



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

CENTRAL DISTRICT
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SECRETARY

Electronically Sent-Received Receipt Requested
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FINAL PERMIT

PERMITTEE

Standard Carbon, LLC
551 North U.S. Highway 41
Dunnellon, FL 34432

Authorized Representative:
Mr. James Sharpe, CEO

Air Permit No. 0830170-009-AO
Permit Effective Date: 07/03/2014
Permit Expires: 01/24/2016
Site Name: Activated Carbon Production
Facility
Minor Source Air Operation Permit
Project Name: Operation Permit Revision

This is the final air Operation Permit revision, which revises Operation Permit 0830170-007-AO whose expiration date remains 01/24/2016. This revision incorporates the installation of a new material transfer Emission Unit and baghouse at the Standard Carbon, LLC, activated carbon production facility (Standard Industrial Classification No. 2819) which was authorized in air Construction Permit 0830170-008-AC. This revision also updates the language in the permit.

The facility is located in Marion County at 551 North US Highway 41 in Dunnellon, Florida. The UTM coordinates are Zone 17, 360.2 km East, and 3230.0 km North.

This final permit is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Facility-wide and Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C., and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C., for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of the final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Orange County, Florida



F. Thomas Lubozynski, P.E.
Waste and Air Resource Programs Administrator

July 3, 2014

Date

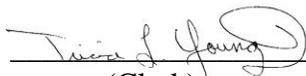
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Permit and the Appendices) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on July 3, 2014 to the persons listed below.

Mr. James Sharpe, CEO, Standard Carbon, LLC (jsharpe@standardpurification.com)
Ms. Kristine Switt, Chief Operating Officer, Standard Carbon, LLC (kswitt@standardpurification.com)
Mr. Kenneth E. Given, P.E., Air Testing & Consulting, Inc. (ken@airtest.fdn.com)

Clerk Stamp

FILED, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


(Clerk)

July 3, 2014

(Date)

SECTION 1. GENERAL INFORMATION (FINAL)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

This facility produces activated carbon using recovered fly ash as a raw material. Raw material in the form of fly ash (from coal or wood combustion) is received at the facility and fed into indirectly heated kilns for conversion into activated carbon (carbon). The carbon from the kiln is transported to a Raymond Mill for grinding and sizing into desired product size. Powdered activated carbon produced offsite is also received at the facility in large supersacks and unloaded to silos for mixing with the carbon produced at the facility to produce final carbon product to meet customer specifications. Finished carbon product is transferred to loading silos and loaded to covered trucks or railcars for final shipment.

The existing facility consists of the following emissions units (baghouse identifications used by the facility are shown in parentheses).

Facility ID No. 0830170	
ID No.	Emission Unit Description
001	Fly Ash/Powdered Activated Carbon Unloading (Baghouse DC-1)
002	Material Transfer to Fly Ash/Carbon Storage Silo Nos. 9 and 11 (Baghouse DC-2)
003	Material Transfer to Kiln Fly Ash Feed Hoppers K1 (for Kiln No. 1) and K2 (for Kiln No. 2) (currently not operating - no baghouse)
004	Kiln No. 2 (inner drying chamber, Baghouse K2BH)
005	Kiln No. 1 (inner drying chamber Baghouse K1BH)
006 ¹	Raymond Mill No. 1 and Raymond Mill No. 1(Outlet Hopper Baghouse RM1BH)
007 ¹	Kiln Surge Hopper, Shaker Screen, and Raymond Mill No. 1 Receiving Hopper (Baghouse DC-4)
009 ¹	Material Transfer to Carbon Storage Silo Nos. 8, 10 and 12 (Baghouse BV-5)
010	Material Transfer to Carbon Storage Silo No. 14 (Baghouse DC-6)
011	Bulk Truck/Railcar Loading (Baghouse 16 Tank)
012	Material Transfer to Carbon Bagging Storage Tower (Baghouse BH)
013 ¹	Material Transfer to Carbon Bagging Hopper, and to Bagging Unit (Baghouse Mahle)
014	Material Transfer to Carbon Storage Silo No. 16 (Baghouse 16 Tank)
015	Kiln No. 1 Combustion Chamber
016	Kiln No. 2 Combustion Chamber
017	Material Transfer to Carbon Storage Silo No. 4 (Baghouse DC-5)
018 ²	Kiln No. 3 (inner drying chamber, Baghouse SDC)
019 ²	Kiln No. 3 Combustion Chamber
020 ²	Raymond Mill No. 2 Receiving Hopper (Baghouse Kinetic Air Model 12)

SECTION 1. GENERAL INFORMATION (FINAL)

021 ²	Raymond Mill No. 2 and Raymond Mill No. 2 Outlet Hopper (Baghouse Mikro-Pulsaire)
022 ²	Material Transfer from Raymond Mill No. 2 to Carbon Storage Silo Nos. 2, 3, 4, 6, 8, 10, 12 or 18 (Baghouse Mikro-Pulsaire)
023	Activated Carbon Dump Station. A new pneumatic transfer line from the activated carbon storage hoppers connected to existing, Silo No. 1. A new Kinetic Aire Model 12-RS-84 baghouse was installed on Silo 1 to control dust emissions.

Note:

1. Emission units being modified as described in Construction Permit 0830170-006-AC, dated 05/21/12.
2. New emission units as described in Construction Permit 0830170-006-AC, dated 05/21/12.

NOTE: Please reference the Permit No. 0830170-009-AO, Facility ID 0830170, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

Exempt Emission Units/Activities

Wet Fly Ash Handling

Fly ash can be received at approximately 66-80% moisture content (wet fly ash). This material is too wet to be handled by the pneumatic dry fly ash handling system (*see EU Nos. 001, 002 and 003*) without causing blockage and other operational problems. The wet fly ash is dumped directly on the pavement. Due to the high material moisture content, fugitive emissions are not a problem when wet fly ash is received. Precautions are taken to prevent fugitive emissions in case the pile surface dries and it becomes windy enough to potentially blow fly ash off the pile surface. The wet fly ash pile is covered with tarps and there is a water hose available to wet the surface of the pile if necessary. In order to directly load the wet fly ash to the kilns, the wet fly ash is loaded into a portable bin and taken by forklift to the kilns. The bin is elevated above either one of the kiln fly ash feed hoppers (EU No. 003), which has its lid removed. The wet fly ash is then dumped into the feed hopper, which then feeds into the kiln. The wet fly ash handling operations are exempt from air permitting in accordance with the provisions of Rule 62-4.040(1)(b), F.A.C., based on the insignificant potential for particulate matter emissions.

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is not a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400, F.A.C., Prevention of Significant Deterioration, F.A.C.
- This facility is a minor source for particulate matter (PM) because they use air pollution control equipment (i.e., baghouse PM emission control devices). The use of in process control equipment ensures the facility's PM emissions are less than the threshold limits required for the facility to be considered a major source per Chapter 62-213, F.A.C. However, the facility is required to submit an Annual Operating Report because their potential to emit PM is 61.5 tons per year.

SECTION 1. GENERAL INFORMATION (FINAL)

PERMIT HISTORY/AFFECTED PERMITS

This permit revises Air Operation Permit No. 0830170-007-AO, dated 7/2/12. It incorporates all the changes authorized by Construction Permit 0830170-008-AC. Construction Permit 0830170-006-AC, dated 5/21/12, expires 12/31/2014, also authorizes additional modifications and emission unit construction to this facility which has yet to be completed.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection, Central District Waste & Air Resource Programs. The Central District's mailing address and phone number is:

Florida Department of Environmental Protection
Central District Office
Waste & Air Resource Programs
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
Telephone: 407-897-4100

All documents related to applications for permits shall be submitted to the above address or electronically to the following address: **DEP_CD@dep.state.fl.us**. In any electronic submittal clearly identify the Air Permit No. 0830170-009-AO.

