



November 15, 2012

Via FedEx Overnight

Mr. Jeff Greenwell
Florida Department of Environmental Protection
SW District – Solid Waste Section
13051 North Telecom Parkway
Temple Terrace, FL 33637

RE: Alternative Fuel/Material Permit Application, 62-701, F.A.C.
Brooksville South Cement Plant – CEMEX Construction Materials Florida, LLC
Brooksville, Hernando County, Florida

Dear Mr. Greenwell:

Enclosed, please find four (4) copies of the application and a check in the amount of \$1,000.00 (check No. 22472650) to cover the application fee.

Should you have any questions and/or comments or require additional information, please feel free to contact me or Tammy Reed, Koogler & Associates.

Respectfully,

George Townsend
Environmental Manger

Dept. Of Environmental Protection
NOV 16 2012
Southwest District

Pc: James S. Daniel, Plant Manager
Tammy Reed, Koogler & Associates

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Submittal_11152012.docx

Florida Region

10311 Cement Plant Rd., Brooksville, Florida 34601. USA, (352) 799-7881, Fax: (352) 799-6088



4014 NW 13th STREET
GAINESVILLE, FL 32609-1923
352/377-5822 ■ FAX/377-7158

307-12-04
November 14, 2012

Mr. Jeff Greenwell
Florida Department of Environmental Protection
SW District - Solid Waste Section
13051 North Telecom Park
Temple Terrace, FL 33637-0926

Dept. Of Environmental Protection
NOV 16 2012
Southwest District

**RE: *Alternative Fuel/Material Permit Application, 62-701, FAC
Brooksville South Cement Plant-CEMEX Construction Materials Florida, LLC
Brooksville, Hernando County, Florida***

Dear Mr. Greenwell:

On behalf of CEMEX Construction Materials Florida, LLC (CEMEX), Koogler and Associates, Inc. is submitting the attached application for storage, handling and processing of alternative fuel/materials (AFM) at the Brooksville South Cement Plant.

CEMEX has been working with AFM for the past several years successfully conducting trials or evaluations of a broad range of materials. All of the AFM that will be received are defined as a fuel pursuant to 40 CFR Part 241. These fuels are considered by the state under multiple classifications as per 62-701 F.A.C.; solid waste, recovered materials, recyclable materials, and industrial by-products. For the purpose of this application, CEMEX is taking the most conservative approach and considering all of the AFM as solid waste.

CEMEX believes that by expanding their fuel use to include AFM, it will result in the following benefits:

1. Increased demand for such AFM encourages recovery versus discard to landfills. This objective matches the goals of the State efforts to increase residual material diversion from discard for re-use or recycling.¹
2. Promotion of related recycling and recovery business activities (i.e., employment, taxable income) in the State.

¹ <http://www.dep.state.fl.us/waste/recyclinggoal75/default.htm> (last visited April 18, 2011)

3. Reduction of greenhouse gas emissions by re-using and reducing landfilled biogenic material, reducing source material transportation and reducing methane emissions from materials that would be otherwise land filled.
4. Promotion of a more diverse energy supply which improves the viability of CEMEX and the alternative fuels market suppliers.

In 1982 the Florida Governor and Cabinet, sitting as the Power Plant Siting Board, approved the construction and operation of cogeneration facilities at the site pursuant to the provisions of Florida's Electrical Power Plant Siting Act, §§403.501-403.518, Florida Statutes. The generating facilities were recently sold and will be converted to the use of biomass as a primary fuel. As a result of this transaction, and based upon discussions with the staff at the Siting Coordination Office in Tallahassee, CEMEX is pursuing individual permitting for various components and activities that will continue to be operated by CEMEX. Once this permitting has been completed, these facilities will be separated from the Conditions of Certification. This permit application is a part of that effort.

CEMEX sincerely appreciates the Department's review of the enclosed documents which include one (1) original and three (3) copies of DEP Form #62-701.900(4) and attachments, and a check for \$1,000 for the application fee for the AFM Storage System at the CEMEX Brooksville South Cement Plant.

If you have any questions regarding this application or require further information, please contact me at (352) 377-5822 or mlee@koooglerassociates.com.

Regards,



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

MRL/tlr

Enclosures

cc: George Townsend, CEMEX Construction Materials Florida, LLC
Lillian Deprimo, CEMEX Construction Materials Florida, LLC
James Daniel, CEMEX Construction Materials Florida, LLC



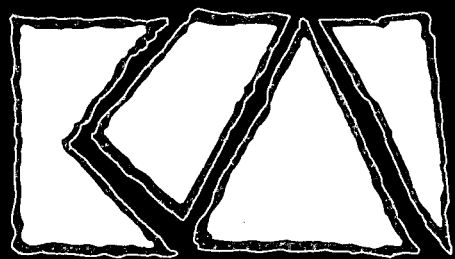
**APPLICATION FOR PERMIT
TO OPERATE AN
ALTERNATIVE FUEL MATERIAL
PROCESSING FACILITY**

CEMEX Construction Materials Florida, LLC
Brooksville South Cement Plant
Brooksville, Hernando County, Florida

Application Date: November 13, 2012

Consultant:

Maxwell R. Lee, Ph.D., P.E.
Tammy L. Reed
Koogler and Associates, Inc.
4014 NW 13th Street
Gainesville, FL 32609-1923
(352) 377-5822



KOOGLER & ASSOCIATES, INC.

ENVIRONMENTAL SERVICES

4014 NW 13th STREET
GAINESVILLE, FL 32609-1923
352/377-5822 □ FAX/377-7158

**APPLICATION FOR PERMIT TO OPERATE AN ALTERNATIVE
FUEL/MATERIAL PROCESSING FACILITY**

CEMEX Construction Materials Florida, LLC
Brooksville South Cement Plant
Brooksville, Hernando County, Florida

Application Date: November 13, 2012

Consultant:

Maxwell R. Lee, Ph.D., P.E.
Tammy Reed
Koogler and Associates, Inc.
4014 NW 13th Street
Gainesville, Florida 32609-1923
(352) 377-5822

Dept. Of Environmental Protection
NOV 16 2012
Southwest District

307-12-04



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Dept. Of Environmental Protection
NOV 16 2012
Southwest District



1.0 INTRODUCTION

CEMEX Construction Materials Florida, LLC (CEMEX) owns and operates the CEMEX Brooksville South Cement Plant (facility) located at 10311 Cement Plant Road in Brooksville, Hernando County, Florida. The facility includes two Portland Cement kiln lines and associated equipment capable of producing up to 2,004,000 tons of clinker per year. The cement Kiln No. 2 is currently permitted by the FDEP Air Section to burn natural gas, distillate fuel oil, on specification used oil, coal, petroleum coke, propane, flyash, tire derived fuels, and a variety of alternative fuel materials (AFM) (i.e., plastics; roofing materials; agricultural biogenic materials; untreated and treated cellulosic biomass; carpet-derived fuels; and engineered fuels) that are defined as “non-hazardous” under the rules of 40 CFR 260 (i.e., RCRA) regarding solid waste.

CEMEX believes that their AFM program will result in the following benefits:

1. Promotion of related recycling and recovery business activities (i.e., employment, taxable income) in the State.
2. Reduction of greenhouse gas emissions by re-using and reducing landfilled biogenic material, reducing source material transportation and reducing methane emissions from landfilled materials.
3. Increased demand for recovered materials encourages recovery versus landfilling. This matches the goals of the State efforts to increase waste diversion for re-use or recycling.¹
4. Promotion of a more diverse energy supply which improves the viability of CEMEX and promotes and supports the AFM market.

¹<http://www.dep.state.fl.us/waste/recyclinggoal75/default.htm> (last visited April 18, 2011)

2.0 BACKGROUND INFORMATION

2.1 Permitting

CEMEX has been issued several air construction permits (FDEP Permit Nos. 0530021-031-AC, 035-AC, 037-AC) from the Florida Department of Environmental Protection (FDEP). On April 24, 2012, Permit 0530021-039-AC was issued. The permit was issued for several changes including; construction of long-term mechanical and pneumatic material handling systems for introduction of AFM into the existing preheater/precalciner Kiln No. 2 System; and modification or replacement of the main kiln burner system to allow introduction of a variety of AFM to the Kiln No. 2 System; and the long-term firing of a variety of alternative fuels including tire-derived fuel; plastics; roofing materials; agricultural biogenic materials; untreated and treated cellulosic biomass; carpet-derived fuels; and engineered fuels.

3.0 APPLICATION WITH SECTION B, ADDITIONAL INFORMATION

The following pages include the completed form, 62-7012.900(4) with the additional information required by the form provided in the following subsections.

Dept. Of Environmental Protection
NOV 16 2012
Southwest District



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(4), F.A.C.

Form Title: Application to Construct, Operate, or Modify
a Waste Processing Facility

Effective Date: January 6, 2010

Incorporated in Rule: 62-701.710(2), F.A.C.

APPLICATION TO CONSTRUCT, OPERATE, OR MODIFY A WASTE PROCESSING FACILITY

GENERAL REQUIREMENT: Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes (F.S.) and in accordance with Florida Administrative Code (F.A.C.) Chapter 62-701. A minimum of four copies of the application shall be submitted to the Department District Office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315(4), F.A.C., shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP). Complete appropriate sections for the type of facility for which application is made and include all additional information, drawings, and reports necessary to evaluate the facility.

