Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor
Jeff Kottkamp
Lt. Governor
Michael W. Sole
Secretary

October 29, 2008

Electronically sent – Received Receipt requested.

tomm@suwanneecement.com
Mr. Tom Messer, Plant Manager
Suwannee American Cement (SAC)
Post Office Box 410
Branford, Florida 32008

Re: DEP File No. 1210465-016-AC (PSD-FL-259G)
Alternative Fuel Materials Testing – SAC Cement Kiln
Branford, Suwannee County

Dear Mr. Messer:

On September 29, 2008, you submitted an application for an air construction permit to allow the burning of alternative fuels in the SAC kiln.

As an overall comment, the main concern involves the constituents of automobile shredder residue (ASR). Depending on the source of the automobiles from which the material is derived, ASR can contain a variety of plastics and metals capable of contributing to emissions of gaseous or particulate air toxics. The lumpy nature of the material is different than the typical fine pulverized coal, raw materials and fly ash presently used in the calciner and preheater zones.

It does not appear that the existing pyroprocessing system is designed with sufficient residence time needed to insure complete destruction of the burnable fraction of the ASR. It also does not appear possible to actually achieve 50 percent (%) of the total pyroprocessing heat input using the requested alternative fuels only in the calciner.

Pursuant to Rules 62-4.055, and 62-4.070 F.A.C., Permit Processing, the Department requests submittal of the additional information prior to processing the application. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form. Some of the questions are follow up questions from your meeting with the Department's Northeast District Office on October 22, 2008.

Heat Value and Maximum Fuel Input Rate

1. Please provide more specific details on the type of alternative fuel likely to be used. Include the origin of each fuel, percent fuel substitution for each, a schedule for firing such fuels, and a proposal to evaluate emissions of nitrogen oxides (NO_X), carbon monoxide (CO), volatile organic compounds (VOC) and sulfur dioxide (SO_2) from the continuous emissions monitoring systems (CEMS) record to demonstrate no increase in emissions above permitted levels.
2. Estimate potential emissions of criteria pollutants, hydrogen chloride (HCl), mercury (Hg) and dioxin/furan (D/F).
3. Consider whether techniques such as dust withdrawal are feasible to reduce the tendency to emit volatile and semi-volatile metals such as Hg, cadmium (Cd) and lead (Pb) to be emitted.
4. According to the application, the heat values of the fuels are stated as below.

Fuel	Heat Value	Maximum Fuel Input Rate
ASR	12 MMBtu/ton	19.1 tons/hour
Paper Byproducts	18 MMBtu/ton, dry basis	12.7 tons/hour
Sawdust/woodchips	15.8 MMBtu/ton, dry basis	14.5 tons/hour

   a. The ASR heat value is not stated as dry basis while the analytical test shows significant moisture in the material. Please clarify if the heat value of ASR is estimated on dry basis.
   b. The maximum fuels throughput rates are estimated based on dry basis. It is believed that this might not be appropriate. For instance, if the applicant intends to limit the fuel usage for "up to maximum of 50% heat input rate", the actual fuel input rate will be significantly higher than what's stated in the application, since all the proposed fuels have significant moisture content.

Fuel Mix and Throughput Rate Measurement

5. It is unclear how the facility plans to measure the fuel input rate into the kiln. From the application, it appears that the facility will try different combination/percentage of fuel mix to evaluate the effectiveness of the combustion. It is believed that the accuracy of the measurement is crucial to validate that the combustions of these fuels is not going to cause significant emissions increases for the pollutants. For instance, if the unit is permitted to burn 20% by wt of ASR when mixed with 40 % of recycled paper product and 40% of Coal, how can the Department be assured that the measurement is reasonably accurate? If there is no dependable/accurate measurement method, then the established permitted capacity in the future might be "unenforceable". The applicant shall submit a detail test protocol describing how they are going to measure the fuel mix and the input rate during the test.

