TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

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

Facility ID No. 0830170

PROJECT

Project No. 0830170-005-AC
Application for Minor Air Construction Permit for Carbon Storage Silo No. 4

COUNTY

Marion County Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Management
Southwest District Office
Temple Terrace, Florida 33637-7600

November 15, 2011

Prepared by David Zell

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

B. Professional Engineer:

Mr. Kenneth E. Given, P.E.
Air Testing & Consulting, Inc.
333 N. Falkenburg Road, Unit B-214
Tampa, FL 33619

C. Project Location:

This existing activated carbon production facility is located at 551 North Highway 41 in Dunnellon, Marion County.

D. Project Summary:

The proposed project is the refurbishment and operation of existing, currently not-in-use, Silo No. 4 to store carbon product material. Emissions from transfer of carbon product to Carbon Storage Silo No. 4 will be controlled by existing baghouse particulate matter (PM) emission control device Baghouse PJ-4, a Kinetic Air Model 12-RS-84. *(Note - Baghouse PJ-4 was previously the emission control device for EU No. 009 (Carbon Storage Silo Nos. 8, 10, and 12), but was authorized to be removed (and replaced by PJ-2) as part of recently issued construction permit 0830170-004-AC.)*

Carbon Storage Silo No. 4 will be used as a blending tank to combine the Carbon Storage Silo Nos. 9 and 11 (EU No. 002) tank super sack powdered activated carbon material 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.

(PTE Note - Baghouse PJ-4 controlling emissions from Carbon Storage Silo No. 4 represents an additional emission point (and therefore an additional emissions unit), and an increase in the potential PM emissions from the facility *(see Section III.).*

E. Application Information:

Application Received and Complete on: 10/17/11

(*Permit Application Processor Note – An email was sent on 10/21/11 requesting more information on how the proposed new silo will fit into the process. An email response describing the proposed use of the silo was received from the facility contact on 10/24/11, and an email response with an updated process flow diagram was received from their consultant on 11/01/11.)*

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. - Project Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, F.A.C.	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	Material handling operations are a potential source of unconfined particulate matter emissions.

Subject to:	Y/N	Comments
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	N	operation of silo not a source of VOC or 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 not an air quality maintenance area for ozone
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	this is a "new" facility, therefore not subject to PM RACT rule
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 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants for Source Categories a.k.a. MACT (NESHAPS - 40 CFR 63)	N	there is no applicable source category
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	N	facility is a synthetic non-Title V source
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C.	Y	VE testing is required for the baghouse emission control device (EU No. 017)

III. Summary of Potential to Emit (PTE) from This Project

Pollutant	Affected EU No. and Brief Description of Operation	PTE Prior to Control Device [1] (TPY)	PTE After Control Device [2] (TPY)
PM/PM_{10}	EU 017 – Material transfer into Carbon Storage Silo No. 4, controlled by baghouse emission control device PJ-4	9.0	0.45 [3]

Notes –

[1] Based upon baghouse design air flow rate of 600 cfm and filter bag manufacturer's stated design outlet concentration of 0.008 gr/cf, assumed baghouse control efficiency of 98%, and operation for 8760 hrs/yr.

[2] Based upon baghouse design air flow rate of 600 cfm, typical baghouse outlet concentration of 0.02 gr/cf (conservative*), and operation for 8760 hrs/yr. (*Note – Filter bag manufacturer's stated design outlet concentration is 0.008 gr/cf.)

3 With this project, **Total Facility PM/PM_{10} PTE** will be:

59.96 TPY *(see Technical Evaluation (TEV) for 0830170-003-AC)* + 0.866 TPY (*see TEV for 0810170-004-AC)* + 0.45 TPY *(this permit)* = **61.28 TPY**.

IV. 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.

V. 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 at the Florida Department of Environmental Protection Air Resource Management, Southwest District 13051 North Telecom Parkway, Temple Terrace, Florida 33637-7600.

Pursuant to Section 403.087, Florida Statutes and Section 62-4.070, Florida Administrative Code, the Department hereby gives notice of its intent to issue a permit to construct the aforementioned air pollution source in accordance with the draft permit and its conditions as stipulated (see attached).