Please Type or Print in Ink

A. GENERAL INFORMATION

1. Type of facility (check all that apply):

☐ Transfer Station

☐ Materials Recovery Facility:

☐ C&D Recycling

☐ Class III MRF

☐ MSW MRF

☐ Other Describe: _____

☒ Other Facility That Processes But Does Not Dispose Of Solid Waste On-Site:

☐ Storage, Processing or Disposal for Combustion Facilities (not addressed in another permit)

☒ Other Describe: AFM Storage and Processing Facility

NOTE: C&D Disposal facilities that also recycle C&D, shall apply on DEP FORM 62-701.900(6), F.A.C.

2. Type of application:

☐ Construction/Operation

☒ Operation without Additional Construction

3. Classification of application:

☒ New

☐ Substantial Modification

☐ Renewal

☐ Intermediate Modification

☐ Minor Modification

4. Facility name: CEMEX Brooksville South Cement Plant

5. DEP ID number: To Be Assigned County: Hernando

6. Facility location (main entrance): 10311 Cement Plant Road Brooksville, FL 34601

Northwest District
160 Government Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way Ste 200B
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

7. Location coordinates:
 Section: 8 Township: 22S Range: 19E
 Latitude: 28° 34' 54" Longitude: 82° 25' 56"
 Datum: WGS84 Coordinate Method: Unknown
 Collected by: N/A Company/Affiliation: N/A
8. Applicant name (operating authority): CEMEX Construction Materials Florida, LLC
 Mailing address: 10311 Cement Plant Road, Brooksville, FL 34601
 Street or P.O. Box City State Zip
 Contact person: Mr. James S. Daniel Telephone: (352) 799-7881
 Title: Plant Manager jdaniel@cemexusa.com
 E-Mail address (if available)
9. Authorized agent/Consultant: Koogler and Associates, Inc.
 Mailing address: 4014 NW 13th Street, Gainesville, FL 32609
 Street or P.O. Box City State Zip
 Contact person: Tammy Reed Telephone: (352) 377-5822
 Title: Environmental Scientist treed@kooglerassociates.com
 E-Mail address (if available)
10. Landowner (if different than applicant): Same as Applicant
 Mailing address: _____
 Street or P.O. Box City State Zip
 Contact person: _____ Telephone: (____) _____

 E-Mail address (if available)
11. Cities, towns and areas to be served: NA

12. Date site will be ready to be inspected for completion: TBD
13. Estimated costs:
 Total Construction: \$ Not Applicable Closing Costs: \$ 212,608.32-incl. 20% contingency
14. Anticipated construction starting and completion dates:
 From: Not Applicable To: Not Applicable
15. Expected volume of waste to be received: _____ yds³/day 240 tons/day
16. Provide a brief description of the operations planned for this facility: _____

Receive and process alternative fuel/materials (AFM) for Portland Cement kiln. Note this facility does not intend to receive or process secondary materials that are identified as solid waste per 40 CFR 241.

This application is submitted to address state of Florida regulatory matters.

B. ADDITIONAL INFORMATION

Please attach the following reports or documentation as required.

1. Provide a description of the solid waste that is proposed to be collected, stored, processed or disposed of by the facility, a projection of those waste types and quantities expected in future years, and the assumptions used to make the projections (Rule 62-701.710(2)(a), F.A.C.).
2. Attach a site plan, signed and sealed by a professional engineer registered under Chapter 471, F.S., with a scale not greater than 200 feet to the inch, which shows the facility location, total acreage of the site, and any other relevant features such as water bodies or wetlands on or within 200 feet of the site, potable water wells on or within 500 feet of the site (Rule 62-701.710(2)(b), F.A.C.).
3. Provide a description of the operation and functions of all processing equipment that will be used, with design criteria and expected performance. The description shall show the flow of solid waste and associated operations in detail, and shall include (Rule 62-701.710(2)(c), F.A.C.):
 - a. Regular facility operations as they are expected to occur;
 - b. Procedures for start up operations, and scheduled and unscheduled shut down operations; and
 - c. Potential safety hazards and control methods, including fire detection and control.
4. Provide a description of the loading, unloading, storage and processing areas (Rule 62-701.710(2)(d), F.A.C.).
5. Provide the identification and capacity of any on-site storage areas for recyclable materials, non-processable wastes, unauthorized wastes, and residues (Rule 62-701.710(2)(e), F.A.C.).
6. Provide a plan for disposal of unmarketable recyclable materials and residue, and for waste handling capability in the event of breakdowns in the operations or equipment (Rule 62-701.710(2)(f), F.A.C.).
7. Provide a boundary survey, legal description, and topographic survey of the property (Rule 62-701.710(2)(g), F.A.C.).
8. Provide a description of the design requirements for the facility which demonstrate how the applicant will comply with Rule 62-701.710(3), F.A.C.
9. Provide an operation plan which describes how the applicant will comply with Rule 62-701.710(4), F.A.C. (Rule 62-701.710(2)(h), F.A.C.).
10. Provide a closure plan which describes generally how the applicant will comply with Rule 62-701.710(6), F.A.C. (Rule 62-701.710(2)(i), F.A.C.).
11. Unless exempted by Rule 62-701.710(10)(a), F.A.C., provide the financial assurance documentation required by Rule 62-701.710(7), F.A.C. (Rule 62-701.710(2)(j), F.A.C.).
12. Provide documentation to show that stormwater will be controlled according to the requirements of Rule 62-701.710(8), F.A.C.
13. Provide documentation to show that the applicant will comply with the recordkeeping requirements of Rule 62-701.710(9), F.A.C.
14. Provide a history and description of any enforcement actions by the applicant described in subsection 62-701.320(3), F.A.C. relating to solid waste management facilities in Florida. (Rules 62-701.710(2), F.A.C. and 62-701.320(7)(i), F.A.C.)

C. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

1. Applicant:

The undersigned applicant or authorized representative of CEMEX Construction Materials Florida LLC

is aware that statements made in this form and attached information are an application for a AF storage and

processing facility Permit from the Florida Department of Environmental Protection and certifies that the information in this application is true, correct and complete to the best of his/her knowledge and belief. Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules and regulations of the Department. It is understood that the Permit is not transferable, and the Department will be notified prior to the sale or legal transfer of the permitted facility.


Signature of Applicant or Agent

James Daniel

Name and Title (please type)

jdaniel@cemexusa.com

E-Mail address (if available)

10311 Cement Plant Road

Mailing Address

Brooksville, FL

City, State, Zip Code

(352) 799-7881

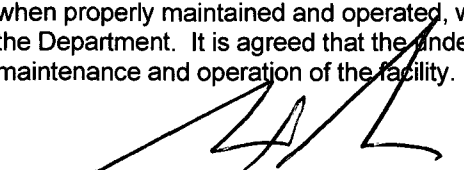
Telephone Number

11/19/12
Date

Attach letter of authorization if agent is not a governmental official, owner, or corporate officer.

2. Professional Engineer registered in Florida (or Public Officer if authorized under Sections 403.707 and 403.7075, Florida Statutes):

This is to certify that the engineering features of this waste processing facility have been designed/examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, this facility, when properly maintained and operated, will comply with all applicable statutes of the State of Florida and rules of the Department. It is agreed that the undersigned will provide the applicant with a set of instructions of proper maintenance and operation of the facility.


Signature

Maxwell R. Lee, Ph.D., P.E.

Name and Title (please type)

4014 NW 13th Street

Mailing Address

Gainesville, FL 32609

City, State, Zip Code

mlee@kooglerassociates.com

E-Mail address (if available)

(352) 377-5822

Telephone Number

11/13/12
Date


58091

Florida Registration Number

(please affix seal)

3.1 Description of Alternative Fuels/Materials (AFM)

Provide a description of the solid waste that is proposed to be collected, stored, processed or disposed of by the facility, a projection of those waste types and quantities expected in future years, and the assumptions used to make the projections (Rule 62-701.710(2)(a), F.A.C.).

The CEMEX Brooksville South Cement Plant has obtained FDEP permitting for air emissions to use the AFM at their facility beginning in early 2011 under air Permit 0530021-031-AC. Additional related air permits have been issued, 0530021-035-AC, 0530021-037-AC, and 0530021-039-AC to allow use of AFM. CEMEX has evaluated AFM under the temporary trial test air permits and the temporary approval from the Southwest FDEP Office of Solid Waste during 2011 (e-mail from Susan Pelz to Max Lee on September 14, 2011 for outdoor storage of clean biomass and peanut hulls.).

As state above, CEMEX was issued an air construction permit (FDEP Permit No. 0530021-039-AC) from the Florida Department of Environmental Protection (FDEP) on April 24, 2012. The permit was issued for several changes including the firing of a variety of AFM including tire-derived fuel; plastics; roofing materials; agricultural biogenic materials; untreated and treated cellulosic biomass; carpet-derived fuels; and engineered fuels (EF) in the Kiln No. 2 System.

