

PRELIMINARY DETERMINATION

PERMIT RENEWAL

Alabama Power Company
P.O. Box 2641
Birmingham, Alabama 35291

Alabama Power Company Barry Steam Plant Landfill
Permit No. 49-18

JANUARY 17, 2020

The **Alabama Power Company** submitted to the Alabama Department of Environmental Management (ADEM) a application for renewal of the Solid Waste Disposal Facility Permit for the **Alabama Power Company Barry Steam Plant Landfill (Permit No. 49-18)**. The landfill is described as being located in the NE $\frac{1}{4}$ of Section 31, Township 1 North, Range 1 East in Mobile County, Alabama. The total permitted area for the Alabama Power Company Barry Steam Plant Landfill is approximately 15.87 acres with all permitted for disposal operations.

The waste stream for the Alabama Power Company Barry Steam Plant Landfill shall remain non-hazardous, non-putrescible, construction and demolition waste, rubbish as defined by ADEM Rule 335-13-1-.03, wood products, pipe, insulation, paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, friable asbestos, spent anion/cation resins, sandblasting waste, pulverized or ground limestone, spent desiccant, carbon capture system filter cake, sodium carbonate anhydrous (soda ash), reverse osmosis pre-filter and membrane cartridges, and off-spec activated carbon. The service area for the Alabama Power Company Barry Steam Plant Landfill would remain the Alabama Power Company. The maximum average daily volume of waste disposed at the Alabama Power Company Barry Steam Plant Landfill would remain 15.0 cubic yards per day.

All previous variances have been requested by the applicant and will be granted in the renewed permit.

The Land Division has determined that the permit renewal applications meet the applicable requirements of ADEM's Administrative Codes Division 13 regulations and does not impact human health or the environment.

Technical Contact:

Mr. Devin M. Jenkins
Solid Waste Engineering Section
Land Division
(334) 270-5605



ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SOLID WASTE DISPOSAL FACILITY PERMIT

PERMITTEE: Alabama Power Company

FACILITY NAME: Alabama Power Company Barry Steam Plant Landfill

FACILITY LOCATION: NE ¼ of Section 31, Township 1 North, Range 1 East in Mobile County, Alabama. The total permitted area is approximately 15.87 acres with all approved for disposal.

PERMIT NUMBER: 49-18

PERMIT TYPE: Industrial Landfill

WASTE APPROVED FOR DISPOSAL: Non-hazardous, non-putrescible, construction and demolition waste, rubbish as defined by ADEM Rule 335-13-1-.03, wood products, pipe, insulation, paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, friable asbestos, spent anion/cation resins, and sandblasting waste. Additionally, the permittee may accept for disposal pulverized or ground limestone, spent desiccant, carbon capture system filter cake, sodium carbonate anhydrous (Soda Ash), reverse osmosis pre-filter and membrane cartridges, and off-spec activated carbon.

APPROVED WASTE VOLUME: Maximum Daily Volume of 15.0 cubic yards per day

APPROVED SERVICE AREA: Alabama Power Company

In accordance with and subject to the provisions of the Alabama Solid Wastes and Recyclable Materials Management Act, as amended, Code of Alabama 1975, SS 22-27-1 to 22-27-27 ("SWRMMA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, SS 22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to dispose of the above-described solid wastes at the above-described facility location.

ISSUANCE DATE: XXXXXXXXXXXX

EFFECTIVE DATE: XXXXXXXXXXXX

EXPIRATION DATE: XXXXXXXXXXXX

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
SOLID WASTE PERMIT**

Permittee: Alabama Power Company
P.O. Box 2641
Birmingham, Alabama 35291

Landfill Name: Alabama Power Company Barry Steam Plant Landfill

Landfill Location: A part of the Northeast ¼ of Section 31, Township 1 North, Range 1 East in Mobile County, Alabama.

Permit Number: 49-18

Landfill Type: Industrial Landfill

Pursuant to the Alabama Solid Wastes & Recyclable Materials Management Act, Code of Alabama 1975, §§ 22-27-1, *et seq.*, as amended, and attendant regulations promulgated there under by the Alabama Department of Environmental Management (ADEM), this permit is issued to Alabama Power Company (hereinafter called the Permittee), to operate a solid waste disposal facility, known as the Alabama Power Company Barry Steam Plant Landfill.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions set forth herein (including those in any attachments), and the applicable regulations contained in 335-13-1 through 335-13-15 of the ADEM Administrative Code (hereinafter referred to as the "ADEM Admin. Code"). Rules cited are set forth in this document for the purpose of Permittee reference. Any rule that is cited incorrectly in this document does not constitute grounds for noncompliance on the part of the Permittee. Applicable ADEM Administrative Codes are those that are in effect on the date of issuance of this permit or any revisions approved after permit issuance.

This permit is based on the information submitted to the Department on January 22, 2019, and as amended, for permit renewal and known as the Permit Application (hereby incorporated by reference and hereinafter referred to as the Application). Any inaccuracies found in this information could lead to the termination or modification of this permit and potential enforcement action. The Permittee must inform the Department of any deviation from or changes in the information in the Application that would affect the Permittee's ability to comply with the applicable ADEM Admin. Code or permit conditions.

This permit is effective as of **XXXXXXXX**, and shall remain in effect until **XXXXXXXXXX**, unless suspended or revoked.

Alabama Department of Environmental Management

Date Signed

SECTION I. STANDARD CONDITIONS.

- A. Effect of Permit. The Permittee is allowed to dispose of nonhazardous solid waste in accordance with the conditions of this permit and ADEM Admin. Code Div. 13. Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local laws or regulations. Except for actions brought under Code of Alabama 1975, §§ 22-27-1, *et seq.*, as amended, compliance with the conditions of this permit shall be deemed to be compliance with applicable requirements in effect as of the date of issuance of this permit and any future revisions.
- B. Permit Actions. This permit may be suspended, revoked or modified for cause. The filing of a request for a permit modification or the notification of planned changes or anticipated noncompliance on the part of the Permittee, and the suspension or revocation does not stay the applicability or enforceability of any permit condition.
- C. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- D. Definitions. For the purpose of this permit, terms used herein shall have the same meaning as those in ADEM Admin. Code Division 13, unless this permit specifically provides otherwise; where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.
1. "EPA" for purposes of this permit means the United States Environmental Protection Agency.
 2. "Permit Application" for the purposes of this permit, means all permit application forms, design plans, operational plans, closure plans, technical data, reports, specifications, plats, geological and hydrological reports, and other materials which are submitted to the Department in pursuit of a solid waste disposal permit.
- E. Duties and Requirements.
1. Duty to Comply. The Permittee must comply with all conditions of this permit except to the extent and for the duration such noncompliance is authorized by a variance granted by the Department. Any permit noncompliance, other than noncompliance authorized by a variance, constitutes a violation of Code of Alabama 1975, §§ 22-27-1, *et seq.*, as amended, and is grounds for enforcement action, permit suspension, revocation, modification, and/or denial of a permit renewal application.
 2. Duty to Reapply. If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The renewal application must be submitted to the Department at least 180 days before this permit expires.
 3. Permit Expiration. This permit and all conditions therein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application as required by Section I.E.2., and, through no fault of the Permittee, the Department has not made a final decision regarding the renewal application.
 4. Need to Halt or Reduce Activity Not A Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.
 5. Duty to Mitigate. In the event of noncompliance with this permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

6. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with the conditions of this permit.
7. Duty to Provide Information. If requested, the Permittee shall furnish to the Department, within a reasonable time, any information that the Department may reasonably need to determine whether cause exists for denying, suspending, revoking, or modifying this permit, or to determine compliance with this permit. If requested, the Permittee shall also furnish the Department with copies of records kept as a requirement of this permit.
8. Inspection and Entry. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the employees of the Department or their authorized representative to:
 - a. Enter at reasonable times the Permittee's premises where the regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.
 - c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
 - d. Sample or monitor, at reasonable times, any substances or parameters at any location for the purposes of assuring permit compliance or as otherwise authorized by Code of Alabama 1975, §§ 22-27-1, *et seq.*
9. Monitoring, Corrective Actions, and Records.
 - a. Samples and measurements taken for the purpose of monitoring or corrective action shall be representative of the monitored activity. The methods used to obtain representative samples to be analyzed must be the appropriate method from 335-13-4 or the methods as specified in the Application attached hereto and incorporated by reference. Laboratory methods must be those specified in Standard Methods for the Examination of Water and Wastewater (American Public Health Association, latest edition), Methods for Chemical Analysis of Water and Wastes (EPA-600/4-79-020), Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (EPA Publication SW-846, latest edition), other appropriate EPA methods, or as specified in the Application. All field tests must be conducted using approved EPA test kits and procedures.
 - b. The Permittee shall retain records, at the location specified in Section I.I., of all monitoring, or corrective action information, including all calibration and maintenance records, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record or for periods elsewhere specified in this permit. These periods may be extended by the request of the Department at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.
 - c. Records of monitoring and corrective action information shall include.
 - i. The exact place, date, and time of sampling or measurement.
 - ii. The individual(s) and company who performed the sampling or measurements.
 - iii. The date(s) analyses were performed.
 - iv. The individual(s) and company who performed the analyses.

- v. The analytical techniques or methods used.
 - vi. The results of such analyses.
 - d. The Permittee shall submit all monitoring and corrective action results at the interval specified elsewhere in this permit.
10. Reporting Planned Changes. The Permittee shall notify the Department, in the form of a request for permit modification, at least 90 days prior to any change in the permitted service area, increase in the waste received, or change in the design or operating procedure as described in this permit, including any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
11. Transfer of Permit. This permit may be transferred to a new owner or operator. All requests for transfer of permits shall be in writing and shall be submitted on forms provided by the Department. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of this permit.
12. Certification of Construction. The Permittee may not commence disposal of waste in any new cell or phase until the Permittee has submitted to the Department, by certified mail or hand delivery, a letter signed by both the Permittee and a professional engineer stating that the facility has been constructed in compliance with the permit. The Department must inspect the constructed cells or phases before the owner or operator can commence waste disposal unless the Permittee is notified that the Department will waive the inspection.
13. Compliance Schedules. Reports of compliance or noncompliance with or any progress reports on interim and final requirements contained in any compliance schedule required and approved by the Department shall be submitted no later than 14 days following each schedule date.
14. Other Noncompliance. The Permittee shall report all instances of noncompliance with the permit at the time monitoring reports are submitted.
15. Other Information. If the Permittee becomes aware that information required by the Application was not submitted or was incorrect in the Application or in any report to the Department, the Permittee shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to the Department, within a reasonable time, information related to compliance with the permit.
- F. Design and Operation of Facility. The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of contaminants (including leachate and explosive gases) to air, soil, groundwater, or surface water, which could threaten human health or the environment.
- G. Inspection Requirements.
- 1. The Permittee shall comply with all requirements of ADEM Admin. Code Division 13.
 - 2. The Permittee shall conduct random inspections of incoming loads.
 - 3. Records of all inspections shall be included in the operating record.
- H. Recordkeeping and Reporting.
- 1. The Permittee shall maintain a written operating record at the location specified in Section I.I. The operating record shall include:
 - a. Documentation of inspection and maintenance activities.

- b. Daily Volume reports.
 - c. Personnel training documents and records.
 - d. Solid/Hazardous Waste Determination Forms for Industrial Wastes, and the associated Department disposal approval correspondence for industrial waste and special waste.
 - e. Groundwater monitoring records.
 - f. Explosive gas monitoring records.
 - g. Surface water and leachate monitoring records.
 - h. Copies of this Permit and the Application.
 - i. Copies of all variances granted by the Department, including copies of all approvals of special operating conditions.
2. Quarterly Volume Report. Beginning with the effective date of this permit, the Permittee shall submit, within thirty (30) days after the end of each calendar quarter, a report summarizing the daily waste receipts for the previous (just ended) quarter. Copies of the quarterly reports shall be maintained in the operating record.
3. Monitoring and Corrective Action Reports. The Permittee shall submit reports on all monitoring and corrective activities conducted pursuant to the requirements of this permit, including, but not limited to, groundwater, surface water, explosive gas and leachate monitoring. The groundwater monitoring shall be conducted in March and September of each year, or as directed by the Department, and the reports shall be submitted at least semi-annually, or as directed by the Department. The reports should contain all monitoring results and conclusions from samples and measurements conducted during the sampling period. Explosive gas monitoring must be submitted on a quarterly basis, and the reports should be submitted to the Department and placed in the operating record within 30 days of the monitoring event. Copies of the groundwater and explosive gas monitoring reports shall be maintained in the operating record. At this time the Department is not requiring explosive gas monitoring and groundwater monitoring.
4. Availability, Retention, and Disposition of Records.
- a. All records, including plans, required under this permit or 335-13 must be furnished upon request, and made available at reasonable times for inspection by any officer, employee, or representative of the Department.
 - b. All records, including plans, required under this permit or 335-13 shall be retained by the Permittee for a period of at least three years. The retention period for all records is extended automatically during the course of any unresolved enforcement action regarding the facility, or as requested by the Department.
 - c. A copy of records of waste disposal locations and quantities must be submitted to the Department and local land authority upon closure of the facility.
- I. Documents to be Maintained by the Permittee. The Permittee shall maintain, at the Alabama Power Company Barry Steam Plant Landfill office the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure of the permitted landfill.
- 1. Operating record.

2. Closure Plan.
- J. Mailing Location. All reports, notifications, or other submissions which are required by this permit should be sent via signed mail (i.e. certified mail, express mail delivery service, etc.) or hand delivered to:
1. Mailing Address:
Chief, Solid Waste Branch
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463
 2. Physical Address:
Chief, Solid Waste Branch
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, Alabama 36110-2400
- K. Signatory Requirement. All applications, reports or information required by this permit, or otherwise submitted to the Department, shall be signed and certified by the owner as follows:
1. If an individual, by the applicant.
 2. If a city, county, or other municipality or governmental entity, by the ranking elected official, or by a duly authorized representative of that person.
 3. If a corporation, organization, or other legal entity, by a principal executive officer, of at least the level of Vice President, or by a duly authorized representative of that person.
- L. Confidential Information. The Permittee may claim information submitted as confidential if the information is protected under Code of Alabama 1975 §§22-39-18, as amended.
- M. State Laws and Regulations. Nothing in this permit shall be construed to preclude the initiation of any legal action or to relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation.

SECTION II. GENERAL OPERATING CONDITIONS.

- A. Operation of Facility. The Permittee shall operate and maintain the disposal facility consistent with the Application, this permit, and ADEM Admin. Code Division 13.
- B. Open Burning. The Permittee shall not allow open burning without prior written approval from the Department and other appropriate agencies. A burn request should be submitted in writing to the Department outlining why that burn request should be granted. This request should include, but not be limited to, specifically what areas will be utilized, types of waste to be burned, the projected starting and completion dates for the project, and the projected days and hours of operation. The approval, if granted, shall be included in the operating record.
- C. Prevention of Unauthorized Disposal. The Permittee shall follow the approved procedures for the detecting and preventing the disposal of free liquids, regulated hazardous waste, PCB's, and medical waste at the facility.
- D. Unauthorized Discharge. The Permittee shall operate the disposal facility in such a manner that there will be no water pollution or unauthorized discharge. Any discharge from the disposal facility or practice thereof may require a National Pollutant Discharge Elimination System permit under the Alabama Water Pollution Control Act.

- E. Industrial Waste Disposal. The Permittee shall dispose of industrial waste as required by 335-13-4-.21(1)(c), and as specified in the Application.
- F. Boundary Markers. The Permittee shall ensure that the facility is identified with a sufficient number of permanent boundary markers that are at least visible from one marker to the next.

SECTION III. SPECIFIC REQUIREMENTS FOR INDUSTRIAL WASTE LANDFILLS.

- A. Waste Identification and Management.
 - 1. Subject to the terms of this permit, the Permittee may dispose of the nonhazardous solid wastes listed in III.B. Disposal of any other wastes is prohibited, except waste granted a temporary or one time waiver by the Director.
 - 2. The total permitted area for the Alabama Power Company Barry Steam Plant Landfill is approximately 15.87 acres with all permitted for disposal operations.
 - 3. The maximum average daily volume of waste disposed at the facility shall not exceed 15.0 cubic yards per day. Should the average daily volume exceed this value by 20% or 100 tons/day, whichever is less, for two (2) consecutive quarters the permittee shall be required to modify the permit in accordance with 335-13-5-.06(2)(a)5. An increase in maximum average daily volume shall not be approved by the Department unless the permittee has received local approval for the increased maximum average daily volume. The average daily volume shall be computed as specified by 335-13-5-.06(2)(a)5.(i).
- B. Waste Streams. The Permittee may accept for disposal non-hazardous, non-putrescible, construction and demolition waste, rubbish as defined by ADEM Rule 335-13-1-.03, wood products, pipe, insulation, paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, friable asbestos, spent anion/cation resins, sandblasting waste, pulverized or ground limestone, spent desiccant, carbon capture system filter cake, and sodium carbonate anhydrous (Soda Ash). Additionally, the permittee may accept for disposal reverse osmosis pre-filter and membrane cartridges, and off-spec activated carbon.
- C. Service Area. The Permittee is allowed to receive for disposal waste from Alabama Power Company.
- D. Waste Placement, Compaction, and Cover. All waste shall be confined to an area as small as possible and placed onto an appropriate slope not to exceed 4 to 1 (25%) or as approved by the Department. All waste shall be spread in layers two feet or less in thickness and thoroughly compacted weekly with adequate landfill equipment prior to placing additional layers of waste or placing the weekly cover. A minimum of six inches of compacted earth or other alternative cover material approved by the Department shall be added at the conclusion of each week's operation unless a variance is granted in Section VIII. The permittee has been granted a variance from weekly cover and is required to cover at the end of each month. (See Section VIII.4.)
- E. Liner Requirements. At the present time the Department is not requiring liners to be installed at this landfill. The base of the disposal cells shall be a minimum of five (5) feet above the temporal fluctuation of the groundwater table.
- F. Security. The Permittee shall provide artificial and/or natural barriers, which prevent entry of unauthorized vehicular traffic to the facility.
- G. All Weather Access Roads. The Permittee shall provide an all-weather access road to the dumping face that is wide enough to allow passage of collection vehicles.
- H. Adverse Weather Disposal. The Permittee shall provide for disposal activities in adverse weather conditions.

