KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES
4014 NW 13th STREET
GAINESVILLE, FL 32609-1923
352/377-5822 • FAX/377-7158

KA 624-08-04
September 26, 2008

Mrs. Trina Vielhauer, Bureau Chief
Bureau of Air Regulation
Florida Dept. of Environmental Regulation
2600 Blair Stone Road, MS 5500
Tallahassee, Florida 32399-2400

RE: AC Permit Application to Trial Test Alternative Fuel Materials in Kiln
Suwannee American Cement; Branford Cement Plant, Facility ID: 1210465

Dear Mrs. Vielhauer:

Enclosed please find four (4) copies of an air construction (AC) permit application for Suwannee American Cement, Branford Cement Plant. The AC permit application is to request authorization to test alternative fuel materials in the Cement Kiln.

Please feel free to contact me at (352) 377-5822 or mlee@koooglerassociates.com or Krishna Cole, Suwannee American Cement at (386) 935-5023 or krishnaC@suwanneecement.com, if you have any questions regarding this submittal.

Regards,

Max Lee, PhD., P.E.
Senior Engineer
KOOGLER AND ASSOCIATES, INC.

Enclosure: Application Form

cc: Krishna Cole, Suwannee American Cement

Department of Environmental Protection

Division of Air Resource Management

RECEIVED
SEP 29 2008
BUREAU OF AIR REGULATION

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **Suwannee American Cement, LLC**	
2. Site Name: **Branford Cement Plant**	
3. Facility Identification Number: **1210465**	
4. Facility Location... Street Address or Other Locator: **5117 US Hwy 27, near intersection of CR 49** City: **Branford** County: **Suwannee** Zip Code: **32008**	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Max Lee, PhD, PE**
2. Application Contact Mailing Address... Organization/Firm: **Koogler and Associates, Inc.** Street Address: **4014 NW 13th Street** City: **Gainesville** State: **Florida** Zip Code: **32609**
3. Application Contact Telephone Numbers... Telephone: **(352) 377-5822** ext.**13** Fax: **(352) 377-7158**
4. Application Contact E-mail Address: **mlee@kooglerassociates.com**

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 9/29/08	3. PSD Number (if applicable):
2. Project Number(s): 1210465-016-AC	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- [X] Air construction permit.
- [ ] Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- [ ] Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- [ ] Initial Title V air operation permit.
- [ ] Title V air operation permit revision.
- [ ] Title V air operation permit renewal.
- [ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- [ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- [ ] Air construction permit and Title V permit +revision, incorporating the proposed project.
- [ ] Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- [ ] I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

Application is for a maximum of one hundred eighty (180) days of operational testing within a 12 month trial period to test alternative fuel materials in the Cement Kiln. Attachment A includes a list of and a description of the alternate fuel materials to be used. Condition C.2 and C.3 is requested to be revised through this construction permit to allow this trial period. The purpose of these tests is to generate sufficient data to substantiate a subsequent application for use of this material as a fuel.

SAC does not expect an increase in emissions due to the use of these groups of alternate materials as a fuel. However, SAC will monitor emissions and conduct stack testing (refer to Attachment A for details) during the use of each material to determine their effect on emissions.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
004	In-Line Kiln/Raw Mill	N/A	N/A

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
   Mr. Tom Messer, Plant Manager
2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Suwannee American Cement, LLC**
   Street Address: **5117 US Hwy 27**
   City: **Branford** State: **Florida** Zip Code: **32008**
3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(386) 935 –5000** ext. Fax: **(386) 935 -5080**
4. Owner/Authorized Representative E-mail Address: **tomm@suwanneecement.com**
5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.

   Signature

   9·25·08
   Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

   ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

   ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   ☐ The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.

3. Application Responsible Official Mailing Address...
   Organization/Firm:
   Street Address:
   City: State: Zip Code:

4. Application Responsible Official Telephone Numbers...
   Telephone: ( ) - ext. Fax: ( ) -

5. Application Responsible Official E-mail Address:

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

   Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Max Lee, PhD PE**
   Registration Number: **58091**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Koogler and Associates, Inc.**
   Street Address: **4014 NW 13th Street**
   City: **Gainesville** State: **Florida** Zip Code: **32609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 377-5822** ext.**13** Fax: **(352) 377-7158**
4. Professional Engineer E-mail Address: **mlee@kooglerassociates.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 9/26/08 Date

(seal)

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **321.40** North (km) **3315.9**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **29/57/45** Longitude (DD/MM/SS) **82/51/03**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **32**	6. Facility SIC(s): **3241**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Krishna Cole, Environmental Engineer**
2. Facility Contact Mailing Address Organization/Firm: **Suwannee American Cement, LLC** Street Address: **P.O. Box 410** City: **Branford** State: **FL** Zip Code: **32008**
3. Facility Contact Telephone Numbers: Telephone: **(386) 935-5023** ext. Fax: **(386) 935-5080**
4. Facility Contact E-mail Address: **krishnac@suwaneecement.com**

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official E-mail Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	

12. Facility Regulatory Classifications Comment:

The SAC Branford Cement Plant, is subject to 40 CFR 60, Subpart F: Standards of Performance for Portland Cement Plants (superceded by 40 CFR 63, Subpart LLL); 40 CFR 60, Subpart Y: Standards of Performance for Coal Preparation Plants; 40 CFR 60, Subpart OOO: Standards of Performance for Nonmetallic Mineral Processing Plants; 40 CFR 63, Subpart LLL: National Emission Standards for Hazardous Air Pollutants from Portland Cement Industry.

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Particulate Matter – PM	**A**	**N**
Particulate Matter – PM_{10}	**A**	**N**
SO_2	**A**	**N**
NO_x	**A**	**N**
CO	**A**	**N**
VOC	**B**	**N**
SAM	**B**	**N**
H114 (Mercury)	**C**	**N**
PB	**C**	**N**
DIOX (Dioxins/Furans)	**C**	**N**
HAPs – Total	**A**	**N**
H106 (hydrochloric acid)	**A**	**N**

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps N/A

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: 2005 **-006-AV**
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: 2005 **-006-AV**
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) ☐ Attached, Document ID:_____ ☒ Previously Submitted, Date: 2005 **-006-AV**

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: ☐ Attached, Document ID:_____ ☒ Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): ☒ Attached, Document ID: **1**
3. Rule Applicability Analysis: ☒ Attached, Document ID: **1**
4. List of Exempt Emissions Units: ☐ Attached, Document ID:_____ ☒ Not Applicable
5. Fugitive Emissions Identification: ☐ Attached, Document ID:_____ ☒ Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): ☐ Attached, Document ID:_____ ☒ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications N/A

1. List of Exempt Emissions Units:
   ☐ Attached, Document ID:_____ ☐ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications N/A

1. List of Insignificant Activities: (Required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable (revision application)

2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
   ☐ Attached, Document ID:_____
   ☐ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
   ☐ Attached, Document ID:_____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities Onsite but Not Required to be Individually Listed
   ☐ Not Applicable

5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☐ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:

   Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable (not an Acid Rain source)

   Phase II NO_X Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable (not a CAIR source)

3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)):
   ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____
   ☒ Not Applicable (not a Hg Budget unit)

Additional Requirements Comment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **In-Line Kiln/Raw Mill**

3. Emissions Unit Identification Number: **004**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: **32**
A		2/17/2003	

8. Federal Program Applicability: (Check all that apply) **N/A**

☐ Acid Rain Unit

☐ CAIR Unit

☐ Hg Budget Unit

9. Package Unit:
Manufacturer: **Polysius** Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description: **Baghouse – High Temperature**
2. Control Device or Method Code: **016**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **210 TPH (1-hr) dry preheater feed rate, 1,684,578 tons/consecutive 12-mo.**	
2. Maximum Production Rate: **120 TPH (1-hr) clinker; 965,425 tons/consecutive 12-mo.**	
3. Maximum Heat Input Rate: million Btu/hr **458 (24-hr)**	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Kiln**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **315** feet	7. Exit Diameter: **9.42** feet
8. Exit Temperature: **205°F (mill operating)**	9. Actual Volumetric Flow Rate: **194,000 acfm (mill operating)**	10. Water Vapor: **6.5 %**
11. Maximum Dry Standard Flow Rate: **144,000 dscfm**	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **Common baghouse for raw mill and kiln**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 8

1. Segment Description (Process/Fuel Type): **Industrial Processes; Mineral Products; Cement Manufacturing (Dry Process); Preheater Kiln**		
2. Source Classification Code (SCC): **3-05-006-23**	3. SCC Units: **Tons Clinker**	
4. Maximum Hourly Rate: **120**	5. Maximum Annual Rate: **965,425**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

Segment Description and Rate: Segment 2 of 8

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; Bituminous Coal; Cement Kiln/Dryer – Kiln and Precalciner**		
2. Source Classification Code (SCC): **3-90-002-01**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **17.6**	5. Maximum Annual Rate: **154,310**	6. Estimated Annual Activity Factor:
7. ~~Maximum~~ Typical % Sulfur: **0.7**	8. ~~Maximum~~ Typical % Ash: **7.9**	9. Million Btu per SCC Unit: **26**
10. Segment Comment: **Hourly rate based 458 mmbtu/hr @ 26 mmbtu/ton. Annual rate based on the hourly rate and 8,760 hr/yr. Typical % sulfur, % ash, and MMBtu/ton burned based on typical fuel analysis data.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 3 of 8