The list of AFM includes:

- a) **Tire-Derived Fuel (TDF)**, which includes whole and shredded tires with or without steel belt material including portions of tires such as tirefluff. The kiln is currently permitted to use whole tires using the existing tire injection mechanism

system. Note that up to 23 percent of tires contribute raw materials and 20 percent of tires are typically biogenic.²

- b) **Plastics**, which include materials such as polyethylene plastics used in agricultural and silviculture operations. This may include incidental amounts of chlorinated plastics. Note that chlorine above the range of 0.2 percent will cause damage to the kiln preventing use of chlorinated plastics.
- c) **Roofing Materials**, which consists of roofing shingles and related roofing materials with the bulk of the incombustible grit material separated and which is not subject to regulations as an asbestos-containing material per 40 CFR 61 subpart M.
- d) **Agricultural Biogenic Materials**, which includes materials such as peanut hulls, rice hulls, corn husks, citrus peels, cotton gin by-products, animal bedding and other similar types of materials.
- e) **Cellulosic Biomass - Untreated**, which includes materials such as untreated lumber, tree stumps, tree limbs, slash, bark, sawdust, sander dust, wood chips scraps, wood scraps, wood slabs, wood millings, wood shavings and processed pellets made from wood or other forest residues.
- f) **Cellulosic Biomass - Treated**, which includes preservative-treated wood that may contain treatments such as creosote, copper-chromium-arsenic (CCA), or alkaline copper quaternary (ACQ), painted wood, or resinated woods (plywood, particle board, medium density fiberboard, oriented strand board, laminated beams, finger-jointed trim and other sheet goods).

² 40 CFR 98

- g) **Carpet-Derived Fuel**, which includes shredded new, reject or used carpet materials.
- h) **Alternative Fuel Mix**, which includes a blended combination of two or more of any of the above materials.
- i) **Engineered Fuel (EF)** is engineered to have targeted, consistent fuel properties such as: calorific value, moisture, particle size, ash content, and volatility. The specific targeted properties are established based on available alternative fuel material supply and are carefully controlled through blending of non-hazardous combustible materials or through separation of non-hazardous incombustible materials from combustible materials (mixes of any alternative fuels where the blending and processing may also include the addition of on-specification used oils or other non-hazardous liquids to ensure consistent and predictable fuel properties). EF is engineered largely from the above materials and could consist of animal meal, automotive manufacturing by-products, clean-up debris from natural disasters, processed municipal solid waste, paint filter cake, hospital materials (non-infectious), pharmaceuticals (expired prescriptions), cosmetics, and confiscated narcotics.

As such, the Brooksville South Cement Plant is requesting to collect, store and process these AFM on-site. The Brooksville South Cement Plant is planning to store AFM in five separate locations on-site. These storage locations with fuel types and capacity tonnage are listed on the following table.

Table 1. AFM Storage Locations

Location* (storage tonnage)	Tire Derived Fuel	Plastics	Roofing Material	Agricultural Biogenic Materials	Cellulosic Biomass- Untreated	Cellulosic Biomass- Treated	Carpet- Derived	Alternative Fuel Mix**	Engineered Fuel
A-Frame Bldg. – Covered (1000 tons)	X	X	X	X	X	X	X	X	X
ASB Storage –Covered (1000 tons)	X	X	X	X	X	X	X	X	X
Alternative Fuel/Material Storage and Processing Slab (300 tons)	--	--	--	X	X	--	--	--	--
Outdoor Storage Trailers (100 tons)	X	X	X	X	X	X	X	X	X
Coal Yard (2500 tons)	--	--	--	X	X	--	--	--	--

* See Section 3.4 for location details

**If such AFM includes material not allowed to be stored outdoors, then the mix will not be stored outdoors.

These locations are mapped and further discussed in the following sections. The total storage capacity of the cement plant locations is 4,900 tons. As such, the Brooksville South Cement Plant is projecting to have a maximum of 4,900 tons of AFM on-site at any given time. AFM on the cement plant site will be managed in accordance with 62-701 F.A.C.

Additional AMF storage area for approximately 2,500 tons is available on the quarry property (Gregg Mine), which is separately regulated under the environmental resource permit (ERP) issued by the FDEP Mining and Minerals Regulation Department. AFM on the quarry site will be managed as permitted by the ERP and not through this permit. The approximate location of the AFM storage area on the quarry property is shown on Figure 1.

3.2 Site Plans

Attach a site plan, signed and sealed by a professional engineer registered under chapter 471, F.S. with a scale not greater than 200 feet to the inch, which shows the facility location, total acreage of the site, and any other relevant features such as water bodies or wetlands on or within 200 feet of the site, potable water wells on or within 200 feet of the site (Rule 62-701.710(2)(b) FAC.

Facility figures depicting the site location and other relevant features are provided in Appendix 1. The site plan is provided on one figure at a scale of 1 inch = approx. 330 feet due to the large size of the facility. We are respectfully requesting an exemption from the requirement that the scale be not greater than 200 feet to the inch.

3.3 Description of Equipment

Provide a description of the operation and functions of all processing equipment that will be used, with design criteria and expected performance. The description shall show the flow of solid waste and associated operations in detail, and shall include (Rule 62-701.710(2)(c), F.A.C.):

- a. Regular facility operations as they are expected to occur;***
- b. Procedures for startup operations, and scheduled and unscheduled shut down operations; and***
- c. Potential safety hazards and control methods, including fire detection and control.***

AFM will be used during normal operations and not used during scheduled and unscheduled startup and shutdown of the kiln system. Covered trucks will unload AFM at the designated storage areas. When AFM are to be used in the pyroprocessing process, AFM will be transported via front end loader or open top trailers to the feeder system.

The following photos depict the typical major component of an AFM handling/injection system, the feeder system. The feeder system typically includes a docking station for walking trailers or hopper to unload AFM that is then fed into a screw feeder. The AFM is conveyed, weighed and then injected pneumatically into the kiln. Startup of operations will include the use of the walking bed trailers to deliver AFM to the feeder system. In the case of an unscheduled shutdown of the feeder, delivery of the AFM to the feeder will cease and the trailers will be used to store the AFM until the issue has been resolved. See photos 1-5, representing a typical feeder delivery system.



Photo 1. A typical covered feeder system



Photo 2. Two offloading docks of typical feeder system

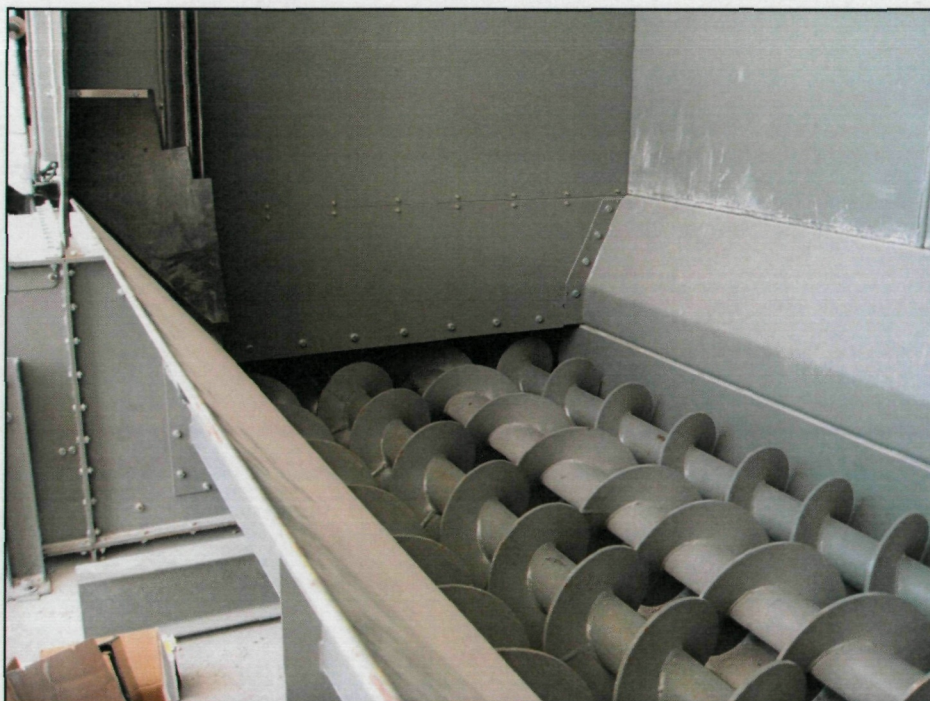


Photo 3. Typical screw conveyor in bottom of offloading ports



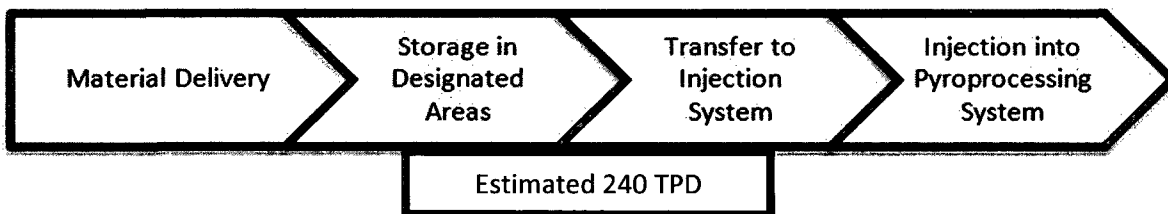
Photo 4. Typical Conveyors coming from offloading ports to metering system



Photo 5. Typical Pneumatic blower from metering system to injection porthole

CEMEX personnel working with the feeder system receive feeder training on proper operation of the system. This will include, but is not limited to, training on safety interlocks, location of all emergency stops, location of electrical disconnects and how to unplug AFM from the system. In addition, the operators have fire safety training as part of employee training.