- I. Personnel. The Permittee shall maintain adequate personnel to ensure continued and smooth operation of the facility.
- J. Environmental Monitoring and Treatment Structures. The Permittee shall provide protection and proper maintenance of environmental monitoring and treatment structures.
- K. Vector Control. The Permittee shall provide for vector control as required by ADEM Admin. Code Division 13.
- L. Bulk or Noncontainerized Liquid Waste. The Permittee shall not dispose of bulk or noncontainerized liquid waste, or containers capable of holding liquids, unless the conditions of 335-13-4-.23(1)(j) are met.
- M. Empty Containers. Empty containers larger than 10 gallons in size must be rendered unsuitable for holding liquids prior to disposal in the landfill unless otherwise approved by the Department.
- N. Other Requirements. The Department may enhance or reduce any requirements for operating and maintaining the landfill as deemed necessary by the Land Division.
- O. Other Permits. The Permittee shall operate the landfill according to this and any other applicable permits.
- P. Scavenging and Salvaging Operations. The Permittee shall prevent scavenging and salvaging operations, except as part of a controlled recycling effort. Any recycling operation must be in accordance with plans submitted and approved by the Department.
- Q. Signs. If the landfill is available to the public or commercial haulers, the Permittee shall provide a sign outlining instructions for use of the site. The sign shall be posted and have the information required by 335-13-4-.23(1)(f).
- R. Litter Control. The Permittee shall control litter.
- S. Fire Control. The Permittee shall provide fire control measures.

SECTION IV. GROUNDWATER MONITORING REQUIREMENTS.

The Permittee is not required to install a groundwater monitoring system at this time due to the close proximity of monitoring wells that monitor an adjacent sanitary landfill, and provided that the waste stream does not change from the waste stream listed in Section III.B.

SECTION V. GAS MONITORING REQUIREMENTS

The Permittee is not required to install an explosive gas monitoring system at this time due to the location of this landfill on Barry Steam Plant property and distance from any adjacent property owners. If the Department determines that an explosive gas monitoring system is required in order to protect human health and the environment, the Permittee must within 90 days submit an explosive gas monitoring system plan, which meets all requirements for explosive gas monitoring of the Division 13 Solid Waste Regulations.

SECTION VI. LEACHATE AND SURFACE WATER MANAGEMENT REQUIREMENTS

The Permittee shall construct and maintain run-on and run-off control structures to control the discharge of pollutants in stormwater. Any discharges from drainage control structures shall be permitted through a discharge permit issued by the ADEM Water Division.

SECTION VII. CLOSURE AND POST-CLOSURE REQUIREMENTS

The Permittee shall close the landfill and perform post-closure care of the landfill in accordance with Division 13.

- A. Final Cover. The Permittee shall grade final soil cover such that surface water does not pond over the permitted area as specified in the Application. The final cover system shall comply with ADEM Admin. Code Division 13.
- B. Vegetative Cover. The Permittee shall establish a vegetative or other appropriate cover within 90 days after completion of final grading requirements in the Application. Preparation of a vegetative cover shall include, but not be limited to, the placement of seed, fertilizer, mulch, and water.
- C. Notice of Intent. The Permittee shall place in the operating record and notify the Department of their intent to close the landfill prior to beginning closure.
- D. Completion of Closure Activities. The Permittee must complete closure activities of each landfill unit in accordance with the Closure Plan within 180 days of the last known receipt of waste.
- E. Certification of Closure. Following closure of each unit, the Permittee must submit to the Department a certification, signed by an engineer, verifying the closure has been completed according to the Closure Plan.
- F. Post-Closure Care Period. Post-closure care activities shall be conducted after closure of each unit throughout the life of this permit and continuing for a period of thirty (30) years following closure of the facility. The Department may shorten or extend the post-closure care period applicable to the solid waste disposal facility. The Permittee shall reapply in order to fulfill the post-closure care requirements of this permit.
- G. Post-Closure Maintenance. The Permittee shall provide post closure maintenance of the facility to include regularly scheduled inspections. This shall include maintenance of the cover, vegetation, monitoring devices and pollution control equipment and correction of other deficiencies that may be observed by the Department. Monitoring requirements shall continue throughout the post closure period as determined by the Department unless all waste is removed and no unpermitted discharge to waters of the State has occurred.
- H. Post-Closure Use of Property. The Permittee shall ensure that post closure use of the property never be allowed to disturb the integrity of the final cover, liner, or any other component of the containment system. This shall preclude the growing of deep-rooted vegetation on the closed area.
- I. Certification of Post-Closure. Following post-closure of each unit, the Permittee must submit to the Department a certification, signed by an engineer, verifying the post-closure has been completed according to the Post-Closure Plan.
- J. Notice in Deed to Property. The Permittee shall record a notation onto the land deed containing the property utilized for disposal within 90 days after permit expiration, revocation or when closure requirements are achieved as determined by the Department as stated in the Application. This notation shall state that the land has been used as a solid waste disposal facility, the name of the Permittee, type of disposal activity, location of the disposal facility and beginning and closure dates of the disposal activity.
- K. Recording Instrument. The Permittee shall submit a certified copy of the recording instrument to the Department within 120 days after permit expiration, revocation, or as directed by the Department as described in the Application.
- L. Removal of Waste. If the Permittee, or any other person(s), wishes to remove waste, waste residues, or any liner or contaminated soils, the owner must request and receive prior approval from the Department.

SECTION VIII. VARIANCES

1. The Permittee is granted a variance from groundwater monitoring. (See Section IV).
2. The Permittee is granted a variance from ADEM Rule 335-13-4-.16 explosive gas monitoring. (See Section V).
3. The Permittee is granted a variance from ADEM Rule 335-13-4-.13(2) (f) requiring a 100 foot buffer.
4. The Permittee is granted a variance from weekly cover and is now required to cover monthly. (See Section III.D.)

Any variance granted by the Department may be terminated by the Department whenever the Department finds, after notice and opportunity for hearing, that the petitioner is in violation of any requirement, condition, schedule, limitation or any other provision of the variance, or that operation under the variance does not meet the minimum requirements established by state and federal laws and regulations or is unreasonably threatening the public health.



600 North 18th Street / 12N-0831
Birmingham, Alabama 35203
(205) 257-4150 tel
(205) 257-4349 fax
(205) 504-3000 cell
egrinder@southernco.com

January 21, 2019

Mr. Eric Sanderson, Chief
Solid Waste Branch
Land Division
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, AL 36130-1463



**RE: Barry Steam Plant Landfill – Landfill Permit Renewal
(Permit 49-18)
Alabama Power Company
Barry Steam Plant
15300 Highway 43
Bucks, Alabama 36512**

Dear Mr. Sanderson:

Enclosed is the industrial landfill permit renewal application for the Alabama Power Company Barry Steam Plant Landfill, Permit #49-18. Included in the package are three (3) copies of the completed permit application with required attachments and a check in the amount of \$4,075.00 to cover the industrial landfill renewal fee.

If you have any questions, please contact Ms. Elizabeth Grinder at (205) 257-4150.

Sincerely,

A handwritten signature in blue ink that reads "Mike Godfrey".

Mike Godfrey, Manager
Environmental Compliance

Attachments



ATTACHMENT 1
SOLID WASTE APPLICATION

Solid Waste Permit Application

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6. Contact Person:

Name _____ Elizabeth Grinder _____ Tamala Davis _____

Position or Affiliation _____ Environmental Affairs Specialist _____ Compliance Specialist _____

Address: _____ 600 North 18th Street, 12N-0831 _____ 15300 Highway 43 North _____
_____ Birmingham, Alabama 35205 _____ Bucks, Alabama 36512 _____

Telephone: _____ (205) 257-4150 _____ (251) 829-2802 _____

7. Size of Facility:

_____ 15.87 _____ **Acres**

Size of Disposal Area(s):

_____ 15.87 _____ **Acres**

8. Identify proposed service area or specific industry that waste will be received from:

_____ The landfill service area is limited to waste generated by Alabama Power _____

_____ Company. _____

9. Proposed maximum average daily volume to be received at landfill (choose one):

_____ Tons/Day _____ 15 _____ Cubic Yards/Day

10. List all waste streams to be accepted at the facility (i.e., household solid waste, wood boiler ash, tires, trees, limbs, stumps, etc.):

Construction and demolition waste - including waste building materials, masonry, wall board, roofing material, wood products, pipe, insulation, and similar materials.

Rubbish - paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, and similar materials.

Asbestos - asbestos containing material.

Industrial Wastes:

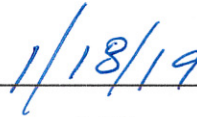
- **Spent anion/cation resins** - material used in the on-site water treatment plant. This is typically a low volume/frequency waste stream.

- **Sandblasting waste** - each lot of sandblast waste is analyzed for TCLP metals (RCRA-8) to confirm it is non-hazardous prior to disposal.

- **Pulverized/ground limestone** – limestone that is contaminated with soil, gravel, or vegetative material during loading and unloading the storage silo that no longer meets the operational specifications.
- **Spent desiccant** – spent desiccant that no longer has the capacity to condition or control the moisture of compressed air.
- **Carbon capture system filter cake** – carbon capture system filter cake is replaced during routine operation and maintenance activities and consists of a cellulose based filter media that removes carbon dioxide from flue gas.
- **Sodium carbonate (soda ash)** – Off-specification sodium carbonate that no longer meets operational specifications. This is a low volume, low frequency waste.
- **Reverse osmosis pre-filter & membrane cartridges** – damaged off-spec reverse osmosis membranes and polycarbonate water treatment pre-filters used in the treatment of raw surface water.
- **Off-spec activated carbon** – unused off-specification activated carbon. Material that has been contaminated with dirt and/or gravel or out of date and no longer meets operational specifications.



SIGNATURE



DATE

ATTACHMENT 2
BARRY STEAM PLANT LANDFILL OPERATIONAL PLAN

**ALABAMA POWER COMPANY
BARRY STEAM PLANT LANDFILL**

OPERATIONAL PLAN

Permit # 49-18

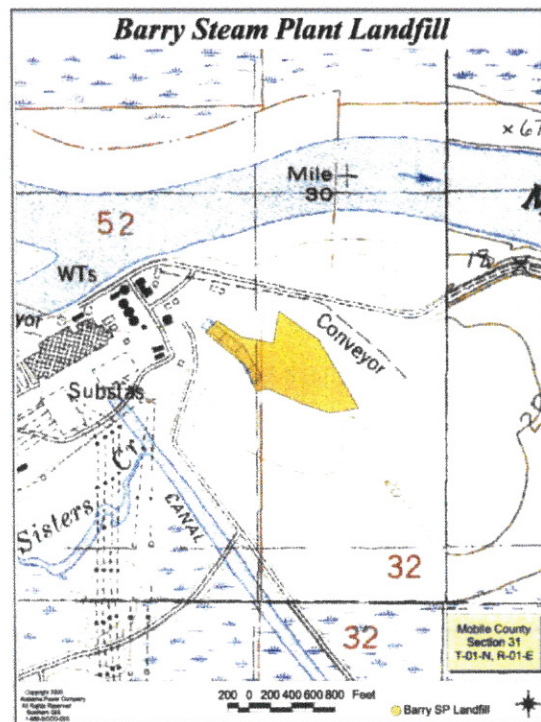
JANUARY 21, 2019

OPERATIONAL PROCEDURE

Facility

Barry Steam Plant, an Alabama Power Company (APC) electric generating plant, is located twenty-three miles north of Mobile Alabama on the banks of the Mobile River in the Bucks community. The plant has five coal-fired units and two natural gas-fired combustion turbine units. Construction began in 1951 and the plant was first in-service in 1954.

This plan describes the operational procedures and criteria associated with the Plant's on-site 15.75 acre industrial landfill.



Facility Siting

- Flood Plain Determination

Although the current topographic elevations in and around the Barry Steam Plant site are located within the 100-year flood plain, a determination has been made that the existing landfill is outside the flood plain boundaries. (See Appendix 1 for the basis of this determination.) Normal storm water flow is controlled to minimize erosion and ponding in the landfill with the use of controlled slopes, earthen berms, adequate vegetation and regular inspections.

- Endangered Species Act

No known endangered or threatened species of plants, fish, wildlife or their habitat is affected by the existing landfill.

- Proximity to Airports

There is no airport runway within 10,000 feet of the proposed landfill.

- Regional Geology

The landfill is located in the Alluvial-Deltaic Plain region, near the junction of the Southern Pine Hills. The area is included in the Gulf Coastal Plain of Alabama. The Alluvial-Deltaic Plain is developed along the Mobile River. The area is characterized by a broad, level plain with relatively little or no relief, underlain by alluvial and terrace deposits. Elevations within a one (1) mile radius of the plant range from 7 to 50 feet above mean sea level (msl).

The Mobile River is the primary drainage feature in the area. Secondary features typically form a dendritic drainage pattern. Sister Creek is the

only secondary drainage feature indicated in the general vicinity of the plant and landfill. The creek is located southwest of the landfill and terminates into the plant's discharge canal. Numerous low-lying swampy areas can be observed on maps of the general area.

The Alluvial-Deltaic Plain in this portion of Alabama is underlain by unconsolidated sediments deposited by the Mobile River. Sediments typically consist of beds and lenses of fine to coarse gravel, fine- to coarse-grained sand, silty sand, silt, sandy clay, soft to stiff clay and carbonaceous material (Ricchio, Hardin, and Lamb, 1973). The alluvial deposits reach thicknesses of one hundred-fifty feet (150) near the City of Mobile. Bedding is typically lenticular and discontinuous.

- Site Geology

The Barry landfill is located in an area that is underlain entirely by unconsolidated alluvial deposits. Exploratory drilling for various structures at the plant indicates that most areas are underlain by fine-grained, sandy clay at the surface. This material grades to a fine- to medium-grained sand at depths ranging from three (3) to twenty (20) feet. No exploratory drilling has been performed in the immediate vicinity of the landfill.). There are no known zones of active faults, sink holes or karst zones.

The site area is underlain by an unconfined surface aquifer developed in the alluvial material. Groundwater levels essentially occur at or slightly above the level of the Mobile River which is approximately at mean sea level. The bottom elevation of solid waste will be a minimum of five feet above the seasonal high groundwater table or bedrock. Groundwater

levels at the landfill may be above this level due to the water in the ash storage pond which is located east. No wells are located in the immediate site area to supply this data. Surface run-off from the site flows in a southwesterly direction and is pumped into the ash pond by the ash line drainage sump. The site topography, earthen berms and ash line drainage sump prevent surface run-off from directly entering the Mobile River.

References

Riccio, J. F., Harden, J. D., and George M. Lamb 1973. *Development of a Hydrologic Concept for the Greater Mobile Metropolitan-Urban Environment: Geological Survey of Alabama, Bul. 106, p. 171.*

Plans Required

APC will maintain a written operating record at the site. The following information will become part of that operating record and will be kept on file at the facility. These records will be available to the Alabama Department of Environmental Management (ADEM) upon request.

- Documentation of inspection and maintenance activities
- Daily volume reports
- Personnel training records
- Waste certifications and disposal approvals for Special Wastes, Industrial Wastes, etc.
- Other pertinent operating, inspection, maintenance, and monitoring information

- Copies of all variances granted by the Department, including copies of all approvals of special operating conditions

APC will submit Quarterly Volume Reports as specified in Rule 335-13-5-.05(1) (b) 2.

Groundwater Resources

Due to the inert nature of the material to be placed in the landfill, groundwater monitoring has not been required.

Cover

Soil and earthen material will be used for the intermediate cover. As the frequency and volume of waste placed in the landfill varies greatly, the active face of the landfill will be covered at least monthly. As each cell is closed, 2' of top soil will be placed on the cell and suitable vegetative growth will be established. Vegetative growth will be in accordance the Alabama Department of Transportation's Standard Specifications for Highway Construction, or equivalent. (See Appendix 3).

Explosive Gas Monitoring

ADEM granted APC a variance of Section 13-4-.16 relating to methane gas testing. This variance was based on the distance of the landfill from adjacent property owners and enclosed structures and the inert characteristics of the waste placed in the landfill. Attached is the letter dated October 29, 1990. (See Appendix 2.)

Drainage

The existing site is the highest elevation in the immediate area around the landfill, which minimizes the opportunity for storm water run-on to occur. The existing site is designed so that precipitation from the disposal site does not collect or pond within the site. A NPDES storm water discharge point is not required since the water is managed through the ash line drainage sump. The water is pumped into the ash pond, which has a NPDES permitted discharge point.