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; Natural Gas; Cement Kiln/Dryer – Kiln and Precalciner**		
2. Source Classification Code (SCC): **3-90-006-02**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.436**	5. Maximum Annual Rate: **3,821.0**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **negligible**	8. Maximum % Ash: **negligible**	9. Million Btu per SCC Unit: **1,050**
10. Segment Comment: **Hourly rate based on 458 mmbtu/hr @ 1,050 mmbtu/mmcf.**		

Segment Description and Rate: Segment 4 of 8

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; Coke – Petroleum Coke in Kiln and Precalciner**		
2. Source Classification Code (SCC): **3-90-008-99**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **16.96**	5. Maximum Annual Rate: **148,596**	6. Estimated Annual Activity Factor:
7. ~~Maximum~~ Typical % Sulfur: **0.5 – 1.0**	8. ~~Maximum~~ Typical % Ash: **0.5 – 5.0**	9. Million Btu per SCC Unit: **27**
10. Segment Comment: **Hourly rate based 458 mmbtu/hr @ 28 mmbtu/ton. Annual rate based on the hourly rate and 8,760 hr/yr. Typical % sulfur, % ash. burned based on AP-42 Appendix A. MMBtu/ton based on in-house periodic analyses.**		

Segment Description and Rate: Segment **5** of **8**

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; Natural Gas; Raw Mill**		
2. Source Classification Code (SCC): **3-99-900-03**	3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.03**	5. Maximum Annual Rate: **266.97**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **negligible**	8. Maximum % Ash: **negligible**	9. Million Btu per SCC Unit: **1,050**
10. Segment Comment: **Hourly rate based on 32 mmbtu/hr @ 1,050 mmbtu/mmcf.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

EMISSIONS UNIT INFORMATION
Section [1] of [1] **In-Line Kiln/Raw Mill**
NEW SEGMENT-GROUP 1

Segment Description and Rate: Segment 6 of 8

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; "Automobile Fluff" – in Kiln and Precalciner**		
2. Source Classification Code (SCC): **3-90-012-99**	3. SCC Units: **tons**	
4. Maximum Hourly Rate: **19.1**	5. Maximum Annual Rate: **82,512**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **See Attachment B**	8. Maximum % Ash: **See Attachment B**	9. Million Btu per SCC Unit: **12**
10. Segment Comment: **Maximum Hourly Rate based on a maximum of 50% heat input replacement. Heat content of 12 mmbtu/ton based on recent samples analyses. 458 mmbtu/hr x 50% = 229 mbtu/hr, 229 mmbtu/hr / 12 mmbtu/ton = 19.1 tons/hr.**		

Segment Description and Rate: Segment 7 of 8

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; "Recycled Paper Byproducts" – in Kiln and Precalciner**		
2. Source Classification Code (SCC): **3-90-012-99**	3. SCC Units: **tons**	
4. Maximum Hourly Rate: **12.7**	5. Maximum Annual Rate: **54,864**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **18**
10. Segment Comment: **Maximum Hourly Rate based on a maximum of 50% heat input replacement. Heat content of 18 mmbtu/ton dry basis based on recent samples analyses. At 458 mmbtu/hr x 50% = 229 mbtu/hr, 229 mmbtu/hr / 18 mmbtu/ton = 12.7 tons.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

EMISSIONS UNIT INFORMATION
Section [1] of [1] **In-Line Kiln/Raw Mill**
NEW SEGMENT-GROUP 1

Segment Description and Rate: Segment **8** of **8**

1. Segment Description (Process/Fuel Type): **Industrial Processes; In-Process Fuel Use; "Sawdust and Wood Chips" – in Kiln and Precalciner**		
2. Source Classification Code (SCC): **3-90-012-99**	3. SCC Units: **tons**	
4. Maximum Hourly Rate: **14.5**	5. Maximum Annual Rate: **62,640**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **15.8**
10. Segment Comment: **Maximum Hourly Rate based on a maximum of 50% heat input replacement. Heat content of 15.8 mmbtu/ton dry basis based on recent samples analyses. 458 mmbtu/hr x 50% = 229 mbtu/hr, 229 mmbtu/hr / 15.8 mmbtu/ton = 14.5 tons.**		

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **April 2005**

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **Att. B** ☐ Previously Submitted, Date

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **April 2005**

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____
   ☒ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **April 2005**
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications N/A

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☐ Not Applicable

Additional Requirements Comment

ATTACHMENT A

DESCRIPTION OF PROPOSED PROJECT

ATTACHMENT A

DESCRIPTION OF PROPOSED PROJECT

Suwannee American Cement (SAC) operates a Cement Plant located in Branford, Florida. The cement plant consists of a dry-process kiln with preheater, precalciner, and clinker cooler capable of producing up to 965,425 tons per year of clinker. The cement kiln is permitted to utilize coal, natural gas, and petroleum coke as fuels. SAC is requesting a 12-month period to evaluate the materials listed in this attachment as alternative fuels for the kiln. The purpose of these tests is to generate sufficient data to substantiate a subsequent application for use of this material as a fuel. SAC requests to test trial these materials in different mixtures with currently allowed "conventional" fuels to replace up to 50% of the required heat input. The time period and range of the amount of material is requested to provide time to evaluate each step in this process: to import store, handle/mix due to the unique nature of these materials. The materials will be fed into a weigh hopper and blown into the pyro-processing system via an existing injection system. During the trial period, SAC will determine the amount of material that will be needed to obtain the desired kiln fuel mix with the various allowed conventional fuels.

The materials will be transported to the facility by truck and will be stored under cover at the plant site which is currently controlled for PM emissions by water spray. During testing, if the material is determined to need further size reduction to be compatible with the injection system, a temporary 20 ton/hr low speed shredder will be used. Prepared material will be transported into a temporary weigh hopper, which will feed the material at a controlled rate to an existing injection system. All equipment for this test is temporary. All equipment deemed necessary for continuous operation, based on successful test results, will be made part of a subsequent application.

Location of trial site and basic equipment information is available in Attachment D.

TEST MATERIALS

Fluff

Fluff, also commonly known as "Shredder Residue", is a byproduct of the metal recycling process and is a mixture of non-ferrous materials including plastics, foam, textiles, rubber, and glass that comes from shredded consumer products (primarily scrap automobiles). After shredding, approximately 96 to 98% of all metals are removed for recycling, and the material that is left over (fluff) is uploaded to trucks for transport, and is disposed of at a landfill.

While fluff is considered a byproduct, it contains material of significant heating value. The heat content has been determined to be approximately 50% of coal (6,000 btu/lb). Thus, the efficient thermal incineration of a cement kiln can provide an alternative use of both the material heat content and a disposal method by incorporation into cement product. It is a fact that in the United States, approximately five million tons of fluff is landfilled annually. Thus, use of fluff in cement production will provide a reduction of fossil fuel usage and will eliminate a substantial amount of landfilled waste. As well, the use of this material for fuel will effectively reduce greenhouse gas emissions due to the reduced transport and use of fossil fuels.

Further material analysis is provided in Attachment B.

Recycled Paper Byproducts

The recycled paper byproducts (RPB) is a byproduct of the paper recycling process. RPB is a mixture of paper, cardboard, and plastics removed from the recycling process. This material has sixty five (65) percent moisture content, but has very high energy content of approximately 9,000 btu/lb on a dry basis. However, this material is also currently landfilled

Sawdust and Wood Chips

Sawdust and wood chips are a byproduct of saw mills and the pulp and paper industry. This material primarily comes from the debarking part of the process, and is made up of a mix of various sized particles of wood and wood fibers.

FUEL ANALYSIS & SAMPLING

Grab samples of processed material will be collected daily to make a weekly composite for analysis. Weekly analysis of the samples will at a minimum consist of the following:

- Calorific Value [Btu/lb]
- Volatiles [%]
- Ash [%]
- Sulfur [%]
- Moisture [%]

Due to the nature of some of this material the samples may have to be sent to external laboratories for analysis. This means that results may not be available for up to several weeks after samples were taken.

EMISSIONS MONITORING & RECORDKEEPING

As per Title V Operation Permit No. 1210465-006-AV and SAC will monitor emissions using the Continuous Emissions Monitoring Systems (CEMS) for the following pollutants.

- SO_2 – CEMS
- NO_x – CEMS
- CO – Process Monitors
- VOC (THC) – CEMS
- Opacity - COMS
- Mercury – SAC will collect daily grab samples of all raw materials and fuel inputs for any month a new fuel is tested for preparation of a monthly composite sample. The analysis and material usage will be used to determine the amount of mercury input to the system by material balance. All mercury inputs are assumed to be emitted.

SAC will conduct performance testing for the following pollutants during the trial period to determine the effect of new materials on emissions.

- PM/PM_{10} – EPA Method 5 or 201/201A
- Lead – EPA Method 29
- Sulfuric Acid Mist – EPA Method 8
- Carbon Monoxide (CO) – EPA Method 10

The following minimum records will be obtained for each test:

- Fuel Analysis Results (as required above)
- Emissions Monitoring Results (as required above)
- Average Fuel Feed Rates [tons/hour]
- Average Kiln Feed Rates [tons/hour]
- Average Clinker Production [tons/hour]
- Total Fuel Consumption [tons]

NOTE: Materials will be tested separately before any material blends will be tested.