The flow of alternative fuels from delivery to use will be as follows:



3.4 Description of Loading, Unloading, Storage and Processing Areas

Provide a description of the loading, unloading, storage and processing areas (Rule 62-701.710(2)(d), F.A.C.).

The storage areas and drainage details for each of the planned AFM locations are identified and depicted on Figure 1 (Appendix 1). The facility has two designated covered storage areas, two designated outside storage areas for uncovered AFM, and one outside trailer storage area totaling 4,900 tons. Note that a primary goal is to keep these AFM dry since water within the AFM directly reduces the value of the fuel. Engineered fuel will only be stored under cover or in trailers (see Table 1 for details).

The details for these locations are as follows:

- A-Frame Building (AFB) – 1,000 ton capacity - NE end of the building. This building has a roof and an impervious floor. Drainage around this building is

directed to the drainage ditch which outfalls to the settling pond. This building is covered so no drainage from AFM should occur.

- Additive Storage Building (ASB) – 1,000 ton capacity – SW end of building. The ASB has a clay lined floor. This building is covered so no drainage from AFM should occur.
- Alternative Fuel/Materials Storage and Processing Slab (AFM slab): Slab - 300 ton capacity. Drainage is directed to the drainage ditch which outfalls to the settling pond (See Figure 1, Appendix 1). AFM are temporarily placed in this location prior to injection into the alternative fuels feeding system. Agricultural biogenic material or untreated biomass will be stored and processed here. This area will be covered/tented should other types of AFM require processing on the AFM slab.
- Outdoor Trailer Storage – 100 tons. Drainage is directed to the drainage ditch which outfalls to the settling pond. However, all AFM in this location will be stored in enclosed trailers.
- Coal Yard – 2,500 tons. Drainage is directed to the existing ditch which outfalls to the settling pond. Agricultural biogenic material or untreated biomass will be stored in this location. Coal pile runoff, biomass fuel storage area runoff, and leachate from less than the 10-year 24-hour rainfall is collected in a lined ditch and treated in in the existing perimeter ditch prior to discharge to the tailings pond.

3.5 Storage Capacity

Provide the identification and capacity of any on-site storage areas for recyclable materials, non-processable wastes, unauthorized wastes, and residues (Rule 62-701.710(2)(e), F.A.C.).

The above citation from the regulation is intended to address solid waste facilities and does not apply entirely to this AFM processing facility. CEMEX will accept a wide variety of AFM as described in previous sections, many of which are not defined as solid waste. However, for the purposes of this permitting process, CEMEX will manage all of the AFM in accordance with 62-701 F.A.C.

CEMEX intends on occasionally processing AFM on-site for screening and reducing sizing as needed at the AFM slab (inert, untreated biomass or agricultural by-products) or under cover in the ASB location. Portable tents or other type of wind barriers will be utilized at the AFM slab as necessary to prevent release of material to the air or water. After AFM is screened and/or reduced in size, the AFM will be stored in one of the designated on-site locations or at the designated storage location within the quarry property. Processing is considered as a secondary process and will be utilized as needed for material handling purposes. For example, if a whole tire is not acceptable, then it can be shredded then fed into the kiln, instead of setting aside for shipment off-site. CEMEX will make every effort to ensure that unauthorized wastes are not brought on-site.

3.6 Plan for Disposal

Provide a plan for disposal of unmarketable recyclable materials and residue, and for waste handling capability in the event of breakdowns in the operations or equipment (Rule 62-701.710(2)(f), F.A.C.).

Not applicable.

3.7 Boundary Survey, Legal Description, and Topographic Survey

Provide a boundary survey, legal description, and topographic survey of the property (Rule 62-701.710(2)(g) FAC.

Boundary surveys with legal descriptions are on file with the Department for the CEMEX property. A site plan (Figure 1) and topographic map (Figure 2) are provided in Appendix 1.

3.8 Design Requirements - Rule 72-701.710(3)

(a) Tipping, processing, sorting, storage and compaction areas that are in an enclosed building or covered area shall have ventilation systems. The areas that are not enclosed shall be equipped with litter control devices.

The identified storage areas have adequate ventilation being either outdoors or pole barns (see Figure 1, Appendix 1). The areas are maintained the same as conventional fuel storage areas with housekeeping measures implemented to maintain the product by sweeping and dust control as needed.

(b) The facility shall be designed with a leachate control system to prevent discharge of leachate and avoid mixing of leachate with stormwater, and to minimize the presence of standing water.

These AFMs typically have 5-50% moisture, with some fresh cut woods having up to 50% moisture. Given these are fuels that should be dry, CEMEX intends to minimize outdoor storage of AFMs, and outdoor storage will only be used for clean materials as

listed in Table 1. CEMEX is currently permitted to store up to 55,000 tons of coal outside which contains similar constituents to AFMs.

(c) Provisions shall be made for evaluating the quantity of all incoming solid waste and recovered materials. Storage areas shall be designed to hold the expected volume of materials until they are transferred for disposal or recycling.

The receipt of AFM will be monitored as described in Sections 3.6 and 3.9. The storage areas have already been constructed and are designed to hold the expected volume of AFM until transferred for use in the kiln. All incoming AFM are weighed and the weights documented. Records of each shipment will be stored for at least three years. See Sections 3.4, 3.5, and 3.6 for additional details on the handling and storage of AFM.

3.9 Operation Plan

Provide an operation plan which describes how the applicant will comply with Rule 62-701.710(4), F.A.C. (Rule 62-701.710(2)(h), F.A.C.).

3.9.1 Receiving

The air permitting requires AFM to be received at the facility in covered trucks and/or in enclosed containers. During unloading and handling of AFM, the facility will use precautions as necessary to prevent fugitive dust emissions. AFM will be transported within the facility by open top trailers and stored in accordance with applicable regulations. Most AFM such as processed carpet, plastic, and paper will likely be delivered in large bales – which may require minimal processing, but other AFM such as processed roofing shingles, peanut hulls, engineered fuels, sawdust and wood shavings would likely come in unbaled or loose. AFM will be inspected by the provider prior to shipment. If unacceptable material is found, it will be removed. Access to the facility is regulated by a manned guard gate at all times.

3.9.2 Preparation

As mentioned in Section 3.5, depending on the AFM, the AFM may periodically be additionally sized (i.e., grinded) and may also be screened to ensure uniform particle size as well as removal of unwanted materials, and/or passed through a belt magnet for additional metal removal. A primary requirement of the quality of the AFM is minimal moisture content, thereby limiting the potential of wet material to the maximum extent possible. Such periodic processing and storage will be conducted either under cover in the ASB building (for all AFM) and on the AFM slab (for inert, untreated biomass or agricultural by-products). After processing is complete, mechanically transported AFM will be moved by mobile equipment (front loader, truck and trailer, etc.) to designated storage locations (see Table 1) or to a hopper system which feeds the AFM into the pyroprocessing system (kiln). Dust suppression in storage areas will be used as needed. The facility will store AFM under cover and on a concrete or compacted clay surface with run-off control.

3.9.3 Transport, Handling, and Storage

The transport of AFM in the site will be in opened top trailers or by front end loader, with dust suppression as needed to control fugitive dust. Trucks delivering AFM to the site will be covered trucks and will enter through the front gate and deposit the AFM at one of the four specified locations (See Figure 1, Appendix 1).

3.9.4 Personnel

The responsible person(s) for individual portions of operation.

Plant Manager: James Daniel

Environmental Manager: George Townsend

3.9.5 Equipment

See Section 3.3 of this document.

3.9.6 Best Management Practices (BMP) Plan

Table 2. Best Management Practices Plan	
Practice	Description
Minimization of Fugitive Dust	<ol style="list-style-type: none"> 1) Drop points to storage areas shall be designed to minimize the overall exposed (or exposed to the atmosphere) drop height for AFM that have the potential to create airborne dust particles. 2) Periodic maintenance shall be performed to maintain off-loading locations and associated drop point integrity as necessary.
Minimization of AFM in Contact with Stormwater	<ol style="list-style-type: none"> 1) AFM will be processed and stored under cover or in enclosed conditions. It is a primary goal of the facility to keep the AFM dry per category (e.g. agricultural biogenic material and untreated biomass will be stored outdoors, not under cover).
Fire Prevention/ Spontaneous Combustion Minimization	<ol style="list-style-type: none"> 1) The Emergency Response Plan includes: <ol style="list-style-type: none"> a. Facility maintains a separate Fire Prevention and Safety Plan on-site. b. The local Fire Department performs an annual inspection of the facility. c. All buildings and mobile equipment are equipped with firefighting equipment as required by all county, state, and federal codes and regulations. 2) Proper storage of AFM to ensure that heat generated from pile compaction does not result in spontaneous combustion. 3) All fuel areas must display appropriate signage (fire hazard warnings, no smoking, etc.) to notify personnel and visitors of any potential fire hazards to prevent accidental combustion of AFM.
Quality Assurance	<ol style="list-style-type: none"> 1) The AFM shall be delivered to the Plant with all loads properly secured, contained, and covered. 2) For each shipment of AFM, the permittee shall record the date, quantity and a description of the AFM received and keeps a record of the Bill of Lading for a minimum of two years. 3) The permittee shall inspect and sample shipments of AFM to ensure that delivered AFM meet the respective expected selection criteria. If the permittee identifies off-specification material, the supplier shall be contacted and the AFM shall be returned, disposed, blended, or any other appropriate legal method of handling the AFM shall be employed. 4) The permittee shall maintain records of off-specification deliveries and actions taken to correct such abnormalities. Such records shall be stored on-site for at least two years and available for inspection upon request.
Safety	CEMEX maintains a separate Safety Plan on-site.