Access

The landfill is located within the perimeter fence of Plant Barry. APC Security is present on site continuously and actively monitors plant property.

Closure

Closure will be such that surface water does not pond over the disposal facility. A two foot soil cover (18 inches of clay and 6 inches of top soil) will be placed on the landfill as each cell is completed and the slope will be graded to less than 25% but greater than or equal to 5%. Slopes longer than 25 feet will be terraced to prevent erosion. Each cell will be graded within 60 days after landfilling. Vegetative growth will be established within 30 days after the completion of final grading. The vegetative growth will be in accordance to Alabama Highway Department specifications (See Appendix 3). The vegetative cover will be maintained as necessary to ensure adequate growth.

Maintenance is to include watering and fertilizer as required to insure proper cover. Post closure maintenance will include quarterly inspections and any problems will be corrected in a timely manner. All eroded areas will be filled and re-seeded. Cover will be maintained as solid and will not allow ponding. Post-closure use of the property will never be allowed to disturb the integrity of the final cover and current plans do not include post-closure use of property. Within 90 days after closure or permit expiration, APC will record a notation onto the land deed containing the property utilized for disposal in accordance with regulation 335-13-4-.20(5). Signs will be placed at all boundaries indicating that this area was used as a landfill and that no activity is to be conducted within the landfill boundaries. Vector control practices shall be conducted to prevent any problems.

General Operational Standards

- Open Burning

No open burning will be conducted at the existing landfill site.

- Approved Landfill Waste Streams

Construction and demolition waste - including waste building materials, masonry, wall board roofing material, wood products, pipe, insulation, and similar materials.

Rubbish - paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, and similar materials.

Industrial and Special Wastes:

- | | |
|-------------------------------|--|
| • Asbestos | • Carbon Capture System Filter Cake |
| • Spent Anion/Cation Resin | • Sodium Carbonate (Soda Ash) |
| • Sandblasting Waste | • Reverse Osmosis Pre-Filter & Membrane Cartridges |
| • Pulverized/ground limestone | • Activated Carbon |
| • Spent Desiccant | |

- Prohibited Waste & Training

With the low volume of waste placed in the landfill, operators are able to monitor for prohibited wastes – those containing, free liquids, regulated hazardous waste, regulated medical waste, or regulated PCB waste. Formal programs to manage these waste streams are in place. Completion of a Landfill Disposal Record is a system to approve and document wastes that are placed in the landfill is required to ensure that no prohibited wastes are placed in the landfill. See Appendix 4 for an example of the form. Additionally, employees are trained through annual Compliance Training on these issues. Landfill operators and compliance personnel are periodically trained on landfill compliance issues by the APC Corporate Environmental staff.

- Service Area

The landfill is approved to accept waste generated from any APC facility.

- Boundary Markers

The existing landfill is identified with a sufficient number of permanent markers which are at least visible from one marker to the next

Specific Requirements for Industrial Landfills

- Cover and Closure

A minimum of six (6) inches of compacted earth and/or ash will be placed on the active part of the active cell at the conclusion of each month's operation. Final grading of each cell will be conducted within 60 days after landfilling is complete for that cell. Final earth cover shall be a minimum of two

feet of compacted soil (18 inches of clay and 6 inches of topsoil). A two-foot soil cover will be placed on the landfill as each cell is completed and the slope will be graded to less than 25% but greater than or equal to 5%. Slopes longer than 25 feet will be terraced to prevent erosion. Each cell will be graded within 60 days after landfilling. Vegetative growth will be established within 30 days after the completion of final grading for each completed cell. The vegetative growth will be in accordance to Alabama Highway Department specifications (See Appendix 3). The vegetative cover will be maintained as necessary to ensure adequate growth. The waste will be dumped at the top of the cell in a confined space and will be layered in 2' or less layers. As the operator daily inspects the active cell, these layers will be thoroughly compacted by the landfill equipment prior to placing any more waste in the cell on an as needed basis. At the conclusion of the month, the waste placed in the active cell that week will have the monthly cover placed on the cell.

- Landfill Operational Technique

Waste will be disposed by placing the material on the top and utilizing the area fill method. No material is allowed to be removed once placed in the landfill.

- Litter Control

Litter associated with the landfill will be monitored by the landfill operator and during routine landfill inspections.

- Fire Protection

In the event of a landfill fire, the Turnerville Volunteer Fire Department and the Mount Vernon Fire Department will be deployed as first responders.

- Security

The landfill is located wholly within Plant Barry's property perimeter fence. Access is controlled and APC Security provides 24-hour, 7 days per week security surveillance.

- Access

Disposal can be postponed if weather does not permit the use of the road to the landfill but the road will not be heavily traveled so the condition of the road should remain passable at all times.

Special Wastes

- Asbestos

Asbestos waste generated at the plant is resulting from an on-going asbestos abatement program. The asbestos is placed wet in double 6 mil high density polyethylene bags that are appropriately labeled as asbestos waste. The bagged material is placed in the dedicated asbestos area of the landfill. At the end of each working day that asbestos is placed in the landfill, it is covered with a minimum of 12 inches of earth. Special precautions are given to all personnel handling the bagged asbestos material and to the landfill operator to ensure that the bags are not ruptured prior to applying the required daily earth cover.

- Sandblast Waste

This waste results from the surface preparation of equipment or structures prior to painting. Each lot of this waste is analyzed for TCLP metals to ensure it is non-hazardous prior to disposal.

- Spent Anion/Cation Resin

Spent anion/cation resins are used in the on-site water treatment plant. The resins are disposed of when they fail to meet operational specifications. This waste stream is a low volume/frequency waste.

- Off-Specification Pulverized/Ground Limestone

Limestone is used as a reagent in the wet flue gas desulfurization system. Limestone that is contaminated with soil, gravel or vegetative material during loading and unloading the storage silo no longer meets the operational specifications and is disposed of in the landfill.

- Spent Desiccant

Desiccant is used to condition and control moisture of compressed air used in plant control systems. Spent desiccant that no longer has the capacity to condition the compressed air is disposed of in the landfill.

- Carbon Capture System Filter Cake

The carbon capture system removes carbon dioxide from flue gas. The process includes a filter vessel that utilizes a cellulose based filter media. The material is replaced during routine operation and maintenance activities. The used filter media is disposed of in the landfill.

- Sodium Carbonate (Soda Ash)

Sodium carbonate is used in the on-site water treatment plant. Out-of-date or moisture-hardened sodium carbonate no longer meets operational specifications and is disposed of in the landfill. This waste stream is a low volume, low frequency waste.

- Reverse Osmosis Pre-filter and Membrane Cartridges

A reverse osmosis water treatment system is used to treat raw water. The system utilizes disposable pre-filter and reverse osmosis membrane cartridges. Spent cartridges are disposed of in the landfill.

- Off-Specification (unused) Activated Carbon

Activated carbon is used as a reagent in a flue gas treatment system. Unused carbon that is contaminated with soil, gravel or vegetative material during loading and unloading the storage silo no longer meets the system's operational specifications and is disposed of in the landfill.

Appendix 1.

Flood Plain Determination

Location Standards: (Rule 335-13-4-.01(1) 100-year Flood Plain Determination

To determine if the Barry Steam Plant landfill is located within the 100-year flood plain, the site was located on the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM). The landfill is contained on Mobile County, Alabama Map Number 01097C0200 J, dated July 6, 1998. From this map the landfill is located in the area shaded and designated Zone AE. The flood plain elevation in this zone is identified as 15 feet above mean sea level (msl).

The elevation of the landfill has been determined to be above 15 feet above msl. Alabama Power Company's Power Generation-Technical Services-Civil Department verified the landfill elevations in 1993 (see Drawing D-377468, sheet 1, and again in 2007). These elevation determinations are also supported by the United States Department of the Interior, Geological Survey *Mount Vernon Quadrangle 7.5 minute Topographic Map, 1983*. Additionally, these findings were supported in a flood plain development permit application prepared and submitted to Mobile County by Alabama Power Company for developments along the Mobile River at Barry Steam Plant in 1994.

Based on these determinations, it is our belief that although the location of the landfill is within the shaded portion of the FIRM map indicating inclusion in the 100-year flood plain, the actual elevations at the Barry Steam Plant Landfill are above the 100-year flood plain.

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



October 29, 1990

Guy Hunt
Governor

Leigh Pegues, Director

1757 Cong. W. L.
Dickson Drive
Montgomery, AL
36130
205/271-7700

Mr. John D. Grogan, Manager
Environmental Compliance
Alabama Power Company
P. O. Box 2641
Birmingham, AL 35291

Field Offices:

Unit 806, Building 8
225 Oxmoor Circle
Birmingham, AL
35209
205/942-6168

P.O. Box 953
Decatur, AL
35602
205/353-1713

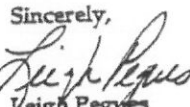
Perimeter Road
Mobile, AL
36615
205/479-2336

Dear Mr. Grogan:

This is in response to your request of October 16, 1990, to Mr. Honeycutt of the Solid Waste Branch for a variance of Section 13-4-.16 of Division 13 Regulations relating to methane gas testing at the steam plant landfills operated by Alabama Power.

The purpose of testing methane gas is to minimize the fire hazard should gas accumulate as the result of decaying waste. Your request for a variance is based on the distance of the landfill from adjacent property owners and enclosed structures. We concur that due to the distance involved and the type waste disposed, methane gas should not be a problem at the landfill. We are, therefore, granting your variance request.

If you have any questions, please contact the Solid Waste Branch at (205) 271-7726.

Sincerely,

Leigh Pegues
Director

LP/JH/bbg#3472

Appendix 3.

VEGETATIVE COVER FOR LANDFILLS

All seed for grassing shall be labeled in accordance with the U. S. Department of Agriculture rules and regulations under the current Federal Seed Act.

- A. Planting shall occur within 2 weeks after final cover placement in accordance with Alabama Highway Department specifications.

Dec through Feb - Mix 1A

| | |
|----------------------------|---------------|
| Kentucky 31 or Alta Fescue | 15 # per acre |
| Pensacola Bahiagrass | 25 # per acre |
| Reseeding Crimson Clover | 30 # per acre |
| Bermuda grass (Unhulled) | 25 # per acre |
| Annual Ryegrass | 20 # per acre |

Mar through Aug - Mix 2A

| | |
|------------------------|---------------|
| Pensacola Bahiagrass | 20 # per acre |
| Bermuda grass (Hulled) | 20 # per acre |
| Kobe Lespedeza | 40 # per acre |

Sep through Nov - Mix 3A

| | |
|----------------------------|---------------|
| Kentucky 31 or Alta Fescue | 15 # per acre |
| Pensacola Bahiagrass | 25 # per acre |
| Reseeding Crimson Clover | 30 # per acre |
| Bermuda grass (Unhulled) | 30 # per acre |

Fertilizer of the 10-10-10 grade shall be applied at a rate of 1200 lbs. per acre.

Appendix 4.

Barry Steam Plant Industrial Landfill
Permit # 49-13



Landfill Disposal Record

| (Name/Company Placing Waste in Landfill) | (Date) | (Time) |
|--|---------------------------|--|
| Type of Waste | | |
| Waste | Volume (yd ³) | Wastes Which Include: |
| <input type="checkbox"/> Construction and Demolition Waste | _____ | Building materials from construction including wood, masonry, metals, drywall, roofing. |
| <input type="checkbox"/> Rubbish | _____ | Paper, Cardboard, furniture, rubber, plastics, glass, steel |
| <input type="checkbox"/> Non-hazardous Sandblast Waste | _____ | Sandblast waste that has been determined to be non-hazardous. |
| <input type="checkbox"/> Anion and/or Cation Resin | _____ | Spent resin from the WTP. |
| <input type="checkbox"/> Asbestos Containing Material | _____ | Asbestos must be placed in the designated cell and must be covered with 12" of earthen cover at the end of each working day. |
| <input type="checkbox"/> Other (Describe the Waste) | _____ | |

Prohibited Wastes

- These wastes cannot be placed in our landfill:
- **Food Contaminated Waste** (including lunch bags, drink bottles, water bottles, etc.)
 - **Wastes with Free Liquids** (any waste that is saturated to the point that liquid readily drips)
 - **Hazardous, PCB, or Petroleum/Oil Contaminated Wastes**
 - **Medical Waste** (including first aid/potential blood borne pathogen material, hypodermic syringes or other sharps)
 - **Coal Combustion By-Products** (including coal ash, gypsum, coal rejects, pyrites, etc.)
 - **Empty Containers > 10 gallons** must be rendered incapable of holding liquids prior to placing in the landfill.

Waste Volume

We need to estimate the volume of waste placed in the landfill as accurately as we can.

Volume Estimating Tools:

- 1 yd³ = a box, 3' x 3' x 3'
- Three 55 gal Drums ≈ 1 yd³
- The bed of a full LWB pick-up truck will hold ≈ 2 ¼ yd³
- A 12 yd³ dump truck will hold ≈ 12 yd³.

If you have any questions regarding the landfill, call: Tamala Davis — 251—829—2802

ATTACHMENT 3
LANDFILL SURVEY

ATTACHMENT 4
SOLID WASTE PROFILE

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300

General Information

Profile Type (check one): New Certification Recertification Modification to Active Profile
Generator Name: Alabama Power Company - Barry Steam Plant
Generator Physical Address: 15300 Highway 43, Bucks, Alabama 36512
Generator County: Mobile EPA ID: _____
Generator Mailing Address: 600 North 18th Street – 12N-0831
Generator Contact: Elizabeth Grinder Title: Environmental Affairs Specialist
Phone: 205-257-4150 Email: egrinder@southernco.com

Submitted by (if different from above):

Company Name: _____ Contact: _____
Mailing Address: _____
Phone: _____ Email: _____

Waste Information

Process Generating Waste: Limestone is used as a reagent in the flue gas desulfurization (FGD scrubber). This waste consists of material spilled during truck unloading or does not otherwise meet operating specifications

Waste Name: Pulverized/ground limestone

If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST) provide the following information:

UST Facility ID # _____ UST Incident # _____

Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, ect.): _____

Does the waste contain any of the following: PCBs Cyanides Sulfides Asbestos
Concentration: _____ Units: mg/L mg/Kg PPM PPB
Waste Type: Remediation Process CERCLA Cleanup Other
Waste Volume: 100 Units: Cu Yd Frequency: Annual Quarterly Monthly

Waste Properties

Physical State: Solid Liquid Bladeable Sludge Solid/Liquid Combination Other
% Free Liquids 0% pH (if liquid) N/A Flash Point (if liquid) N/A
Will liquids be solidified prior to disposal (see instructions)? YES NO

Waste Disposition

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? YES NO

Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? YES NO

Landfill Name #1: Barry Steam Plant Landfill Permit #: 49-18

Landfill Name #2: _____ Permit #: _____

Landfill Name #3: _____ Permit #: _____

Landfill Name #4: _____ Permit #: _____

Current Profile No. (if applicable) _____

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300
Continuation Form

Process Generating Waste continued:

Other:

Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


Elizabeth Grinder
Name (type or print)


Signature

Environmental Affairs Specialist
Title

01/18/19
Date

MISSISSIPPI LIME COMPANY - SAFETY DATA SHEET

| Section 1: Identification | | | |
|--|--|---------------|--|
| Limestone - (High Calcium) | | | |
| Product Line | CalCarb-A1, A2, AC3, AC325, AFM, C2, M2, PG, F1, R1, R2, Feed Grade F1; Screenings | | |
| Product Uses | High calcium product used as inert filler for plastics, rubber and building products, coal mine rock dust, glass. pH adjustment, aglime and other agricultural purposes and animal nutrition. | | |
| Manufacturer | Mississippi Lime Company 16147 US Highway 61, Ste Genevieve, MO 63670 | | |
| 24 Hour Emergency Contact Number (800) 437-5463 | | | |
| Section 2: Hazard Identification | | | |
|  WARNING! | | | |
| Hazard | H 320: Causes eye irritation H 333: May be harmful if inhaled H 351: Suspected of causing cancer | | |
| Precautionary Statements | <p>PREVENTION</p> P 264: Wash hands and face thoroughly after handling. P 261: Avoid breathing dust. P 280: Wear protective eye protection. P 284: Wear respiratory protection (in case of inadequate ventilation). <p>RESPONSE</p> P 301 + P 330: IF SWALLOWED: Rinse mouth. P 302 + P 353: IF ON SKIN: Rinse skin with water. P 304 + P 340: IF INHALED: Remove victim to fresh air and keep at rest and comfortable. P 305 + P 351: IF IN EYES: Rinse cautiously with water for several minutes. P 305 + P 337 + P 313: IF IN EYES: If eye irritation persists-Get medical advice / attention. | | |
| CANADA - WHMIS: Classification D2A (Toxic if Qtz > 0.1%) GHS Classification: Respiratory Irritation (Category 3); Eye Irritation/Damage (Category 2B) | | | |
| Section 3: Composition / Information on Ingredients | | | |
| Compound | CAS | Concentration | |
| Calcium Carbonate (CaCO ₃) | 1317-65-3 / 471-34-1 | 97-99% | |
| Aluminum Oxide (Al ₂ O ₃) | 1344-28-1 | < 1% | |
| Magnesium Carbonate (MgCO ₃) | 546-93-0 | < 1% | |
| Iron Oxide (Fe ₂ O ₃) | 1309-37-1 | < 1% | |
| Silica (SiO ₂) Total | 14808-60-7 | 0.5-1% | |
| Crystalline Silica is detectable above 0.1% in limestone using Xray methods. Free Silica concentration is dependent upon the particle size and application. | | | |
| Section 4: First-Aid Measures | | | |
| Eye Contact | Do not rub eyes. Contact with dust may cause irritation by mechanical abrasion. Irrigate eyes immediately with clean water. Obtain medical attention if necessary. | | |
| Skin Contact | Wash skin with soap and water. | | |
| Ingestion | If significant - obtain medical attention. Do not induce vomiting. | | |
| Inhalation | Dust may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits. Move to fresh air. If breathing is difficult give oxygen and seek medical attention. | | |
| Physician | Treat symptomatically. | | |