Applicable Rule(s) and Regulation(s)

6. The application states that the facility will have to install equipment to temporarily or permanenetly accommodate the proposed alternative fuels. Ultimately the facility will need to address changes in emissions as well as rule applicability. Please include a rule evaluation with respect to the applicability of any of the federal solid waste rules that might apply to the facility.

Fuels Sampling and Analysis

7. Since the ASR is not a homogeneous material, the facility shall submit a detailed material sampling plan for review in order to ensure proper sampling procedure will be taken and sufficient sample will be collected to obtain reliable analysis data. Please also include the information about the source of material coming from for each sample.

8. The additional fuel analyses are needed for the following materials to further evaluate the air quality impact for the proposed project.

Material	Analysis
ASR	• Cadmium • PCB • Chromium • Chlorine content
Recycle paper byproduct	• Chlorine content

Performance Stack Testing

9. Additional stack testing is needed to further evaluate the effects for the proposed project. The facility should conduct stack test(s) using EPA test methods for the following pollutants during the trial burn of ASR and recycle paper byproduct.

   - Dioxin/Furan
   - HCl

Miscellaneous Items

10. During the October 22, 2008 meeting between SAC with the Department's Northeast District Office, the SAC representatives suggested that there are other facilities in the United States burning ASR. Please provide a list of those facilities, with specific information in relation to the purpose of each subject facility, the end products for each facility, what fuels are used, what percentage of ASR is burned, what controls are employed, what testing is performed and the results of that testing, and facility contact.

11. The SAC representatives also represented that special separating devices will be used to promote a more uniform material. Please provide detailed information as to where these special separating devices will be, how they operate, what they will separate out, their efficiency, rule applicability, controls, monitoring and means of process measurement. Please also address if there are any air pollutants emissions from the separation process.

12. The SAC representatives also represented that if allowed to perform the trial burn, that ASR will be stored in a covered area. Will fuels or raw materials be displaced from covered areas to provide cover for the ASR?

13. The SAC representatives presented that the kiln operating temperatures are 3000 degrees F. Is this the temperature throughout the kiln? If not please present the temperature distribution between the top of the preheater and the main kiln burner.

14. Facility representatives suggested that there will be a shredder on site. Please advise if this will be a re-shredder, meaning further shredding of ASR from an automobile shredder located elsewhere. Please provide information about the shedder i.e. horsepower, fuel type, feed capacity, means of feeding the shredder, and means of controlling fugitives. Please provide information concerning the point of discharge, and product flow chart through the system, including control of fugitives if needed. Please also address if there are any air pollutant emissions expected from the separation process?

15. Please describe if the facility will implement any waste separation plan to remove the materials that contain mercury, lead, cadmium polychlorinated biphenols (PCB) and any other materials that can be construed as constituents of hazardous wastes. If so, please submit the material separation plan for the Department's review.

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Please note that per Rule 62-4.055(1): *"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department..... Failure of an applicant to provide the timely requested information by the applicable date* ***shall*** *result in denial of the application."*

If you have any questions regarding this matter, please call me at 850/921-9523.

Sincerely,

A. A. Linero, Program Administrator
Special Projects Section
Bureau of Air Regulation

AAL/th

Cc: Joe Horton, SAC: jbhorton@suwanneecement.com
Greg Strong, DEP NED: greg.strong@dep.state.fl.us
Chris Kirts, DEP NED: christopher.kirts@dep.state.fl.us
Max Lee, Ph.D. P.E., K&A: mlee@kooglerassociates.com
Kathy Forney, EPA Region 4: forney.kathleen@epa.gov
Heather Abrams, EPA Region 4: abrams.heather@epa.gov

Walker, Elizabeth (AIR)

From: Linero, Alvaro
Sent: Wednesday, October 29, 2008 3:44 PM
To: Walker, Elizabeth (AIR)
Subject: FW: Delivery Status Notification (Relay)
Attachments: ATT186649.txt

Elizabeth.

At least we know the key official, Mr. Messer was actually sent the message.