3.9.7 Contingency Plan

In the event of an operational interruption or emergency, such as fires, explosions, or natural disasters, material delivery to the facility will cease until the interruption or emergency has been resolved. The facility maintains a Contingency Plan (Plan).. This Plan addresses a broad range of contingencies that are described in 62-701.320.(16) including fires, explosions, and natural disasters.

The Contingency Plan shall be kept at the facility at all times and shall be accessible to facility operators. The contingency plan includes:

1. Designation of persons responsible for implementation of the contingency plan;
2. Procedures for notification of appropriate emergency response persons, including the department, the local government, and local fire protection agencies;
3. A description of emergency procedures to be followed, including the location of fire-fighting equipment and explanations of how to use this equipment;
4. Provisions for the immediate shutting down of those parts of the facility affected by the emergency and notification to customers of the closure of the facility; and
5. Procedures for notification of neighbors and local government officials of the potential impacts of the emergency, and provisions to minimize those impacts.

3.9.8 Operators and Spotters

Not applicable to the processing and storage of AFM. AFM comes to the facility as a sorted and sized commodity. Therefore, the requirement of regulated spotter and operator training per 62-701.320(15), F.A.C. should not be required.

3.9.9 Objectionable Odors

The facility will be operated such that objectionable odors will be addressed in accordance with subsection 62-296.320(2), F.A.C. The facility will not allow the discharge of air pollutants which cause or contribute to an objectionable odor beyond the facility boundary.

3.9.10 Fire Protection

The facility has adequate fire protection available at all times.

3.9.11 Access

Access to the facility is controlled through the use of plant personnel on-site 24 hours per day, 7 days per week, by the use of surveillance cameras, fences, and natural barriers. All vehicles are logged in and out.

3.9.12 Regulated Hazardous Wastes

If regulated hazardous wastes are discovered to have been improperly deposited at the facility, the facility operator will promptly notify the Department, the person responsible for shipping the wastes to the facility, and the generator of the wastes, if known. The area where the wastes are deposited shall immediately be cordoned off from public access. If the generator or hauler cannot be identified, the facility operator shall assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

3.10 Closure Plan

3.10.1 Notification and Closing Process

Prior to ceasing operations, notification will be provided to the Department and contracted waste suppliers and generators of the intent to close and the expected time

frame. Access to the facility is controlled through the use of plant personnel on-site 24 hours per day, 7 days per week, by the use of surveillance cameras, fences, and natural barriers. All vehicles are logged in and out. When the facility is no longer going to function as an AFM processing facility, the plant personnel will deny access of AFM to the facility. A notice will be posted at the entrance to the property stating that the facility is closed.

Prior to closing the facility, any remaining AFM from the storage areas will be combusted in the cement kilns or removed from the facility by a permitted hauler and management facility or returned to the supplier(s).

3.10.2 Quantity of Alternative Fuel Material (AFM)

The maximum quantity of AFM to be stored at the facility is 4,900 tons. There is no disposal of ash from the combustion of AFM in the cement manufacturing process. Maximum usage for the kiln system is estimated at 240 tons/day, with an average expected usage of 150 tons/day. The expected average inventory turnaround is therefore approximately 33 day's supply based on 4,900 tons per day of storage and 150 tons per day usage. For the CEMEX Brooksville South Cement Plant facility, that amount is as follows:

$$150 \text{ tons/day} \times 33 \text{ days} = \underline{4,900 \text{ tons of AFM}}$$

At a higher usage rate, the AFM storage would be for a shorter period of time.

3.10.3 Closure Scheduling

At the time a decision is made to close the facility, it is estimated that the total time necessary for closure will be as follows:

Notification Period – 60 days

The Notification Period is expected to be 60 days to allow time for collectors to revise their routing and notify the facilities to receive the AFM.

Combust All AFM At Facility – 60 days

After the 60 day Notification Period ends, the facility will be closed to incoming AFM. As the facility will be managed to ensure that approximately less than 30 times the daily capacity of the equipment is stored, approximately 30 days of normal operations are necessary to combust all AFM. To cover any unforeseen circumstances (i.e., down time), this phase of closure is estimated to be 60 days.

Removal of Residues - 30 Days

Although significant quantities are not expected, any residues at the facility will be removed to a permitted facility or receiver.

Restore Facility to its Pre-Permit Condition

If facility rehabilitation in accordance with 62-711.700(3)(c) is deemed necessary by the Department, CEMEX will work with the Department to develop and implement a plan for action. Part of the plan development will address adequate time for completion. Without a scope of work, the time frame to complete this task is unknown.

Department Notification

CEMEX will notify the Department when the closing of the facility is complete. CEMEX understands that the Department will inspect the site to ensure that all closing procedures have been correctly implemented and completed. Upon Department inspection and approval of the facility closing, the Department shall provide CEMEX approval of the closing in writing. It is further understood that the Department Secretary or his designee shall release the financial instrument within 30 days of closing approval.

3.10.4 Closure Cost Estimates

The estimated closing costs for the facility are based on current third party estimates. The third parties are not subsidiary or parent companies and their estimates are based on performing the work and are reported on a per unit basis. Closing costs include removal and disposal of AFM, manual labor for facility cleanup, facility re-grading (if necessary), and inspection by a Professional Engineer registered in the state of Florida. The cost estimates are certified by a Professional Engineer. The cost estimate is re-estimated at least annually and submitted to the Department at least 60 days prior to the anniversary date of the instrument.

To demonstrate financial assurance of the facility closing costs, CEMEX will obtain a guarantee bond that meets or exceeds the required amount of money for the closure costs.

Dept. Of Environmental Protection
NOV 16 2012
Southwest District



The actual estimated cost of closing the facility at the time of development of this Closure Plan is \$177,173.60, plus the contingency estimate of \$35,434.72 for a total of \$212,608.32. The closing estimates are provided in the Attachments, and are detailed in the following sections.

Removal/Disposal of AFM

The closing cost estimate for this task is based on the quantity of AFM that is permitted for the facility at the amount that would be expended to remove, process, and dispose of AFM at the facility and to close the related operations at the facility. The estimate was obtained from Greenway Recycling and is provided as Attachment A. The estimate was obtained for 4,400 tons of AFM, not 4,900 tons as currently proposed. Therefore, a cost estimate for the transport and disposal of 4,900 tons of AFM based on the Greenway Recycling estimate is as follows:

- 4,900 tons @ approximately \$35.00 ton = \$171,500

Professional Engineer Services

This cost estimate is for an inspection by a professional engineer registered in Florida. A professional engineer will visit the facility to determine if there are spills or any AFM remaining after the removal of residues. The engineer will provide an inspection report detailing the findings and if applicable, will direct the cleanup effort. The closure cost estimate includes the cost for the inspection and

reporting (see Attachment B). The estimate for professional engineering services is as follows:

- Site Inspection and Reporting - 8 hours at \$175/hour = \$1,400.00

Manual Labor

The cost of manual cleaning and debris removal is based on the United States Bureau of Labor Statistics for Occupational Employment and Wages, May 2011 for Cleaners of Vehicles and Equipment.³ The cost of rough grading was obtained from RSMeans.⁴ The costs for manual labor for facility clean-up and re-grading (if necessary) are estimated as follows:

- Cleanup - \$25/man hour x 80 hrs. = \$2,000.00
- Rough Grading - Equipment Operator \$51.00/8 hr. day and Backhoe \$728.80/day for two 8 hour days = \$2,273.60.

3.10.5 Summary of Closure Plan

CEMEX has developed this Closure Plan in accordance with Rule 62-701.320(10)(b) (F.A.C.). Closing cost estimates were obtained from independent third parties, and appropriate proof of financial responsibility will be provided upon the Department's approval of this closure plan and closure cost estimates. The total current estimated

³ US DEPARTMENT OF LABOR, OCCUPATIONAL EMPLOYMENT STATISTICS, Occupational Employment and Wages, May 2011. <http://www.bls.gov/oes/current/oes537061.htm>

⁴ RSMeans. *Assemblies Cost Data*, 28th Annual Edition; 2003.

cost of closing the facility including a contingency fee is \$212,608.32. A Financial Assurance Cost Estimate Form is provided as Attachment C.

3.11 Financial Assurance

Unless exempted by Rule 62-701.710(10)(a) FAC, provide the financial assurance documentation required by Rule 62-701.710(7) FAC (Rule 62-701-710(2)(j) FAC).

CEMEX will provide the required financial assurance upon the Department's review and approval of the closing cost estimates, and no later than sixty days prior to accepting AFM at the site under this solid waste permit. CEMEX will add a 20 percent contingency fee (\$35,434.72) to the estimated closing costs for financial assurance to be provided totaling \$212,608.32.

3.12 Stormwater Control

Provide documentation to show that stormwater will be controlled according to the requirements of Rule 62-701.710(8), F.A.C.

The facility was not required to obtain an Environmental Resource permit and has a letter from the Environmental Protection Agency stating that a National Pollutant Discharge Elimination System (NPDES) permit is not required. The facility has a closed drainage system. Run-off from the facility is directed to the perimeter drainage ditch which is pumped to a series of on-site ponds. In the event of a storm event causing the ponds to overflow, two emergency spillways would direct flow to the adjacent property owned by CEMEX. Based on the proposed storage, at no time would there be a discharge of stormwater to waters of the United States and no ditch connects to off-site surface waters. CEMEX conducts quarterly monitoring of the perimeter ditch and one of the receiving ponds (shown in Figure 1, Appendix 1) in accordance with the Site Certification Permit.