MISSISSIPPI LIME COMPANY - SAFETY DATA SHEET

| Section 5: Fire-Fighting Measures | | | | |
|--|--|--|---|---|
| Suitable extinguishing media | Non-flammable. | | | |
| Extinguishing media to avoid | No specific information. | | | |
| Hazards of concern | No specific information. | | | |
| Advice for fire-fighters | Standard personal protective equipment. | | | |
| Section 6: Accidental Release Measures | | | | |
| Precautions | Dusty. Wear appropriate personal protective equipment. | | | |
| Environmental | Impact insignificant. Clean-up spillage in dry form if possible rather than flushing with water. | | | |
| Containment | Contain and cover spill to minimize dust emission. | | | |
| Clean-up | Use vacuum systems if available or broom and shovel. | | | |
| Disposal | Generally inert. Dispose in accordance with regulations - or recycle and use beneficially in other applications. | | | |
| Section 7: Handling and Storage | | | | |
| Precautions for Safe Handling | Minimize fugitive dust in workplace and carefully handling and adequate ventilation. | | | |
| | Wear dust masks when exposure is high. | | | |
| | Use appropriate eye protection and tight fitting goggles if wearing contact lenses. | | | |
| | Exposed skin may become dry and irritated with prolonged contact. | | | |
| | Avoid contact with food and ingestion. | | | |
| Storage | Keep product dry. | | | |
| Section 8: Exposure Controls/Personal Protection | | | | |
| Compound | Exposure Limit (mg/m) | | | |
| Calcium Carbonate (CaCO₃) | OSHA PEL (TWA) 8/40h (mg/m ³) | ACGIH TLV (TWA) 8/40h (mg/m ³) | MSHA/PEL (TWA) 8/40h (mg/m ³) | NIOSH REL (TWA) 10/40H (mg/m ³) |
| | T=15 R=5 | TLV Withdrawn | T= 15 R=5 | T=10 R=5 |
| Crystalline Silica (1) | T= 30 (%SiO ₂)+2 R=10/(%SiO ₂)+2 | R = 0.025 | T= 30 (%SiO ₂)+2 R=10/(%SiO ₂)+2 | R = 0.05 (free silica) |
| Limestone is not a carcinogen listed by ACGIH, MSHA, OSHA, NTP, DFG, RSST or IARC. However, crystalline silica may be trace amounts at or above detection levels (<0.1%). Occurrence is dependent upon the stone source, process and specific application. Two ranges are disclosed for (T) Total Dust and (R) Respirable Dust | | | | |
| Engineering Control Measures | Eye Wash - Ensure that eye wash stations are close to the workplace location. | | | |
| | Exposure - Evaluate degree of exposure and use PPE as necessary. | | | |
| | Ventilation - Local exhaust or ventilation adequate to reduce exposures below appropriate limits. | | | |
| | Other - Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee work stations. | | | |
| Personal Protective Equipment | Eye Protection - ANSI, CSA or ATM approved glasses and goggles. Dust goggles should be worn if excessive emissions are present and when wearing contact lenses. | | | |
| | Respiratory Protection - Follow OSHA respirator guidelines found in 29 CFR 1910.134 or European Standard EN 149, Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. | | | |
| | Hand Protection - No special requirements. Wear gloves to protect skin. | | | |
| | Skin protection - No special requirements. Appropriate clothing to minimize skin contact.. | | | |
| | Footwear - No special requirements. | | | |
| | Hygiene - Wash dust-exposed skin with soap and water before eating, drinking, smoking, and using toilet facilities. Wash work clothes after each use | | | |

MISSISSIPPI LIME COMPANY - SAFETY DATA SHEET

| Section 9: Physical and Chemical Properties | | | | | | |
|---|---|---------------------------|---------------------------|-------------------------|--------------------|-------------------|
| <u>Physical State</u> | <u>Formula</u> | <u>Color</u> | <u>Stability</u> | <u>Flammability</u> | <u>Explosivity</u> | <u>Flash Pt</u> |
| Solid | CaCO ₃ | White-gray | Very Stable | Non-flammable | Non-explosive | NA |
| <u>Solubility(H2O)</u> | <u>Volatiles %</u> | <u>Density</u> | <u>Bulk Density</u> | <u>Specific Gravity</u> | <u>Vapor Press</u> | <u>Boiling Pt</u> |
| 0.00066g/100g | None | 2.6-2.8 g/cm ³ | 200-300 kg/m ³ | 2.650-2.75 | NA | NA |
| <u>Freezing Point</u> | <u>pH @ (25C)</u> | <u>Melting Pt</u> | <u>Auto Ignition T</u> | <u>Dust Defrag Kst</u> | <u>Vapor Den</u> | <u>Viscosity</u> |
| NA | 8.5-9.4 | 1339°C /1517°F | NA | NA | NA | NA |
| <u>Partition Coef</u> | <u>Odor</u> | <u>Odor Threshold</u> | <u>Decomposition</u> | <u>Evaporation Rate</u> | <u>Additives</u> | |
| NA | None | NA | 600-870 °C | NA | None | |
| Section 10: Stability and Reactivity | | | | | | |
| <u>Reactivity</u> | Reacts with acid to form Carbon Dioxide (CO ₂). | | | | | |
| <u>Stability</u> | Stable under normal conditions. | | | | | |
| <u>Hazardous</u> | Calcium oxide will form at high sustained temperatures. | | | | | |
| <u>Incompatibility</u> | Avoid contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas – silicon tetrafluoride. | | | | | |
| <u>Decomposition</u> | Limestone ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium. Silica reacts violently with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride yielding possible fire and/or explosions. Silica dissolves readily in hydrofluoric acid producing a corrosive gas – silicon tetrafluoride. | | | | | |
| Section 11: Toxicological Information | | | | | | |
| <u>Acute</u> | Routes of Entry - Skin Contact; Eye Contact; Inhalation; Ingestion | | | | | |
| <u>Skin</u> | May dry and irritate skin and mucus membranes: Skin Irritation - Rabbit 500 mg/24 hours - Moderate. | | | | | |
| <u>Eyes</u> | Eye irritation with possible discomfort or pain, local redness and swelling of the conjunctiva. Eye Irritation Data: Rabbit 750 ug/24 hours - Severe. | | | | | |
| <u>Inhalation</u> | Harmful if inhaled. May cause respiratory tract irritation /inflammation. Exposure may cause coughing and sneezing. Large amounts may cause chemical pneumonitis. | | | | | |
| <u>Ingestion</u> | May cause gastro-intestinal irritation. If ingested in large quantities may cause nausea, constipation and hypocalcaemia, & hemorrhage. | | | | | |
| <u>Sensitization</u> | No sensitizing effects known. | | | | | |
| <u>Chronic</u> | No signs or symptoms of chronic exposure of limestone have been reported. This product may contain trace amounts of Crystalline Silica. Excessive inhalation of respirable Crystalline Silica dust may result in respiratory disease, including silicosis, pneumoconiosis and pulmonary fibrosis. | | | | | |
| <u>Carcinogenicity</u> | Limestone is not a carcinogen listed by ACGIH, MSHA, OSHA, NTP, DFG, RSST or IARC. Limestone may contain trace amounts of Crystalline Silica listed by these organizations as a carcinogen. | | | | | |
| | Crystalline Silica, if inhaled in the form of quartz or cristobalite from occupational sources, is classified by IARC as (Group 1) carcinogenic to humans. | | | | | |
| | Respirable crystalline silica is regulated under California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). | | | | | |
| | NIOSH considers Crystalline Silica to be a potential occupational carcinogen as defined by the OSHA carcinogen policy (29 CFR 1990) | | | | | |
| | NTP lists respirable Crystalline Silica as known to be human carcinogens based on sufficient evidence of carcinogenicity in humans | | | | | |
| ACGIH list respirable Crystalline Silica (quartz) as suspected human carcinogen (A-2) | | | | | | |
| RSST lists respirable Crystalline Silica (quartz) as suspected human carcinogen. | | | | | | |

MISSISSIPPI LIME COMPANY - SAFETY DATA SHEET

| | |
|---|---|
| Section 12: Ecological Information | |
| Toxicity - Aquatic toxicity foreseeable as non relevant. | |
| Persistence and degradability - No relevant information available. | |
| Ecological information - Non-biodegradable but soluble in weak acid | |
| Bioaccumulative potential - No further relevant information available. | |
| Mobility in soil - No further relevant information available. | |
| Additional information - Product generally considered non hazardous as a water pollutant. | |
| PBT and vPvB assessment - Not applicable. | |
| Marine pollutant - Not Classified. | |
| Other adverse effects - No further relevant information available. | |
| Section 13: Disposal Considerations | |
| Spillage generating dust may expose cleanup personnel to respirable crystalline silica. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Do not dry sweep spilled material without PPE. Prevent spilled materials from inadvertently entering streams, drains, or sewers | |
| Recover in dry state if possible and minimize airborne dispersion. Reuse clean or uncontaminated materials. Dispose of waste materials in accordance with applicable federal, state, and local laws and regulations. | |
| Section 14: Transport Information | |
| Shipping and Transportation - Limestone is classified as a non-hazardous material by the Canadian Transportation of Dangerous Good (TDG) Regulations and the US Department of Transportation. (DOT). | |
| EU Transportation: Road (ADR); Rail (RID); Sea(IMDG); Air (ICO/IATA) - Not Restricted | |
| International Maritime Dangerous Goods (IMDG Code) - Not Classified | |
| Transport in bulk EU Annex II of MARPOL73/78 and the IBC Code) - Not applicable. | |
| Section 15: Regulatory Information | |
| TSCA/DSL | Listed under CAS 1317-65-3 Exempt from DSL as naturally occurring |
| CONEG | Materials used to manufacture packaging are CONEG compliant. |
| CWA | Not considered to be a water pollutant . |
| WASTE | Waste is not subject to RCRA and acceptable at landfills as a "solid wastes"". Product can often be beneficially reused or recycled for other purposes. |
| SPILLS | Sweep up spillage in dry form where possible. |
| OSHA | Labeling required under OSHA Hazard Communication Standard [29 CFR 1910.1200 (f) and other applicable state and local laws and regulations. |
| PROP 65 | WARNING: This product MAY contain chemical(s) known to the state of California to cause cancer. |
| NAFTA | Product qualifies under HS Tariff No 2521.00 as 100% US Origin, Preference Criteria A. |
| EU DIRECTIVE | Not classified as hazardous for supply (1999/45/EC) |
| Section 16: Other Information /Disclaimer | |
| Mississippi Lime Company provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular application or purpose. | |
| Prepared by: <i>J.H. Ebeling</i> | Prepared 5/29/2016 |

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300

General Information

Profile Type (check one): New Certification Recertification Modification to Active Profile
Generator Name: Alabama Power Company - Barry Steam Plant
Generator Physical Address: 15300 Highway 43, Bucks, Alabama 36512
Generator County: Mobile EPA ID: _____
Generator Mailing Address: 600 North 18th Street - 12N-0831
Generator Contact: Elizabeth Grinder Title: Environmental Affairs Specialist
Phone: 205-257-4150 Email: egrinder@southernco.com

Submitted by (if different from above):

Company Name: _____ Contact: _____
Mailing Address: _____
Phone: _____ Email: _____

Waste Information

Process Generating Waste: Routine maintenance of an air dryer system used to condition compressed air for plant control systems.
Comprised of the following: 0-25% silica gel, 0-25% molecular sieve, and 50-100% tabular bed support (Alumina) - MSDS attached
Waste Name: Spent desiccant

If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST) provide the following information:

UST Facility ID # _____ UST Incident # _____
Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, ect.): _____
Does the waste contain any of the following: PCBs Cyanides Sulfides Asbestos
Concentration: _____ Units: mg/L mg/Kg PPM PPB
Waste Type: Remediation Process CERCLA Cleanup Other
Waste Volume: 100 Units: Cu Yd Frequency: Annual Quarterly Monthly

Waste Properties

Physical State: Solid Liquid Bladeable Sludge Solid/Liquid Combination Other
% Free Liquids 0% pH (if liquid) N/A Flash Point (if liquid) N/A
Will liquids be solidified prior to disposal (see instructions)? YES NO

Waste Disposition

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? YES NO
Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? YES NO
Landfill Name #1: Barry Steam Plant Landfill Permit #: 49-18
Landfill Name #2: _____ Permit #: _____
Landfill Name #3: _____ Permit #: _____
Landfill Name #4: _____ Permit #: _____

Current Profile No. (if applicable) _____

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300
Continuation Form

Process Generating Waste continued:

Other:

Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Elizabeth Grinder

Name (type or print)


Signature

Environmental Affairs Specialist

Title

01/18/19

Date

Material Safety Data Sheet

Revision Date: 05/11/11 Supersedes: 05/14/08

Desiccant: K12, Beaded Silica Gel
K3, Granular Silica Gel

PRODUCT NAME: Silica Gel



COMPANY IDENTIFICATION

Suppliers Name: Kemp, an SPX Brand

Emergency Telephone No. 352-237-1220

Address: 4647 S.W. 40th Avenue
Ocala, Florida 34474-5799 USA

For Product Information 352-237-1220

1. PRODUCT IDENTIFICATION

Product Name: Silica Gel – White

2. COMPOSITION / INFORMATION ON INGREDIENTS

| <u>Component</u> | <u>CAS No.</u> | <u>% Weight</u> |
|--------------------------------|----------------|-----------------|
| Silica Gel (SiO ₂) | 7631-86-9 | 99.0 |

Hazard Data: Non-hazard

3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White Granules or Beads

Odor: Odorless

pH: 4 - 8

Boiling Point: Not Available

Melting Point: 1713 +6°C

Water Solubility: Insoluble

Specific Gravity (H₂O = 1): Not Available

Vapor Pressure (mm Hg): Not Available

Vapor Density (Air = 1): Not Available

Bulk Density (kg/m³): 700 – 800g

Evaporation Rate (Butyl Acetate = 1): Not Available

4. FIRE FIGHTING MEASURES

Flash Point: Not Available.

Flammable Limits: Non-flammable

LEL: Not Available

UEL: Not Available

Extinguishing Media: Not Available.

Special Fire Fighting Procedures: Not Available.

Unusual Fire and Explosion Hazards: Not Available.

Material Safety Data Sheet

Desiccant: K-12, Beaded Silica Gel
K-3, Granular Silica Gel

Revision Date: 05/11/11 Supersedes: 05/14/08

PRODUCT NAME: Silica Gel

5. STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: Not Available

Hazardous Decomposition Products: Not Available

Hazardous Polymerization: Will not occur.

Hazardous Polymerization (Conditions to Avoid): Not Available

6. HAZARDS IDENTIFICATION

Routes of Exposure:

Inhalation: Not Available.

Skin Absorption: No Hazard.

Skin Contact: No Hazard.

Eye Contact: No Hazard.

Ingestion: Believed to be no hazard.

Signs and Symptoms of Exposure: Not Available

Effects of Overexposure:

Acute Exposure: Not Available

Chronic Exposure: Not Available

Medical Conditions Aggravated by Exposure: Not Available.

Emergency and First Aid Procedures

Eye Contact: Immediately wash from eyes with clean of water while occasionally lifting eyelids. (Do not rub eyes.)

Skin Contact: Wash affected area with soap and plenty of water.

Inhalation: Remove victim to fresh air. Get medical attention for any difficulty with breathing.

Ingestion: Administer plenty of water.

7. PRECAUTIONS FOR SAFE HANDLING AND USE

Spill Procedure: Sweep up.

Waste Disposal Method: Comply with local regulations for non-hazardous chemical disposal.

8. SPECIAL PROTECTION AND CONTROL METHODS

Respiratory Protection: Use a NIOSH approved dust mask when working with powder.

Ventilation: Natural ventilation.

Protective Gloves: Working gloves.

Eye Protection: Safety goggles recommended.

Other Protective Clothing or Equipment: Not Available

Material Safety Data Sheet

Desiccant: K-12, Beaded Silica Gel
K-3, Granular Silica Gel

Revision Date: 05/11/11 Supersedes: 05/14/08

PRODUCT NAME: Silica Gel

9. TRANSPORTATION AND SHIPPING REQUIREMENTS

D.O.T. Shipping Name: Not Available

D.O.T. Hazard Classification: Non-Hazardous

D.O.T. Labels Required: None

Hazardous Waste: None

10. OTHER INFORMATION

MSDS Status: Supersedes 05/14/08.