ADDITIONAL INFORMATION

There will not be any change in kiln production rate as a result of this project. It is not expected that emission rates will increase due to the use of these materials as a fuel in the kiln. A brief explanation regarding specific emissions control is given below:

Carbon Monoxide Emissions

CO emissions are not expected to increase since they can be controlled. In order to control CO emissions, SAC will closely monitor the combustion of all alternate fuels to ensure there is no partial combustion of the alternate fuels which could create constituents of partial combustion such as CO emissions. The SAC preheater/calciner is designed for the use of alternate fuels with reduced volatile content and large partial sizing by having the addition of a separate calciner chamber. This separate calciner chamber is referred to as a Combustion Chamber (see Image 1 below). This Combustion Chamber allows for the introduction of alternate fuels along with kiln feed, tertiary air (ambient air/combustion air) and mixing with other fuels (fine coal) to insure proper ignition with retention in a high temperature atmosphere to initiate combustion of the alternate fuel.

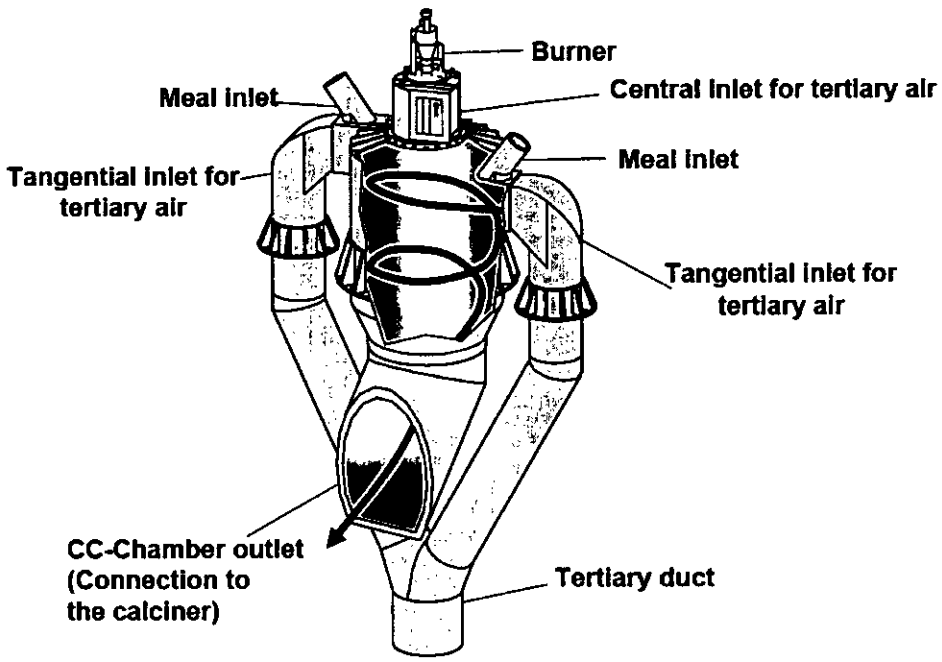

Image 1: Calciner Combustion Chamber

In addition the preheater is designed to extend retention time to provide long residence time at high temperatures to complete the combustion process. In addition, SAC will closely monitor the volatile content and particle sizing of the alternate fuels along with the combustion characteristics of the preheater/calciner to insure proper combustion of all fuel. Currently SAC operates with an oxygen rich combustion environment through the calciner and preheater assisting in the combustion process. In addition to this SAC monitors CO with process monitors in various stages of the preheater (CO Process Monitor at Kiln Inlet and 3rd Stage) and exit of the preheater (CO Process Monitor at ID Fan) to insure proper combustion. SAC will control the proper combustion through process controls such as changes in the location of the introduction of tertiary air, increase process draft and oxygen content through the process, changes in fine coal feed rates into the Combustion Chamber and/or changes in the kiln feed rates.

Through testing and monitoring of the alternate fuel prior to introduction and with combustion characteristics monitoring and process adjustments, SAC will be able to ensure proper and complete combustion of the alternate fuel with no generation of constituents of partial combustion such as CO.

NOx Emissions

Nitrogen Oxide (NOx) emissions are not expected to change since they can be controlled by adjustments to the multistage combustion system timing, fuel input rates, and the selective non-catalytic reduction (SNCR) system.

Dioxin/Furans Emissions

Emission of dioxin/furans (D/F) are not expected to change when using these fuels due to formation of D/F is a function of the exhaust gas residence time when at a temperature range of 700 to 400 °F which is independent of the fuel type.

Therefore, it is not expected that emission rates will increase due to the use of these materials as a fuel in the kiln. It is expected that by substituting the fossil fuels (maximum 50% total heat input substitution) that are currently used as kiln fuel with an alternative fuels a beneficial result

will be a greenhouse gas emissions reduction. In addition, use of the proposed materials provides a method to constructively utilize a material that would otherwise be sent to a landfill. During the trial, SAC will monitor emissions and conduct stack tests as stated above to verify the expected effect on emissions. Therefore, emission calculations have not been submitted with this application and this project is not subject to PSD review. Following completion of the trials and all testing results have been recorded and reported, PSD applicability will be reviewed for each material.

ATTACHMENT B

FLUFF MATERIAL ANALYSIS

W. Z. BAUMGARTNER & ASSOCIATES, INC.

ENVIRONMENTAL ENGINEERS AND CONSULTANTS

P.O. BOX 680369 • FRANKLIN, TN 37068-0369
1113 MURFREESBORO RD., SUITE 310 • FRANKLIN, TN 37064
615-595-0025 • FAX 615-595-1595

LETTER OF TRANSMITTAL

TO: [redacted]	DATE June 23, 2008
	PROJECT NO. 99032
	RE: Shredder Residue Monitoring

WE ARE SENDING YOU: ☒ Attached ☐ Previously faxed ☐ Under separate cover
VIA: ☐ Overnight ☐ 2nd Day ☒ Regular

THE FOLLOWING ITEMS: ☒ Exhibits ☐ Shop Drawings ☐ Permit Applications
☐ Report ☐ Survey ☐ Change Order
☐ Plans ☐ Specifications ☐ Other

COPIES	DATE	PGS.	DESCRIPTION
1	06/11/08		Exhibit No. 1: TCLP Metals Analysis - Concentration
1	06/11/08		Exhibit No. 2: Constituent Analysis
1	06/11/08		Exhibit No. 3: TCLP Metals Analysis - Individual Samples
1	06/11/08		Chain of Custody

THESE ARE TRANSMITTED as checked below:
☐ For approval ☐ Approved as submitted ☐ Resubmit ____ copies for approval
☒ For your use ☐ Approved as noted ☐ Submit ____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return ____ corrected prints
☐ For review and comment ☐ _____

REMARKS:

COPY TO:

SIGNED: _____
W. Z. Baumgartner Jr., P.E.
President

If enclosures are not as noted, kindly notify us at once.

p

EXHIBIT NO. 1

[redacted]

SUMMARY OF ANALYTICAL DATA
SHREDDER RESIDUE MONITORING
TOXICITY CHARACTERISTIC LEACHING PROCEDURE

JUNE 11, 2008

PARAMETER	CONCENTRATION	EPA LIMIT
TCLP METALS (mg/l)[1]		
Arsenic	<0.10	5.0
Barium	0.804	100.0
Cadmium	0.251	1.0
Chromium (T)	<0.050	5.0
Lead	2.763	5.0
Mercury	<0.010	0.2
Selenium	0.111	1.0
Silver	<0.10	5.0

[1]EPA Method 1311; Analysis according to *SW 846*

W. Z. BAUMGARTNER & ASSOCIATES, INC.
Environmental Engineers & Consultants
P. O. Box 680369
Franklin, TN 37068-0369

p/99032

WZB

EXHIBIT NO. 2

[redacted]

SUMMARY OF ANALYTICAL DATA
SHREDDER RESIDUE MONITORING
CONSTITUENT ANALYSIS (mg/Kg)

JUNE 11, 2008

COMPOSITE # 1,5,9 (81891)	PCB	EPA LIMIT
Wet Weight Concentration	4.97	NA
% Moisture	43.6	NA
Dry Weight Concentration [1]	8.81	50.0

[1] As required by EPA
N.S. - No Standard

W. Z. BAUMGARTNER & ASSOCIATES, INC.
Environmental Engineers & Consultants
P. O. Box 680369
Franklin, TN 37068-0369

p/99032

WZB

EXHIBIT NO. 3

[redacted]

SUMMARY OF ANALYTICAL DATA
SHREDDER RESIDUE MONITORING
TOXICITY CHARACTERISTIC LEACHING PROCEDURE

JUNE 11, 2008

PARAMETER	GS - 5 (83014)	GS - 6 (83015)	GS - 7 (83016)	CONCEN-TRATION	EPA LIMIT
TCLP METALS (mg/L)[1]					
Arsenic	<0.10	---	---	<0.10	5.0
Barium	0.804	---	---	0.804	100.0
Cadmium	0.393	0.168	0.192	0.251	1.0
Chromium, Total	<0.050	---	---	<0.050	5.0
Lead	3.70	2.34	2.25	2.763	5.0
Mercury	<0.010	---	---	<0.010	0.2
Selenium	0.111	---	---	0.111	1.0
Silver	<0.10	---	---	<0.10	5.0

[1]EPA Method 1311; Analysis according to *SW 846*

W. Z. BAUMGARTNER & ASSOCIATES, INC.
Environmental Engineers & Consultants
P.O. Box 680369
Franklin, TN 37068-0369

p/99032

WZB

CHAIN OF CUSTODY

Page 1 of 1

Project No. 99054

GENERATOR: [redacted]

ADDRESS: [redacted]

CITY: [redacted] **STATE:** [redacted] **ZIP.** [redacted]

