Florida Department of Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

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Lt. Governor

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Secretary

DRAFT PERMIT

PERMITTEE

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

Authorized Representative:
Mr. James Sharpe, CEO

Air Permit No. 0830170-006-AC
Permit Expires: 12/31/2014
Minor Air Construction Permit

Construction Permit for Facility Modifications

This is the final air construction permit for modifications at the existing Standard Purification activated carbon production facility (Standard Industrial Classification No. 2819) 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. As noted in the Final Determination provided with this final permit, no changes or only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Due to 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 this 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 Hillsborough County, Florida

DRAFT

_____ _____

Robert C. Wong Effective Date
District Air Program Administrator
Southwest District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, 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 _____ to the persons listed below.

Mr. James Sharpe, CEO, Standard Carbon LLC
(jsharpe@standardpurification.com)

Ms. Kristine Switt, Plant Manager, Standard Carbon, LLC
(kswitt@standardpurification.com)

Mr. Kenneth E. Given, P.E., Air Testing & Consulting, Inc.
(ken@airtest.fdn.com)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

DRAFT

_____ _____

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

This existing facility produces activated carbon using recovered fly ash as a raw material. The existing facility consists of the following emissions units*.

Facility ID No. 0830170

EU ID No.	Emission Unit Description	Associated PM Emission Control Device
001	Dry Fly Ash Truck Receiving/Unloading, and Bagged (Super Sacks) Activated Carbon Unloading	Baghouse PJ-T (Kinetic Air Model 100-SL-120)
002	Material Transfer to Fly Ash/Carbon Storage Silo Nos. 9 and 11	Baghouse PJ-1 (Kinetic Air Model 72-SL-120)
003	Material Transfer to Kiln Fly Ash Feed Hoppers K1 (for Kiln No. 1) and K2 (for Kiln No. 2) *(currently not operating)*	*none currently (however an emission control device is required if dry fly ash is transferred pneumatically)*
004	Kiln No. 2 (inner drying chamber)	Cyclone followed by SDC Model 48-SL-108 Baghouse
005	Kiln No. 1 (inner drying chamber)	Cyclone followed by SDC Model 48-SL-108 Baghouse
006	Raymond Mill No. 1 and Raymond Mill No. 1 Outlet Hopper	Mikro-Pulsaire Model 64S820 Baghouse
007	Kiln Surge Hopper, Shaker Screen, and Raymond Mill No. 1 Receiving Hopper	Baghouse PJ-3 (Kinetic Air Model 12-RS-84)
009	Material Transfer to Carbon Storage Silo Nos. 8, 10 or 12	Baghouse PJ-2 (Kinetic Air Model 36-BV-84)
010	Material Transfer to Carbon Storage Silo No. 14	Baghouse PJ-6 (Kinetic Air Model 16-RS-84)
011	Bulk Truck/Railcar Loading	Flex-Kleen Model 84BVBS 1611G Baghouse *(common control device with EU No. 014)*
012	Material Transfer to Carbon Bagging Storage Tower	Flex-Kleen Model 84BVBS-25 Baghouse
013	Material Transfer to Carbon Bagging Hopper, and to Bagging Unit	Mahle Model 25-K Baghouse

014	Material Transfer to Carbon Storage Silo No. 16	Flex-Kleen Model 84BVBS 1611G Baghouse *(common control device with EU No. 011)*
015	Kiln No. 1 Combustion Chamber	*none*
016	Kiln No. 2 Combustion Chamber	*none*
017	Material Transfer to Carbon Storage Silo No. 4	Baghouse PJ-4 (Kinetic Air Model 12-RS-84)

(**Permitting Note** – The above EU table includes the modifications permitted by Construction Permit Nos. 0830170-004-AC and 0830170-005-AC. These modifications have been completed and are in operation, but at the time of issuance of this permit have not yet been incorporated into the facility Operation Permit No. 0830170-002-AO.)*

Project Description and Affected/Proposed Emission Units

This project will modify *(EU Nos. 006, 007, 009 and 013)*, or create *(EU Nos. 018, 019, 020, 021 and 022)*, the following emissions units *(shown as modified or new – see detailed descriptions below the table)*:

EU ID No.	Emission Unit Description	Associated PM Emission Control Device
006 *(modified*)*	Raymond Mill No. 1 (with Dynamic Classifier) and Raymond Mill No. 1 Outlet Hopper	Mikro-Pulsaire Model 64S820 Baghouse
007 *(modified*)*	Kiln Surge Hopper, Kiln Baghouses Fines Hoppers (3), Shaker Screen, and Raymond Mill No. 1 Receiving Hopper	Baghouse PJ-3 (Kinetic Air Model 12-RS-84)
009 *(modified*)*	Material Transfer to Carbon Storage Silo Nos. 1, 2, 3, 4, 6, 8, 10, 12 or 18	Baghouse PJ-2 (Kinetic Air Model 36-BV-84)
013 *(modified*)*	Material Transfer to Carbon Bagging Hopper, and to Bagging Units (2)	Mahle Model 25-K Baghouse
018 *(new**)*	Kiln No. 3 (inner drying chamber)	SDC Model 48-SL-108 Baghouse
019 *(new**)*	Kiln No. 3 Combustion Chamber	*none*
020 *(new**)*	Raymond Mill No. 2 Receiving Hopper	Kinetic Air Model 12-RS-84 Baghouse *(or equivalent)*
021 *(new**)*	Raymond Mill No. 2 and Raymond Mill No. 2 Outlet Hopper	Mikro-Pulsaire Model 64S820 Baghouse
*022 (new**)*	Material Transfer from Raymond Mill No. 2 to Carbon Storage Silo Nos. 1, 2, 3, 4, 6, 8, 10, 12 or 18	Kinetic Air Model 12-RS-84 Baghouse *(or equivalent)*

(**Affected Modified Emission Unit Permitting Note** - The modifications to the equipment covered by these existing emissions units (see **Exempt Emission Units/Activities** below) do not require construction permitting since they will not result in an increase in potential emissions. They are shown in this table because the description of the emission unit has changed.)*

*(** **New Emission Unit Permitting Note** - These modifications will result in new emission sources and new assigned Emission Unit (EU) ID Nos., or modifications of existing emissions units. See below for additional description of these modifications.)*

Description of New or Modified Emission Sources/Emissions Units (EUs) -
(See Section 3. (Emissions Units Specific Conditions), Subsections A. through D. for more detailed descriptions of the new emissions units (EUs).)

- Addition of a new Kiln No. 3 (or refurbish the existing unpermitted kiln which is in a state of disrepair), with Kiln Fly Ash Feed Hopper K3 *(see **Exempt Emission Units/Activities** below)* and separate natural gas fired combustion chamber, with emissions from the kiln inner drying chamber controlled by a new cyclone separator pre-cleaner and a new 2,500 dscfm baghouse **(new Nos. 018 and 019))**
- Addition of a new Raymond Mill No. 2 (EU No. 021) with same milling capacity as existing Raymond Mill No. 1. This will also include a new Raymond Mill No. 2 Receiving Hopper (EU No. 020), a new Raymond Mill No. 2 Outlet Hopper (part of EU No. 021), two new blowers and two new baghouse emission control devices, one for the Raymond Mill No. 2 Receiving Hopper, and one for Raymond Mill No. 2 and the Raymond Mill No. 2 Outlet Hopper**.** New Raymond Mill No. 2 will act as a backup for the existing mill and also could be used to grind a separate product.
- Addition of a transfer piping system and associated new baghouse emission control device to allow for separate transfer of material from Raymond Mill No. 2 outlet hopper to any of the carbon storage silos (EU No. 022). The separate transfer system and baghouse would allow both Raymond Mills to operate and independently transfer material simultaneously without cross contamination.
- Addition of new kiln baghouse fines hoppers to existing Kiln No. 2 and new Kiln No. 3. Emissions associated with the operation of the kiln fines hoppers will be controlled by existing Baghouse PJ-3. They will become part of EU No. 007. ***(The addition of these new kiln baghouse fines hoppers will not result in a new emission source, or an increase in potential emissions from an existing emissions unit. Actual emissions may increase due to higher utilization of the baghouse.)***
- Addition of a new Dynamic Classifier on the top of the existing Raymond Mill (Raymond Mill No. 1) to remove sand**.** Emissions from operation of this classifier will be part of the Raymond Mill No. 1 emissions controlled by the existing Raymond Mill No. 1 Mikro-Pulsaire baghouse. It will become part of EU No. 013. ***(The addition of this new classifier will not result in a new emissions source, or an increase in potential emissions from an existing emissions unit. Actual emissions may increase due to higher utilization of the baghouse.)***