Quick Identifier

Desiccant: **K12, Beaded Silica Gel**
K3, Granular Silica Gel

Material Safety Data Sheet

ATTENTION: Plant Manager/Safety Director:

This MSDS supersedes all prior data sheets received for this product. We urge you to study it carefully. This is provided with each container as our way of communicating Health, Safety, and Environmental Protection Information to our customers.

This information is provided to ensure safe handling and storage of our products in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200. The information contained in this MSDS must be passed on to all employees in your firm that handle and/or become involved in the implementation or control of operations involving use of the product. We strongly urge you to forward this MSDS to all parties that have a need to know the information contained herein!



LEGEND:

| | | | |
|------------------|---|--------|-------------------------|
| ACGIH | American Conference of Government Industrial Hygienists | atm | atmosphere |
| AICS | Australian Inventory of Chemical Substances | cm | centimeter |
| CAS | Chemical Abstract Services | g, gm | gram |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | in | inch |
| CFR | Code of Federal Regulations | kg | kilogram |
| DOT | Department of Transportation | lb | pound |
| DSL | Domestic Substances List (Canada) | m | meter |
| ECOIN | European Core Inventory | mg | milligram |
| EPA | Environmental Protection Agency | ml, ML | milliliter |
| IARC | International Agency for Research on Cancer | mm | millimeter |
| LC ₅₀ | Lethal Concentration (50% kill) | n.o.s. | not otherwise specified |
| LC _{LO} | Lowest Published Lethal Concentration | ppb | parts per billion |
| LD ₅₀ | Lethal Dose (50% kill) | ppm | parts per million |
| LD _{LO} | Lowest Published Lethal Dose | psia | pounds per square inch |
| NFPA | National Fire Protection Agency | μ, u | micron |
| NIOSH | National Institute of Occupational Safety and Health | μg | microgram |
| NTP | National Toxicology Program | | |
| OSHA | Occupational Safety and Health Administration | | |
| PEL | Permissible Exposure Limit | | |
| PIN | Product Identification Number | | |
| RCRA | Resource Conservation and Recovery Act | | |
| SARA | Superfund Amendments and Reauthorization Act | | |
| STEL | Short Term Exposure Limit | | |
| TCLP | Toxic Chemicals Leachate Program | | |
| TDG | Transportation of Dangerous Goods | | |
| TLV | Threshold Limit Value | | |
| TSCA | Toxic Substances Control Act | | |
| TWA | Time Weighted Average | | |

The information contained herein is based upon data considered true and accurate. However, the supplier makes no warranties (express or implied) as to the accuracy or adequacy of the information contained herein or the results to be obtained from the use thereof. This information is offered solely for the user's consideration, investigation and verification. Since the use and conditions of use of this information and the material described herein are not within the supplier's control, the supplier assumes no responsibility for injury to the user or third persons. The material described herein is sold only pursuant to the supplier's Terms and Conditions of Sale, including those limiting warranties and remedies contained therein. It is the responsibility of the user to determine whether any use of this data and information is in accordance with applicable Federal, State or Local Laws and Regulations.

Material Safety Data Sheet

Revision Date: 05/09/11 Supersedes: 05/14/08

Desiccant: K4, Molecular Sieve
(Type 4A beads)

PRODUCT NAME: Molecular Sieve Type 4A



COMPANY IDENTIFICATION

Suppliers Name: Kemp, an SPX Brand

Emergency Telephone No. 352-237-1220

Address: 4647 S.W. 40th Avenue
Ocala, Florida 34474-5799 USA

For Product Information 352-237-1220

1. PRODUCT IDENTIFICATION

Product Name: Molecular Sieve Type 4A

2. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | CAS No. | % Weight |
|-----------------|-----------|----------|
| Silicon Dioxide | 7631-86-9 | < 50 |
| Aluminum Oxide | 1344-28-1 | < 30 |
| Sodium Oxide | 1313-59-3 | < 30 |
| Magnesium Oxide | 1309-48-4 | < 5 |

3. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light Tan Beads or Powder
Odor: None
Boiling Point/Range: Not Applicable
Melting Point/Range: Not Applicable
Water Solubility: Insoluble
Specific Gravity: 2.10
Vapor Pressure (mm Hg): Not Applicable
Vapor Density (Air = 1): Not Applicable
Bulk Density (kg/m³): Not Applicable
Evaporation Rate (Butyl Acetate = 1): Not Applicable

4. FIRE FIGHTING MEASURES

Flash Point: Not applicable.

Flammable Limits: Non-flammable

LEL: Not Applicable

UEL: Not Applicable

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Fire and Explosion Hazards: Contact with moisture may generate sufficient heat to ignite combustible materials. Used product may contain retained material of a hazardous nature. Identify that material and inform the fire fighters.

Material Safety Data Sheet

Desiccant: K4, Molecular Sieve
(Type 4A beads)

Revision Date: 05/09/11 Supersedes: 05/14/08

PRODUCT NAME: Molecular Sieve Type 4A

5. HAZARDS IDENTIFICATION

Emergency Overview

Caution - may cause irritation - Skin and eye irritant.

Health Rating - 0 - None

Flammability Rating - 0 - None

Reactivity Rating - 0 - None

Contact Rating - 1 - Slight

Storage Color Code - Orange (General Storage)

Potential Health Effects

Primary Routes of Exposure: Contact with skin and eyes. Exposure may also occur via inhalation or ingestion if product dust is generated.

Skin Contact: May cause skin irritation. The product gets hot as it first adsorbs water.

Eye Contact: Dust and/or product may cause eye discomfort and/or irritation seen as tearing and reddening.

Ingestion: Not applicable.

Inhalation: Exposure to dust particles generated from this material may cause irritation of the respiratory tract.

Signs and Symptoms of Exposure: Not Applicable

Effects of Overexposure:

Acute Exposure: Not Applicable

Chronic Exposure: Not Applicable

Aggravation of Pre-Existing Conditions: No information found.

Medical Conditions Aggravated by Exposure: Breathing of dust may aggravate asthma

Emergency and First Aid Procedures

Eye Contact: Flush immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a physician.

Skin Contact: Wash affected area with soap and plenty of water. If skin irritation persists, call a physician.

Inhalation: Remove victim into fresh air. If symptoms persist, call a physician.

Ingestion: Administer plenty of water. Obtain medical attention.

General Recommendations: Avoid breathing dust and direct contact with skin

6. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions.

Hazardous Decomposition Products: Not Applicable

Hazardous Polymerization: Will not occur.

Hazardous Polymerization (Conditions To Avoid): Moisture

7. PRECAUTIONS FOR SAFE HANDLING AND USE

Handling: Keep container tightly closed. Suitable for general chemical storage area. Containers of this material may become hazardous since they retain product residues, dusts, solids; observe all warnings and precautions listed for the product.

Accidental Release Procedure: Wear protective clothing, sweep up and remove.

Waste Disposal Method: Comply with local regulations for non-hazardous chemical disposal.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection: Use a NIOSH approved dust mask when working with powder.

Ventilation: Dilution ventilation is a satisfactory health hazard control for this substance.

Skin Protection: Wear protective gloves

Eye Protection: Safety goggles recommended

Airborne Exposure Limits: None Established.

Other Protective Clothing or Equipment: Not Applicable

Material Safety Data Sheet

Desiccant: K4, Molecular Sieve
(Type 4A beads)

Revision Date: 05/09/11 Supersedes: 05/14/08

PRODUCT NAME: Molecular Sieve Type 4A

9. TOXICOLOGICAL INFORMATION

Acute Toxicity

LD50 - Oral: No information available
LS50 - Skin: No information available
LD50 - Inhalation: No information available
Irritation (Skin/Eyes): No information available

Chronic Toxicity:

Acute eye, skin, and respiratory tract irritation

Chronic Inhalation:

The drying action of this product can cause irritation of the mucous membranes of the nose and throat. Avoid prolonged breathing of dust.

10. ECOTOXOLOGICAL INFORMATION

LC50 Fish: No information available
LC50 - Daphnia: No information available

11. TRANSPORT INFORMATION

D.O.T. Shipping Name: Not Applicable
D.O.T. Hazard Classification: Non-Hazardous
D.O.T. Labels Required: None
Hazardous Waste: None

12. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal regulations. Dispose of container and unused contents in accordance with local, state, and federal regulations

13. OTHER INFORMATION

MSDS Status: Supersedes 05/14/08.

Quick Identifier

Desiccant: **K4, Molecular Sieve**
(Type 4A beads)

Material Safety Data Sheet

ATTENTION: Plant Manager/Safety Director:

This MSDS supersedes all prior data sheets received for this product. We urge you to study it carefully. This is provided with each container as our way of communicating Health, Safety, and Environmental Protection Information to our customers.

This information is provided to ensure safe handling and storage of our products in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200. The information contained in this MSDS must be passed on to all employees in your firm that handle and/or become involved in the implementation or control of operations involving use of the product. We strongly urge you to forward this MSDS to all parties that have a need to know the information contained herein!



LEGEND:

| | | | |
|------------------|---|--------|-------------------------|
| ACGIH | American Conference of Government Industrial Hygienists | atm | atmosphere |
| AICS | Australian Inventory of Chemical Substances | cm | centimeter |
| CAS | Chemical Abstract Services | g, gm | gram |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | in | inch |
| CFR | Code of Federal Regulations | kg | kilogram |
| DOT | Department of Transportation | lb | pound |
| DSL | Domestic Substances List (Canada) | m | meter |
| ECOIN | European Core Inventory | mg | milligram |
| EPA | Environmental Protection Agency | ml, ML | milliliter |
| IARC | International Agency for Research on Cancer | mm | millimeter |
| LC ₅₀ | Lethal Concentration (50% kill) | n.o.s. | not otherwise specified |
| LC _{Lo} | Lowest Published Lethal Concentration | ppb | parts per billion |
| LD ₅₀ | Lethal Dose (50% kill) | ppm | parts per million |
| LD _{Lo} | Lowest Published Lethal Dose | psia | pounds per square inch |
| NFPA | National Fire Protection Agency | μ, u | micron |
| NIOSH | National Institute of Occupational Safety and Health | μg | microgram |
| NTP | National Toxicology Program | | |
| OSHA | Occupational Safety and Health Administration | | |
| PEL | Permissible Exposure Limit | | |
| PIN | Product Identification Number | | |
| RCRA | Resource Conservation and Recovery Act | | |
| SARA | Superfund Amendments and Reauthorization Act | | |
| STEL | Short Term Exposure Limit | | |
| TCLP | Toxic Chemicals Leachate Program | | |
| TDG | Transportation of Dangerous Goods | | |
| TLV | Threshold Limit Value | | |
| TSCA | Toxic Substances Control Act | | |
| TWA | Time Weighted Average | | |

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Material Safety Data Sheet

Revision Date: 05/09/11 Supersedes: 05/14/08

PRODUCT NAME: Tabular Bed Support

Desiccant: TABULAR SUPPORT
TS-4 (1/8" Dia.), TS-25 (1/4" Dia.),
TS-38 (3/8" Dia.), TS-50 (1/2" Dia.)
TS-100 (1" Dia.)

COMPANY IDENTIFICATION

SUPPLIERS NAME: SPX Flow Technology
ADDRESS: 4647 S.W. 40th Avenue
Ocala, Florida 34474-5799 USA

EMERGENCY
TELEPHONE No. 352-237-1220
FOR PRODUCT
INFORMATION 352-237-1220

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Tabular Bed Support
Chemical Name: Chemical Stoneware
Chemical Family: Alumina Silicate

2. COMPOSITION / INFORMATION ON INGREDIENTS

| <u>COMPONENT</u> | <u>CAS NO.</u> | <u>%</u> | <u>OSHA/PEL</u> | <u>ACGIH/TLV</u> |
|------------------|----------------|----------|-----------------|------------------|
| Aluminum oxide | 1344-28-1 | 40 | Not available | Not available |
| Silicon Dioxide | 7631-86-9 | 60 | Not available | Not available |

3. HAZARDS IDENTIFICATION

The health effects noted below are consistent with requirements under the OSHA Hazard Communication Standard (29CFR 1910.1200)

Potential Health Effects

Eye Contact: This product may be mildly irritating to the eyes.

Skin Contact: This product is non-irritating to the skin.

Inhalation: Dust may cause irritation to respiratory tract if inhaled. Long term exposure (10-25 years) to dust may cause cough, chest pains, dyspnea, decreased vital capacity and diminished chest expansion. Treat as a nuisance dust

Ingestion: This product is generally considered to have a low order of acute oral toxicity.

Signs and Symptoms: Irritation as noted above.

4. FIRST AID MEASURES

Eye Contact: N/A
Skin Contact: N/A
Inhalation: N/A
Ingestion: N/A

5. FIRE FIGHTING MEASURES

Flash Point Method: Will not burn (see below)

Flammable Limits/% Volume in Air

Lower: Not applicable **Upper:** Not applicable

Extinguishing Media: Will not burn. Use an extinguishing media appropriate for the surrounding fire.

Special Fire Fighting Procedures and Precautions: Will not burn.

Material Safety Data Sheet

Revision Date: 05/09/11 Supersedes: 05/14/08

Desiccant: **TABULAR SUPPORT**
TS-4 (1/8" Dia.), TS-25 (1/4" Dia.),
TS-38 (3/8" Dia.), TS-50 (1/2" Dia.)
TS-100 (1" Dia.)

PRODUCT NAME: Tabular Bed Support

6. SPECIAL PRECAUTIONS

Stack securely and keep contents dry prior to use.

7. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: NIOSH-approved dust respirator where exposure limit is or may be exceeded.

Protective Clothing: Wear gloves to protect against bruising. Eye protection recommended in case of material splintering during handling.

8. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--------------------------------|
| Appearance and Odor: | Buff colored solid — odorless. |
| Boiling Point: | Approximately 4000°F. |
| Melting Point: | Approximately 3700°F. |
| Vapor Pressure (mm Hg): | Not significant. |
| Vapor Density (air=1): | Not applicable. |
| Solubility in Water: | Negligible. |
| Specific Gravity (H₂O=1): | Not applicable. |
| Evaporation Rate (n-butyl acetate = 1): | Not significant. |
| Bulk Density: | 2.4 G/CC |

9. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Conditions to Avoid: None known.

Incompatibility: None known.

Hazardous Decomposition Products: Not applicable.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None known.

10. TOXICOLOGICAL INFORMATION

No LD₅₀ or LC₅₀ found for oral, dermal, or inhalation routes of administration.

11. ENVIRONMENTAL PROTECTION

The material is inert itself. It will not of itself contaminate other equipment

If the product is used by the customer with chemicals further handling and treatment should be based upon that exposure.

12. DISPOSAL CONSIDERATIONS

Dispose of unused desiccant in accordance with Federal, State, and Local Regulations.

Material Safety Data Sheet

Revision Date: 05/09/11 Supersedes: 05/14/08

Desiccant: **TABULAR SUPPORT**
TS-4 (1/8" Dia.), **TS-25** (1/4" Dia.),
TS-38 (3/8" Dia.), **TS-50** (1/2" Dia.)
TS-100 (1" Dia.)

PRODUCT NAME: Tabular Bed Support

13. TRANSPORTATION REQUIREMENTS

Department of Transportation Classification: Not hazardous by DOT Regulations.

14. REGULATORY INFORMATION

The components of this product are listed on the EPA/TSCA inventory of chemical substances.

SARA Title III Information:

| NO. | EHS RQ (lbs) (*1) | EHS TPQ (lbs) (*2) | 311/312 Category (*3) | Section 313 (*4) |
|-----|----------------------|-----------------------|--------------------------|---------------------|
|-----|----------------------|-----------------------|--------------------------|---------------------|

Aluminum Oxide: None

- *1 **Reportable Quantity** - of extremely hazardous substance under Section 302.
- *2 **Threshold Planning Quantity** - of extremely hazardous substance under Section 302.
- *3 **Hazard Category** - for Section 311/312 Reporting
 - Health:** H-1 = Immediate (acute) Health Hazard; H-2 = Delayed (chronic) Health Hazard
 - Physical:** P-3 = Fire Hazard; P-4 = Sudden release of Pressure Hazard; P-5 = Reactive Hazard
- *4 **Toxic Chemical:** Under Section 313, category as required under Section 313 (40 CFR 372.42)

15. OTHER INFORMATION

MSDS Status: Supersedes 05/14/08

Originated: 03/20/02

Product Use: Support Media

HMIS™ - Hazardous Materials Identification System

| | | |
|-------------------|--------------|---|
| HMIS™ Ratings: | Health | 0 |
| | Flammability | 0 |
| | Reactivity | 0 |

0 - minimal hazard; 1 - slight hazard; 2 - moderate hazard; 3 - serious hazard; 4 - severe hazard

Quick Identifier

Desiccant: TABULAR SUPPORT
TS-4 (1/8" Dia.), **TS-25** (1/4" Dia.),
TS-38 (1/8" Dia.), **TS-50** (1/2" Dia.)
TS-100 (1" Dia.)

Material Safety Data Sheet

ATTENTION: Plant Manager/Safety Director:

This MSDS supersedes all prior data sheets received for this product. We urge you to study it carefully. This is provided with each container as our way of communicating Health, Safety, and Environmental Protection Information to our customers.

This information is provided to ensure safe handling and storage of our products in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200. The information contained in this MSDS must be passed on to all employees in your firm that handle and/or become involved in the implementation or control of operations involving use of the product. We strongly urge you to forward this MSDS to all parties that have a need to know the information contained herein!