All of the proposed storage areas are designated as Flood Zone X (not within a flood zone).

3.13 Recordkeeping Requirements

Provide documentation to show that the applicant will comply with the recordkeeping requirements of Rule 62-701.710(9), F.A.C.

CEMEX will retain operational records to include a daily log of the quantity and type of AFM received, the quantity transferred to the kiln for energy recovery, and the quantity shipped off-site. These records will include each type of AFM which is processed, recycled, and/or disposed. The records will be compiled on a monthly basis and made available for inspection by the Department. The facility will retain the records for a minimum of three years.

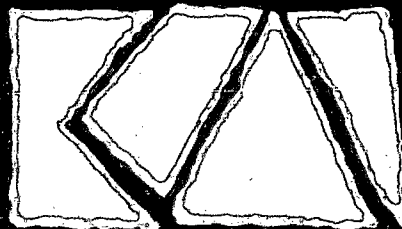
3.14 Enforcement Actions

Provide a history and description of any enforcement actions by the applicant described in subsection 62-701.320(3), F.A.C. relating to solid waste management facilities in Florida. (Rules 62-701.710(2), F.A.C. and 62-701.320(7)(i), F.A.C.)

The facility has not had any enforcement actions relating to solid waste management facilities in Florida.

- A. AFM Removal Cost Estimate**
 - B. Professional Engineering Estimate**
 - C. Financial Assurance Cost Estimate**
- Form**

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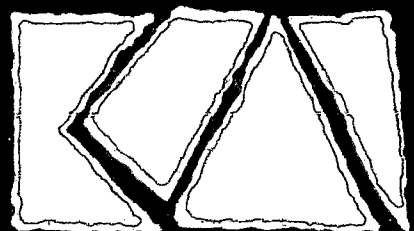
KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

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ESTIMATE



KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES



May 21, 2012

Steven Bassler
Production Manager - United States of America
CEMEX
10311 Cement Plant Road Brooksville
Florida 34601

RE: Removal of C&D material and Natural Wood Material from Cemex Brooksville Plant.

Dr. Mr. Bassler,

The following is a cost breakdown of what Greenway Recycling, Inc. would charge to haul and dispose of materials in the Brooksville Plant Alternative Fuel Storage Areas. All materials would be transported in 120 CY walking floor trailers. The materials will be disposed at a properly permitted waste facility and documented for your records.

C & D Material (2,100 Tons)
Costs Per Ton

Transport:	\$20.00
Disposal:	\$15.00
Unit Total:	\$35.00
Total Cost:	\$35.00 x 2,100 tons = \$73,500.00

Natural Wood Material (2,300 Tons)
Costs Per Ton

Transport:	\$12.00
Disposal:	\$ 6.00
Unit Cost:	\$18.00
Total Cost:	\$18.00 x 2,300 tons = \$41,400.00

Total Material Disposal Cost: \$114,900.00

Thank You,


J. Andrew Rist, PhD
Vice President
Greenway Recycling, Inc.

3035 Highway 92 East
Lakeland, FL 33801
(863) 668 - 5402 Phone
(863) 668 - 5403 Fax

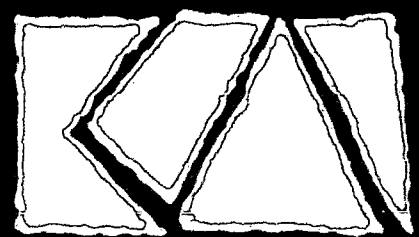
3565 126th Avenue North
Clearwater, FL 33762
(727) 573-1110 Office
(727) 573-1109 Fax
(727) 573-1180 Plant

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KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

307-12-04
September 10, 2012



4014 NW 13th STREET
GAINESVILLE, FL 32609-1923
352/377-5822 ■ FAX/377-7158

Mr. George Townsend
CEMEX Construction Materials Florida, LLC
PO Box 1508
Brooksville, FL 34605-1508

Re: Closing Cost Estimate - Professional Engineering Services
CEMEX Brooksville South Cement Plant AFM Facility
Brooksville, Hernando County, Florida

Dear George:

Thank you for the opportunity to present this cost estimate for Professional Engineering services for the Brooksville South Cement Plant, Alternative Fuel/Material Facility.

A Professional Engineer (P.E.), registered in Florida, will visit the Facility to conduct a site inspection to determine if there are any spills of any solid wastes or other clean-up activities necessary to meet the closure requirements as described in the Closure Plan and in accordance with Rule 62-701.600 (F.A.C.). The engineer will provide an inspection report detailing the findings and directing clean-up efforts if necessary. The professional engineer's inspection will also include a visual evaluation of the Facility elevations. The inspection report will detail these findings, and will provide direction of re-grading if necessary. The costs for Professional Engineering services as described above are as follows:

Site Inspection by P.E., 4 hours at \$175.00/hr. =	\$700.00
Report of findings and direction clean-up and re-grading as necessary, 4 hours at \$175.00/hr. =	\$700.00
<hr/> TOTAL	<hr/> \$1,400.00

We look forward to assisting you with this project in the future.

Best regards,

Maxwell R. Lee., Ph.D., P.E.
President, Koogler and Associates, Inc.

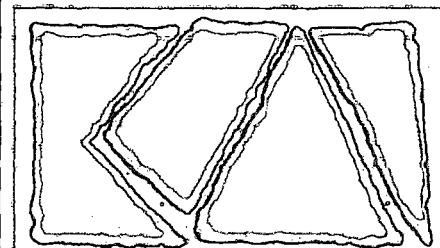
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COST
ESTIMATE
FORM



KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

[Print Form](#)[Reset Form](#)

DEP Form # 62-701.900(28), F.A.C.

Form Title: Closure Cost Estimating Form
For Solid Waste Facilities

Effective Date: January 6, 2010

Incorporated in Rule 62-701.630(3), F.A.C.

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: CEMEX Brooksville South Cement Plant WACS ID: _____
Permit Application or Consent Order No.: To Be Assigned Expiration Date: _____
Facility Address: 10311 Cement Plant Road; Brooksville, FL 34601
Permittee or Owner/Operator: CEMEX Construction Materials Florida, LLC
Mailing Address: 10311 Cement Plant Road; Brooksville, FL 34601

Latitude: 28° 34' 54" Longitude: 82° 25' 56"
Coordinate Method: Degrees/Minutes/Sec Datum: NAD83 (assumed)
Collected by: Unknown/From Original Form Company/Affiliation: N/A

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Active Life of Unit From Date of Initial Receipt of Waste	If active: Remaining life of unit	If closed: Date last waste received	If closed: Official date of closing
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total disposal unit acreage included in this estimate: Closure: N/A Long-Term Care: N/A

Facility type: ☐ Class I ☐ Class III ☐ C&D Debris Disposal
(Check all that apply) ☐ Other: N/A

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check type)

- ☐ Letter of Credit* ☐ Insurance Certificate ☐ Escrow Account
☐ Performance Bond* ☐ Financial Test ☐ Form 29 (FA Deferral)
☒ Guarantee Bond* ☐ Trust Fund Agreement

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement

Northwest District
160 Government Center
Pensacola, FL 32502-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL 33637
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 N. Congress Ave., Ste. 200
West Palm Beach, FL 33401
561-681-6600

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code, (F.A.C.) sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select one of the methods of cost estimate adjustment below.

☐ (a) Inflation Factor Adjustment

☒ (b) Recalculated or New Cost Estimates

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850) 245-8706.

This adjustment is based on the Department approved closing cost estimate dated:

To Be Approved

Latest Department Approved
Closing Cost Estimate:

Current Year Inflation
Factor, e.g. 1.02

Inflation Adjusted Closing
Cost Estimate:

x

=

This adjustment is based on the Department approved long-term care cost estimate dated:

N/A

Latest Department Approved
Annual Long-Term Care
Cost Estimate:

Current Year Inflation
Factor, e.g. 1.02

Inflation Adjusted Annual
Long-Term Care Cost
Estimate:

x

=

Number of Years of Long Term Care Remaining:

x

Inflation Adjusted Long-Term Care Cost Estimate:

=

Signature by: ☒ Owner/Operator

☐ Engineer

(check what applies)

Signature

10311 Cement Plant Road

Address

James Daniel, Facility Manager

Name & Title

Brooksville, FL 34601

City, State, Zip Code

Date

jdaniel@cemexusa.com

E-Mail Address

352-799-7881

Telephone Number

IV. ESTIMATED CLOSING COST (check what applies)☐ **Recalculated Cost Estimate**☒ **New Facility Cost Estimate**

- Notes: 1. Cost estimates for the time period when the extent and manner of landfill operation makes closing most exp
2. Cost estimate must be certified by a professional engineer.
3. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.
4. In some cases, a price quote in support of individual item estimates may be required.