SAMPLE POINT: Shredder Dewatering Pics

SAMPLER'S NAME: [redacted] (PRINT) [redacted] (SIGN)

COMPANY NAME: [redacted]

PART II - Sample Information

Sample Matrix Codes

DW	Drinking Water	OL	Oil
WW	Wastewater	SL	Sludge
GW	Groundwater	SO	Soil
SW	Stormwater	SR	Shredder Residue
SU	Surface Water	EC	Eddy Current

Sample I.D.	Date	Time	Matrix	Comp.	Grab	Requested Analysis: TCLP - Arsenic	TCLP - Barium	TCLP - Cd	TCLP - Cr	TCLP - Pb	TCLP - Hg	TCLP - Selenium	TCLP - Silver	PCB	% Moisture	Total No. of Containers
JAX S1	6-10-08	10:00	SR		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S2	6-10-08	10:30	SR		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S3	6-10-08	11:00	SR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S4	6-11-08	10:00	SR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S5	6-11-08	10:30	SR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S6	6-11-08	10:45	SR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S7	6-11-08	11:00	SR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S8	6-12-08	10:00	SR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S9	6-12-08	10:15	SR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX S10	6-12-08	10:30	SR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
JAX A	6-12-08	11:00	SR		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1

PART III - Chain of Custody

	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
1	[signature]	6/12/08	1540hrs	
2				
3				
4				

Received for Laboratory By: (Signature) [signature] 6/13/08 10:45

Custody Seals Intact: ☑ Yes ☐ No **Temperature: (°C)**

EXHIBIT NO. 1

[redacted]

SUMMARY OF ANALYTICAL DATA
SHREDDER RESIDUE MONITORING
TOXICITY CHARACTERISTIC LEACHING PROCEDURE

JANUARY 25, 2008

PARAMETER	CONCENTRATION	EPA LIMIT
TCLP METALS (mg/l)[1]		
Arsenic	<0.10	5.0
Barium	1.10	100.0
Cadmium	0.326	1.0
Chromium (T)	<0.050	5.0
Lead	2.163	5.0
Mercury	<0.010	0.2
Selenium	0.111	1.0
Silver	<0.10	5.0

[1]EPA Method 1311; Analysis according to *SW 846*

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p/99032

WZB

EXHIBIT NO. 2

[redacted]

SUMMARY OF ANALYTICAL DATA
SHREDDER RESIDUE MONITORING
CONSTITUENT ANALYSIS (mg/Kg)

JANUARY 25, 2008

COMPOSITE # 1,5,9 (81891)	PCB	EPA LIMIT
Wet Weight Concentration	6.46	NA
% Moisture	59.9	NA
Dry Weight Concentration [1]	10.79	50.0

[1] As required by EPA
N.S. - No Standard

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p/99032

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EXHIBIT NO. 3

[redacted]

SUMMARY OF ANALYTICAL DATA
SHREDDER RESIDUE MONITORING
TOXICITY CHARACTERISTIC LEACHING PROCEDURE

JANUARY 25, 2008

PARAMETER	GS - 1 (81888)	GS - 5 (81889)	GS - 9 (81890)	CONCEN-TRATION	EPA LIMIT
TCLP METALS (mg/L)[1]					
Arsenic	<0.10	—	—	<0.10	5.0
Barium	1.10	—	—	1.10	100.0
Cadmium	0.305	0.341	0.331	0.326	1.0
Chromium, Total	<0.050	—	—	<0.050	5.0
Lead	1.80	3.18	1.51	2.163	5.0
Mercury	<0.010	—	—	<0.010	0.2
Selenium	0.111	—	—	0.111	1.0
Silver	<0.10	—	—	<0.10	5.0

[1]EPA Method 1311; Analysis according to *SW 846*

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p/99032

WZB

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CHAIN OF CUSTODY

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E-MAIL: WZB1@AOL.COM

Page ____ of ____

PART I - Client: [redacted]

Proj. No: [redacted] City: [redacted] ST: [redacted] Sampling Point: Eddy current residue bed

PART II - Container Information

Code	Preservative A	B	C	D	E	F	Plastic Containers 1	2	3	4	5	6	7	Glass Containers 8	9	10	11	12	13	14	Notes
Quantity of Sample Containers Shipped	H_2SO_4	HNO_3	HCl	$Na_2S_2O_3$	NaOH	Unpreserved	125 ml HDPE	250 ml HDPE	500 ml HDPE	1l HDPE	1gal HDPE	Poly Bag	5 gal. Bucket	40-ml Vial	4 oz Jar	8 oz Jar	16 oz Jar	1l Clear	1l Amber	Trip Blank	
10						✓						✓									

Preservative added: ☐ By Contract Laboratory ☐ By WZB Laboratory ☐ In Field

PART III - Sample Information

Sample Matrix Codes

DW	Drinking Water	OI	Oil
WW	Wastewater	SL	Sludge
GW	Groundwater	SO	Soil
SW	Stormwater	SR	Shredder Residue
SU	Surface Water	EC	Eddy Current

Sample I.D.	Date	Time	Matrix	Comp.	Grab	Preserv./Container Code	Requested Analysis	Total No. of Containers
1	1/25/08	0930	EC	✓		1		1
2	"	0940	"	✓		1		1
3	"	0950	"	✓		1		1
4	"	1000	"	✓		1		1
5	"	1010	"	✓		1		1
6	"	1020	"	✓		1		1
7	"	1030	"	✓		1		1
8	"	1040	"	✓		1		1
9	"	1115	"	✓		1		1
10	1/25/08	1125	EC	✓		1		1

Sampler's Name (Print): W.C. Barron II

PART IV - Chain of Custody

	Relinquished By: (Signature)	Date:	Time:	Received By: (Signature)
1	W.C. Barron II	1/25/08	1200	Fedex
2				
3				
4				

Received for Laboratory By: (Signature) 1/29/8 1000 Custody Seals Intact: ☐ Yes ☐ No Temperature: (°C) ____

CLG/DRAWING/FORMS/CHAINCOS

ENVIRONMENTAL TESTING LABORATORIES, INC.
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PHONE: (229)-228-2592
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DATE REPORTED: 6/16/2008

[redacted]

ETL PROJECT NUMBER: A8-200
CLIENT PROJECT ID:
CLIENT FACILITY ID:
CLIENT FACILITY NAME: [redacted]

DEAR MR. BILLY WARBACH:

Enclosed are the analytical results for sample(s) received by Environmental Testing Laboratories on May 16, 2008. Results reported herein are reported on an as received basis and conform to current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Sample analyses performed by Environmental Testing Laboratories, Inc. (ETL) unless otherwise noted. ETL is accredited through NELAC and the Florida Department of Health, Certification #E87684. Scope of analyses: RCRA/CERCLA Metals, General Chemistry, Extractable Organics, and Volatile Organics. Effective Dates: February 14, 2002 through June 30, 2008.

If you have any questions concerning this report, please feel free to contact me.

Respectfully Submitted,

Digitally signed by Brad Williams
DN: CN = Brad Williams, C = US, O = Environmental Testing Laboratories, OU = President of Operations
Reason: I am approving this document
Date: 2008.06.16 15:42:55 -05'00'

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

REPORT OF LABORATORY ANALYSIS

FL NELAP #E87684

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ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: A8-200

Client Project / Site Name [redacted]

PROJECT NOTE SUMMARY

GENERAL

GENERAL

- Solid samples are reported on a dry-weight basis unless otherwise noted.
- (S$) Denotes an ETL Laboratory Surrogate Compound
- Environmental Testing Laboratories, Inc. is accredited through NELAC and the Florida Department of Health, Certification #E87684
- Refer to Section 4.0 of the ETL Quality Assurance Manual for measure of uncertainty
- All analyses performed using EPA or FL-DEP method and certified to meet NELAC requirements except as noted.

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ENVIRONMENTAL TESTING LABORATORIES inc

Laboratory Project#: **A8-200**

Client Project / Site Name [redacted]

METHOD SUMMARY

Laboratory Name: ***PACE ANALYTICAL - HUNTERSVILLE, NC***

Certification #: ***E87627***

Analyte	Method	Description	Matrix
TCLP MERCURY - 1311 / EPA 245.1 / EPA 245.1 - TCLP Metals			Other, Solid
As Reported by ETL - EPA 3545 / EPA 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography			Other, Solid

Laboratory Name: ***ENVIRONMENTAL TESTING LABORATORIES - THOMASVILLE, GA***

Certification #: ***E87684***

Analyte	Method	Description	Matrix
TCLP ARSENIC - 1311 / 3005 / 6010B - TCLP Metals			Other, Solid
TCLP BARIUM - 1311 / 3005 / 6010B - TCLP Metals			Other, Solid
TCLP CADMIUM - 1311 / 3005 / 6010B - TCLP Metals			Other, Solid
TCLP CHROMIUM - 1311 / 3005 / 6010B - TCLP Metals			Other, Solid
TCLP LEAD - 1311 / 3005 / 6010B - TCLP Metals			Other, Solid
TCLP SELENIUM - 1311 / 3005 / 6010B - TCLP Metals			Other, Solid
TCLP SILVER - 1311 / 3005 / 6010B - TCLP Metals			Other, Solid

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

REPORT OF LABORATORY ANALYSIS

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ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: *A8-200*

Client Project / Site Name: [redacted]

SAMPLE SUMMARY

Laboratory Sample ID	Client Sample ID / Location	Sample Matrix / Description	Grab / Composite	Date / Time Sampled	Date Received
74335	#1	O-S - Other, Solid	G	-	05/16/2008