- Addition of a brand new carbon product storage silo (Silo No. 18), and refurbishment and operation of existing Silo Nos. 1, 2, 3, and 6 for carbon product storage. All silos (the above additional refurbished silos, new Silo No. 18, and permitted Silo Nos. 4, 8, 10, and 12) would be piped so that they could receive carbon from multiple sources – either Raymond Mill No. 1 or No. 2, supersack dumping, tank truck discharge or railcar discharge. Only one silo will be loaded at any one time so no new baghouse will required (emissions from loading these new and refurbished silos will use Baghouse PJ-2 along with Carbon Storage Silo Nos. 4, 8, 10, and 12). They will become part of EU No. 009. ***(The addition of these new and refurbished carbon storage silos will not result in a new emissions source, or an increase in potential emissions from an existing emissions unit. Actual emissions may increase due to higher utilization of the baghouse.)***
- Addition of a 2nd carbon product bagging unit (Bagging Unit No. 2), which will be same size and use same existing Mahle baghouse as the existing bagging unit (Bagging Unit No. 1). It will become part of EU No. 013. ***(The addition of this new bagging unit will not result in a new emissions source, or an increase in potential emissions from an existing emissions unit. Actual emissions may increase due to higher utilization of the baghouse.)***

Exempt Emission Units/Activities <u>Associated with this Modification</u>

- Addition of a new (or refurbished) Kiln No. 3 Fly Ash Feed Hopper K3. Wet fly ash (which is how all the fly ash raw material has been received since start of operation of the facility) is loaded to the kiln fly ash feed hoppers by dumping wet fly ash directly into the kiln feed hoppers. Wet fly ash is loaded into a transportable bin and taken by forklift to the kilns. The bin is elevated above the kiln fly ash feed hopper, which has its lid removed, and dumped. This loading of the wet fly ash into the feed hopper does not produce any emissions and no baghouse emission control device is necessary or required. ***(The Kiln No. 3 Fly Ash Feed Hopper K3 is exempt from permitting in accordance with Rule 62-4.040(1)(b), F.A.C. (insignificant emissions).)***
- Addition of a new Sand Receiver with a small bin vent filter. ***(Bin vent filter will be a new emission source exempt from permitting in accordance with Rule 62-4.040(1)(b), F.A.C. (insignificant emissions).)***

  <u>Note</u> - Exemptions under Rule 62-4.040(1)(b), F.A.C., may be revoked if the installation is substantially modified or the basis for the exemption is determined to be materially incorrect.

Additional Permit Condition Revisions Being Made as Part of this Project

- At the request of the permittee during a June 5, 2012 site visit to review the construction permit application, the facility recordkeeping requirements are being revised to only require monthly records of total product shipped and not separate records of product shipped by rail, bulk truck and bagged product. This revision involves minor changes to two Specific Conditions in Section 3., Subsection E. (Specific Condition Nos. E.2. and E.6.). ***(This change to the recordkeeping requirements will not result in any changes in potential, allowable or actual 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 213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- This facility is a synthetic non-Title V source for the pollutant particulate matter (PM/PM10). The emission limitations and restriction on the amount of material produced in this permit will ensure that the facility's PM/PM10 emissions will be below the threshold for a Title V source.

PERMIT HISTORY/AFFECTED PERMITS

Reference also facility Air Operation Permit 0830170-002-AO, and Air Construction Permit Nos. 0830170-004-AC and 0830170-005-AC. This permit modifies and replaces two conditions in Air Operation Permit 0830170-002-AO and Air Construction Permit Nos. 0830170-004-AC *(see Section 3., Subsection E., pages 21 and 22)*.

1. Permitting Authority - The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District's Air Resource Management Section. The Southwest District's mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Air Resource Management Section
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-632-7600

All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority - All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office's Air Resource Management Section (see above mailing address and phone number).

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 and operation 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.]

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 may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority.
[Rule 62-210.370(3), F.A.C.]