LEGEND:

| | | | |
|------------------|---|--------|-------------------------|
| ACGIH | American Conference of Government Industrial Hygienists | atm | atmosphere |
| AICS | Australian Inventory of Chemical Substances | cm | centimeter |
| CAS | Chemical Abstract Services | g, gm | gram |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | in | inch |
| CFR | Code of Federal Regulations | kg | kilogram |
| DOT | Department of Transportation | lb | pound |
| DSL | Domestic Substances List (Canada) | m | meter |
| ECOIN | European Core Inventory | mg | milligram |
| EPA | Environmental Protection Agency | ml, ML | milliliter |
| IARC | International Agency for Research on Cancer | mm | millimeter |
| LC ₅₀ | Lethal Concentration (50% kill) | n.o.s. | not otherwise specified |
| LC _{Lo} | Lowest Published Lethal Concentration | ppb | parts per billion |
| LD ₅₀ | Lethal Dose (50% kill) | ppm | parts per million |
| LD _{Lo} | Lowest Published Lethal Dose | psia | pounds per square inch |
| NFPA | National Fire Protection Agency | μ, u | micron |
| NIOSH | National Institute of Occupational Safety and Health | μg | microgram |
| NTP | National Toxicology Program | | |
| OSHA | Occupational Safety and Health Administration | | |
| PEL | Permissible Exposure Limit | | |
| PIN | Product Identification Number | | |
| RCRA | Resource Conservation and Recovery Act | | |
| SARA | Superfund Amendments and Reauthorization Act | | |
| STEL | Short Term Exposure Limit | | |
| TCLP | Toxic Chemicals Leachate Program | | |
| TDG | Transportation of Dangerous Goods | | |
| TLV | Threshold Limit Value | | |
| TSCA | Toxic Substances Control Act | | |
| TWA | Time Weighted Average | | |

The information contained herein is based upon data considered true and accurate. However, the supplier makes no warranties (express or implied) as to the accuracy or adequacy of the information contained herein or the results to be obtained from the use thereof. This information is offered solely for the user's consideration, investigation and verification. Since the use and conditions of use of this information and the material described herein are not within the supplier's control, the supplier assumes no responsibility for injury to the user or third persons. The material described herein is sold only pursuant to the supplier's Terms and Conditions of Sale, including those limiting warranties and remedies contained therein. It is the responsibility of the user to determine whether any use of this data and information is in accordance with applicable Federal, State or Local Laws and Regulations.

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300

General Information

Profile Type (check one): New Certification Recertification Modification to Active Profile
Generator Name: Alabama Power Company - Barry Steam Plant
Generator Physical Address: 15300 Highway 43, Bucks, Alabama 36512
Generator County: Mobile EPA ID: _____
Generator Mailing Address: 600 North 18th Street - 12N-0831
Generator Contact: Elizabeth Grinder Title: Environmental Affairs Specialist
Phone: 205-257-4150 Email: egrinder@southernco.com

Submitted by (if different from above):

Company Name: _____ Contact: _____
Mailing Address: _____
Phone: _____ Email: _____

Waste Information

Process Generating Waste: Aqueous solution used in the carbon capture/sequestration process is filtered through a cellulose filter media. This waste stream is comprised of the spent filter cake.

Waste Name: Carbon capture system filter cake

If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST) provide the following information:

UST Facility ID # _____ UST Incident # _____

Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, ect.): _____

Does the waste contain any of the following: PCBs Cyanides Sulfides Asbestos

Concentration: _____ Units: mg/L mg/Kg PPM PPB

Waste Type: Remediation Process CERCLA Cleanup Other

Waste Volume: 100 Units: Cu Yd Frequency: Annual Quarterly Monthly

Waste Properties

Physical State: Solid Liquid Bladeable Sludge Solid/Liquid Combination Other

% Free Liquids 0% pH (if liquid) N/A Flash Point (if liquid) N/A

Will liquids be solidified prior to disposal (see instructions)? YES NO

Waste Disposition

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? YES NO

Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? YES NO

Landfill Name #1: Barry Steam Plant Landfill Permit #: 49-18

Landfill Name #2: _____ Permit #: _____

Landfill Name #3: _____ Permit #: _____

Landfill Name #4: _____ Permit #: _____

Current Profile No. (if applicable) _____

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300
Continuation Form

Process Generating Waste continued:

Other:

Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Elizabeth Grinder
Name (type or print)


Signature

Environmental Affairs Specialist
Title

01/18/19
Date

Alabama Power
 General Test Laboratory
 P.O. Box 2641
 Birmingham, Alabama 35291
 (205) 664 - 6032 or 6171
 FAX (205) 664-1654



CERTIFICATE OF ANALYSIS

TO: Mr. Brandon Patrick
 12N-0830
 Mr. Tuck Tucker

Customer Account : HWBSP
 Sample Date : 01-Nov-11
 Customer ID :
 Received Date : 10-Nov-11

Description : Barry SP
 Carbon Capture Filter Cake

Laboratory ID Number : AR29017

| Test Name | Reference | VSpec | MDL | Result | Units |
|----------------------------|--------------|-------|--------|--------------|-------------|
| Free Liquid | EPA 9095 | | 1. | Not Detected | % by Volume |
| Solids Content of Sample | EPA 1311 | | 0.01 | 100 | percent |
| pH of TCLP Extract | EPA 1311 | | 0. | 6.04 | |
| TCLP Extraction Fluid | EPA 1311 | | 0. | 2 | |
| Silver, TCLP Extractable | EPA1311/6010 | | 0.006 | Not Detected | mg/l |
| Arsenic, TCLP Extractable | EPA1311/6010 | | 0.009 | 0.024 | mg/l |
| Barium, TCLP Extractable | EPA1311/6010 | | 0.003 | 0.887 | mg/l |
| Cadmium, TCLP Extractable | EPA1311/6010 | | 0.001 | Not Detected | mg/l |
| Chromium, TCLP Extractable | EPA1311/6010 | | 0.01 | 0.01 | mg/l |
| Mercury, TCLP Extractable | EPA1311/7470 | | 0.0002 | Not Detected | mg/l |
| Lead, TCLP Extractable | EPA1311/6010 | | 0.01 | Not Detected | mg/l |
| Selenium, TCLP Extractable | EPA1311/6010 | | 0.02 | 0.36 | mg/l |

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

Comments :

CC: Mr. Tommy Ryals

Quality Control _____ Supervision _____ Date: 12/14/2011

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300

General Information

Profile Type (check one): New Certification Recertification Modification to Active Profile
Generator Name: Alabama Power Company - Barry Steam Plant
Generator Physical Address: 15300 Highway 43, Bucks, Alabama 36512
Generator County: Mobile EPA ID: _____
Generator Mailing Address: 600 North 18th Street – 12N-0831
Generator Contact: Elizabeth Grinder Title: Environmental Affairs Specialist
Phone: 205-257-4150 Email: egrinder@southernco.com

Submitted by (if different from above):

Company Name: _____ Contact: _____
Mailing Address: _____
Phone: _____ Email: _____

Waste Information

Process Generating Waste: Unused sodium carbonate that no longer meets operational specification (SDS attached)

Waste Name: Sodium Carbonate (Soda Ash) Anhydrous

If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST) provide the following information:

UST Facility ID # _____ UST Incident # _____

Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, ect.): _____

Does the waste contain any of the following: PCBs Cyanides Sulfides Asbestos

Concentration: _____ Units: mg/L mg/Kg PPM PPB

Waste Type: Remediation Process CERCLA Cleanup Other

Waste Volume: 100 Units: Cu Yd Frequency: Annual Quarterly Monthly

Waste Properties

Physical State: Solid Liquid Bladeable Sludge Solid/Liquid Combination Other

% Free Liquids 0% pH (if liquid) N/A Flash Point (if liquid) N/A

Will liquids be solidified prior to disposal (see instructions)? YES NO

Waste Disposition

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? YES NO

Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? YES NO

Landfill Name #1: Barry Steam Plant Landfill Permit #: 49-18

Landfill Name #2: _____ Permit #: _____

Landfill Name #3: _____ Permit #: _____

Landfill Name #4: _____ Permit #: _____

Current Profile No. (if applicable) _____

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300
Continuation Form

Process Generating Waste continued:

Other:

Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Elizabeth Grinder

Name (type or print)



Signature

Environmental Affairs Specialist

Title

01/18/19

Date



SAFETY DATA SHEET

Based upon Regulation (EC) No. 1907/2006, as amended by Regulation (EC) No. 453/2010

sodium carbonate

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name : sodium carbonate
Synonyms : carbonic acid disodium salt; carbonic acid sodium salt; CASWELL NO. 752; chrysol carbonate; crysol carbonate (=sodium carbonate); disodium carbonate; natural ash; Na-X; snowlite 1; soda ash; soda, crystals; soda (=sodium carbonate); anhydrous soda; ash; bisodium carbonate; calcined soda(=sodium carbonate); sodium carbonate, anhydrous; sodium carbonate, anhydrous ASTM D458; sodium carbonate, anhydrous GE materials D4D5; sodium carbonate, anhydrous powder; sodium carbonate, crude; sodium carbonate, granular; Solvay soda; synthetic ash; washing soda (= sodiumcarbonate)
Registration number REACH : 01-2119485498-19-0011
Product type REACH : Substance/mono-constituent
CAS number : 497-19-8
EC index number : 011-005-00-2
EC number : 207-838-8
RTECS number : VZ4050000
Molecular mass : 105.99 g/mol
Formula : Na₂CO₃

1.2 Relevant identified uses of the substance or mixture and uses advised against:

1.2.1 Relevant identified uses

Chemical raw material
Glass production: raw material
Detergent: component
Acidity regulator
Paper production: auxiliary substance

1.2.2 Uses advised against

No uses advised against known

1.3 Details of the supplier of the safety data sheet:

Supplier of the safety data sheet

OCI Chemical Corporation
Five Concourse Parkway - Suite 2500
USA GA 30328-6111 Atlanta

Manufacturer of the product

OCI Wyoming L.P.
254 County Road 4-6
USA - WY 82935 Green River

1.4 Emergency telephone number:

24h/24h:

CHEMTREC : +1 703 527 38 87

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation EC No 1272/2008

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

| Class | Category | Hazard statements |
|------------|------------|--------------------------------------|
| Eye Irrit. | category 2 | H319: Causes serious eye irritation. |

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

Xi; R36 - Irritating to eyes.

sodium carbonate

2.2 Label elements:

Labelling according to Regulation EC No 1272/2008 (CLP)



Signal word Warning

H-statements

H319 Causes serious eye irritation.

P-statements

P280 Wear eye protection/face protection.

P264 Wash hands thoroughly after handling.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards:

SECTION 3: Composition/information on ingredients

3.1 Substances:

| Name (REACH Registration No) | CAS No EC No | Conc. (C) | Classification according to DSD/DPD | Classification according to CLP | Note | Remark |
|-------------------------------------|-----------------------|-----------|--|------------------------------------|------|------------------|
| sodium carbonate (01-2119485498-19) | 497-19-8 207-838-8 | C>99 % | Xi; R36 | Eye Irrit. 2; H319 | (1) | Mono-constituent |

(1) For R-phrases and H-statements in full: see heading 16

3.2 Mixtures:

Not applicable

SECTION 4: First aid measures

4.1 Description of first aid measures:

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed:

4.2.1 Acute symptoms

After inhalation:

AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties.

After skin contact:

Not irritating.

After eye contact:

Irritation of the eye tissue. Lacrimation.

After ingestion:

AFTER ABSORPTION OF HIGH QUANTITIES: Nausea. Abdominal pain. Irritation of the gastric/intestinal mucosa.

4.2.2 Delayed symptoms

No effects known.

4.3 Indication of any immediate medical attention and special treatment needed:

If applicable and available it will be listed below.

Reason for revision: 1.3+1.4

Publication date: 2013-03-13

Date of revision: 2013-08-13

Revision number: 0100

Product number: 10318

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sodium carbonate

SECTION 5: Firefighting measures

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media:

Adapt extinguishing media to the environment.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2 Special hazards arising from the substance or mixture:

Upon combustion: CO and CO₂ are formed. Reacts on exposure to water (moisture) with (some) metals.

5.3 Advice for firefighters:

5.3.1 Instructions:

No specific fire-fighting instructions required.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Prevent dust cloud formation, e.g. by wetting. No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.

Suitable protective clothing

See heading 8.2

6.2 Environmental precautions:

Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Violent exothermic reaction with (some) acids: release of harmful gases/vapours (carbon dioxide). Carbon dioxide is heavier than air and will collect in ducts, drains and low lying areas.

6.3 Methods and material for containment and cleaning up:

Prevent dust cloud formation. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4 Reference to other sections:

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1 Precautions for safe handling:

Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities:

7.2.1 Safe storage requirements:

Store in a cool area. Store in a dry area. Keep container in a well-ventilated place. Keep out of direct sunlight. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, (strong) acids, metals, water/moisture.

7.2.3 Suitable packaging material:

No data available

7.2.4 Non suitable packaging material:

Aluminium, zinc.

7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

Reason for revision: 1.3+1.4

Publication date: 2013-03-13

Date of revision: 2013-08-13

Revision number: 0100

Product number: 10318

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sodium carbonate

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

| Product name | Test | Number |
|-------------------|------|--------|
| No data available | | |

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL - Workers

sodium carbonate

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|------------------------------------|----------------------|--------|
| DNEL | Long-term local effects inhalation | 10 mg/m ³ | |

DNEL - General population

sodium carbonate

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|--------------------------|--------------------------------|----------------------|--------|
| DNEL | Acute local effects inhalation | 10 mg/m ³ | |

8.1.5 Control banding

If applicable and available it will be listed below.

8.2 Exposure controls:

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Dust production: dust mask with filter type P1.

b) Hand protection:

Gloves.

- materials for protective clothing (good resistance)

Butyl rubber, PVC.

c) Eye protection:

Safety glasses. In case of dust production: protective goggles.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

| | |
|---------------------|--|
| Physical form | Crystalline solid |
| | Crystalline powder |
| | Grains |
| | Lumps |
| Odour | Odourless |
| Odour threshold | Not applicable |
| Colour | Colourless to white |
| Particle size | 694 µm |
| Explosion limits | Not applicable |
| Flammability | Non combustible |
| Log Kow | -6.19 ; Estimated value |
| Dynamic viscosity | Data not required |
| Kinematic viscosity | Data not required |
| Melting point | 851 °C |
| Boiling point | Data not required |
| Flash point | Not required: exemption according to REACH |
| Evaporation rate | Not applicable |
| Vapour pressure | Not required: exemption according to REACH |

Reason for revision: 1.3+1.4

Publication date: 2013-03-13

Date of revision: 2013-08-13

Revision number: 0100

Product number: 10318

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sodium carbonate

| | |
|---------------------------|--|
| Relative vapour density | Not applicable |
| Solubility | water ; 212.5 g/l ; 20 °C |
| Relative density | 2.52-253 ; 20 °C |
| Decomposition temperature | 1600 °C |
| Auto-ignition temperature | >400 °C |
| Explosive properties | No chemical group associated with explosive properties |
| Oxidising properties | No chemical group associated with oxidising properties |
| pH | 11.6 ; 5.0 % |

Physical hazards

No physical hazard class

9.2 Other information:

| | |
|------------------|------------------------|
| Absolute density | 2530 kg/m ³ |
|------------------|------------------------|

SECTION 10: Stability and reactivity

10.1 Reactivity:

Substance has basic reaction.

10.2 Chemical stability:

Hygroscopic.

10.3 Possibility of hazardous reactions:

Reacts on exposure to water (moisture) with (some) metals. Violent exothermic reaction with (some) metals. Reacts with (strong) oxidizers.

10.4 Conditions to avoid:

Avoid raising dust. Keep away from naked flames/heat.

10.5 Incompatible materials:

(strong) acids, metals, water/moisture, aluminium, zinc.

10.6 Hazardous decomposition products:

Violent exothermic reaction with (some) acids: release of harmful gases/vapours (carbon dioxide). Upon combustion: CO and CO₂ are formed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

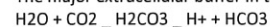
11.1.1 Test results

- Toxicokinetics: summary

Toxicokinetics (absorption, metabolism, distribution and elimination)

The toxicokinetics of sodium carbonate are well understood. When sodium carbonate comes into contact with body fluids it will dissociate into carbonate and sodium. The carbonate could potentially increase the pH of the blood.

The major extracellular buffer in the blood and the interstitial fluid of vertebrates is the bicarbonate buffer system, described by the following equation:



Carbon dioxide from the tissues diffuses rapidly into red blood cells, where it is hydrated with water to form carbonic acid. This reaction is accelerated by carbonic anhydrase, an enzyme present in high concentrations in red blood cells. The carbonic acid formed dissociates into bicarbonate and hydrogen ions. Most of the bicarbonate ions diffuse into the plasma. Since the ratio of H₂CO₃ to dissolved CO₂ is constant at equilibrium, pH may be expressed in terms of bicarbonate ion concentration and partial pressure of CO₂ by means of the Henderson-Hasselbach equation:

$$\text{pH} = \text{pK} + \log \left[\frac{[\text{HCO}_3^-]}{a\text{PCO}_2} \right]$$

The blood plasma of man normally has a pH of 7.40. Should the pH fall below 7.0 or rise above 7.8, irreversible damage may occur. Compensatory mechanisms for acid-base disturbances function to alter the ratio of HCO₃ to PCO₂, returning the pH of the blood to normal. Thus, metabolic acidosis may be compensated for by hyperventilation and increased renal absorption of HCO₃. Metabolic alkalosis may be compensated for by hypoventilation and the excess of HCO₃- in the urine (Johnson and Swanson, 1987). Renal mechanisms are usually sufficient to restore the acid-base balance (McEvoy, 1994). The uptake of sodium, via exposure to sodium carbonate, is much less than the uptake of sodium via food. Therefore, sodium carbonate is not expected to be systemically available in the body. Furthermore it should be realised that an oral uptake of sodium carbonate will result in a neutralisation in the stomach due to the gastric acid.