-----Original Message-----
From: Exchange Administrator
Sent: Wednesday, October 29, 2008 3:41 PM
To: Linero, Alvaro
Subject: Delivery Status Notification (Relay)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

tomm@suwanneecement.com
krishnac@suwanneecement.com
natachal@suwanneecement.com

Walker, Elizabeth (AIR)

From: Linero, Alvaro
Sent: Wednesday, October 29, 2008 4:03 PM
To: Walker, Elizabeth (AIR)
Cc: Kirts, Christopher; Heron, Teresa
Subject: FW: Request for additional Information; SAC Alternative fuels Application

Elizabeth:

Below is the key acknowledgment of receipt from responsible official.

Al.

From: Messer Tom [mailto:tomm@suwanneecement.com]
Sent: Wednesday, October 29, 2008 4:01 PM
To: Linero, Alvaro
Cc: Horton Joe; Kirts, Christopher; Strong, Greg; Cole Krishna; Abrams.Heather@epamail.epa.gov; forney.kathleen@epa.gov; mlee@kooglerassociates.com; Lago Natacha; Martini Celso
Subject: RE: Request for additional Information; SAC Alternative fuels Application

Mr. Linero,

We will work to have the additional information and clarifications to you by weeks end.

Best Regards',

Tom Messer

Plant Manager
Suwannee American Cement
5117 U.S. Hwy. 27
P.O. Box 410
Branford, Fl 32008
Phone (386) 935-5017
Fax (386) 935-5080

From: Linero, Alvaro [mailto:Alvaro.Linero@dep.state.fl.us]
Sent: Wednesday, October 29, 2008 3:40 PM
To: Messer Tom
Cc: Horton Joe; Kirts, Christopher; Strong, Greg; Cole Krishna; Abrams.Heather@epamail.epa.gov; forney.kathleen@epa.gov; mlee@kooglerassociates.com; Lago Natacha; Martini Celso
Subject: Request for additional Information; SAC Alternative fuels Application

Dear Sir/ Madam:

Attached is the a request for additional information related to the referenced project. Please send a "reply" message verifying receipt of the documents by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to open the document. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Thank you.

A. A. Linero, Program Administrator

850-921-9523

Walker, Elizabeth (AIR)

From: Linero, Alvaro
Sent: Wednesday, October 29, 2008 3:40 PM
To: 'tomm@suwanneecement.com'
Cc: 'Horton Joe'; Kirts, Christopher; Strong, Greg; 'Cole Krishna'; 'Abrams.Heather@epamail.epa.gov'; 'forney.kathleen@epa.gov'; 'mlee@kooglerassociates.com'; Lago Natacha; 'celsom@vcsmc.com'
Subject: Request for additional Information; SAC Alternative fuels Application
Attachments: 016AC_259G_INC.pdf

Dear Sir/ Madam:

Attached is the a request for additional information related to the referenced project. Please send a "reply" message verifying receipt of the documents by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to open the document. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Thank you.

A. A. Linero, Program Administrator

850-921-9523

SUWANNEE AMERICAN CEMENT (SAC) APPLICATION TO TRIAL TEST ALTERNATIVE FUEL MATERIALS IN CEMENT KILN

Public Involvement

1. The Department has learned that SAC has briefed the public about the project. Please explain how the facility makes the information available to the public. For instance, if the facility has conducted a public meeting, please provide the information such as date, time, location and agenda (if any) of the public meeting. Please also describe which parties are briefed (local community, environmental group and ect.) and submit all the public comments received since the project information is made available to the public.

Heat Value and Maximum Fuel Input Rate

2. According to the application, the heat values of the fuels are stated as below.

Fuel	Heat Value	Maximum Fuel Input Rate
Autofluff	12 MMBtu/ton	19.1 tons/hour
Paper Byproducts	18 MMBtu/ton, dry basis	12.7 tons/hour
Sawdust/woodchip	15.8 MMBtu/ton, dry basis	14.5 tons/hour

   a. The autofluff heat value is not stated as dry basis while the analytical test shows significant moisture in the material. Please clarify if the heat value of autofluff is estimated on dry basis.
   b. The maximum fuels throughput rates are estimated based on dry basis. It is believed that this might not be appropriate. For instance, if the applicant intents to limit the fuel usage for "up to maximum of 50% heat input rate", the actual fuel input rate will be significantly higher than what's stated in the application, since all the proposed fuels have significant moisture content.