8. Application for Non-Title V Air Operation Permit Revision - This permit authorizes modification of the permitted emissions unit and initial operation to determine compliance with Department rules. A Non-Title V air operation permit revision is required for continued operation of the permitted emissions unit. The permittee shall apply for a Non-Title V air operation permit revision to incorporate each of the following modifications at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation of: Kiln No. 3 (EU Nos. 18 and 19); Raymond Mill No, 2 (EU Nos. 20 and 021); or the baghouse for transfer of carbon from new Raymond Mill No. 2 to the carbon storage silos (EU No. 022) . *(Note - see Specific Condition Nos. A.5., B.7., and C.6. for start of operation notification requirements.) (Application Submittal Note – An application for an operation permit revision for more than one of the above modifications can be submitted as long as the above 180 day requirement is met for each of them.)* Commencing operation means setting into operation of any emissions unit for any purpose. To apply for a Non-Title V air operation permit revision, the applicant shall submit the following:

a. 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/)*;

b. the appropriate operation permit application fee from Rule 62-4.050(4)(a), F.A.C.; and

c. a copy of the initial visible emissions (VE) compliance test report required by Specific Condition Nos. A.2., B.4., and C.3., if not previously submitted.

[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.]

A. EU Nos. 020 and 022 - Material Handling and Storage

*(**Permitting Note For Emissions Unit (EU) Nos. 007, 009 and 013** - Material handling and storage EU Nos. 007, 009 and 013 were shown in the Section I, Project Description as affected emissions units that are being modified as part of this project.* ***Specific conditions for these EUs in Construction Permit 0830170-004-AC remain effective and are not changed by this permit.)***

This section of the document addresses the following emissions units (EUs) (and associated particulate matter (PM) emission control devices). *(See more detailed descriptions below the emissions unit (EU) table.)*

EU ID No.	Emission Unit Description	Associated PM Emission Control Device
020 *(new)*	Raymond Mill No. 2 Receiving Hopper	Kinetic Air Model 12-RS-84 Baghouse *(or equivalent)*, with a design air flow rate of approximately 600 dscfm
022 (new)	Material Transfer from Raymond Mill No. 2 to Carbon Storage Silo Nos. 1, 2, 3, 4, 6, 8, 10, 12 or 18	Kinetic Air Model 12-RS-84 Baghouse *(or equivalent)*, with a design air flow rate of approximately 600 dscfm

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

More Detailed Emission Unit Descriptions

EU No. 020 - Raymond Mill No. 2 Receiving Hopper -
Unmilled (unground) product (activated carbon) from the kilns is sent to the enclosed Kiln Surge Hopper shared by the three kilns via (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 Hoppers 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 one of the kilns if needed.) From this surge hopper, the product is pneumatically conveyed to the Raymond Mill No. 2 Receiving Hopper. Granular activated carbon from supersacks, tanker trucks or railcars can also be pneumatically conveyed to the Raymond Mill Receiving Hoppers to be milled by the Raymond Mills. Particulate matter emissions from the transfer of material to and from the Raymond Mill No. 2 Receiving Hopper will be controlled by a baghouse dust collector.

EU No. 022 – Material Transfer to Carbon Storage Silo Nos. 1, 2, 3, 4, 6, 8, 10, 12 or 18 -
From the Raymond Mill No. 2 Outlet Hopper *(part of EU No. 021)*, the activated carbon (carbon) will be pneumatically transferred to Carbon Storage Silo Nos. 1, 2, 3, 4, 6, 8, 10, 12 or 18. Particulate matter (PM) emissions from transfer of carbon to these carbon storage silos will be controlled by a common baghouse dust collector (a Kinetic Air Model 12-RS-84 or equivalent). This separate carbon product transfer system and baghouse for Raymond Mill No. 2 will allow both Raymond Mills to operate and independently transfer material simultaneously without cross contamination.

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

A. EU Nos. 020 and 022 - Material Handling and Storage

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

(**Note** – See also **Subsection E.** which contains common conditions applicable to these emissions units.)