Acute toxicity

sodium carbonate

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Gender | Value determination |
|-------------------|-----------|--------|-------------|---------------|---------|-------------|---------------------|
| Oral | LD50 | | 2800 mg/kg | | Rat | Male/female | Experimental value |
| Dermal | LD50 | | >2000 mg/kg | | Rabbit | | Experimental value |
| Inhalation | LC50 | | 2.30 mg/l | 2 h | Rat | Male | Experimental value |

Conclusion

Reason for revision: 1.3+1.4

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sodium carbonate

Low acute toxicity by the oral route
 Low acute toxicity by the dermal route
 Low acute toxicity by the inhalation route

Corrosion/irritation

sodium carbonate

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination |
|----------------------|---------------------|------------------------|---------------|----------------------------|---------|---------------------|
| Eye | Irritating | EPA 16 CFR 1500.42 | | 1; 2; 3; 4; 7; 10; 14 days | Rabbit | Experimental value |
| Eye | Highly irritating | Equivalent to OECD 405 | | 1; 24; 48; 72; 168 hours | Rabbit | Experimental value |
| Dermal | Not irritating | OECD 404 | | 24; 48; 72 hours | Rabbit | Experimental value |
| Inhalation (aerosol) | Slightly irritating | | | | | Literature |

Conclusion

Causes serious eye irritation.
 Not classified as irritating to the skin
 Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

sodium carbonate

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Gender | Value determination |
|-------------------|--------|--------|---------------|------------------------|---------|--------|--|
| Skin | | | | | | | Not determined, exemption according to REACH |
| Inhalation | | | | | | | Not determined, exemption according to REACH |

Conclusion

Not classified as sensitizing for skin
 Not classified as sensitizing for inhalation

Specific target organ toxicity

sodium carbonate

| Route of exposure | Parameter | Method | Value | Organ | Effect | Exposure time | Species | Gender | Value determination |
|-------------------|-----------|--------|-------|-------|--------|---------------|---------|--------|----------------------------|
| Oral | | | | | | | | | No relevant data available |
| Dermal | | | | | | | | | No data available |
| Inhalation | | | | | | | | | No data available |

Conclusion

Supplementary classification for repeated dose toxicity was not considered necessary

Mutagenicity (in vitro)

sodium carbonate

| Result | Method | Test substrate | Effect | Value determination |
|-----------|----------|--------------------------|--------|---------------------|
| Negative | Other | Escherichia coli | | Experimental value |
| Ambiguous | OECD 471 | Bacteria (S.typhimurium) | | Read-across |

Mutagenicity (in vivo)

sodium carbonate

| Result | Method | Exposure time | Test substrate | Gender | Organ | Value determination |
|--------|--------|---------------|----------------|--------|-------|---------------------|
| | | | | | | No data available |

Carcinogenicity

sodium carbonate

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Gender | Value determination | Organ | Effect |
|-------------------|-----------|--------|-------|---------------|---------|--------|---------------------|-------|--------|
| Inhalation | | | | | | | No data available | | |
| Dermal | | | | | | | No data available | | |
| Oral | | | | | | | No data available | | |

Reason for revision: 1.3+1.4

Publication date: 2013-03-13

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sodium carbonate

Reproductive toxicity

sodium carbonate

| | Parameter | Method | Value | Exposure time | Species | Gender | Effect | Organ | Value determination |
|------------------------|-----------|--------|-------------|---------------|---------|--------|-----------|-------|--|
| Developmental toxicity | NOAEL | Other | ≥ 245 mg/kg | | Rat | | No effect | | Experimental value |
| Effects on fertility | | | | | | | | | Not determined, exemption according to REACH |

Conclusion CMR

Not classified for carcinogenicity
 Not classified for mutagenic or genotoxic toxicity
 Not classified for reprotoxic or developmental toxicity

Toxicity other effects

sodium carbonate

No (test)data available

Chronic effects from short and long-term exposure

sodium carbonate

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Dry skin. Tingling/irritation of the skin. Affection of the nasal septum.

SECTION 12: Ecological information

12.1 Toxicity:

sodium carbonate

| | Parameter | Method | Value | Duration | Species | Test design | Fresh/salt water | Value determination |
|---|-----------|--------|----------------|----------|---------------------|---------------|------------------|---------------------|
| Acute toxicity fishes | LC50 | Other | 300 mg/l | 96 h | Lepomis macrochirus | Static system | Fresh water | Experimental value |
| Acute toxicity invertebrates | EC50 | Other | 200 - 227 mg/l | 48 h | Ceriodaphnia sp. | Semi-static | Fresh water | Experimental value |
| Toxicity algae and other aquatic plants | EC50 | | 242 mg/l | 5 day(s) | Algae | | | Experimental value |

Conclusion

Slightly harmful to fishes (LC50(96h) 100-1000 mg/l)
 Practically non-toxic to algae (EC50 >100 mg/l)
 Slightly harmful to invertebrates (EC50 (48h): 100 - 1000 mg/l)
 pH shift
 Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC
 Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2 Persistence and degradability:

Biodegradability: not applicable

12.3 Bioaccumulative potential:

sodium carbonate

Log Kow

| Method | Remark | Value | Temperature | Value determination |
|--------|--------|-------|-------------|---------------------|
| | | -6.19 | | Estimated value |

Conclusion

Low potential for bioaccumulation (Log Kow < 4)

12.4 Mobility in soil:

Low potential for adsorption in soil

12.5 Results of PBT and vPvB assessment:

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances.

12.6 Other adverse effects:

Reason for revision: 1.3+1.4

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sodium carbonate

sodium carbonate

Global warming potential (GWP)

Not included in the list of substances which may contribute to the greenhouse effect (Regulation (EC) No 842/2006)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1 Waste treatment methods:

13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

16 05 07* (discarded inorganic chemicals consisting of or containing dangerous substances). Depending on branch of industry and production process, also other waste codes may be applicable. Hazardous waste according to Directive 2008/98/EC.

13.1.2 Disposal methods

Precipitate/make insoluble. Remove to an authorized dump (Class I). Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. May be discharged to wastewater treatment installation. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).

15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1 UN number:

| | |
|-----------|-------------|
| Transport | Not subject |
|-----------|-------------|

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

| | |
|------------------------------|--|
| Hazard identification number | |
| Class | |
| Classification code | |

14.4 Packing group:

| | |
|---------------|--|
| Packing group | |
| Labels | |

14.5 Environmental hazards:

| | |
|--|----|
| Environmentally hazardous substance mark | no |
|--|----|

14.6 Special precautions for user:

| | |
|--------------------|--|
| Special provisions | |
| Limited quantities | |

Rail (RID)

14.1 UN number:

| | |
|-----------|-------------|
| Transport | Not subject |
|-----------|-------------|

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

| | |
|------------------------------|--|
| Hazard identification number | |
| Class | |
| Classification code | |

14.4 Packing group:

| | |
|---------------|--|
| Packing group | |
| Labels | |

14.5 Environmental hazards:

| | |
|--|----|
| Environmentally hazardous substance mark | no |
|--|----|

14.6 Special precautions for user:

| | |
|--------------------|--|
| Special provisions | |
| Limited quantities | |

Inland waterways (ADN)

14.1 UN number:

| | |
|-----------|-------------|
| Transport | Not subject |
|-----------|-------------|

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14.2 UN proper shipping name:

14.3 Transport hazard class(es):

| | |
|---------------------|--|
| Class | |
| Classification code | |

14.4 Packing group:

| | |
|---------------|--|
| Packing group | |
| Labels | |

14.5 Environmental hazards:

| | |
|--|----|
| Environmentally hazardous substance mark | no |
|--|----|

14.6 Special precautions for user:

| | |
|--------------------|--|
| Special provisions | |
| Limited quantities | |

Sea (IMDG/IMSBC)

14.1 UN number:

| | |
|-----------|-------------|
| Transport | Not subject |
|-----------|-------------|

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

| | |
|-------|--|
| Class | |
|-------|--|

14.4 Packing group:

| | |
|---------------|--|
| Packing group | |
| Labels | |

14.5 Environmental hazards:

| | |
|--|----|
| Marine pollutant | - |
| Environmentally hazardous substance mark | no |

14.6 Special precautions for user:

| | |
|--------------------|--|
| Special provisions | |
| Limited quantities | |

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

| | |
|--------------------------|--|
| Annex II of MARPOL 73/78 | |
|--------------------------|--|

Air (ICAO-TI/IATA-DGR)

14.1 UN number:

| | |
|-----------|-------------|
| Transport | Not subject |
|-----------|-------------|

14.2 UN proper shipping name:

14.3 Transport hazard class(es):

| | |
|-------|--|
| Class | |
|-------|--|

14.4 Packing group:

| | |
|---------------|--|
| Packing group | |
| Labels | |

14.5 Environmental hazards:

| | |
|--|----|
| Environmentally hazardous substance mark | no |
|--|----|

14.6 Special precautions for user:

| | |
|---|--|
| Special provisions | |
| Passenger and cargo transport: limited quantities: maximum net quantity per packaging | |

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

European legislation:

European drinking water standards

Maximum concentration in drinking water: 200 mg/l (sodium) (Directive 98/83/EC)

Volatile organic compounds (VOC)

Not applicable (inorganic)

National legislation The Netherlands

| | |
|--|---|
| Waste identification (the Netherlands) | LWCA (the Netherlands): KGA category 05 |
| Waterbezwaarlijkheid | 11 |

National legislation Germany

| | |
|---------|---|
| TA-Luft | TA-Luft Klasse 5.2.1 |
| WGK | 1; Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2) |

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National legislation France

No data available

National legislation Belgium

No data available

15.2 Chemical safety assessment:

A chemical safety assessment has been performed.

SECTION 16: Other information

Information based on classification according to CLP

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Enumerated in substance list Annex I of Directive 67/548/EEC et sequens

Labels



Irritant

R-phrases

36 Irritating to eyes

S-phrases

(02) (Keep out of the reach of children)

22 Do not breathe dust

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

Full text of any R-phrases referred to under headings 2 and 3:

R36 Irritating to eyes

Full text of any H-statements referred to under headings 2 and 3:

H319 Causes serious eye irritation.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

DPD Dangerous Preparation Directive

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

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SAFETY DATA SHEET
Sodium Carbonate, Anhydrous

SDS #: 497-19-8
Revision date: 2017-03-09
Format: NA
Version 5.03

TRONOX

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name

Soda Ash

Other means of identification

Product Code(s)

497-19-8

Synonyms

Sodium carbonate, anhydrous; Carbonic acid, disodium salt; Disodium carbonate

Chemical Family

Alkali salt

Recommended use of the chemical and restrictions on use

Recommended Use:

Glass manufacture , Personal care, Detergent, Water treatment chemical, Chemical processing

Restrictions on Use:

See section 16 for more information

Manufacturer Address

Tronox Alkali Wyoming Corporation
1735 Market Street
Philadelphia, PA 19103
Tel: +1 877-362-2248 or +1 215-845-4500
www.tronox.com

Emergency telephone number

1 307 / 872 2452 (Plant - Green River, WY)
1 303/ 389-1409 (Medical - U.S. - Call Collect)

For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation


Category 2

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Warning

Hazard Statements
 H319 - Causes serious eye irritation



Precautionary Statements - Prevention

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear eye protection/ face protection

Precautionary Statements - Response

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Alkali salt.
Formula Na₂CO₃

| Chemical name | CAS-No | Weight % |
|------------------|----------|----------|
| Sodium carbonate | 497-19-8 | 100 |

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Skin Contact Wash off with warm water and soap. Get medical attention if irritation develops and persists. Remove and wash contaminated clothing before re-use.

Inhalation Remove person to fresh air. If signs/symptoms continue, get medical attention.

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| | |
|--|---|
| Ingestion | Never give anything by mouth to an unconscious person Get medical attention if symptoms occur |
| Most important symptoms and effects, both acute and delayed | Causes serious eye damage / eye irritation. |
| Indication of immediate medical attention and special treatment needed, if necessary | Treat symptomatically. |

5. FIRE-FIGHTING MEASURES

| | |
|---|--|
| Suitable Extinguishing Media | Use extinguishing agent suitable for type of surrounding fire. |
| Specific Hazards Arising from the Chemical | Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes |
| Hazardous Combustion Products | Fumes of sodium oxide. Carbon oxides (COx). |
| <u>Explosion data</u> | |
| Sensitivity to Mechanical Impact | Not sensitive. |
| Sensitivity to Static Discharge | Not sensitive. |
| Protective equipment and precautions for firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---------------------------|--|
| Personal Precautions | Avoid dust formation. Sweep up to prevent slipping hazard. |
| Other | For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above. |
| Environmental Precautions | Do not flush into surface water or sanitary sewer system. |
| Methods for Containment | Prevent large quantities of this product from contacting vegetation or waterways. Cover with plastic sheet to prevent spreading. Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal. |
| Methods for cleaning up | Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal. Dispose of waste as indicated in Section 13. |

7. HANDLING AND STORAGE

| | |
|-----------------------|--|
| Handling | Use air conveying/mechanical systems for bulk transfer to storage. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected. |
| Storage | Store in original container. Keep in properly labeled containers. Keep container tightly closed. |
| Incompatible products | Aluminium. Powdered aluminum. Acids |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies Local nuisance dust standards apply

Appropriate engineering controls

Engineering measures Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles.

Skin and Body Protection Wear suitable protective clothing. Protective shoes or boots.

Hand Protection Nitrile rubber, Neoprene gloves

Respiratory Protection In case of inadequate ventilation wear respiratory protection.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

General information These recommendations apply to the product as supplied

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|------------------------------|--|
| Appearance | Granules |
| Physical State | Solid |
| Color | White |
| Odor | odorless |
| Odor threshold | Not applicable |
| pH | 11.4 (1% solution in water) |
| Melting point/freezing point | 851 °C |
| Boiling Point/Range | No information available |
| Flash point | Not applicable |
| Evaporation Rate | No information available |
| Flammability (solid, gas) | Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes |
| Flammability Limit in Air | |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Density | No information available |
| Specific gravity | 2.52 |
| Water solubility | 212.5 g/L @ 20 °C |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | 400 °C |
| Viscosity, kinematic | No information available |
| Viscosity, dynamic | No information available |
| Explosive properties | Not explosive |
| Oxidizing properties | Non-oxidizing |
| Molecular weight | 105.99 |
| Bulk density | 0.86 - 1.12 g/cm ³ (Dense grades) 0.70 - 0.90 g/cm ³ (Light Grades) |
| K _{st} | 0 bar m/s |

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Chemical Stability Stable. Decomposes by reaction with strong acid.

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Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods.

Incompatible materials Aluminium. Powdered aluminum. Acids.

Hazardous Decomposition Products Sodium oxides. Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral 2,800 mg/kg (rat)
LD50 Dermal > 2,000 mg/kg (rabbit)
LC50 Inhalation

Eye Contact Irritating to eyes.
Skin Contact Non-irritating
Sensitization Patch test on human volunteers did not demonstrate sensitization properties.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity No known effect.
Mutagenicity No information available
Carcinogenicity Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).
Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Sodium carbonate (497-19-8) | | | | |
|-----------------------------|-----------|------------------|---------|-------|
| Active Ingredient(s) | Duration | Species | Value | Units |
| Sodium Carbonate | 96 h LC50 | Bluegill sunfish | 300 | mg/L |
| Sodium Carbonate | 48 h EC50 | Ceriodaphnia | 200-227 | mg/L |

Persistence and degradability Biodegradability does not pertain to inorganic substances.

Bioaccumulation Does not bioaccumulate.

Mobility Dissociates into ions.

Other Adverse Effects None known.

13. DISPOSAL CONSIDERATIONS

Sodium Carbonate, Anhydrous

SDS #: 497-19-8
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Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT NOT REGULATED

TDG NOT REGULATED

ICAO/IATA NOT REGULATED

IMDG/IMO NOT REGULATED

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute health hazard | Yes |
| Chronic health hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

International Inventories

| Component | TSCA (United States) | DSL (Canada) | EINECS/ELI NCS (Europe) | ENCS (Japan) | China (IECSC) | KECL (Korea) | PICCS (Philippines) | AICS (Australia) |
|--------------------------------------|-------------------------|-----------------|-------------------------------|-----------------|------------------|-----------------|------------------------|---------------------|
| Sodium carbonate 497-19-8 (100) | X | X | X | X | X | X | X | X |

Sodium Carbonate, Anhydrous

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Mexico - Grade Moderate risk, Grade 2

WHMIS Hazard Class D2B - Toxic materials, Eye irritation
 Class E: Corrosive to aluminum. Not corrosive to animal skin or carbon steel.