Description	Unit	Number of Units	Cost / Unit	Total Cost
1. Proposed Monitoring Wells (Do not include wells already in existence.)				
	EA			
			Subtotal Proposed Monitoring Wells:	
2. Slope and Fill (bedding layer between waste and barrier layer):				
Excavation	CY	1	\$2,273.60	\$2,273.60
Placement and Spreading	CY			
Compaction	CY			
Off-Site Material	CY			
Delivery	CY			
			Subtotal Slope and Fill:	\$2,273.60
3. Cover Material (Barrier Layer):				
Off-Site Clay	CY			
Synthetics - 40 mil	SY			
Synthetics - GCL	SY			
Synthetics - Geonet	SY			
Synthetics - Other (explain)				
			Subtotal Cover Material:	
4. Top Soil Cover:				
Off-Site Material	CY			
Delivery	CY			
Spread	CY			
			Subtotal Top Soil Cover:	
5. Vegetative Layer				
Sodding	SY			
Hydroseeding	AC			
Fertilizer	AC			
Mulch	AC			
Other (explain)				
			Subtotal Vegetative Layer:	
6. Stormwater Control System:				
Earthwork	CY			
Grading	SY			
Piping	LF			
Ditches	LF			
Berms	LF			
Control Structures	EA			
Other (explain)				
			Subtotal Stormwater Control System:	

Description	Unit	Number of Units	Cost / Unit	Total Cost
7. Passive Gas Control:				
Wells	EA	_____	_____	_____
Pipe and Fittings	LF	_____	_____	_____
Monitoring Probes	EA	_____	_____	_____
NSPS/Title V requirements	LS	1	\$0.00	_____
Subtotal Passive Gas Control:				_____
8. Active Gas Extraction Control:				
Traps	EA	_____	_____	_____
Sumps	EA	_____	_____	_____
Flare Assembly	EA	_____	_____	_____
Flame Arrestor	EA	_____	_____	_____
Mist Eliminator	EA	_____	_____	_____
Flow Meter	EA	_____	_____	_____
Blowers	EA	_____	_____	_____
Collection System	LF	_____	_____	_____
Other (explain) _____	_____	_____	_____	_____
Subtotal Active Gas Extraction Control:				_____
9. Security System:				
Fencing	LF	_____	_____	_____
Gate(s)	EA	_____	_____	_____
Sign(s)	EA	_____	_____	_____
Subtotal Security System:				_____
10. Engineering:				
Closure Plan Report	LS	1	\$0.00	_____
Certified Engineering Drawings	LS	1	\$0.00	_____
NSPS/Title V Air Permit	LS	1	\$0.00	_____
Final Survey	LS	1	\$0.00	_____
Certification of Closure	LS	1	\$0.00	_____
Other (explain) Disposal	_____	1	\$171,500.00	\$171,500.00
Subtotal Engineering:				\$171,500.00
Contractor (Greenway Recycling)				

Description	Hours	Cost / Hour	Hours	Cost / Hour	Total Cost
11. Professional Services					
	<u>Contract Management</u>		<u>Quality Assurance</u>		
P.E. Supervisor	4	\$175.00	4	\$175.00	\$1,400.00
On-Site Engineer	_____	_____	_____	_____	_____
Office Engineer	_____	_____	_____	_____	_____
On-Site Technician	_____	_____	_____	_____	_____
Other (explain)	80	\$25.00	_____	_____	\$2,000.00
Clean-up Tech	_____	_____	_____	_____	_____

Description	Unit	Number of Units	Cost / Unit	Total Cost
Quality Assurance Testing	LS	1	_____	_____
Subtotal Professional Services:				\$3,400.00

Subtotal of 1-11 Above: \$177,173.60

12. Contingency 20 % of Subtotal of 1-11 Above \$35,434.72

Subtotal Contingency: \$35,434.72

Estimated Closing Cost Subtotal: \$212,608.32

Description	Total Cost
13. Site Specific Costs	
Mobilization	
Waste Tire Facility	
Materials Recovery Facility	
Special Wastes	
Leachate Management System Modification	
Other (explain) _____	
	Subtotal Site Specific Costs: _____

TOTAL ESTIMATED CLOSING COSTS (\$): \$212,608.32

V. ANNUAL COST FOR LONG-TERM CARE

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

(Check Term Length) ☐ 5 Years ☐ 20 Years ☐ 30 Years ☒ Other, 0 Years

Notes: 1. Cost estimates must be certified by a professional engineer.

2. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.

3. In some cases, a price quote in support of individual item estimates may be required.

All items must be addressed. Attach a detailed explanation for all entries left blank.

Description	Sampling Frequency (Events / Year)	Number of Wells	(Cost / Well) / Event	Annual Cost
1. Groundwater Monitoring [62-701.510(6), and (8)(a)]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	_____	_____	_____
Annually	1	_____	_____	_____
Subtotal Groundwater Monitoring:				_____
2. Surface Water Monitoring [62-701.510(4), and (8)(b)]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	_____	_____	_____
Annually	1	_____	_____	_____
Subtotal Surface Water Monitoring:				_____
3. Gas Monitoring [62-701.400(10)]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	_____	_____	_____
Annually	1	_____	_____	_____
Subtotal Gas Monitoring:				_____
4. Leachate Monitoring [62-701.510(5), (6)(b) and 62-701.510(8)c]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	_____	_____	_____
Annually	1	_____	_____	_____
Other (explain) _____	_____	_____	_____	_____
Subtotal Leachate Monitoring:				_____

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. Leachate Collection/Treatment Systems Maintenance				
<u>Maintenance</u>				
Collection Pipes	LF	_____	_____	_____
Sumps, Traps	EA	_____	_____	_____
Lift Stations	EA	_____	_____	_____
Cleaning	LS	1	_____	_____
Tanks	EA	_____	_____	_____

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. (continued)				
<u>Impoundments</u>				
Liner Repair	SY	_____	_____	_____
Sludge Removal	CY	_____	_____	_____
<u>Aeration Systems</u>				
Floating Aerators	EA	_____	_____	_____
Spray Aerators	EA	_____	_____	_____
<u>Disposal</u>				
Off-site (Includes transportation and disposal)	1000 gallon	_____	_____	_____
Subtotal Leachate Collection / Treatment Systems Maintenance:				_____
6. Groundwater Monitoring Well Maintenance				
Monitoring Wells	LF	_____	_____	_____
Replacement	EA	_____	_____	_____
Abandonment	EA	_____	_____	_____
Subtotal Groundwater Monitoring Well Maintenance:				_____
7. Gas System Maintenance				
Piping, Vents	LF	_____	_____	_____
Blowers	EA	_____	_____	_____
Flaring Units	EA	_____	_____	_____
Meters, Valves	EA	_____	_____	_____
Compressors	EA	_____	_____	_____
Flame Arrestors	EA	_____	_____	_____
Operation	LS	1	\$0.00	_____
Subtotal Gas System Maintenance:				_____
8. Landscape Maintenance				
Mowing	AC	_____	_____	_____
Fertilizer	AC	_____	_____	_____
Subtotal Landscape Maintenance:				_____
9. Erosion Control and Cover Maintenance				
Sodding	SY	_____	_____	_____
Regrading	AC	_____	_____	_____
Liner Repair	SY	_____	_____	_____
Clay	CY	_____	_____	_____
Subtotal Erosion Control and Cover Maintenance:				_____
10. Storm Water Management System Maintenance				
Conveyance Maintenance	LS	1	\$0.00	_____
Subtotal Storm Water Management System Maintenance:				_____
11. Security System Maintenance				
Fences	LS	1	\$0.00	_____
Gate(s)	EA	_____	_____	_____
Sign(s)	EA	_____	_____	_____
Subtotal Security System Maintenance:				_____

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
12. Utilities	LS	1	\$0.00	
Subtotal Utilities:				

13. Leachate Collection/Treatment Systems Operation
Operation

P.E. Supervisor	HR			
On-Site Engineer	HR			
Office Engineer	HR			
OnSite Technician	HR			
Materials	LS	1	\$0.00	

Subtotal Leachate Collection/Treatment Systems Operation: _____

14. Administrative

P.E. Supervisor	HR			
On-Site Engineer	HR			
Office Engineer	HR			
OnSite Technician	HR			
Other _____				

Subtotal Administrative: _____

Subtotal of 1-14 Above: _____

15. Contingency _____ % of Subtotal of 1-14 Above
Subtotal Contingency: _____

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
16. Site Specific Costs				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Subtotal Site Specific Costs:				_____

ANNUAL LONG-TERM CARE COST (\$ / YEAR): _____

Number of Years of Long-Term Care: _____

TOTAL LONG-TERM CARE COST (\$): _____

VI. CERTIFICATION BY ENGINEER

This is to certify that the Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and/or long-term care of the facility and comply with the requirements of Rule 62-701.630 F.A.C. and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Cost Estimates shall be submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.



Signature

4014 NW 13th Street

Mailing Address

Maxwell R. Lee, Ph.D., P.E.