EMISSIONS STANDARDS

A.1. Visible Emissions (VE) Limitation For Raymond Mill No. 2 Material Receiving Hopper Baghouse (EU No. 020) and Material Transfer to Storage Silos Baghouse (EU No. 022) - In order to provide reasonable assurance that the Raymond Mill No. 2 material (activated carbon product) receiving hopper and storage silos baghouse PM emission control devices are operating properly in accordance with Section 4. Appendix C, Condition 2. (Circumvention of Control Equipment), the Department establishes a visible emission (VE) limitation not to exceed an opacity of 5% from each of these baghouse exhausts. This VE limit applies to each of the baghouses shown in the Emission Unit table in the EU Description above (and also shown in Specific Condition A.3. below).
[Rules 62-4.070(3), and 62-210.650, F.A.C.]

COMPLIANCE TESTING REQUIREMENTS

A.2. Initial Visible Emissions (VE) Compliance Tests - Within 90 days of the initial operation of Raymond Mill No. 2, the permittee shall conduct initial visible emissions (VE) compliance tests on each of the baghouses emission control devices shown in the Emission Unit table in the EU Description above (and also shown in Specific Condition A.3. below) to demonstrate compliance with the VE standard of Specific Condition No. A.1. The operations/activities required to be in operation during the testing period are as shown in Specific Condition No. A.3. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.

(Permitting Note – See also Specific Condition No. A.5. for notification requirements associated with the start of operation of Raymond Mill No. 2.)

A.3. Annual Visible Emissions (VE) Compliance Tests- 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 visible emissions (VE) standards of Specific Condition No. A.1. 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[1].

EU ID No(s).	Baghouse ID/ Description	Operation to be conducted during emissions testing [1]
020 *(new)*	Kinetic Air Model 12-RS-84 Baghouse *(or equivalent)*	Transfer of material to Raymond Mill No. 2 Receiving Hopper
022 (new)	Kinetic Air Model 12-RS-84 Baghouse *(or equivalent)*	Transfer of activated carbon from Raymond Mill No. 2 to Carbon Storage Silos 1, 2, 3, 4, 6, 8, 10, 12 or 18 [2]

A.3. *(continued)*

Notes -

[1] *Material Transfer Rate Permitting Note - Based on the fact that the material transfer blowers will operate at fixed speeds, the material transfer rate is assumed to be constant.*

[2] *Material Transfer Operations Permitting Note - The baghouse for this EU will control emissions from multiple silos (loading of only one silo occurs at any one time). It does not matter which of the multiple silos controlled by the baghouse the material is being transferred to as the transfer rate will be the same.*

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

A.4. 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 statement of the material transfer operations (as further described below) that were being done during the test period and a statement of whether they represented normal operating conditions.

b. For the Raymond Mill No. 2 Receiving Hopper (EU No. 020), the test report shall include a statement of what carbon material transfer operations to the Raymond Mill No. 2 Receiving Hopper were being conducted.

c. For Transfer of Carbon From Raymond Mill No. 2 Outlet Hopper to Carbon Storage Silos 1, 2, 3, 4, 6, 8, 10, 12 and 18 (EU No. 022), the test report shall include a statement of what carbon storage silo loading operations were being conducted (i.e., identification of which carbon storage silo was being loaded from Raymond Mill No. 2 Outlet Hopper).

[Rules 62-4.070(3) and 62-297.310(8), F.A.C.]

NOTIFICATION REQUIREMENTS

A.5. Notification of Start of Raymond Mill No. 2 Operations - The permittee shall notify the Compliance Authority of the date of the first processing of material through Raymond Mill No. 2. The written notification shall be sent within 15 days of the first such Raymond Mill No. 2 operation.
[Rule 62-4.070(3), F.A.C.]

(Permitting Note – See also Specific Condition No. A.2. for initial VE testing requirements for the Raymond Mill No.2 Receiving Hopper Baghouse (EU No. 020) and Raymond Mill No. 2 Material Transfer Baghouse (EU No. 022).)