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP E87684

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Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

EXECUTIVE SUMMARY

Analyte	CAS#	Result	Qualifier	PQL	Units	Method
[redacted]						
TCLP BARIUM	7440-39-3	0.74		0.050	mg/L	6010B
TCLP CHROMIUM	7440-43-9	0.062		0.050	mg/L	6010B
TCLP CADMIUM	7440-47-3	0.19		0.050	mg/L	6010B
TCLP LEAD	7439-92-1	1.7		0.10	mg/L	6010B

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

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Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

ANALYTICAL DATA

Laboratory Sample Number: 74335 | *Sample Time:* | Grab or Composite: G

Client Sample ID: #1 | *Sample Date:* | Matrix: O-S

Client Sample Location: | Date Received: 05/16/2008

Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Preparation Method / Date: NA | **InstrumentID:**

Extraction Method / Date: EPA 3545 - 05/26/2008 | **DataFile:**

Analysis Method / Date: EPA 8082 - 06/05/2008

Analysis Time:

ANALYTE	CAS No.	RESULT	DF	MDL	PQL	UNITS	ANALYST
PCB-1016 (AROCLOR 1016)	12674-11-2	95 U	1.0	95	95	ug/kg*dw	E87627
PCB-1221 (AROCLOR 1221)	11104-28-2	95 U	1.0	95	95	ug/kg*dw	E87627
PCB-1232 (AROCLOR 1232)	11141-16-5	95 U	1.0	95	95	ug/kg*dw	E87627
PCB-1242 (AROCLOR 1242)	53469-21-9	95 U	1.0	95	95	ug/kg*dw	E87627
PCB-1248 (AROCLOR 1248)	12672-29-6	95 U	1.0	95	95	ug/kg*dw	E87627
PCB-1254 (AROCLOR 1254)	11097-69-1	95 U	1.0	95	95	ug/kg*dw	E87627
PCB-1260 (AROCLOR 1260)	11096-82-5	95 U	1.0	95	95	ug/kg*dw	E87627
DCB DECACHLOROBIPHENYL (S$)	2051-24-3	76	1.0		30% - 155%	%	E87627

TCLP Metals

Preparation Method / Date: 1311 - 05/21/2008 | **InstrumentID: IRIS 1000**

Extraction Method / Date: 3005 - 05/27/2008 | **DataFile: NA**

Analysis Method / Date: 6010B - 05/29/2008

Analysis Time:

ANALYTE	CAS No.	RESULT	DF	MDL	PQL	UNITS	ANALYST
TCLP ARSENIC	7440-38-2	0.050 U	1.0	0.050	0.050	mg/L	DWH
TCLP BARIUM	7440-39-3	0.74	1.0	0.050	0.050	mg/L	DWH
TCLP CHROMIUM	7440-43-9	0.062	1.0	0.050	0.050	mg/L	DWH
TCLP CADMIUM	7440-47-3	0.19	1.0	0.050	0.050	mg/L	DWH
TCLP LEAD	7439-92-1	1.7	2.0	0.10	0.10	mg/L	DWH
TCLP SELENIUM	7782-49-2	0.050 U	1.0	0.050	0.050	mg/L	DWH
TCLP SILVER	7440-22-4	0.050 U	1.0	0.050	0.050	mg/L	DWH

PQL = Practical Quantitation Limit; MDL = Method Detection Limit; DF = Dilution Factor

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP #E87684

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ENVIRONMENTAL TESTING LABORATORIES Inc

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

ANALYTICAL DATA

Laboratory Sample Number: 74335 | *Sample Time:* | Grab or Composite: G

Client Sample ID: #1 | *Sample Date:* | Matrix: O-S

Client Sample Location: | Date Received: 05/16/2008

TCLP Metals

Preparation Method / Date: 1311 - 05/21/2008 | **InstrumentID:**

Extraction Method / Date: EPA 245.1 - 06/12/2008 | **DataFile:**

Analysis Method / Date: EPA 245.1 - 06/13/2008

Analysis Time:

ANALYTE	CAS No.	RESULT	DF	MDL	PQL	UNITS	ANALYST
TCLP MERCURY	7439-97-6	0.00020 U	1.0	0.00020	0.00020	mg/L	E87627

PQL = Practical Quantitation Limit; MDL = Method Detection Limit; DF = Dilution Factor

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP #E87684

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ENVIRONMENTAL TESTING LABORATORIES Inc

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: 20929 — **Prep/Extraction/Analysis Method: EPA 3545 /EPA 8082**

ClockID: 20929 **Associated Samples:** 74335

QCID: 20929MBLK Blank Prep/Extraction Date: 05/26/2008
QCDescription: METHOD BLANK Blank Analysis Date: 06/03/2008
Data File(s): InstrumentID:

Analyte	MDL	Blank Result	PQL	Units
PCB-1016 (AROCLOR 1016)	7.0	7.0 U	33	ug/kg
PCB-1221 (AROCLOR 1221)	15	15 U	33	ug/kg
PCB-1232 (AROCLOR 1232)	15	15 U	33	ug/kg
PCB-1242 (AROCLOR 1242)	15	15 U	33	ug/kg
PCB-1248 (AROCLOR 1248)	15	15 U	33	ug/kg
PCB-1254 (AROCLOR 1254)	15	15 U	33	ug/kg
PCB-1260 (AROCLOR 1260)	6.0	6.0 U	33	ug/kg

QCID: 20929LCS LCS Prep/Extraction Date: 05/26/2008 LCSD Prep/Extraction Date:
QCDescription: LAB CONTROL STANDARD / DUPLICATE LCS Analysis Date: 06/03/2008 LCSD Analysis Date:
Data File(s): 9219684QC.xls InstrumentID:

Analyte	Spike Amount	LCS Result	LCS %Recovery	LCSD Result	LCSD %Recovery	LCS/D %RPD	%Rec. / %RPD Limit
PCB-1016 (AROCLOR 1016)	167ug/kg / NA	160ug/kg	96%	NA	NA	NA	51-135% / 30%RPD
PCB-1260 (AROCLOR 1260)	167ug/kg / NA	183ug/kg	110%	NA	NA	NA	44-124% / 30%RPD

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

REPORT OF LABORATORY ANALYSIS

FL NELAP #E87684

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ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: 20929 **Prep / Extraction / Analysis Method: EPA 3546 / EPA 8082**

ClockID: 20929 **Associated Samples: 74335**

QCID: 20929MS			MS Prep/Extraction Date: 05/28/2008				MSD Prep/Extraction Date: 05/28/2008	
QCDescription: MATRIX SPIKE / DUPLICATE			MS Analysis Date: 06/03/2008				MSD Analysis Date: 06/03/2008	
Data File(s): 9219684QC.xls / 9219684QC.xls			InstrumentID:					
Analyte	Native Result	Spike Amount	MS Result	MS %Recovery	MSD Result	MSD %Recovery	MS/D %RPD	%Rec. / %RPD Limit
PCB-1016 (AROCLOR 1016)	0ug/kg	177ug/kg / 177ug/kg	182ug/kg	103%	183ug/kg	103%	1 %	51-135% / 30%RPD
PCB-1260 (AROCLOR 1260)	48.7ug/kg	177ug/kg / 177ug/kg	198ug/kg	84%	198ug/kg	84%	0 %	44-124% / 30%RPD

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP #E87684

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Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: 22322 Prep / Extraction / Analysis Method: EPA 245.1 / EPA 245.1

ClockID: 22322 **Associated Samples:** 74335

QCID:	22322MBLK		Blank Prep/Extraction Date:	06/12/2008	
QCDescription:	METHOD BLANK		Blank Analysis Date:	06/13/2008	
Data File(s):			InstrumentID:		
Analyte	MDL	Blank Result	PQL	Units	
MERCURY	0.20	0.20 U	0.20	ug/L	

QCID:	22322LCS		LCS Prep/Extraction Date:	06/12/2008		LCSD Prep/Extraction Date:	
QCDescription:	LAB CONTROL STANDARD / DUPLICATE		LCS Analysis Date:	06/13/2008		LCSD Analysis Date:	
Data File(s):	9221068QC.xls		InstrumentID:				
Analyte	Spike Amount	LCS Result	LCS %Recovery	LCSD Result	LCSD %Recovery	LCS/D %RPD	%Rec. / %RPD Limit
MERCURY	2.50ug/L / NA	2.40ug/L	96%	NA	NA	NA	NA / NA

QCID:	22322MS		MS Prep/Extraction Date:	06/12/2008		MSD Prep/Extraction Date:		
QCDescription:	MATRIX SPIKE / DUPLICATE		MS Analysis Date:	06/13/2008		MSD Analysis Date:		
Data File(s):	9221068QC.xls		InstrumentID:					
Analyte	Native Result	Spike Amount	MS Result	MS %Recovery	MSD Result	MSD %Recovery	MS/D %RPD	%Rec. / %RPD Limit
MERCURY	0ug/L	2.50ug/L / NA	2.30ug/L	92%	NA	NA	NA	NA / NA

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP #E87256

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ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: TCMA052708 **Prep / Extraction / Analysis Method: SW-846 3010 / SW-846 6010B**

ClockID: TCMA052708 **Associated Samples:** 74333 74334 74335

QCID: TCMA052708MBLK Blank Prep/Extraction Date: 05/21/2008 / 5/27/2008
QCDescription: METHOD BLANK Blank Analysis Date: 05/29/2008
Data File(s): InstrumentID: IRIS 1000