2. Compliance Authority: The compliance authority for this project is the Florida Department of Environmental Protection, Central District Compliance Assurance Program. All documents related to compliance activities, such as, reports, tests, and notifications shall be submitted to the Central District Compliance Assurance Program. (Use the above mailing or e-mail address).
3. Appendices: The following Appendices are attached as part of this permit:
 - a. Appendix A. Citation Formats and Glossary of Common Terms;
 - b. Appendix B. General Conditions;
 - c. Appendix C. Common Conditions; and
 - d. Appendix D. Common Testing Requirements.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.
[Rule 62-4.080, F.A.C.]
6. Modifications: Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.
[Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

7. Annual Operating Report: On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility," (AOR) for the preceding calendar year. The report must be submitted electronically in accordance with the instructions received with the AOR package sent by the Department.
[Rule 62-210.370(3), F.A.C.]
{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: <http://www.dep.state.fl.us/air/emission/eaor>. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}
8. Operation Permit Renewal Application: A completed application for renewal of the operation permit shall be submitted to the Permitting Authority no later than 60 days prior to the expiration date of the operation permit. To properly apply for an operation permit, the applicant shall submit the following:
- the appropriate permit application form (*see current version of Rule 62-210.900, F.A.C. (Forms and Instructions)*), and/or FDEP Division of Air Resource Management website at: <http://www.dep.state.fl.us/air/>;
 - the appropriate operation permit application fee from Rule 62-4.050(4)(a), F.A.C.;
 - copies of the initial visible emission (VE) compliance test report required by Specific Condition Nos. **A.5.**, **B.4.**, and **C.4.**, if not previously submitted; and,
 - copies of the most recent two months of records/logs specified in Specific Condition No. **E.6.**

[Rules 62-4.030, 62-4.050, 62-4.070(3), 62-4.090, 62-210.300(2), and 62-210.900, F.A.C.]

FACILITY-WIDE SPECIFIC CONDITIONS

9. General Pollutant Emission Limiting Standards: Unconfined Particulate Matter - No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. In addition to the measures specified in Rule 62-296.320(4)(c), F.A.C. (*see Item 9. In Section 4, Appendix C.*), wet fly ash piles shall be covered with tarps and a water hose shall be available and used to water the piles to ensure the surface does not dry allowing fugitive emissions.
[Rule 62-296.320(4)(c), F.A.C.]

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007, 009 thru 014, 017 and 023 023 - Material Handling and Storage

This section of the permit addresses the following emissions units and associated particulate matter (PM) emission control devices. *(Additional detailed descriptions are below the table.)*

EU ID No.	Emission Unit Description	PM Emission Control Device	
		Baghouse ID*	Baghouse Description
001	Dry Fly Ash Truck Receiving/Unloading, and Bagged (Super Sacks) Activated Carbon Unloading	DC-1	Kinetic Air Model 100-SL-120 (with design airflow rate of 6,000 dscfm)
002	Material Transfer to Fly Ash/Carbon Storage Silo Nos. 9 and 11	DC-2	Kinetic Air Model 72-SL-120 (with design airflow rate of 4,000 dscfm)
003	Material Transfer to Kiln Fly Ash Feed Hoppers K1 (for Kiln No. 1) and K2 (for Kiln No. 2) <i>(currently not operating)</i>	--	<i>none currently (however an emission control device is required if dry fly ash is transferred pneumatically)</i>
007	Kiln Surge Hopper, Shaker Screen, and Raymond Mill No. 1 Receiving Hopper	DC-4	Kinetic Air Model 12-RS-84 (with design airflow rate of 600 dscfm)
009	Material Transfer to Carbon Storage Silo Nos. 8, 10 and 12	BV-5	Kinetic Air Model 36-BV-84 (with design airflow rate of 1,000 dscfm)
010	Material Transfer to Carbon Storage Silo No. 14	DC-6	Kinetic Air Model 16-RS-84 (with design airflow rate of 800 dscfm)
011	Bulk Truck/Railcar Loading	16 Tank BH	Flex-Kleen Model 84BVBS 1611G (with design airflow rate of 600 dscfm) <i>(common control device with EU 014)</i>
012	Material Transfer to Carbon Bagging Storage Tower	Bagging BH	Flex-Kleen Model 84BVBS-25 (with design airflow rate of 600 dscfm)
013	Material Transfer to Carbon Bagging Hopper, and to Bagging Unit	Mahle	Mahle Model 25-K Baghouse (with <i>estimated</i> design airflow rate of 600 dscfm)

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007, 009 thru 014, 017 and 023 023 - Material Handling and Storage

EU ID No.	Emission Unit Description	PM Emission Control Device	
		Baghouse ID*	Baghouse Description
014	Material Transfer to Carbon Storage Silo No. 16	16 Tank BH	Flex-Kleen Model 84BVBS-1611G (with design airflow rate of 600 dscfm) (<i>common control device with EU 011</i>)
017	Material Transfer to Carbon Storage Silo No. 4	DC-5	Kinetic Air Model 12-RS-84 (with design airflow rate of 600 dscfm)
023	Material Transfer to Activated Carbon Storage Silo No. 1.		Kinetic Aire Model 12-RS-84

NOTE - Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

Detailed Emissions Units Descriptions

EU No. 001 - Dry Fly Ash Truck Receiving/Unloading*, and Bagged (Super Sacks) Activated Carbon Unloading**

*(*Optional operating alternative when dry fly ash is being received as the raw material for the facility**.)*

Dry fly ash (less than 45% moisture content which is the maximum moisture content the fly ash handling system was designed to handle) is received via trucks and unloaded by dumping into four fly ash receiving hoppers, which are housed in a truck receiving building to control fugitive dust emissions.

Powdered activated carbon from off-site (activated carbon produced from fly ash from coal combustion to be used for blending with the activated carbon produced at this facility, which is from fly ash from wood combustion) is also received in very large bags (super sacks) in this same building and dumped/unloaded into two of the receiving hoppers. From the receiving hoppers, the powdered activated carbon is pneumatically transferred to Fly Ash/Carbon Storage Silo Nos. 9 and 11 (EU No. 002), Carbon Storage Silo Nos. 8, 10 and 12 (EU No. 009), or to Storage Silo No.1 (EU 023).

Emissions from the fly ash /activated carbon unloading activities in this building are controlled by a baghouse dust control device (Baghouse DC-1, a Kinetic Air Model 100-SL-120). The blower system associated with this baghouse will also maintain a slight negative pressure in the receiving building to enhance fugitive dust control. The building’s receiving door (approx. 12’ x 20’) is equipped with plastic sheets to contain fugitive dust emissions.

**** EU No. 001 Note** - EU No. 001 is equipped to be used for unloading and handling of dry (< 45% moisture content) fly ash. It is not used for fly ash handling when the facility is receiving and processing wet fly ash. Since the start of operation, the facility has received only wet fly ash and has not processed any dry fly ash. Refer to Specific Conditions A.4. and A.6. related to initial operation of this emissions unit with dry fly ash.

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007, 009 thru 014, 017 and 023 023 - Material Handling and Storage

EU No. 002 - Material Transfer to Dry Fly Ash*/Carbon** Storage Silo Nos. 9 and 11

(*Optional operating alternative when dry fly ash is being received as the raw material for the facility**.)

Blower systems pneumatically transfer dry fly ash or powdered activated carbon received from offsite to these two dry fly ash storage/carbon storage silos.

Particulate matter emissions from the material transfer to both storage silos (the two storage silos are interconnected at the top) are controlled by a common baghouse dust collector (Baghouse DC-2, a Kinetic Air Model 72-SL-120).

** *EU No. 002 Note* - Storage Silo Nos. 9 and 11 can potentially be used for storage of dry (< 45% moisture content) fly ash. They are not used for fly ash storage when the facility is receiving and processing wet fly ash. Since the start of operation, the facility has received only wet fly ash and has not processed any dry fly ash. Refer to Specific Conditions A.4. and A.6. related to initial operation of this emissions unit with dry fly ash.

Silo Nos. 9 and 11 can be used to store powdered activated carbon from offsite (which is used to blend with activated carbon produced at this facility) when they are not being used to store dry fly ash. From these two silos, the carbon can be pneumatically transferred to Carbon Storage Silo Nos. 14 or 16 (EU Nos. 010 and 014), or to the Carbon Bagging Storage Tower (EU No. 012) (the same as carbon from Carbon Storage Silos Nos. 8, 10 and 12 (EU No. 009).)