B. EU No. 018 - Kiln No. 3 (Drying Chamber)

This section of the document addresses the following emissions unit (EU) (and associated PM emission control device). *(See more detailed description below the emission unit table.)*

EU ID No.	Emission Unit Description	Associated PM Emission Control Device
018 *(new)*	Kiln No. 3 (inner drying chamber)	SDC Model 48-SL-108 Baghouse (design airflow capacity of approximately 2,500 dscfm (approximately 4,600 acfm))

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

Kiln No. 3 (EU No. 018))
Kiln No. 3 will either be a new kiln or a refurbishment of the existing non-operable (and previously unpermitted) third kiln. Wet fly ash from the Kiln No. 3 Fly Ash Feed Hopper (K3)* will be gravity fed into the kiln for conversion into activated carbon. The kiln will have a separate combustion chamber *(see **EU No. 019** 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 the kiln will pass through a heat exchanger prior to the emission control devices. Particulate matter (PM) emissions from the kiln will be controlled by a cyclone separator precleaner, followed by a baghouse dust collector. The total estimated activated carbon production rate from this kiln is approximately 1.0 ton/hour*.

(Fly Ash Raw Material Note - Wet fly ash (which is how all the fly ash raw material has been received since start of operation of the facility) is loaded to the kiln fly ash feed hoppers by dumping wet fly ash directly into the kiln feed hoppers. Wet fly ash is loaded into a transportable bin and taken by forklift to the kilns. The bin is elevated above the kiln fly ash feed hopper, 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 to transferred pneumatically to the kiln fly ash feed hopper – see Specific Condition No. B.1. below.)*

(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 emission unit (EU).

(**Note** – See also **Subsection E.** which contains common conditions applicable to this emissions unit.)

OPERATION RESTRICTIONS

B.1. Prohibition on Dry Fly Ash Transfer to Kiln No. 3 Fly Ash Feed Hopper (Fly Ash Feed Hopper K3) – Transfer of dry fly ash (i.e., fly ash with a moisture content of 25% or less) to the Kiln No. 3 Fly Ash Feed Hopper K3 is not permitted and shall not be conducted until such

(continued)

B.1. *(continued)*

time as baghouse dust collector emission control equipment is installed to control emissions from Kiln No. 3 Fly Ash Feed Hopper K 3. 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.]

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 Kiln No. 3, 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. B.2. a.)

B.2. Maximum Allowable Particulate Matter Emissions from Kiln No. 3 - Particulate matter (PM) emissions from Kiln No. 3 shall not exceed the lower limit (i.e., more stringent*) of the following:

a. 2.5 pounds/hour;

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.)

(Permitting Note - See Specific Condition No. B.3. for alternate visible emissions (VE) limitations associated with showing compliance with the above PM emission limitations.)

[Rules 62-210.200 (Definition of Potential to Emit), and 62-296.320(4(a)(2), F.A.C., as requested by the applicant consistent with PM emission limitations for Kiln Nos. 1 and 2 in Construction Permit 0830170-004-AC]

B.3. 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 devices, the Department, pursuant to the authority granted under Rule 62-297.620(4), F.A.C., hereby establishes a visible emission (VE) limitation not to exceed an opacity of five percent (5%) from the Kiln No. 3 baghouse exhaust vent in lieu of a particulate stack test to show compliance with the particulate matter emission limits of Specific Condition No. B.2. 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 Section 4. Appendix D, Item 4.b. (Special Compliance Tests))*.
[Rules 62-4.070(3) and 62-297.620(4), F.A.C.]

COMPLIANCE TESTING REQUIREMENTS

B.4. Initial Visible Emissions (VE) Compliance Tests for Kiln No. 3 Baghouse - Within 90 days of the initial operation of Kiln No. 3, the permittee shall conduct initial visible emissions (VE) compliance tests on the Kiln No. 3 baghouse emissions control device to demonstrate compliance with the VE standards of Specific Condition No. B.3. The operations/activities required to be in operation during the testing period are as shown in Specific Condition No. B.4.
[Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.

(Permitting Note – See also Specific Condition No. B.7. for notification requirements associated with the start of operation of Kiln No. 3.)

B.5. Annual Visible Emissions (VE) Compliance Tests for Kiln No. 3 Baghouse - During each federal fiscal year (October 1st to September 30th), the exhaust vent for the Kiln No. 3 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. B.3. The operations/activities required to be in operation during the testing periods are also shown below.

EU ID No.	Baghouse Description	Operation to be conducted during emissions testing
018	SDC Model 48-SL-108	Material being processed thru Kiln No. 3 inner drying chamber

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

B.6. Process Operation Information to be Submitted with Compliance Test Reports – The compliance test reports *(also see Section 4, Appendix D., Item 5 (Test Reports))* shall include the estimated Kiln No. 3 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.]