Analyte	MDL	Blank Result	PQL	Units
TCLP ARSENIC	0.050	0.050 U	0.050	mg/L
TCLP BARIUM	0.050	0.050 U	0.050	mg/L
TCLP CHROMIUM	0.050	0.050 U	0.050	mg/L
TCLP CADMIUM	0.050	0.050 U	0.050	mg/L
TCLP LEAD	0.050	0.050 U	0.050	mg/L
TCLP SELENIUM	0.050	0.050 U	0.050	mg/L
TCLP SILVER	0.050	0.050 U	0.050	mg/L

QCID: TCMA052708LCS LCS Prep/Extraction Date: 05/21/2008 / 5/27/2008 LCSD Prep/Extraction Date: 05/21/2008 / 05/27/2
QCDescription: LAB CONTROL STANDARD / DUPLICATE LCS Analysis Date: 05/29/2008 LCSD Analysis Date: 05/29/2008
Data File(s): InstrumentID: IRIS 1000

Analyte	Spike Amount	LCS Result	LCS %Recovery	LCSD Result	LCSD %Recovery	LCS/D %RPD	%Rec. / %RPD Limit
TCLP ARSENIC	0.400mg/L / 0.400mg/L	0.431mg/L	108%	0.423mg/L	106%	2%	80-120% / 20%RPD
TCLP BARIUM	0.400mg/L / 0.400mg/L	0.421mg/L	105%	0.432mg/L	108%	3%	80-120% / 20%RPD
TCLP CHROMIUM	0.400mg/L / 0.400mg/L	0.438mg/L	110%	0.434mg/L	108%	1%	80-120% / 20%RPD
TCLP CADMIUM	0.400mg/L / 0.400mg/L	0.440mg/L	110%	0.438mg/L	110%	0%	80-120% / 20%RPD
TCLP LEAD	0.400mg/L / 0.400mg/L	0.447mg/L	112%	0.441mg/L	110%	1%	80-120% / 20%RPD
TCLP SELENIUM	0.400mg/L / 0.400mg/L	0.431mg/L	108%	0.436mg/L	109%	1%	80-120% / 20%RPD

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP #E87654

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ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: TCMA052708 | **Prep / Extraction / Analysis Method: / SW-846 3010 / SW-846 6010B**

ClockID: TCMA052708 **Associated Samples:** 74333 74334 74335

QCID:	**TCMA052708LCS**		LCS Prep/Extraction Date:	05/21/2008 / 5/27/2008		LCSD Prep/Extraction Date:	05/21/2008 / 05/27/2
QCDescription:	**LAB CONTROL STANDARD / DUPLICATE**		LCS Analysis Date:	05/29/2008		LCSD Analysis Date:	05/29/2008
Data File(s):			InstrumentID:	IRIS 1000			

Analyte	Spike Amount	LCS Result	LCS %Recovery	LCSD Result	LCSD %Recovery	LCS/D %RPD	%Rec. / %RPD Limit
TCLP SILVER	0.400mg/L / 0.400mg/L	0.375mg/L	94%	0.380mg/L	95%	1%	80-120% / 20%RPD

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP #E87684

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ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: WTMA052708 **Prep / Extraction / Analysis Method: SW-846 3010 / SW-846 6010B**

ClockID: WTMA052708 **Associated Samples:** 74386 74542 74544 74546 74559 74560 74561 74562 74563 74602

QCID: WTMA052708MBLK Blank Prep/Extraction Date: 05/27/2008 / 5/27/2008
QCDescription: METHOD BLANK Blank Analysis Date: 05/28/2008
Data File(s): InstrumentID: IRIS 1000

Analyte	MDL	Blank Result	PQL	Units
TOTAL LEAD	3.2	3.2 U	5.0	ug/L

QCID: WTMA052708LCS LCS Prep/Extraction Date: 05/27/2008 / 5/27/2008 LCSD Prep/Extraction Date: 05/27/2008 / 05/27/2
QCDescription: LAB CONTROL STANDARD / DUPLICATE LCS Analysis Date: 05/28/2008 LCSD Analysis Date: 05/28/2008
Data File(s): InstrumentID: IRIS 1000

Analyte	Spike Amount	LCS Result	LCS %Recovery	LCSD Result	LCSD %Recovery	LCS/D %RPD	%Rec. / %RPD Limit
TOTAL LEAD	400ug/L / 400ug/L	459ug/L	115%	451ug/L	113%	2%	80-120% / 20%RPD

QCID: WTMA052708MS MS Prep/Extraction Date: 05/27/2008 / 5/27/2008 MSD Prep/Extraction Date: 05/27/2008 / 05/27/2
QCDescription: MATRIX SPIKE / DUPLICATE MS Analysis Date: 05/28/2008 MSD Analysis Date: 05/28/2008
Data File(s): InstrumentID: IRIS 1000

Analyte	Native Result	Spike Amount	MS Result	MS %Recovery	MSD Result	MSD %Recovery	MS/D %RPD	%Rec. / %RPD Limit
TOTAL LEAD	15ug/L	400ug/L / 400ug/L	425ug/L	102%	426ug/L	103%	0 %	80-120% / 20%RPD

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP #E87084

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ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: WTMA052708 **Prep / Extraction / Analysis Method: SW-846 3010 / SW-846 6010B**

ClockID: WTMA052708 **Associated Samples:** 74396 74542 74544 74546 74559 74560 74561 74562 74583 74602

QCID: WTMA05270BDUP			DUP Prep/Extraction Date: 05/27/2008 / 5/27/2008	
QCDescription: SAMPLE RESULT / DUPLICATE			DUP Analysis Date: 05/28/2008	
Data File(s):			InstrumentID: IRIS 1000	
Analyte	Native Result	Dup Result	Sample/Dup %RSD	%RPD Limit
TOTAL LEAD	15ug/L	13.2 ug/L	13%	20%RPD

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

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ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

Batch(s): WTMA052708 **Prep / Extraction / Analysis Method: / SW-846 3010 / SW-846 6010B**

ClockID: WTMA052708B **Associated Samples:** 74543 74545 74547

QCID: WTMA052708BMBLK Blank Prep/Extraction Date: 05/27/2008 / 5/27/2008
QCDescription: METHOD BLANK Blank Analysis Date: 05/28/2008
Data File(s): InstrumentID: IRIS 1000

Analyte	MDL	Blank Result	PQL	Units
TOTAL IRON	3.8	3.8 U	50	ug/L

QCID: WTMA052708BLCS LCS Prep/Extraction Date: 05/27/2008 / 5/27/2008 LCSD Prep/Extraction Date: 05/27/2008 / 05/27/2
QCDescription: LAB CONTROL STANDARD / DUPLICATE LCS Analysis Date: 05/28/2008 LCSD Analysis Date: 05/28/2008
Data File(s): InstrumentID: IRIS 1000

Analyte	Spike Amount	LCS Result	LCS %Recovery	LCSD Result	LCSD %Recovery	LCS/D %RPD	%Rec. / %RPD Limit
TOTAL IRON	400ug/L / 400ug/L	455ug/L	114%	449ug/L	112%	1%	80-120% / 20%RPD

QCID: WTMA052708BDUP DUP Prep/Extraction Date: 05/27/2008 / 5/27/2008
QCDescription: SAMPLE RESULT / DUPLICATE DUP Analysis Date: 05/28/2008
Data File(s): InstrumentID: IRIS 1000

Analyte	Native Result	Dup Result	Sample/Dup %RSD	%RPD Limit
TOTAL IRON	48ug/L	28600 ug/L	2%	20%RPD

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FL NELAP #E87084

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ENVIRONMENTAL TESTING LABORATORIES inc

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: WTMA052708 Prep / Extraction / Analysis Method: SW-846 3010 / SW-846 6010B

ClockID: WTMA052708C **Associated Samples:** 74378 74546 74611

QCID:	**WTMA052708CMBLK**		Blank Prep/Extraction Date:	05/27/2008 / 5/27/2008	
QCDescription:	**METHOD BLANK**		Blank Analysis Date:	05/29/2008	
Data File(s):			InstrumentID:	IRIS 1000	

Analyte	MDL	Blank Result	PQL	Units
TOTAL ZINC	0.73	0.73 U	5.0	ug/L

QCID:	**WTMA052708CLCS**		LCS Prep/Extraction Date:	05/27/2008 / 5/27/2008		LCSD Prep/Extraction Date:	05/27/2008 / 05/27/2
QCDescription:	**LAB CONTROL STANDARD / DUPLICATE**		LCS Analysis Date:	05/29/2008		LCSD Analysis Date:	05/29/2008
Data File(s):			InstrumentID:	IRIS 1000			

Analyte	Spike Amount	LCS Result	LCS %Recovery	LCSD Result	LCSD %Recovery	LCS/D %RPD	%Rec. / %RPD Limit
TOTAL ZINC	400ug/L / 400ug/L	463ug/L	116%	461ug/L	115%	0%	80-120% / 20%RPD

QCID:	**WTMA052708CMS**		MS Prep/Extraction Date:	05/27/2008 / 5/27/2008		MSD Prep/Extraction Date:	05/27/2008 / 05/27/2
QCDescription:	**MATRIX SPIKE / DUPLICATE**		MS Analysis Date:	05/29/2008		MSD Analysis Date:	05/29/2008
Data File(s):			InstrumentID:	IRIS 1000			

Analyte	Native Result	Spike Amount	MS Result	MS %Recovery	MSD Result	MSD %Recovery	MS/D %RPD	%Rec. / %RPD Limit
TOTAL ZINC	48ug/L	400ug/L / 400ug/L	484ug/L	109%	482ug/L	108%	0 %	80-120% / 20%RPD