EU No. 003 - Material Transfer to Kiln Fly Ash Feed Hoppers K1 (Kiln No. 1) and K2 (Kiln No. 2)*

Dry fly ash from the fly ash storage silos can be transferred pneumatically to two (2) kiln fly ash feed hoppers (Feed Hopper K1 for Kiln No. 1, and Feed Hopper K2 for Kiln No. 2). The facility is currently not conducting this transfer operation as only wet fly ash is being received. There is not currently a baghouse emission control device installed for this pneumatic transfer operation.

Refer to also Specific Conditions A.2. related to restriction on operation of this emissions unit with dry fly ash.

(* *EU No. 003 Note* - Wet fly ash (which is the normal fly ash raw material handled at the facility) is loaded to these feed hoppers by dumping wet fly ash directly into the hoppers. Wet fly ash is loaded into a bin at the storage pile and taken by forklift to the kilns. The bin is elevated above either one of the kiln fly ash feed hoppers which has its lid removed, and dumped. This loading of the wet fly ash does not produce any emissions and no baghouse emission control device is necessary or required. However, an emission control device is required if dry fly ash is transferred pneumatically to the kiln fly ash feed hoppers – refer to Specific Condition No. A.2.)

EU No. 007 - Kiln Surge Hopper, Shaker Screen and Raymond Mill Receiving Hopper

Unmilled (unground) product (activated carbon) from the kilns is sent to the enclosed Kiln Surge Hopper shared by the two kilns via two (water cooled) cooling screw conveyors. (This surge hopper serves as an overflow reservoir for the kilns should the transfer of product to the Raymond Mill Receiving Hopper be interrupted, as the product must continue to be removed from the kilns even after the flow of feed is stopped. The surge hopper can hold about 1 ton of unground product, enough to clear the kiln if needed.) From this surge hopper the product is conveyed to a shaker screen to remove sand from the kiln product, and then pneumatically conveyed to the Raymond Mill Receiving Hopper.

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007, 009 thru 014, 017 and 023 023 - Material Handling and Storage

Fines from the kiln cyclone separator precleaners and other equipment are carried to a fines surge hopper and from there also conveyed to the Raymond Mill Receiving Hopper. Sand separated out in the shaker screen will pass through a rotary air lock into an enclosed bin, dropping by gravity. This bin will be changed out periodically. All of the equipment associated with the Shaker Screen (feeder equipment, shaker screen, and outlet equipment) is enclosed. Particulate matter (PM) emissions from the Kiln Surge Hopper, Shaker Screen and the Raymond Mill Receiving Hopper are controlled by a common baghouse dust collector (Baghouse DC-4, a Kinetic Air Model 12-RS-84).

EU No. 009 – Material Transfer to Carbon Storage Silo Nos. 8, 10 and 12

From the Raymond Mill Outlet Hopper the activated carbon (carbon) is pneumatically transferred to Carbon Storage Silo Nos. 8, 10 and 12. Activated carbon from Fly Ash/Carbon Storage Silo Nos. 9 and/or 11) (EU No. 002) can also be transferred to Carbon Storage Silo Nos. 8, 10 and 12. Particulate matter (PM) emissions from transfer of carbon to the Carbon Storage Silo Nos. 8, 10 and 12 (these three silos are interconnected at the top) are controlled by a common baghouse dust collector (Baghouse BV-5, a Kinetic Air Model 36-BV-84).

EU No. 010 – Material Transfer to Carbon Storage Silo No. 14

Activated carbon product (carbon) for bulk truck/railcar loading is pneumatically transferred from Carbon Storage Silo Nos. 8, 10 or 12 to Carbon Storage Silo No. 14. Carbon Storage Silo No. 14 is located above the railroad tracks where trucks or railcars are loaded with finished carbon product for shipment (as is Carbon Storage Silo No. 16 (EU No. 014)). Particulate matter (PM) emissions from transfer of carbon to Carbon Storage Silo No. 14 are controlled by a baghouse dust collector (Baghouse DC-6, a Kinetic Air Model 16-RS-84).

EU No. 011 - Bulk Truck/Railcar Carbon Loading

Truck or railcars are loaded from Carbon Storage Silo Nos. 14 and 16 (EU Nos. 010 and 014) (located above the railroad tracks where trucks or railcars are loaded) by gravity through a Rotor Lock valve. Particulate matter (PM) emissions from truck/railcar loading are controlled by a baghouse dust collector (16 Tank BH, a Flex-Kleen Model 84BVBS 1611G), which also controls emissions from Carbon Storage Silo No. 16 (EU No. 014).

EU No. 012 – Material Transfer to Carbon Bagging Storage Tower

Activated carbon product (carbon) for bagging is transferred pneumatically from Carbon Storage Silo Nos. 8, 10 and 12 to the Carbon Bagging Storage Tower. Particulate matter (PM) emissions from the Carbon Bagging Storage Tower are controlled by a baghouse dust collector (Bagging BH, a Flex-Kleen Model 84BVBS-25).

EU No. 013 – Material Transfer to Carbon Bagging Hopper and to Bagging Unit

From the Carbon Bagging Storage Tower, the activated carbon product (carbon) drops into the Carbon Bagging Hopper, and from this hopper drops into the Bagging Unit, which consists of a manual operation bagging machine. The Bagging Unit operates at a maximum design rate of 1.0 ton/hour. Particulate matter (PM) emissions from the Carbon Bagging Hopper and from the Bagging Unit are both controlled by a common baghouse dust collector (Mahle, a Mahle Model 25-K Baghouse).

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007, 009 thru 014, 017 and 023 023 - Material Handling and Storage

EU No. 014 – Material Transfer to Carbon Storage Silo No. 16

Activated carbon product (carbon) for bulk truck/railcar loading is pneumatically transferred from Carbon Storage Silo Nos. 8, 10 or 12 to Carbon Storage Silo No. 16. Carbon Storage Silo No. 16 is located above the railroad tracks where trucks or railcars are loaded with finished carbon product for shipment (as is Carbon Storage Silo No 14 (EU No. 010)). Particulate matter (PM) emissions from transfer of carbon to Carbon Storage Silo No. 16 are controlled by a baghouse dust collector (16 Tank BH, a Flex-Kleen Model 84BVBS 1611G), which also controls emissions from EU No. 011 (Bulk Truck/Railcar Carbon Loading).

EU No. 017 - Material Transfer to Carbon Storage Silo No. 4

Carbon Storage Silo No. 4 is used as a blending tank to combine tank super sack powdered activated carbon material stored in the Carbon Storage Silo Nos. 9 and 11 (EU No. 002) with the activated carbon product stored in Carbon Storage Silo Nos. 8, 10 or 12 (EU No. 009). Material blended in Carbon Storage Silo No. 4 can then be transferred to bagging for packaging, back to Carbon Storage Silo Nos. 8, 10, or 12 for storage of the blended product, or to Carbon Storage Silo Nos. 14 or 16 (EU Nos. 010 and 014) for bulk load-out. Carbon Storage Silo No. 4 will not receive Raymond Mill carbon product directly. Emissions from transfer of carbon product to Carbon Storage Silo No. 4 are controlled by a baghouse dust collector (DC-5, a Kinetic Air Model 12-RS-84).

EU No. 023 - Material Transfer to Activated Carbon Storage Silo No. 1.

Powdered activated carbon from off-site is received in very large bags (super sacks) in the Unloading Building (EU 001) and dumped/unloaded into two of the receiving hoppers. A new pneumatic transfer line from the powdered activated carbon storage hoppers is connected to existing Silo No. 1. Material transfer is conveyed by a blower operating at a fixed air flow rate of 600 cubic feet per minute (cfm). A Kinetic Aire Model 12-RS-84 baghouse, is located on Silo 1 to control dust emissions.

Material Transport Blowers Note - All of the blowers used to transport dry fly ash and activated carbon product have fixed speeds (i.e., material is transported at a fixed rate).

The following Specific Conditions apply to all of the above emissions units (EUs).

(Note – See also Subsection E. which contains common conditions applicable to the entire facility.)