NOTIFICATION REQUIREMENTS

B.7. Notification of Start of Kiln No. 3 Operations - The permittee shall notify the Compliance Authority of the date of the first processing of material through Kiln No. 3 (EU No. 018). The written notification shall be sent within 15 days of the first such kiln operation.
[Rule 62-4.070(3), F.A.C.]

(Permitting Note – See also Specific Condition No. B.4. for initial VE testing requirements for the Kiln No. 3 baghouse.)

C. EU No. 021- Raymond Mill No. 2 and Raymond Mill No. 2 Outlet Hopper

*(**Permitting Note For Emissions Unit (EU) No. 006** - EU No. 006, Raymond Mill No. 1 (with Dynamic Classifier) and Raymond Mill No. 1 Outlet Hopper, was shown in the Section I, Project Description as an affected emissions unit that was being modified as part of this project.* ***Specific conditions for this EU in Construction Permit 0830170-004-AC remain effective and are not changed by this permit.)***

This section of the document addresses the following emissions unit (EU) (and associated PM emission control device). *(See more detailed description below the emission unit table.)*

EU ID No.	Emission Unit Description	Associated PM Emission Control Device
021 *(new)*	Raymond Mill No. 2 and Raymond Mill No. 2 Outlet Hopper	Mikro-Pulsaire Model 64S820 Baghouse *(or equivalent)*, with a design air flow rate of approximately 3,400 dscfm

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

Raymond Mill No. 2and Raymond Mill No. 2 Outlet Hopper (EU No. 021)
From the Raymond Mill Receiving Hopper (part of EU No. 020) the unground carbon product will be fed to Raymond Mill No. 2, which has rollers that will grind (mill) the product into a smaller size. The mill will include a blower which will supply 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 will discharges to the Raymond Mill No. 2 Outlet Hopper as product. The Raymond Mill will operate at a maximum material input rate of up to 4.0 tons/hour. Particulate matter (PM) emissions from the Raymond Mill No. 2 and Raymond Mill No. 2 Outlet Hopper will controlled by a common baghouse dust collector.

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

(**Note** – See also **Subsection E.** which contains common conditions applicable to this emissions unit.)

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 Raymond Mill No. 2 (part of EU No. 021)), 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 Nos. C.1. a.)

C.1. Maximum Allowable Particulate Matter Emissions from Raymond Mill No. 2 and Raymond Mill No. 2 Outlet Hopper (EU No. 021) - Particulate matter (PM) emissions from the baghouse PM emissions control device for Raymond Mill No. 2 and Raymond Mill No. 2 Outlet Hopper shall not exceed the lower limit (i.e., more stringent*) of the following:

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):

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.)

(Permitting Note - See Specific Condition No. C.2. for alternate visible emissions (VE) limitations associated with showing compliance with the above PM emission limitations.)

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

C.2. Alternate Visible Emissions (VE) Limitations in Lieu of PM Testing for Raymond Mill 2 and Raymond Mill 2 Outlet Hopper Baghouse (EU No. 021) - 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 devices, the Department, pursuant to the authority granted under Rule 62-297.620(4), F.A.C., hereby establishes a visible emission (VE) limitation not to exceed an opacity of five percent (5%) from the Raymond Mill 2 and Raymond Mill 2 Outlet Hopper Baghouse exhaust vent in lieu of a particulate stack test to show compliance with the particulate matter emission limits 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 Section 4. Appendix D, Item 4.b.(Special Compliance Tests))*. [Rules 62-4.070(3), and 62-297.620(4), F.A.C.]

TESTING REQUIREMENTS

C.3. Initial Visible Emissions (VE) Compliance Tests for Raymond Mill No. 2 and Raymond Mill 2 Outlet Hopper Baghouse - Within 90 days of the initial operation of Raymond Mill No. 2, the permittee shall conduct initial visible emissions (VE) compliance tests on the Raymond Mill No. 2 baghouse emissions control device to demonstrate compliance with the VE standards of Specific Condition No. C.2. The operations/activities required to be in operation during the testing period are as shown in Specific Condition No. C.4.
[Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

(Permitting Note – See also Specific Condition No. C.6. for notification requirements associated with the start of operation of Raymond Mill No. 2.)