Name and Title (please type)

Gainesville, FL 32609

City, State, Zip Code

11/13/12

Date

mlee@kooglerassociates.com

E-Mail address (if available)

58091

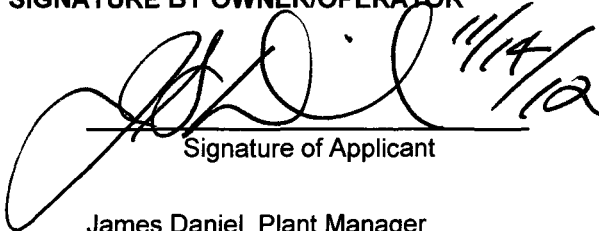
Florida Registration Number

(please affix seal)

352-377-5822

Telephone Number

VII. SIGNATURE BY OWNER/OPERATOR



Signature of Applicant

10311 Cement Plant Road

Mailing Address

James Daniel, Plant Manager

Name and Title (please type)

Brooksville, FL 34601

City, State, Zip Code

E-Mail address (if available)

352-799-7881

Telephone Number

1. Site Figures

A

P

P

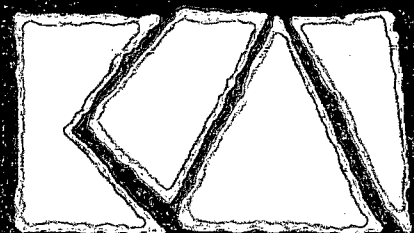
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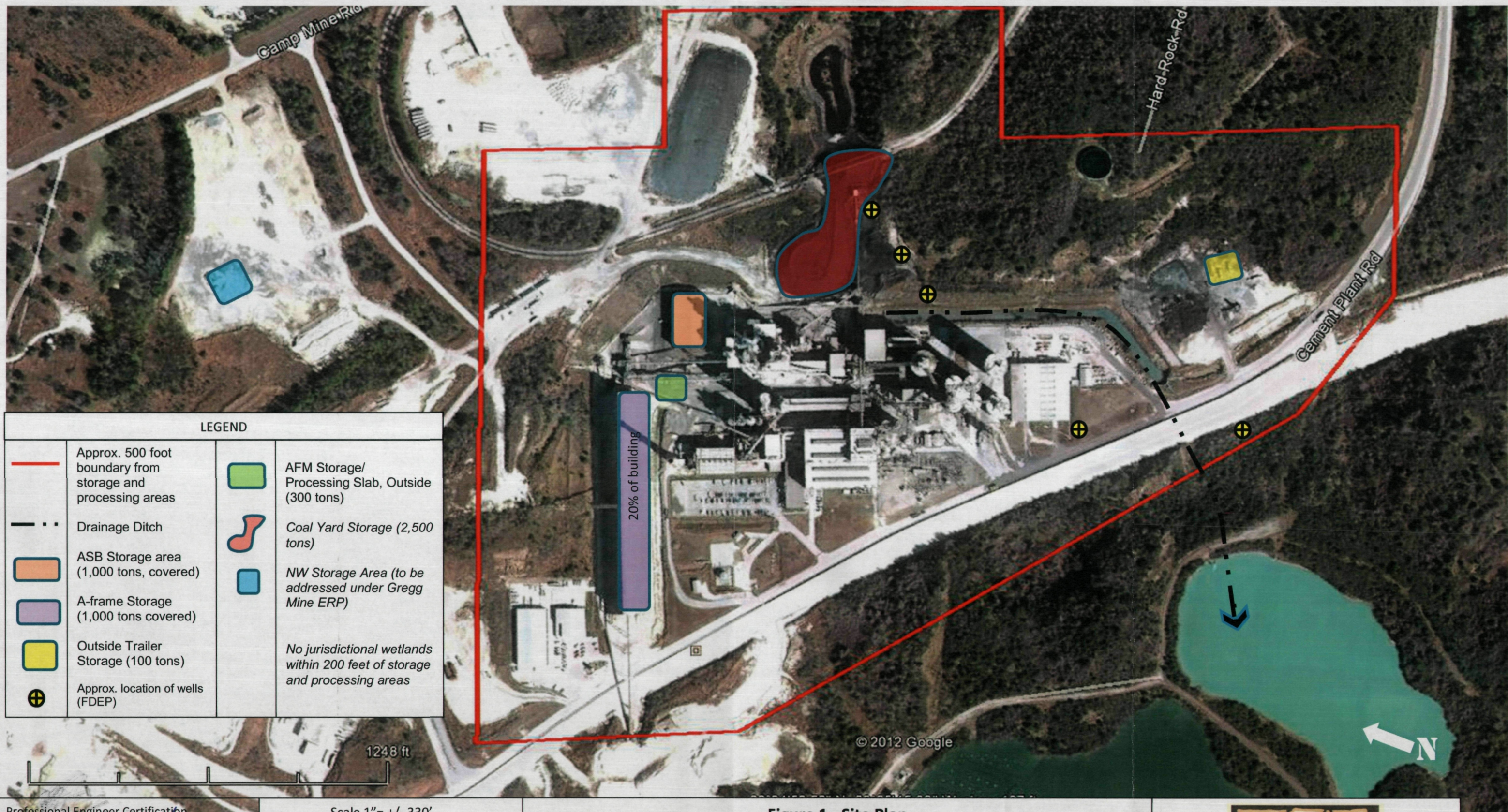
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KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES



Professional Engineer Certification

Maxwell R. Lee, Ph.D., P.E.
R.E. No. 58091
Date 11/13/12

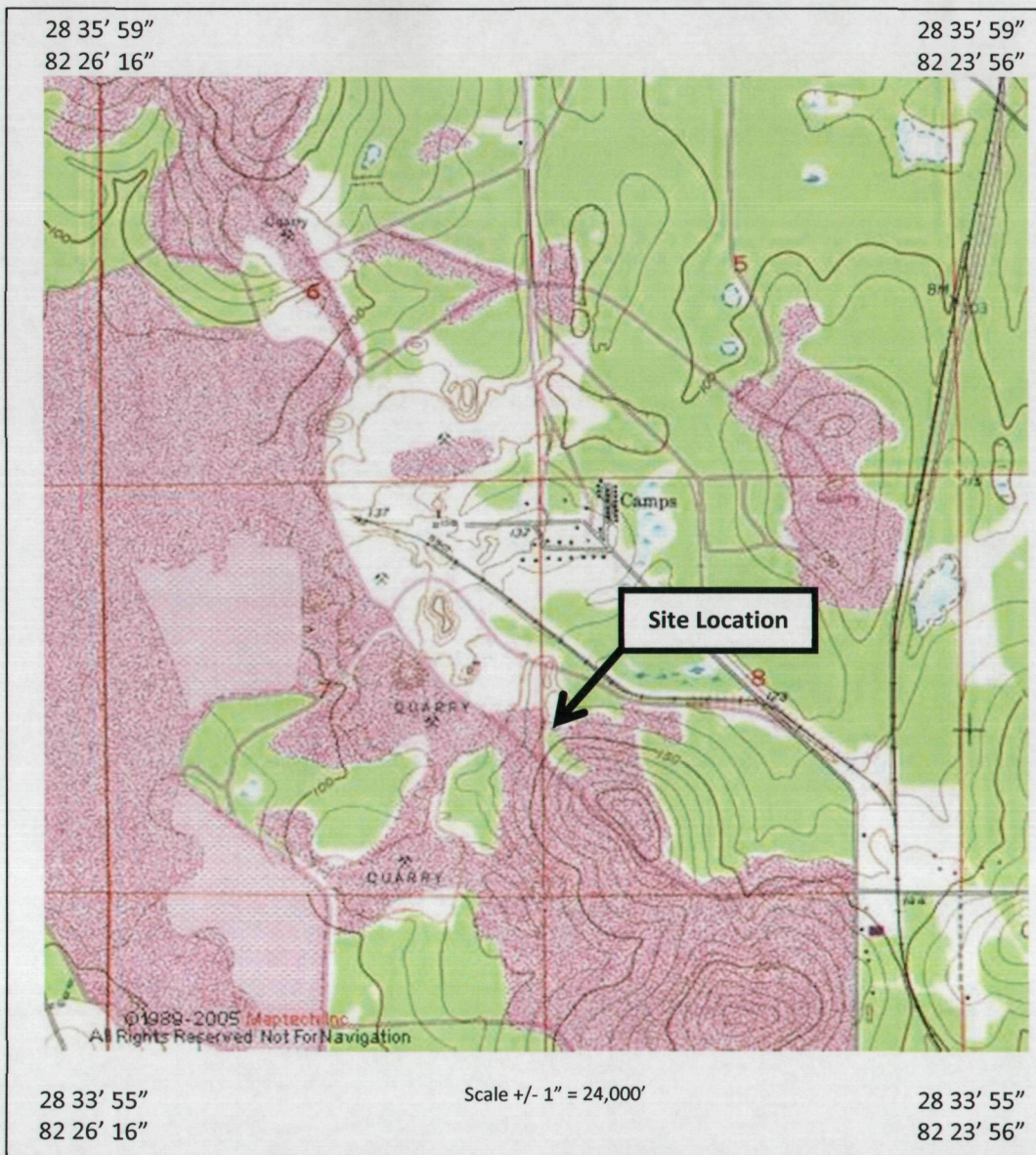
Scale 1" = +/- 330'

Aerial Image from Google Earth
Image Date 01/26/11

Drawing No. 307-12-04

Figure 1 - Site Plan
AFM Storage/Processing Locations
CEMEX Brooksville South-Alternative Fuel Material
Permit Application, 62-701, FAC
Brooksville, Hernando County, FL





USGS map web address: <http://mapserver.mytopo.com/homepage/index.cfm> (last visited October 31, 2012)

Professional Engineer Certification

Maxwell R. Lee, Ph.D., P.E.

P.E. No. 58091

Date

11/13/12

FIGURE 2

**USGS Topographic Map
CEMEX Brooksville South
Alternative Fuel Material
Permit Application, 62-701, FAC
Brooksville, Hernando County, FL**