EMISSIONS STANDARDS

- A.1. Visible Emissions (VE) Limitation For Material Storage Silos/Hoppers** - In order to provide reasonable assurance that the material (fly ash and activated carbon product) handling and storage silo baghouse PM emission control devices are operating properly visible emissions shall not exceed an opacity of 5% from each of these baghouse exhausts. This VE limit applies to all of the baghouses shown in the Emission Unit table above.
[Rules 62-4.070(3), and 62-210.650, F.A.C.; Construction Permits 0830170-004-AC and 0830170-005-AC].

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007, 009 thru 014, 017 and 023 023 - Material Handling and Storage

{Permitting Note: This lower visible emission standard is accepted by the applicant in lieu of annual compliance testing requirements for particulate emissions. However, annual visible emission testing is required.}

OPERATION RESTRICTIONS

- A.2. Prohibition on Dry Fly Ash Transfer to Kiln Fly Ash Feed Hoppers K1 and K2 (EU No. 003)** – Transfer of dry fly ash to Kiln Fly Ash Hoppers K1 and K2 is not permitted and shall not be conducted until such time as baghouse dust collector emission control equipment is installed to control emissions from Kiln Fly Ash Hoppers K1 and K 2. In accordance with Rule 62-210.300(1)(a), F.A.C., installation of any new pollution control equipment requires an air construction permit prior to the installation of the control equipment. [Rules 62-4.070(3), 62-210.300(1)(a), and 62-210.650, F.A.C.; Construction Permit 0830170-004-AC]

COMPLIANCE TESTING REQUIREMENTS

- A.3. Annual Visible Emission (VE) Compliance Test:** During each federal fiscal year (October 1st to September 30th), the exhaust vents for the baghouse PM emission control devices listed below shall be tested to demonstrate compliance with the emissions standards for Visible Emissions specified in Specific Condition **A.1**.
- The VE Compliance Test Method is specified in Condition E.4.
 - The processes/activities required to be in operation during the testing periods are also shown below.
 - Testing of emissions from material transfer operations shall be conducted during material transfer/silo loading conditions that are representative of normal transfer operations¹.
- [Rule 62-297.310, F.A.C.]

EU ID No(s).	Baghouse ID	Operation(s) to be conducted during emissions testing
001	DC-1	Dry fly ash truck unloading; or bagged activated carbon unloading
002	DC-2	Transfer of dry fly ash, or activated carbon, to Fly Ash/Carbon Storage Silos 9 or 11 ²
007	DC-4	Transfer of material to both Kiln Surge Hopper and Raymond Mill Receiving Hopper with Shaker Screen also operating
009	BV-5	Transfer of activated carbon from Raymond Mill to Carbon Storage Silos 8, 10 or 12 ²
010	DC-6	Transfer of carbon to Carbon Storage Silo 14

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007, 009 thru 014, 017 and 023 023 - Material Handling and Storage

EU ID No(s).	Baghouse ID	Operation(s) to be conducted during emissions testing
011 & 014	DC-6	Loading of carbon product into trucks ³ or railcars ³ (EU No. 011) and Transfer of carbon to Carbon Storage Silo 16 (EU No. 014) (<i>both EUs have common baghouse</i>)
012	Bagging BH	Transfer of carbon product to Carbon Bagging Storage Tower
013	Mahle	Transfer of carbon to the Carbon Bagging Hopper and operation of Bagging Unit (bagging machine)
017	DC-5	Transfer of activated carbon to Silo No. 4 from Carbon Storage Silos 8, 10 or 12, or activated carbon from Fly Ash/Carbon Storage Silo Nos. 9 or 11 ⁴
023	Kinetic Aire Model 12-RS-84	Transfer of activated carbon to Silo No. 1 from one of the receiving hoppers in Unloading Building (EU 001).

Notes –

1. Material Transfer Rate Operations: The material transfer rate is assumed to be constant since the material transfer blowers will operate at fixed speeds.
2. Material Transfer Operations: The baghouses for these EUs control emissions from multiple silos. It does not matter which of the multiple silo/hopper(s) controlled by the baghouse the material is being transferred to, as the transfer rate will be the same.
3. Railcar/Truck loading Testing: Separate compliance testing is not required for truck or railcar transfer. At least one mode must be tested during each federal fiscal year.
4. Silo No. 4 Material Transfer Operations: Silo No. 4 can receive activated carbon from any of the listed carbon storage silos. For compliance testing purposes, it does not matter which of the multiple silos material is being transferred from as long as material is being transferred to Silo No. 4 during the entire test period.

[Rule 62-297.310, F.A.C.; Construction Permits 0830170-004-AC, 0830170-005-AC and 0830170-008-AC]

A.4. Initial Visible Emissions (VE) Compliance Tests for Dry Fly Ash Unloading and Handling Operations (EU Nos. 001 and 002 with Baghouses DC-1 and DC-2)* - Within 45 days of initial operation for bulk dry fly ash raw material unloading, the permittee shall conduct initial visible emissions (VE) compliance tests on the baghouse control devices for the dry fly ash unloading and handling operations. The VE Compliance Test Method is specified in Condition 3.E.4. This testing requirement applies individually to EU No. 001 with emission control device Baghouse DC-1 and EU No. 002 with emission control device Baghouse DC-2). The testing is necessary to demonstrate compliance with the VE standard in Specific Condition No. A.1. Testing shall be conducted during dry fly ash unloading and transfer operations. (*See Specific Condition Nos. A.3. (Testing), A.5.b. (Reporting) and A.6. (Notification) for additional*

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007, 009 thru 014, 017 and 023 023 - Material Handling and Storage

requirements associated with the first use of the dry fly ash unloading and handling equipment.)

(EU No. 003 Dry Fly Ash Handling Note – Transfer of dry fly ash to Kiln Fly Ash Feed Hoppers K1 and K2 (EU No. 003) is not currently permitted or allowed – see Specific Condition No. A.2.)*

[Rule 62-4.070(3), F.A.C.; Construction Permit 0830170-004-AC]

A.5. Process Operation Information to be Submitted with Compliance Test Reports – The compliance test reports (*also see Section 4 Appendix D., Condition 5 (Test Reports)*) shall provide the following process operation information (where applicable) from the test period:

- a. All test reports shall include a description of the material transfer operations (as further described below) that were being conducted during the test period and a statement of whether they represented normal operating conditions.
- b. For Dry Fly Ash Truck and Bagged Activated Carbon Unloading and Transfer to Fly Ash/Carbon Storage Silo Nos. 9 and 10 (EU Nos. 001 and 002 w/Baghouses DC-1 and DC-2), the test report shall include the number of trucks and weight of dry fly ash unloaded, or the number of supersack bags and weight of bagged activated carbon (carbon) dumped (tons), as well as, what fly ash/carbon silo loading operations were being conducted. If Fly Ash/Carbon Storage Silos Nos. 9 and 11 are being used to store carbon, then the test report shall include a statement of what carbon storage silo loading operations were being conducted.
- c. For the Kiln Surge Hopper and Raymond Mill Receiving Hopper (EU No. 007 w/Baghouse DC-4), the test report shall describe the carbon transfer operations to the Kiln Surge Hopper and Raymond Mill Receiving Hopper were being conducted.
- d. For Transfer of Carbon From Raymond Mill Outlet Hopper to Carbon Storage Silos 8, 10 and 12 (EU No. 009 w/Baghouses BV-5), the test report shall describe what carbon storage silo loading operations were being conducted.
- e. For Transfer to Carbon Storage Silo No. 14 (EU No. 010 w/Baghouse DC-6), as required in A. above, the test report shall also include a statement as to whether activated carbon was being transferred to Carbon Storage Silo 14 (*see EU No. 010 operation during testing requirements in Specific Condition No. A.3.*).
- f. For Transfer to Carbon Storage Silo No. 16, and Truck/Railcar Loading (EU Nos. 014 and 011 w/common Baghouse 16 Tank BH):
 - i. The test report shall include a statement of the estimated truck or railcar activated carbon loading rate (tons/hr) during the test period.
 - ii. The test report shall also include a statement as to whether activated carbon was being transferred to Carbon Storage Silo No. 16 during the test period (*see EU Nos. 011 and 014 operation during testing requirements in Specific Condition No. A.3.*).
 - iii. If testing was not done during both truck and railcar loading (separate tests), then the test report shall include a statement of why that mode of product

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU Nos. 001 thru 003, 007. 009 thru 014, 017 and 023 023 - Material Handling and Storage

loading/shipping was not tested and when it is anticipated that this mode of loading shipping will be first used or used next.