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

FL NELAP #E87154

ENVIRONMENTAL TESTING LABORATORIES, INC.
412 WEST WALCOTT STREET
THOMASVILLE, GA 31792
PHONE: (229)-228-2592
FAX: (229)-228-2594

ENVIRONMENTAL TESTING LABORATORIES INC

Laboratory Project#: *A8-200*

Client Project / Site Name [redacted]

QUALITY CONTROL DATA

BatchID: WTMA052708 **Prep / Extraction / Analysis Method: / SW-846 3010 / SW-846 6010B**

ClockID: WTMA052708C **Associated Samples:** 74378 74546 74611

QCID:	**WTMA052708CDUP**	DUP Prep/Extraction Date:	05/27/2008 / 5/27/2008
QCDescription:	**SAMPLE RESULT / DUPLICATE**	DUP Analysis Date:	05/29/2008
Data File(s):		InstrumentID:	IRIS 1000

Analyte	Native Result	Dup Result	Sample/Dup %RSD	%RPD Limit
TOTAL ZINC	48ug/L	49.0 ug/L	2%	20%RPD

Report Date: 6/16/2008 - Revision #: 0 - Revision Date:

REPORT OF LABORATORY ANALYSIS

ENVIRONMENTAL TESTING LABORATORIES, INC.
412 WEST WALCOTT STREET
THOMASVILLE, GA 31792
PHONE: (229)-228-2592
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ENVIRONMENTAL TESTING LABORATORIES inc

Laboratory Project#: A8-200

Client Project / Site Name [redacted]

DATA QUALIFIERS

1	Data deviate from historically established concentration ranges.
#	Surrogate compound inadvertently omitted.
$	Due to dilution, surrogate compound was not detected.
*	Not reported due to interference
?	Data are rejected as should not be used.
A	Value reported is the arithmetic mean (average) of two or more determinations.
B	Results based upon colony counts outside the acceptable range.
D	Measurement made in the field.
E	Extra samples were taken at composite stations.
F	When reporting species, F indicates the female sex.
H	Value based on fied kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	Estimated value.
K	Off-scale low. Actual value is known to be less than the value given.
L	Off-scale high. Actual value is known to be greater than the value given.
M	Presence of material is verified but not quantified; the actual value is less than the value given.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed.
Q	Sample held beyond the accepted holding time.
R	Significant rain in the past 48 hours.
T	Value reported is less than the laboratory method detection limit.
U	Compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Y	Laboratory analysis was from an improperly preserved sample. Data may not be accurate.
Z	Too many colonies were present; numeric value represents the filtration volume.

ETL SAMPLE CUSTODY CHECKLIST

Assigned ETL Project Number: AP.200

Assigned ETL Lab ID Range: 74335 (start) through _____ (end)

ETL Sample Custodian: Josh

Courier: USPS (Fed-EX, UPS, DHL, Client, Etc.)

Date Received: 5/16/08

Cooler Temperatures	
Cooler #	Temperature °C
1	4°C
2	
3	
4	
5	
6	
7	
8	
9	
10	
Coolers temp. measured by (Circle one) Temperature Blank	
Other:	

Bottleware Received			
Bottleware Type	Preservative	Total Number of Containers	Properly Preserved?
40ml. VOA Vial	HCl		YES / NO
40ml. VOA Vial	None		N/A
40ml. VOA Vial	$DI-H_2O$		N/A
40ml. VOA Vial	Sodium Bisulfate		YES / NO
40ml. VOA Vial	MeOH		YES / NO
1-L Amber	None		N/A
1-L Amber	H_2SO_4		YES / NO
1-L Amber	HCl		YES / NO
HDPE Plastic	None		N/A
HDPE Plastic	HNO_3		YES / NO
HDPE Plastic	H_2SO_4		YES / NO
4oz Soil Bulk Container	None		N/A
8oz Soil Bulk Container	None		N/A
16oz Soil Bulk Container	None		N/A
1 Ziploc Bag		1	

Was adequate sample volume submitted to perform all necessary project quality requirements (i.e. duplicate, MS/MSD, etc.) (YES) NO

Additional Sample Volumes Submitted for Quality Control (Dup, MS, MSD)			
#	ETL Lab ID	Type	Parameters
1		DUP / MS / (MS/MSD)	VOC / SVOC / FL-PRO / Metals / GenChem
2		DUP / MS / (MS/MSD)	VOC / SVOC / FL-PRO / Metals / GenChem
3		DUP / MS / (MS/MSD)	VOC / SVOC / FL-PRO / Metals / GenChem
4		DUP / MS / (MS/MSD)	VOC / SVOC / FL-PRO / Metals / GenChem

Comments / Project Notes (i.e. Broken Bottleware, Temperature Discrepancies, Improper Preservation, etc.):

- Sample transferred to glass jars
- COC not relinquished

Document Control #: A-02-15
Revision 1 - 01/05/2005

Environmental Testing Labs

Chain of Custody Record

[redacted]

Environmental Testing Laboratories, Inc.
412 W. Wilcott Street
Thomasville, GA 31792-4139
228/226-2382 (telephone)
www.etl-inc.com

[redacted]

Telephone Number: [redacted] Telefax Number: [redacted]

Sampled by (Print Name(s) / Affiliation: [redacted]

Sample(s) Signature(s): [redacted]

Analyses Requested

Project Name: [redacted]

Project Number: [redacted]

Project Manager: [redacted]

Facility ID Number: [redacted]

REQUESTED DUE DATE: [redacted]

Item No.	Field ID No.	Sample Date	Sample Time	Grab or Composite	Matrix (see Codes)	Number of Containers	RCRA Metals	PCB							Remarks	Lab Number
	1						X	X								74335

Shipment Method: [redacted] Total Number of Containers: [redacted] ← Preservatives (see Codes) ICE: ☐ Yes ☐ No

			Item No.	Relinquished by / Affiliation	Date	Time	Accepted by / Affiliation	Date	Time
Out:	/ /	Via:							
Returned:	/ /	Via:							
Additional Comments:							ETL	5/16/03	1100

Cooler Number(s) / Temperature(s) (°C): ON ICE °C | Sampling Kit Number: | Received in Lab By:

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water WW = Wastewater O = Other (specify)

PRESERVATIVE CODES: H = Hydrochloric acid S = Sulfuric acid N = Nitric Na = Sodium Hydroxide O = Other (specify)

PRESERVATIVE CODES: SOB, VOCS M3 = Methanol / Sodium Bisulfate MD = Methanol / DI Water

ETL PROJECT NO. AT-280

ATTACHMENT C

IMAGES OF ALTERNATIVE FUEL MATERIALS

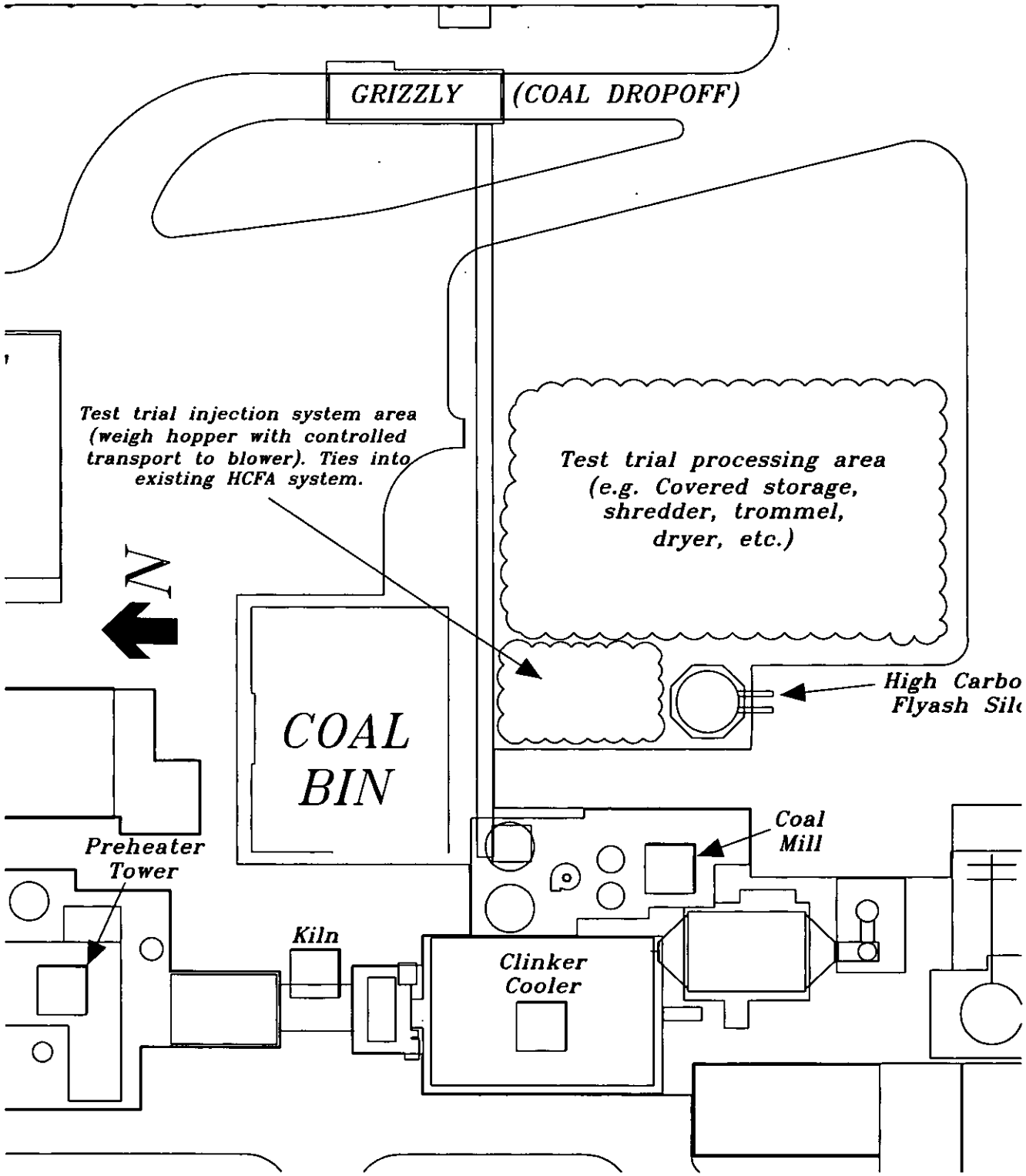
Photo 1: Image of Fluff (mechanical pencil in place for size comparison)