C.4. Annual Visible Emissions (VE) Compliance Tests for Raymond Mill No.2 and Raymond Mill 2 Outlet Hopper Baghouse - During each federal fiscal year (October 1st to September 30th), the exhaust vent for the Raymond Mill No. 2 and Raymond Mill 2 Outlet Hopper 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. The processes/activities required to be in operation during the testing periods are also shown below. Testing of shall be conducted during operation of Raymond Mill No. 2 that is representative of normal operations.

EU ID No.	Baghouse Description	Operation(s) to be conducted during emissions testing
021	Mikro-Pulsaire Model 64S820 *(or equivalent)*	Simultaneous operation of Raymond Mill No. 2 and material transfer to the Raymond Mill No. 2 Outlet Hopper *(emissions from both are controlled by this common baghouse control device)*

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

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

a. a statement 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 the Raymond Mill (tons/hour) during the test period.

[Rules 62-4.070(3) and 62-297.310(8), F.A.C.]

NOTIFICATION REQUIREMENTS

C.6. Notification of Start of Raymond Mill No. 2 Operations - The permittee shall notify the Compliance Authority of the date of the first processing of material through Raymond Mill No. 2. The written notification shall be sent within 15 days of the first such kiln operation. [Rule 62-4.070(3), F.A.C.]

(Permitting Note – As an additional reminder, this notification requirement is a duplication of the requirement in Specific Condition No. A.5.(since both sections include operations related to Raymond Mill No. 2). See also Specific Condition No. C.3. for initial VE testing requirements for the Raymond Mill No. 2 baghouse.)

D. EU No. 019 - Kiln No. 3 Combustion Chamber

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

EU ID No.	Emission Unit Description
019 *(new)*	Kiln No. 3 Combustion Chamber

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

Kiln No. 3 Combustion Chamber (EU No. 019)
The Kiln No. 3 drying chamber *(EU No. 018 – See Subsection B.)* will heated indirectly by a separate combustion chamber around the inner drying chamber. This combustion chamber will be equipped with 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 will be exhausted through a separate exhaust stack from the kiln drying chamber. There will be no emission control device on this kiln combustion chamber exhaust.

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

PERFORMANCE RESTRICTIONS

D.1. Authorized Fuel - This kiln is permitted to burn natural gas only.
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C.; as requested by applicant in construction permit application dated 05/14/12]

D.2. Permitted Hours of Operation – The kiln combustion chamber is permitted to operate continuously (i.e., for 8,760 hours/year).
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C.]

(Maximum Heat Input Rate and Potential Emissions Permitting Note – The maximum kiln combustion chamber heat input rate value in the kiln combustion chamber description above represents the total combined maximum design (potential) heat input rate for all the burners on the kiln combustion chamber. Worst case potential emissions from the kiln combustion chamber was calculated based on operation at this maximum design heat input rate for 8,760 hours/year. This results in potential NOx (the pollutant with the highest emission rate) emissions of 7.93 tons/year. (Note - Potential NOx emission from all three kiln combustion chambers (Kiln Nos. 1, 2 and 3 (EU Nos. 015, 016 and 019) will be a total of 20.8 tons/year.))

This section of the document addresses specific conditions common to all regulated emissions units (EUs).

PERFORMANCE RESTRICTIONS

Note – Specific Condition Nos. E2. And E.6. are revisions of (and replace) Specific Condition Nos. D.2 and D.5. of Operation Permit 0830170-002-AO, and Specific Condition Nos. E.2 and E.6. of Construction Permit 0830170-004-AC.

E.1. Permitted Hours of Operation - All of these emission units are permitted to operate continuously (i.e., for 8760 hours/year).
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C.]

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 12 consecutive month period. For the purpose of demonstrating compliance with this limitation, production shall be defined as the total activated carbon product shipped from the facility. *(Note - See Specific Condition No. E.6. for associated recordkeeping requirements.)*
[Rule 62-210.200 (Definition of Potential to Emit), F.A.C.; Construction Permit 0830170-003-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]

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 the limits of Specific Condition No. E.2., the permittee shall maintain monthly activated carbon product shipment records. At a minimum, the records shall include the following for each calendar month:

a. the quantity of activated carbon shipped by all methods; and

b. the total product shipped for the most recent consecutive 12-month period (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.]