- g. For the Carbon Bagging Storage Tower (EU No. 012 w/Bagging BH baghouse), the test report shall describe how activated carbon was being transferred to the Carbon Bagging Storage Tower during the test period.
- h. For the Carbon Bagging Hopper and Bagging Unit (EU No. 013 w/Mahle baghouse), the test report shall include the estimated bagging rate (tons/hour) during the test period. The test report shall also describe how the activated carbon was being transferred to the Carbon Bagging Hopper during the test period (*see EU No. 013 operation during testing requirement in Specific Condition No. A.3*).
- i. For Material Transfer to Carbon Storage Silo No. 4. (EU No. 017 w/Baghouse DC-5), the compliance test reports shall describe the Carbon Storage Silo No. 4 material transfer operations that were being conducted during the test period, and a statement of whether they represented normal operating conditions and transfer rates.

[Rules 62-4.070(3) and 62-297.310(8), F.A.C.; Construction Permits 0830170-004-AC and 0830170-005-AC]

NOTIFICATION REQUIREMENTS

- A.6.** Notification of Start of Dry Fly Ash Unloading Operations - The permittee shall notify the Compliance Authority of the date of the first processing of bulk dry fly ash raw material using the dry fly ash unloading and handling equipment (EU Nos. 001 and 002). The written notifications shall be sent within 15 days of the first such dry fly ash processing.

[Rule 62-4.070(3), F.A.C.; Construction Permit 0830170-004-AC]

(Permitting Note – See also Specific Condition No. A.4. for initial VE testing requirements for this equipment/process.)

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

B. EU Nos. 004 and 005 – Kilns No. 2 and No. 1 (Drying Chambers)

This section of the document addresses the following emissions units (EUs) (and associated PM emission control devices).

EU ID No.	Emission Unit Description	PM Emission Control Device	
		Baghouse ID*	Baghouse Description
004	Kiln No. 2 (inner drying chamber)	K2 BH	Cyclone followed by SDC Model 48-SL-108 Baghouse (with design airflow rate of 2,500 dscfm)
005	Kiln No. 1 (inner drying chamber)	K1 BH	Cyclone followed by SDC Model 48-SL-108 Baghouse (with design airflow rate of 2,500 dscfm)

NOTE - Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

More Detailed Emissions Units Description

Kiln Nos. 1 and 2 (EU Nos. 005 and 004)

Fly ash from the kiln fly ash hoppers is gravity fed into two (2) kilns (Kiln Nos. 1 and 2) for conversion into activated carbon. The kilns each have a separate combustion chamber (*see EU Nos. 015 and 016 in Subsection D.*) such that the kiln itself is heated indirectly and the combustion gases do not come into direct contact with the fly ash being processed. Exhaust gases from each of the kilns pass through a heat exchanger prior to the emission control devices. Particulate matter (PM) emissions from each kiln are controlled by a cyclone separator precleaner, followed by a baghouse dust collector (Baghouses K1 BH and K2 BH). The total estimated activated carbon production rate from each kiln is approximately 1.0 ton/hour*.

(* *Kiln Process Feed/Production Rate Note – For wet fly ash of approximately 75% moisture it takes about 4 tons/hour of wet fly ash to produce 1 ton/hour of activated carbon from the kiln. When (dry) fly ash of approximately 25% moisture is processed, the ash feed rate would be about 1.3 tons/hour to produce 1.0 ton/hour of activated carbon.*)

The following Specific Conditions apply to the above emissions units (EUs).

Note – See also **Subsection E.** which contains common conditions applicable to the facility.)

B.1. Maximum Allowable Particulate Matter Emissions from Kiln Nos. 1 and 2 (EU Nos. 005 and 004) - Particulate matter (PM) emissions from Kiln No. 1 (EU No. 005) and Kiln No. 2 (EU 004) shall each not exceed the lower limit (i.e., more stringent*) of the following:

- a. 2.5 pounds/hour;

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

B. EU Nos. 004 and 005 – Kilns No. 2 and No. 1 (Drying Chambers)

- b. the maximum emission rate allowed by the following Process Weight Table equation contained in Rule 62-296.320(4)(a)(2), F.A.C. (General Particulate Emission Limiting Standards - Process Weight Table):

$$\text{Maximum Allowable Emission Rate (pounds/hour)} = 3.59 \times P^{0.62}$$

Where P = process (input) rate in tons/hour (TPH)

* Process Weight Table Based Limit Note:

- At a kiln process (input) rate equal to and greater than 0.56 tons/hour, the 2.5 pounds/hour emission limit is more stringent (i.e., lower) than the process Weight Table equation limit.
- At a process rate less than 0.56 TPH, the above Process Weight Table equation limit will be more stringent.
- In order to limit the potential to emit particulate matter (PM) from these operations, the applicant has previously requested and accepted that more stringent PM emission limitations (that is, 2.5 pounds/hour) be established for these emission units than those that would be applicable from the Process Weight Table equation at higher process rates.

[Rules 62-210.200 (Definition of Potential to Emit), and 62-296.320(4)(a)2, F.A.C., as requested by the applicant; Construction Permit 0830170-004-AC]

- B.2.** Alternate Visible Emissions (VE) Limitations in Lieu of PM Testing - Due to the expense and complexity of conducting a stack test on a minor source of particulate matter, and because a baghouse is used as the emission control device, the Department, pursuant to the authority granted under Rule 62-297.620(4), F.A.C., established a visible emission (VE) limitation not to exceed an opacity of five percent (5%) from the applicable exhaust stack in lieu of a particulate stack test to show compliance with the particulate matter emission limitations of Specific Condition No. B.1. The applicable exhaust stacks are the Kiln No. 1 (EU No. 005) and Kiln No. 2 (EU No. 004) baghouses (K1 BH and K2 BH) exhaust vents. Should the Department have reason to believe the particulate emission standard is not being met, the Department shall require that compliance with the particulate emission standard be demonstrated by the applicable test method specified in the applicable rule (*refer to Appendix D, Section 4., Item 4.b. (Special Compliance Tests)*).

[Rules 62-4.070(3), and 62-297.620(4), F.A.C.; Construction Permit 0830170-004-AC]

COMPLIANCE TESTING REQUIREMENTS

- B.3.** Annual Visible Emissions (VE) Compliance Tests - During each federal fiscal year (October 1st to September 30th), the exhaust vents for the baghouse particulate matter (PM) emission control devices listed below shall be tested to demonstrate compliance with the visible emissions (VE) standards of Specific Condition No. B.2., that is, VE not to exceed an opacity of five percent (5%). The processes/activities required to be in operation during the testing periods are also shown below.

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

B. EU Nos. 004 and 005 – Kilns No. 2 and No. 1 (Drying Chambers)

EU ID No.	Baghouse ID	Operation(s) to be conducted during emissions testing
004	K2 BH	Material being processed thru <u>Kiln No. 2</u> inner drying chamber
005	K1 BH	Material being processed thru <u>Kiln No. 1</u> inner drying chamber

[Rule 62-297.310, F.A.C.]

- B.4.** Process Operation Information to be Submitted with Compliance Test Reports – The compliance test reports (*also see Appendix D., Section 4, Item 5 (Test Reports)*) shall include the estimated kiln fly ash process input rate (tons/hour) during the test period for the kiln being tested.

[Rules 62-4.070(3) and 62-297.310(8), F.A.C.; Construction Permit 0830170-004-AC]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

C. EU No. 006 - Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper

This section of the document addresses the following emissions unit (EU) (and associated PM emission control device).