Fuel Mix and Throughput Rate Measurement

3. It is unclear how the facility plans to measure the fuel input rate into the kiln. From the application, it appears that the facility will try different combination/percentage of fuel mix to evaluate the effectiveness of the combustion. It is believed that the accuracy of the measurement is crucial to validate that the combustions of these fuels is not going to cause significant emissions increases for the pollutants. For instance, if the unit is permitted to burn 20% by wt of autofluff when mix with 40 % of recycled paper product and 40 % of Coal, how can the Department be assured that the measurement is reasonably accurate? If there is no dependable/accurate

measurement method, then the established permitted capacity in the future might be "unenforceable". The applicant shall submit a detail test protocol describing how they are going to measure the fuel mix and the input rate during the test.

Applicable Rule (s) and Regulation (s)

4. The NSPS definition of modification states that if an existing facility was designed to accommodate the alternative fuel or raw material or use prior to the date any standard becomes applicable to a given source type, it is not considered a modification by itself. The application states that the facility will have to install equipment to accommodate the proposed alternative fuels. It appears that the facility shall address potential emissions from the proposed project as well as rule applicability. Furthermore, the cement kiln might be classified as wastes incinerators for the combustions of the proposed materials, and subject to EPA rules and requirements for wastes incinerator. The applicants shall evaluate the rules applicability and submit to the Department for review.

Fuels Sampling and Analysis

5. It is believed that additional fuel analyses are needed for the following materials to further evaluate the air quality impact for the proposed project.

Material	Analysis
Autofluff	• Cadmium • PCB • Chromium • Chlorine content
Recycle paper byproduct	• Chlorine content

6. Since the automobile fluff is not a homogeneous material, the facility shall submit a detail material sampling plan for review in order to ensure proper sampling procedure will be taken and sufficient sample will be collected to obtain reliable analysis data. Please also include the information about the source of material coming from for each sample.

Performance Stack Testing

7. It is believed that additional stack testing is needed to further evaluate the air quality impact for the proposed project. The facility shall conduct stack test (s) using EPA test method for the following pollutants during the trial burn of automobile fluff and recycle paper byproduct.
   - Dioxin/Furan
   - HCL

Miscellaneous Items

8. During the October 22, 2008 meeting between SAC with Northeast District Department of Environmental Protection, the SAC representatives implied that there are other facilities in the United States burning Auto Fluff. Please provide a list of those facilities, with specific information in relation to the purpose of each subject facility, the end products for each facility, what fuels are used, what percentage of Auto Fluff is burned, what controls are employed, what testing is performed and the results of that testing, and facility contact.

9. The SAC representatives also presented that special separating devices will be used to promote a more uniform material. Please provide detailed information as to where these special separating devices will be, how they operate, what they will separate out, their efficiency, rule applicability, controls, monitoring and means of process measurement. Please also address if there is any air pollutants emissions from the separation process.

10. The SAC representatives also presented that if allowed to perform the trial burn, that Automobile Fluff will be stored in a covered area. Will fuels or raw materials be displaced from covered areas to provide cover for the "Fluff"?

11. The SAC representatives presented that the kiln operating temperatures are 3000 degrees. Is this the temperature throughout the kiln? If not please present the temperature distribution within the kiln.

12. Facility representatives presented that there will be a shredder on site. Please provide information about the shedder i.e. horsepower, fuel type, feed capacity, means of feeding the shredder, and means of controlling fugitives. Please provide information concerning the point of discharge, and product flow chart through the system, including control of fugitives if needed. Please also address if there is any air pollutants emission from the separation process?

13. Please describe if the facility will implement any waste separation plan to remove the materials that contain mercury, lead, PCB and any other hazardous materials as much as possible. If so, please submit the material separation plan for the Department's review.