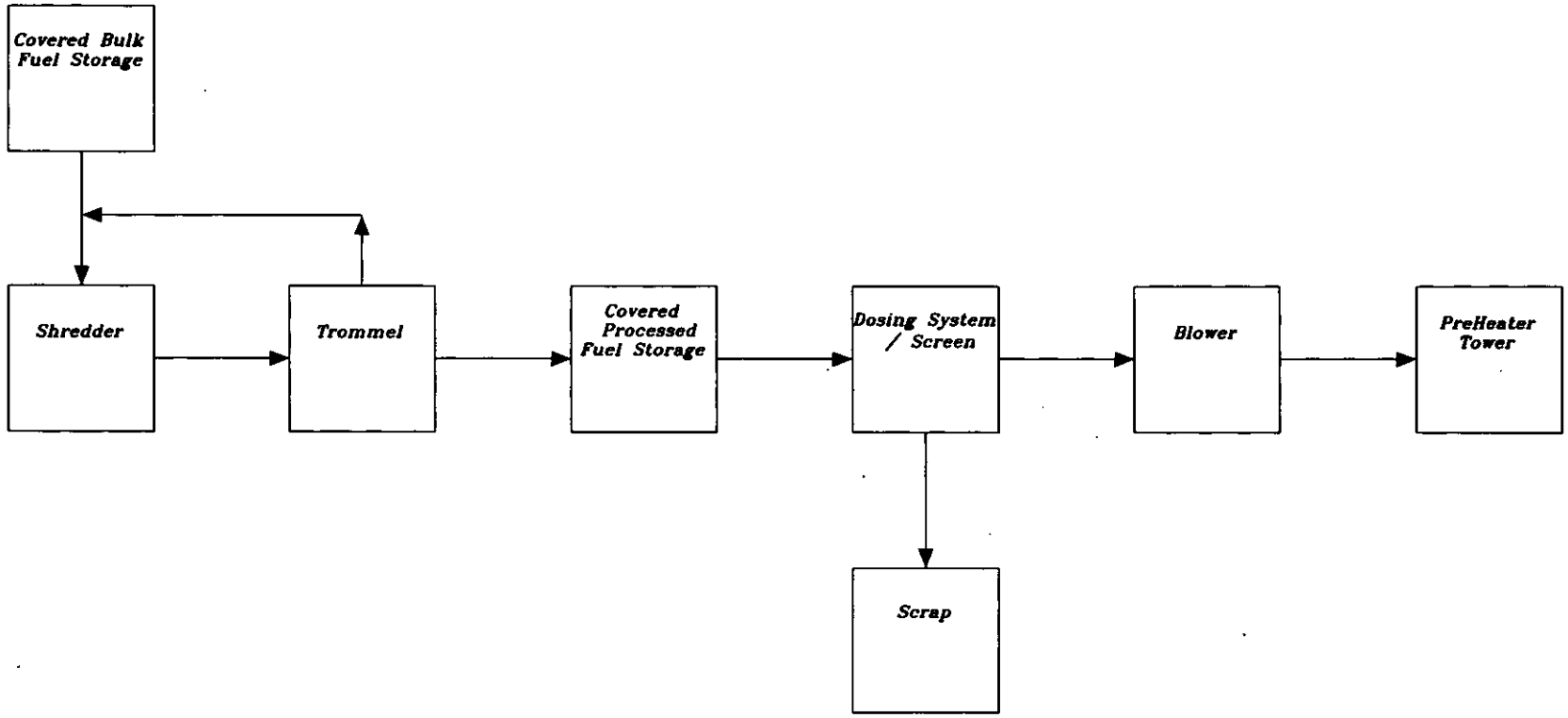
Photo 2: Image of Recycled Paper Byproducts.

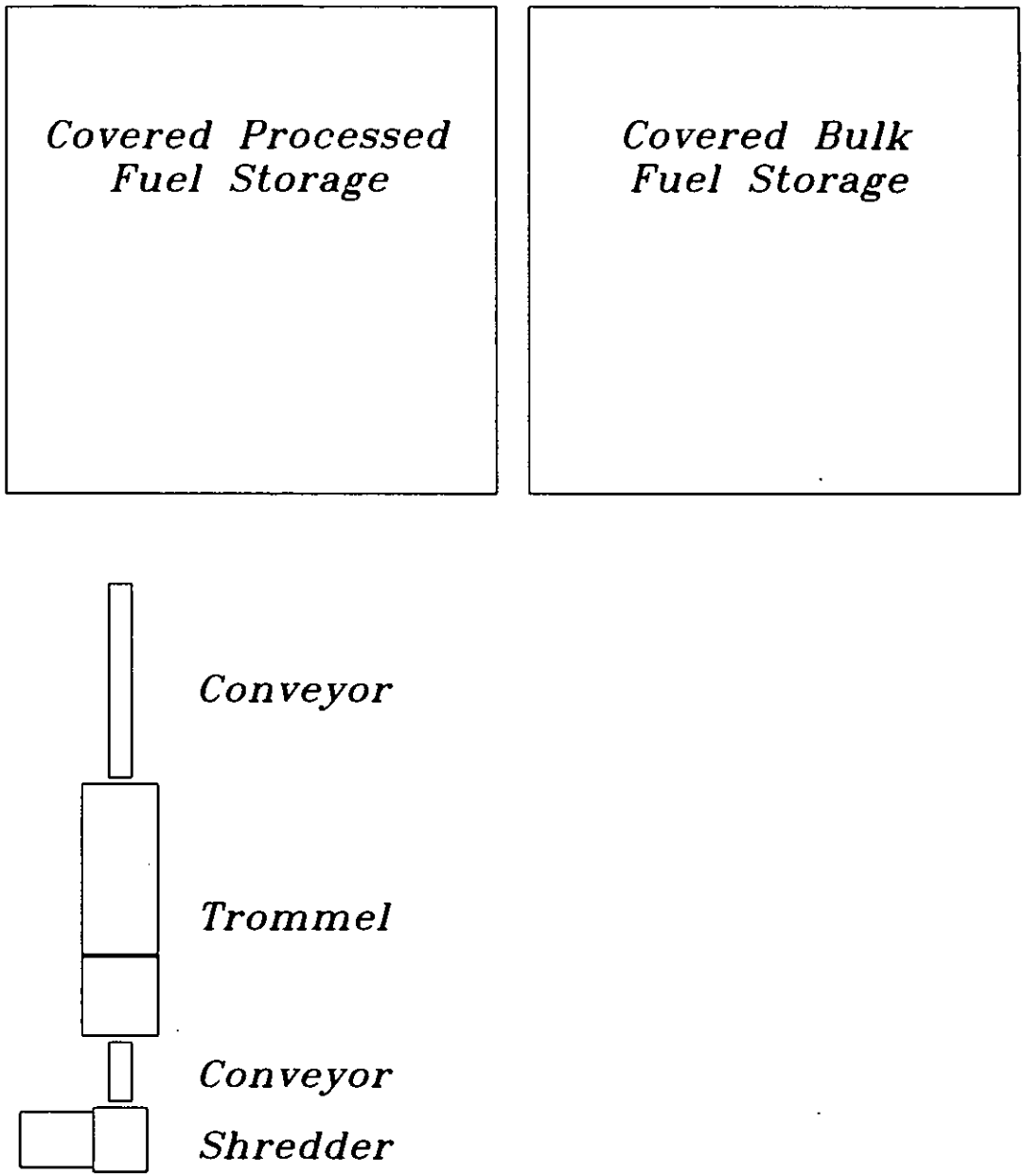
Photo 3: Image of Sawdust/Woodchip Material.

ATTACHMENT D

TEST TRIAL PROCESS EQUIPMENT & PROCESS FLOW


GRIZZLY
(COAL DROPOFF)
Test trial injection system area (weigh hopper with controlled transport to blower). Ties into existing HCFA system.
Test trial processing area (e.g. Covered storage, shredder, trommel, dryer, etc.)
N
COAL BIN
High Carbo
Flyash Sil
Coal Mill
Preheater Tower
Kiln
Clinker Cooler


Covered Bulk Fuel Storage
Shredder
Trommel
Covered Processed Fuel Storage
Dosing System / Screen
Blower
PreHeater Tower
Scrap


Covered Processed Fuel Storage
Covered Bulk Fuel Storage
Conveyor
Trommel
Conveyor
Shredder