EU ID No.	Emission Unit Description	PM Emission Control Device	
		Baghouse ID*	Baghouse Description
006	Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper	RM1 BH	Mikro-Pulsaire Model 64S820 Baghouse (with design airflow rate of 3,600 dscfm)

NOTE - Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

More Detailed Emissions Unit Description

Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper (EU No. 006)

From the Raymond Mill Receiving Hopper (part of EU No. 007) the unground product is fed to the Raymond Mill, a Model 5057 Raymond Mill that has rollers in it that grind (mill) the product into a smaller size. The mill includes a blower which supplies air to lift the ground carbon up through an internal whizzer which is part of the mill. The whizzer spins like a bicycle wheel with spokes, and the finely ground carbon passes through the whizzer while larger particles are knocked down. The fine activated carbon material discharges to the Raymond Mill Outlet Hopper as product. The Raymond Mill operates at a material input rate of up to 4.0 tons/hour. Particulate matter (PM) emissions from the Raymond Mill and Raymond Mill Outlet Hopper are controlled by a common baghouse dust collector (Baghouse RM1 BH, a Mikro-Pulsaire Model 64S820).

The following Specific Conditions apply to the above emissions unit (EU).

(Note – See also **Subsection E.** which contains common conditions applicable to the facility.)

EMISSIONS STANDARDS

(Particulate Matter (PM) Emission Limit Note - Rule 62-296.320(4)(a), F.A.C. (General Particulate Emission Limiting Standards - Process Weight Table) applies to several operations at this facility, including the Raymond Mill (part of EU No. 006)), which “process raw materials to produce a finished product through a chemical or physical change”. In order to limit the potential to emit particulate matter (PM) from these operations, the applicant has requested that more stringent PM emission limitations be established for these emission units than those that would be applicable from the Process Weight Table equation at higher process rates (see Specific Condition No. C.1.a.)

C.1. Maximum Allowable Particulate Matter Emissions from Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper (EU No. 006) - Particulate matter (PM) emissions from the baghouse PM emissions control device for Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper shall not exceed the lower limit (i.e., more stringent*) of the following:

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

C. EU No. 006 - Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper

- a. 5.0 pounds/hour; and
- b. the maximum emission rate allowed by the following Process Weight Table equation contained in Rule 62-296.320(4)(a)(2), F.A.C. (General Particulate Emission Limiting Standards - Process Weight Table):

$$\text{Maximum Allowable Emission Rate (pounds/hour)} = 3.59 \times P^{0.62}$$

Where P = process (input) rate in tons/hour (TPH)

***Process Weight Table Based Limit Note:**

- At process (input) rates above 1.7 tons/hour the 5.0 pounds/hour emission limit is more stringent (i.e., lower).
- At a process rate equal to or less than 1.7 TPH, the above Process Weight Table equation limit will be more stringent.
- In order to limit the potential to emit particulate matter (PM) from these operations, the applicant has previously requested and accepted that more stringent PM emission limitations (that is, 5.0 pounds/hour) be established for these emission units than those that would be applicable from the Process Weight Table equation at higher process rates.

[Rules 62-210.200 (Definition of Potential to Emit), and 62-296.320(4)(a)2, F.A.C., as requested by the applicant; Construction Permit 0830170-004-AC]

- C.2.** Alternate Visible Emissions (VE) Limitations in Lieu of PM Testing for Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper (EU No. 006) - Due to the expense and complexity of conducting a stack test on a minor source of particulate matter, and because a baghouse is used as the emission control device, the Department, pursuant to the authority granted under Rule 62-297.620(4), F.A.C., established a visible emission (VE) limitation not to exceed an opacity of five percent (5%) from the exhaust vent for Baghouse RM in lieu of a particulate stack test to show compliance with the particulate matter emission limitations of Specific Condition No. C.1. Should the Department have reason to believe the particulate emission standard is not being met, the Department shall require that compliance with the particulate emission standard be demonstrated by the applicable test method specified in the applicable rule (*see Appendix D, Section 4. Item 4.b. (Special Compliance Tests)*).

[Rules 62-4.070(3), and 62-297.620(4), F.A.C.; Construction Permit 0830170-004-AC]

COMPLIANCE TESTING REQUIREMENTS

- C.3.** Annual Visible Emissions (VE) Compliance Tests - During each federal fiscal year (October 1st to September 30th), the exhaust vent for the baghouse particulate matter (PM) emission control device listed below shall be tested to demonstrate compliance with the visible emissions (VE) standards of Specific Condition No. C.2., that is, VE not to exceed an opacity of five percent (5%). The processes/activities required to be in operation during the testing periods are also shown below. Testing of emissions from material transfer operations shall be conducted during material transfer/silo loading conditions that are representative of normal transfer operations.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

C. EU No. 006 - Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper

EU ID No.	Baghouse Description	Operation(s) to be conducted during emissions testing
006	RM1 BH	Simultaneous operation of the Raymond Mill and material transfer to the Raymond Mill Outlet Hopper (<i>emissions from both are controlled by this common baghouse control device</i>)

[Rule 62-297.310, F.A.C.; Construction Permit 0830170-004-AC]

C.4. Process Operation Information to be Submitted with Compliance Test Report – The compliance test report (*see Appendix D., Section 4, Condition 5 (Test Reports)*) shall provide the following process operation information from the test period:

- a. a description of the material transfer operations that were being conducted during the test period and a statement of whether they represented normal operating conditions; and
- b. the estimated carbon process input rates to Raymond Mill No. 1 (tons/hour) during the test period.

[Rules 62-4.070(3) and 62-297.310(8), F.A.C.; Construction Permit 0830170-004-AC]

SECTION 3. FACILITY-WIDE AND EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

D. Specific Conditions for EU Nos. 015 and 016

This section of the document addresses the following emissions units (EUs). *(See more detailed description below the emission unit table.)*

EU ID No.	Emission Unit Description
015	<u>Kiln No. 1 Combustion Chamber:</u> The Kiln No. 1 drying chamber is heated indirectly by a separate combustion chamber around the inner drying chamber. This combustion chamber has a series of natural gas fired burners with a total maximum design heat input rating of 19 MMBtu/hour. The products of combustion airflow from the combustion chamber are exhausted through a separate exhaust stack from the kiln drying chamber. There is no emission control device on this kiln combustion chamber exhaust.
016	<u>Kiln No. 2 Combustion Chamber:</u> The Kiln No. 2 drying chamber is heated indirectly by a separate combustion chamber around the inner drying chamber. This combustion chamber has a series of natural gas fired burners with a total maximum design heat input rating of 11.8 MMBtu/hour. The products of combustion airflow from the combustion chamber are exhausted through a separate exhaust stack from the kiln drying chamber. There is no emission control device on this kiln combustion chamber exhaust.

The following Specific Conditions apply to the above emissions units (EU).

PERFORMANCE RESTRICTIONS

- D.1. Authorized Fuel** - The kilns are each permitted to burn natural gas only.
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C.; Construction Permit 0830170-004-AC]

- D.2. Permitted Hours of Operation** – The kiln combustion chambers are each permitted to operate continuously (i.e., for 8,760 hours/year).
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C., Construction Permit 0830170-004-AC]

(Maximum Heat Input Rate and Potential Emissions Permitting Note – The maximum kiln combustion chamber heat input rate values in the descriptions above represent the total combined maximum design (potential) heat input rate for all the burners on each kiln combustion chamber as provided by the equipment manufacturer. Worst case potential emissions from each kiln combustion chamber were calculated based on operation at these maximum design heat input rates for 8,760 hours/year. This resulted in potential NOx (the pollutant with the highest emission rate) emissions of 18 tons/year from both kiln combustion chambers combined.)

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

E. Common Specific Conditions for EU Nos. 001, 002, 004 thru 014 (EUs in Subsections A., B. and C.)

This section of the document addresses specific conditions common to Emissions Unit (EU) Nos. 001, 002, 004 thru 014 and 023 (i.e., all of the EUs in Subsections A., B. and C. except EU No. 003).

PERFORMANCE RESTRICTIONS

- E.1. Permitted Hours of Operation** - All of these emission units are permitted to operate continuously (i.e., for 8,760 hours/year).
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C.; Construction Permits 0830170-004-AC and 0830170-008-AC]

- E.2. Maximum Permitted Activated Carbon Production Rate** - The production of activated carbon product from this facility shall not exceed 15,000 tons in any consecutive 12 month period. For the purpose of demonstrating compliance with this limitation, production shall be defined as the total activated carbon shipped from the facility by truck and railcar (plus any activated carbon bagged in the Bagging Unit).
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C.; Construction Permit 0830170-004-AC]

COMPLIANCE TESTING REQUIREMENTS

- E.3. Compliance Test Requirements** - Compliance tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.
[Rule 62-297.310, F.A.C.]

- E.4. Test Method** - Required visible emissions compliance tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources The Method 9 VE compliance tests shall be conducted by a certified observer and be a minimum of 30 minutes in duration. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur

The above method is described in Appendix A of 40 CFR 60 and is adopted by reference in Rule 62-204.800, F.A.C. No other method may be used unless prior written approval is received from the Department.
[Rules 62-204.800, 62-296.320(4)(b)4, 62-297.310(4)(a)(2), 62-297.320, and 62-297.401; and Appendix A of 40 CFR 60]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

E. Common Specific Conditions for EU Nos. 001, 002, 004 thru 014 (EUs in Subsections A., B. and C.)

NOTIFICATION REQUIREMENTS

- E.5. Compliance Test Notification** - The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required compliance tests. The notification must include the following information: the date, time, and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and the telephone number of the person conducting the test.
(Permitting Note - The notification should also include the relevant emission unit ID No(s), test method(s) to be used, and pollutants to be tested.)
[Rules 62-4.070(3) and 62-297.310(7)(a)9., F.A.C.]

RECORDKEEPING REQUIREMENTS

- E.6. Activated Carbon Production Records** - In order to demonstrate compliance with the production limitations of Specific Condition No. E.2., the permittee shall maintain monthly activated carbon loadout records. At a minimum, the production records shall include the following for each calendar month:
- the quantity of activated carbon product loaded out to trucks (tons) ;
 - the quantity of activated carbon loaded out to railcars (tons);
 - the quantity of activated carbon bagged in the Bagging Unit (tons);
 - the total monthly production (the sum of A., B., and C. above) (tons/month); and
 - the total production for the most recent consecutive 12-month period (the sum of the monthly totals in D. above for the most recent 12 consecutive months) (tons/12 consecutive months).

The above monthly records shall be completed within 15 days of the end of each month.
[Rule 62-4.070(3), F.A.C.; Construction Permit 0830170-004-AC]

- E.7. Record Retention** - The records required in this permit shall be maintained at the facility for a minimum of five years, and made available to the Department upon request.
[Rule 62-4.070(3), F.A.C.; Construction Permit 0830170-004-AC]

SECTION 4. APPENDICES

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SECTION 4. APPENDIX A

Citation Formats and Glossary of Common Terms

CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located

“2222” represents the specific facility ID number for that county

“001” identifies the specific permit project number

“AC” identifies the permit as an air construction permit

“AF” identifies the permit as a minor source federally enforceable state operation permit

“AO” identifies the permit as a minor source air operation permit

“AV” identifies the permit as a major Title V air operation permit

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

AAQS: Ambient Air Quality Standard

acf: actual cubic feet

acfm: actual cubic feet per minute

ARMS: Air Resource Management System (DEP database)

BACT: best available control technology

bhp: brake horsepower

Btu: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

CFR: Code of Federal Regulations

CAA: Clean Air Act

CMS: continuous monitoring system

CO: carbon monoxide

CO₂: carbon dioxide

COMS: continuous opacity monitoring system

DARM: Division of Air Resource Management

DEP: Department of Environmental Protection

Department: Department of Environmental Protection

dscf: dry standard cubic feet

dscfm: dry standard cubic feet per minute

EPA: Environmental Protection Agency

ESP: electrostatic precipitator (control system for reducing particulate matter)

SECTION 4. APPENDIX A

Citation Formats and Glossary of Common Terms

EU: emissions unit	ppmvd: parts per million by volume, dry basis
F.A.C.: Florida Administrative Code	QA: quality assurance
F.A.W.: Florida Administrative Weekly	QC: quality control
F.D.: forced draft	PSD: prevention of significant deterioration
F.S.: Florida Statutes	psi: pounds per square inch
FGD: flue gas desulfurization	PTE: potential to emit
FGR: flue gas recirculation	RACT: reasonably available control technology
Fl: fluoride	RATA: relative accuracy test audit
ft²: square feet	RBLC: EPA's RACT/BACT/LAER Clearinghouse
ft³: cubic feet	SAM: sulfuric acid mist
gpm: gallons per minute	scf: standard cubic feet
gr: grains	scfm: standard cubic feet per minute
HAP: hazardous air pollutant	SIC: standard industrial classification code
Hg: mercury	SIP: State Implementation Plan
I.D.: induced draft	SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
ID: identification	SO₂: sulfur dioxide
kPa: kilopascals	TPD: tons/day
lb: pound	TPH: tons per hour
MACT: maximum achievable technology	TPY: tons per year
MMBtu: million British thermal units	TRS: total reduced sulfur
MSDS: material safety data sheets	UTM: Universal Transverse Mercator coordinate system
MW: megawatt	VE: visible emissions
NESHAP: National Emissions Standards for Hazardous Air Pollutants	VOC: volatile organic compounds
NO_x: nitrogen oxides	
NSPS: New Source Performance Standards	
O&M: operation and maintenance	
O₂: oxygen	
Pb: lead	
PM: particulate matter	
PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less	
ppm: parts per million	
ppmv: parts per million by volume	

SECTION 4. APPENDIX B

General Conditions

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are “permit conditions” and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - a. Have access to and copy any records that must be kept under conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

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General Conditions

- a. A description of and cause of noncompliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
- a. Determination of Best Available Control Technology (not applicable);
 - b. Determination of Prevention of Significant Deterioration (not applicable); and
 - c. Compliance with New Source Performance Standards (not applicable).
14. The permittee shall comply with the following:
- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - (a) The date, exact place, and time of sampling or measurements;

SECTION 4. APPENDIX B

General Conditions

- (b) The person responsible for performing the sampling or measurements;
 - (c) The dates analyses were performed;
 - (d) The person responsible for performing the analyses;
 - (e) The analytical techniques or methods used;
 - (f) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION 4. APPENDIX C

Common Conditions

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed 2 hours in any 24-hour period unless specifically authorized by the Department for longer duration. Pursuant to Rule 62-210.700(5), F.A.C., the permit subsection may specify more or less stringent requirements for periods of excess emissions. Rule 62-210-700(Excess Emissions), F.A.C., cannot vary or supersede any federal NSPS or NESHAP provision. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20%

SECTION 4. APPENDIX C

Common Conditions

opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

9. Unconfined Particulate Emissions:

- a. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.
- b. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
- c. Reasonable precautions include the following:
 - (1) Paving and maintenance of roads, parking areas and yards.
 - (2) Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
 - (3) Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
 - (4) Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
 - (5) Landscaping or planting of vegetation.
 - (6) Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
 - (7) Confining abrasive blasting where possible.
 - (8) Enclosure or covering of conveyor systems.

[Rule 62-296.320(4)(c), F.A.C.]

RECORDS AND REPORTS

10. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 3 years following the date on which such measurements, records, or data are recorded, unless otherwise specified by Department rule. Records shall be made available to the Department upon request. [Rule 62-4.160, F.A.C.]

11. Emissions Computation and Reporting:

- a. *Applicability.* This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C., or of any permit condition that requires emissions be computed in accordance with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit. [Rule 62-210.370(1), F.A.C.]

SECTION 4. APPENDIX C

Common Conditions

- b. *Computation of Emissions.* For any of the purposes set forth in subsection 62-210.370(1), F.A.C., the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.
- (1) **Basic Approach.** The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
- (a) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
- (b) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
- (c) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
- (2) **Continuous Emissions Monitoring System (CEMS).**
- (a) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
- 1) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or
- 2) The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
- (b) Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
- 1) A calibrated flow meter that records data on a continuous basis, if available; or
- 2) The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided

SECTION 4. APPENDIX C

Common Conditions

all stack tests used shall represent the same operational and physical configuration of the unit.

- (c) The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.

(3) Mass Balance Calculations.

- (a) An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
 - 1) Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and
 - 2) Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.
- (b) Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.
- (c) In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.

(4) Emission Factors.

- a. An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
 - 1) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
 - 2) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.

SECTION 4. APPENDIX C

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- 3) The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
- b. If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.
- (5) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.
- (6) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
- (7) Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.
- (8) Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.

[Rule 62-210.370(2), F.A.C.]

c. *Annual Operating Report for Air Pollutant Emitting Facility*

- (1) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year for the following facilities:
 - a. All Title V sources.
 - b. All synthetic non-Title V sources.
 - c. All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area.
 - d. All facilities for which an annual operating report is required by rule or permit.
- (2) Notwithstanding paragraph 62-210.370(3)(a), F.A.C., no annual operating report shall be required for any facility operating under an air general permit.
- (3) The annual operating report shall be submitted to the appropriate Department of Environmental Protection (DEP) division, district or DEP-approved local air pollution control program office by April 1 of the following year. If the report is submitted using the

SECTION 4. APPENDIX C

Common Conditions

Department's electronic annual operating report software, there is no requirement to submit a copy to any DEP or local air program office.

- (4) Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C., for purposes of the annual operating report.
- (5) Facility Relocation. Unless otherwise provided by rule or more stringent permit condition, the owner or operator of a relocatable facility must submit a Facility Relocation Notification Form (DEP Form No. 62-210.900(6)) to the Department at least 30 days prior to the relocation. A separate form shall be submitted for each facility in the case of the relocation of multiple facilities which are jointly owned or operated.

[Rule 62-210.370(3), F.A.C.]

SECTION 4. APPENDIX D
Common Testing Requirements

Unless otherwise specified in the permit, the following testing requirements apply to all emissions units at the facility.

COMPLIANCE TESTING REQUIREMENTS

1. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]
2. Applicable Test Procedures - Opacity Compliance Tests: When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
 - a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
 - b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
 - c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

[Rule 62-297.310(4), F.A.C.]

3. Determination of Process Variables:
 - a. *Required Equipment*. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
 - b. *Accuracy of Equipment*. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

SECTION 4. APPENDIX D
Common Testing Requirements

[Rule 62-297.310(5), F.A.C.]

4. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
- a. *General Compliance Testing*.
1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.
 2. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - (a) Did not operate; or
 - (b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
 3. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for visible emissions, if there is an applicable standard.
 4. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- b. *Special Compliance Tests*. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

[Rule 62-297.310(7), F.A.C.]

RECORDS AND REPORTS

5. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report shall

SECTION 4. APPENDIX D
Common Testing Requirements

provide the following information.

- a. The type, location, and designation of the emissions unit tested.
- b. The facility at which the emissions unit is located.
- c. The owner or operator of the emissions unit.
- d. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
- e. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
- f. The date, starting time and end time of the observation.
- g. The test procedures used.
- h. The names of individuals who furnished the process variable data, conducted the test, and prepared the report.
- i. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
- j. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]



**TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION**

APPLICANT

Standard Carbon LLC
551 North U.S. Highway 41
Dunnellon, FL 34432

Facility ID No. 0830170

PROJECT

Permit No. 0830170-009-AO
Project Name: Operation Permit Revision
(Revises Permit 0830170-006-AO)

COUNTY

Marion County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Waste and Air Resource Programs
Central District Office
Orlando, Florida 32803-3767

June 23, 2013

Prepared by Stephen Amirault

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

I. Project Description:

A. Applicant:

Mr. James Sharpe, Chief Executive Officer
Standard Carbon LLC
551 North U.S. Highway 41
Dunnellon, FL 34432
jsharpe@standardpurification.com

B. Professional Engineer:

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Air Testing & Consulting, Inc.
333 Falkenburg Road, Suite B-214
Tampa, Florida 33619
ken@airtest.fdn.com

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

C. Project Location:

551 North U.S. Highway 41
Dunnellon, FL 34432

D. Project Summary:

This is a revision to Air Operation Permit 0830170-007-AO to incorporate the installation of a new material transfer Emission Unit. The new EU was authorized in air construction permit 0830170-006-AC.

D. Application Information:

Application Received on: 05/27/2014
Application Determined Complete: 06/05/2014

III. PSD Applicability for Project

As provided in the application, the total project emissions will not exceed the PSD significant emission rates; therefore, the project is not subject to the PSD preconstruction review.

II. Rule Applicability

This project is subject to the preconstruction review requirements of Chapter 403, Florida Statutes, and Chapters 62-204 through 62-297, Florida Administrative Code (F.A.C.), as indicated below.

Subject to:	Y/N	Comments
Rule 62-210.300, F.A.C. – Stationary Source, General Requirements	Y	Not exempt from general permitting requirements
Rule 62-212.400, F.A.C. – Prevention of Significant Deterioration	N	Facility is not a PSD major source
Rule 62-296.320(4), F.A.C. - General Particulate Emission Limiting Standards	Y	Activated carbon production operations are a source of unconfined particulate matter emissions.
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	Y	Activated carbon production operations are a source of odors.
Rule 62-296.400, F.A.C. - Stationary Source Emission Standards	N	There is no applicable source category.
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Marion County is an attainment area for ozone.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Subject to:	Y/N	Comments
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	There is no applicable source category.
Rule 62-204.800, F.A.C. - Standards of Performance for New Stationary Sources (NSPS)	N	There is no applicable source category.
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants (NESHAPS – 40 CFR 61)	N	There is no applicable source category.
Rule 62-213, F.A.C. – Operation Permits for Major Source of Air Pollution	N	Facility is a minor source for particulate matter (PM) because they use air pollution control equipment (i.e., baghouse PM emission control devices). The use of in process control equipment ensures the facility’s PM emissions are less than the threshold limits required for the facility to be considered a major source per Chapter 62-213, F.A.C. However, the facility is required to submit an Annual Operating Report because their potential to emit PM is 64 tons per year.
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C	Y	Annual VE Testing is required

III. Summary of Emissions

As provided by the applicant, emissions from the additional material transfer line are expected to remain below the following values:

Pollutant	EU No. and brief description	Potential Emissions (tpy)	Allowable Emissions (tpy)
PM	Facility Wide (including EU 023)	61.46 ^{1,2}	61.46
NOx	EUs 015, 016 Kilns No. 1 and 2 Combustion Chambers	12.85 ^{1,2}	12.85
CO	EUs 015, 016 Kilns No. 1 and 2 Combustion Chambers	10.79 ^{1,2}	10.79
VOC	EUs 015, 016	0.7 ^{1,2}	0.7

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Pollutant	EU No. and brief description	Potential Emissions (tpy)	Allowable Emissions (tpy)
	Kilns No. 1 and 2 Combustion Chambers		
SO ₂	EUs 015, 016 Kilns No. 1 and 2 Combustion Chambers	0.08 ^{1,2}	0.08
VE	Facility Wide		Less than five percent (5%) opacity ³

1. *Potential Emissions as calculated in evaluation conducted for Construction Permits 0830170-004-AC, 0830170-006-AC and 0830170-007-AC. Particulate matter (PM) calculations for EU 004, 005 are based on limit of 2.5 pounds per hour,)PM calculations for EU 006 are based on a PM limit of 5 pounds per hour, as provided in Construction Permit 0830170-004-AC.*
2. *Construction Permit 0830170-006-AC authorized construction and associated emissions from additional emission units (a new kiln, a new Raymond mill, and new storage silos and transfer systems). Construction of these emission units have not been completed.*
3. *A lower visible emission standard is requested and accepted by the facility in lieu of compliance testing requirements for particulate emissions. However, annual visible emission testing is required.*

IV. Federal NSPS and/or NESHAP Provisions

There are no applicable federal NSPS or NESHAP provisions.

V. Conclusions

The emission limits proposed by the applicant will meet all of the requirements of Chapters 62-204 through 297, F.A.C.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all the applicable requirements of Chapters 62-204 through 297, F.A.C.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

VI. Preliminary Determination

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Additional details of this analysis may be obtained by contacting the project engineer, Stephen Amirault, at the Florida Department of Environmental Protection, Waste & Air Resource Programs, Central District Office, 3319 Maguire Blvd., Suite 232, Orlando, Florida 32803-3767, 407/897-4100.