D2B - Toxic



E - Corrosive

16. OTHER INFORMATION

| | | | | |
|------|------------------|----------------|-------------------|-----------------------|
| NFPA | Health Hazards 2 | Flammability 0 | Instability 0 | Special Hazards - |
| HMIS | Health Hazards 2 | Flammability 0 | Physical hazard 0 | Personal Protection X |

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Product Certifications

This product meets the chemical testing specifications defined in the Food Chemicals Codex (FCC), 9th Edition, but is not manufactured under cGMP's.

This product is certified to NSF/ANSI Standard 60 for use in drinking water treatment at the specified maximum use limit. The MUL (maximum use level) for sodium carbonate, anhydrous is 150 mg/L under NSF/ANSI Standard 60.



OU Kosher Certification



Certified to NSF/ANSI 60



Halal: IFANCA



American Water Works Association

Revision date: 2017-03-09
 Revision note: Removed inhalation data; Tox review determined the endpoint was not indicative of soda ash toxicity due to NaOH component in test formulation used to generate the data.

Disclaimer

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Prepared By: Tronox Limited

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 End of Safety Data Sheet

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300

General Information

Profile Type (check one): New Certification Recertification Modification to Active Profile
Generator Name: Alabama Power Company - Barry Steam Plant
Generator Physical Address: 15300 Highway 43, Bucks, Alabama 36512
Generator County: Mobile EPA ID: _____
Generator Mailing Address: 600 North 18th Street – 12N-0831
Generator Contact: Elizabeth Grinder Title: Environmental Affairs Specialist
Phone: 205-257-4150 Email: egrinder@southernco.com

Submitted by (if different from above):

Company Name: _____ Contact: _____
Mailing Address: _____
Phone: _____ Email: _____

Waste Information

Process Generating Waste: Damaged off-specification reverse osmosis membranes and polycarbonate water treatment filters used in the treatment of raw surface water.

Waste Name: Reverse osmosis membranes and filters

If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST), provide the following information:

UST Facility ID # _____ UST Incident # _____

Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, ect.): _____

Does the waste contain any of the following: PCBs Cyanides Sulfides Asbestos
Concentration: _____ Units: mg/L mg/Kg PPM PPB
Waste Type: Remediation Process CERCLA Cleanup Other
Waste Volume: 100 Units: Cu Yd Frequency: Annual Quarterly Monthly

Waste Properties

Physical State: Solid Liquid Bladeable Sludge Solid/Liquid Combination Other
% Free Liquids: 0% pH (if liquid): N/A Flash Point (if liquid): N/A
Will liquids be solidified prior to disposal (see instructions)? YES NO

Waste Disposition

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? YES NO
Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? YES NO

Landfill Name #1: Barry Steam Plant Landfill Permit #: 49-18
Landfill Name #2: _____ Permit #: _____
Landfill Name #3: _____ Permit #: _____
Landfill Name #4: _____ Permit #: _____

Current Profile No. (if applicable) _____

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300
Continuation Form

Process Generating Waste continued:

Other:

Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Elizabeth Grinder
Name (type or print)

Environmental Affairs Specialist
Title


Signature

01/18/19
Date

Alabama Power
 General Test Laboratory
 P.O. Box 2641
 Birmingham, Alabama 35291
 (205) 664 - 6032 or 6171
 FAX (205) 257-1654



CERTIFICATE OF ANALYSIS

TO: Mr. Tommy Ryals
 Mr. Mark Lester

Customer Account : HWBHAM

Sample Date : 10-Apr-13

Customer ID :

Received Date : 15-Apr-13

Description : APC Generation
 RO Membrane Cartridge

Laboratory ID Number : AT08413

| Test Name | Reference | VSpec | MDL | Result | Units |
|----------------------------|----------------|-------|--------|--------------|---------|
| Solids Content of Sample | EPA 1311 | | 0.01 | 100 | percent |
| pH of TCLP Extract | EPA 1311 | | 0. | 5.16 | |
| TCLP Extraction Fluid | EPA 1311 | | 0. | 1 | |
| Silver, TCLP Extractable | EPA 1311/200.7 | | 0.006 | Not Detected | mg/l |
| Arsenic, TCLP Extractable | EPA 1311/200.7 | | 0.009 | Not Detected | mg/l |
| Barium, TCLP Extractable | EPA 1311/200.7 | | 0.003 | 0.372 | mg/l |
| Cadmium, TCLP Extractable | EPA 1311/200.7 | | 0.001 | Not Detected | mg/l |
| Chromium, TCLP Extractable | EPA 1311/200.7 | | 0.01 | Not Detected | mg/l |
| Mercury, TCLP Extractable | EPA 1311/245.1 | | 0.0002 | Not Detected | mg/l |
| Lead, TCLP Extractable | EPA 1311/200.7 | | 0.01 | Not Detected | mg/l |
| Selenium, TCLP Extractable | EPA 1311/200.7 | | 0.02 | Not Detected | mg/l |

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

Comments : REVISED COPY: Description changed from 'RO Filter Cartridge'
 to 'RO Membrane Cartridge' per customer request. 9/10/13 RJ

CC:

Quality Control

Supervision

Reported: 9/10/2013

Version: 1.0

Alabama Power
General Test Laboratory
P.O. Box 2641
Birmingham, Alabama 35291
(205) 664 - 6032 or 6171
FAX (205) 257-1654



CERTIFICATE OF ANALYSIS

TO: Mr. Tommy Ryals
Mr. Mark Lester
BIN 12N 0830

Customer Account : HWBSP

Sample Date : 09-Sep-13

Customer ID :

Received Date : 10-Sep-13

Description : APC Generation - Barry
RO Water Treatment Prefilter Ca

Laboratory ID Number : AT20548

| Test Name | Reference | VSpec | MDL | Result | Units |
|----------------------------|----------------|-------|--------|--------------|---------|
| Solids Content of Sample | EPA 1311 | | 0.01 | 100 | percent |
| pH of TCLP Extract | EPA 1311 | | 0. | 5.04 | |
| TCLP Extraction Fluid | EPA 1311 | | 0. | 1 | |
| Silver, TCLP Extractable | EPA 1311/200.7 | | 0.012 | Not Detected | mg/l |
| Arsenic, TCLP Extractable | EPA 1311/200.7 | | 0.018 | Not Detected | mg/l |
| Barium, TCLP Extractable | EPA 1311/200.7 | | 0.006 | 0.849 | mg/l |
| Cadmium, TCLP Extractable | EPA 1311/200.7 | | 0.002 | 0.002 | mg/l |
| Chromium, TCLP Extractable | EPA 1311/200.7 | | 0.02 | Not Detected | mg/l |
| Mercury, TCLP Extractable | EPA 1311/245.1 | | 0.0002 | Not Detected | mg/l |
| Lead, TCLP Extractable | EPA 1311/200.7 | | 0.02 | 0.01 | mg/l |
| Selenium, TCLP Extractable | EPA 1311/200.7 | | 0.04 | 0.04 | mg/l |

This Certificate states the physical and/or chemical characteristics of the sample as submitted. This document shall not be reproduced, except in full, without written consent from Alabama Power's General Test Laboratory.

Comments :

CC:

Quality Control Russell Jensen Supervision Tommy Ryals Reported: 9/19/2013
Version: 1.0

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300

General Information

Profile Type (check one): New Certification Recertification Modification to Active Profile
Generator Name: Alabama Power Company - Barry Steam Plant
Generator Physical Address: 15300 Highway 43, Bucks, Alabama 36512
Generator County: Mobile EPA ID: _____
Generator Mailing Address: 600 North 18th Street – 12N-0831
Generator Contact: Elizabeth Grinder Title: Environmental Affairs Specialist
Phone: 205-257-4150 Email: egrinder@southernco.com

Submitted by (if different from above):

Company Name: _____ Contact: _____
Mailing Address: _____
Phone: _____ Email: _____

Waste Information

Process Generating Waste: Off-specification or spent activated carbon that cannot be regenerated or reused. The activated carbon is used in the treatment of raw surface water prior to use. (MSDS attached)

Waste Name: Off-Specification or spent activated carbon

If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST) provide the following information:

UST Facility ID # _____ UST Incident # _____

Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, ect.): _____

Does the waste contain any of the following: PCBs Cyanides Sulfides Asbestos
Concentration: _____ Units: mg/L mg/Kg PPM PPB
Waste Type: Remediation Process CERCLA Cleanup Other
Waste Volume: 100 Units: Cu Yd Frequency: Annual Quarterly Monthly

Waste Properties

Physical State: Solid Liquid Bladeable Sludge Solid/Liquid Combination Other
% Free Liquids: 0% pH (if liquid): N/A Flash Point (if liquid): N/A
Will liquids be solidified prior to disposal (see instructions)? YES NO

Waste Disposition

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? YES NO
Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? YES NO

Landfill Name #1: Barry Steam Plant Landfill Permit #: 49-18
Landfill Name #2: _____ Permit #: _____
Landfill Name #3: _____ Permit #: _____
Landfill Name #4: _____ Permit #: _____

Current Profile No. (if applicable) _____

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300
Continuation Form

Process Generating Waste continued:

Other:

Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Elizabeth Grinder

Name (type or print)



Signature

Environmental Affairs Specialist

Title

01/18/19

Date




Non Halogenated Emission Control Series

Section 1. Identification of Product and Company

| | |
|--|---|
| <p>Supplier ADA Carbon Solutions (Red River), LLC 1460 W. Canal Court Littleton, CO 80120-5632 Telephone Number: 888-843-8416 FAX Number: 303-962-1970</p> | <p>Manufacturer ADA Carbon Solutions (Red River), LLC 1460 W. Canal Court Littleton, CO 80120-5632 Telephone Number: 888-843-8416 FAX Number: 303-962-1970</p> |
| <p>Supplier Emergency Contacts & Phone Number CHEMTREC: 800-424-9300</p> | <p>Manufacturer Emergency Contacts & Phone Number CHEMTREC: 800-424-9300</p> |
| <p>Product Name: S PAC™, PowerPAC®, FastPAC®, PowerPAC WS™ CAS Number: N/A Product/Material Uses Powdered carbon sorbent of vapor-phase mercury in flue gas, primarily in coal-fired power plants.</p> | |

Section 2. Hazard(s) Identification

| | | |
|--|-----------------------------|------------------------|
| <p>GHS Classification</p> | | |
| <p>Health</p> | <p>Environmental</p> | <p>Physical</p> |
| <p>Skin Irritation 3 Eye Irritation 2B</p> | | |
| <div style="display: flex; align-items: center;">  <p>WARNING: Activated carbon (especially when wet) removes oxygen from air and can lower the concentration of oxygen inside vessels and other confined spaces.</p> </div> | | |



Non Halogenated Emission Control Series

Primary Routes of Entry

Inhalation, skin contact, eye contact.

Eye Hazards

Dust may cause mild mechanical irritation.

Skin Hazards

Prolonged or repeated skin contact may cause irritation, drying, and redness.

Ingestion Hazards

May cause mild gastrointestinal tract irritation and diarrhea.

Inhalation Hazards

High airborne concentrations of low-toxicity dusts may cause coughing, sneezing, and mild temporary irritation.

Avoid use in confined spaces. Wet activated carbon can absorb and deplete oxygen from the air, causing a severe hazard to workers.

Chronic/Carcinogenicity Effects

Activated carbons may contain crystalline silica, which is classified as a potential human carcinogen. Prolonged inhalation of excessive dust may cause pulmonary disorders.

Section 3. Composition/Information on Ingredients

| Ingredient Name | CAS Number | Percent of Total Weight |
|-------------------|------------|-------------------------|
| Carbon, activated | 7440-44-0 | 0-100 |

This product contains no hazardous ingredients when evaluated by criteria established in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 4. First Aid Measures

Eye

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops.

Skin

Wash affect areas with soap and water. Get medical attention immediately if irritation develops.

Ingestion

If person is fully conscious, give one or two cups of water or milk to drink. Get medical attention immediately if large quantities are ingested.

Inhalation

Remove person from source of exposure and into fresh air. Get medical attention if irritation or breathing difficulties develop.



Non Halogenated Emission Control Series

Section 5. Fire-Fighting Measures

Lower Explosive Limit: N/A
Upper Explosive Limit: N/A

Fire and Explosion Hazards

High dust concentrations may form explosive mixtures with air, which can be ignited by spark or flame. Dusts may accumulate a static discharge. Keep dust concentrations low. Explosibility: Class ST 1.

Fire is possible at elevated temperatures or by self-heating when exposed to strong oxidizers. Activated carbon tends to burn slowly without producing smoke or flame. Material allowed to smolder for long periods in enclosed spaces may produce carbon monoxide, which may reach a lower explosive limit for carbon monoxide (12.5%) in air. Wet activated carbon depletes oxygen from the air. May form halogens when involved in a fire.

Warning: Electrostatic precipitator and baghouse hoppers containing powdered activated carbon or fly ash with activated carbon can autoignite and present a smoldering fire hazard when exposed to elevated temperature and other sources of heat, such as heaters. If activated carbon is present, hoppers should be emptied frequently and particular care should be exercised when hopper heaters are in use. Cutting or welding operations should not be used near this material due to potential for smoldering combustion. This material is not a self-heating material as classified for transportation.

Extinguishing Media

In case of fire, use water spray, dry chemical, or CO₂. Use water to cool fire-exposed containers.

Fire-Fighting Instructions

Firefighters should wear self-contained breathing apparatus and full protective gear. Remove product from building to a non-hazardous area, preferably outdoors, if safe to do so.

Section 6. Accidental Release Measures

Provide maximum dilution or explosion-proof exhaust ventilation. Avoid generating dust. Pick up released product with appropriate implements and return to original container if reusable, or dispose.



Non Halogenated Emission Control Series

Section 7. Handling and Storage**Handling Precautions**

Follow good handling and housekeeping practices. Avoid spills and accumulations of dust, or generation of airborne dust. Do not enter places where bulk material is used or stored until adequately ventilated to prevent asphyxiation.

As with all finely divided materials, precautions should be taken to avoid inhalation and eye contact. Ground all transfer, blending, and dust collecting equipment to prevent static discharge in accordance with NFPA 70, National Electric Code," NFPA 499, "Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas," NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids," and OSHA Combustible Dust standards. Remove all ignition sources from material handling, transfer, and processing areas where dust may be present.

Storage Precautions

Store in sealed containers in a clean cool, dry, well-ventilated area away from strong oxidizers, ignition sources, combustible materials, and heat. Do not store near, or allow contact with, moisture or strong oxidizers.

Warning: Wet activated carbon depletes oxygen, creating oxygen-deficient atmospheres in confined spaces.

Work/Hygienic Practices

Wash thoroughly with soap and water after handling.

Section 8. Exposure Controls/Personal Protection**Engineering Controls**

Use with adequate general and local exhaust ventilation to prevent excessive airborne dust concentrations. Local exhaust ventilation should be provided, to maintain exposures below recommended occupational exposure limits. Confined spaces where activated carbon is present should be well ventilated and monitored for oxygen content.

Eye/Face Protection

Safety glasses with side shields are recommended as minimum industrial eye protection when handling bulk product or performing spill cleanup.

Skin Protection

Protective gloves are recommended to minimize skin contact. Use a lab coat or disposable coveralls to prevent excessive contamination to personal clothing.

Respiratory Protection

In case of inadequate ventilation to control dust, use NOISH-approved respirator for particulates (e.g., N95). Supplied air respirators may be needed for entering confined spaces where product is stored or handled to protect against oxygen deficiency.

Ingredients – Exposure Limits

Carbon, activated.

OSHA PEL-TWA: 15 mg/m³, total dust, as particulates not otherwise specified

OSHA PEL-TWA: 5 mg/m³, respirable dust, as particulates not otherwise specified



Non Halogenated Emission Control Series

Section 9. Physical and Chemical Properties**Appearance**

Grey to black, free-flowing powder

Odor

Odorless

Chemical Type: Mixture

Physical State: Solid

Specific Gravity: > 1*

Packing Density: 0.5 to 0.65

Vapor Pressure: N/A

Solubility: Slightly soluble

Evaporation Rate: N/A

* - Skeletal density (true density without pores)

Section 10. Stability and Reactivity

Stability: Stable under ordinary conditions of shipment, storage, and use.

Hazardous Polymerization: Will not occur.

Incompatible Materials

Avoid contact with strong oxidizing agents such as ozone, liquid oxygen, chlorine, permanganate, sulfuric acid, and nitric acid.

Hazardous Decomposition Products

Thermal decomposition ("burning") may produce irritating and toxic fumes of carbon (carbon dioxide, carbon monoxide), formaldehyde, ethylene, and acrylic acid. The exact chemicals formed depend on many factors including temperature and heating rate.

Section 11. Toxicological Information**Chronic/Carcinogenicity**

The product is not listed as potentially carcinogenic by NTP, IARC, OSHA, or ACGIH.

May contain trace concentrations of bound silica. Crystalline silica is considered to be a probable human carcinogen.

Ingredients – Toxicological Data

Carbon, activated.

LC50 (inhal, rat): > 64,400 mg/m³

LD50 (oral, rat): > 10,000 mg/kg



Non Halogenated Emission Control Series

Section 12. Ecological Information

Ecotoxicological Information

No information available for the product. However, ecotoxicity is expected to be minimal.

This material will increase the conductivity of water by increasing dissolved solids. Used activated carbon may exhibit characteristics of the absorbed material.

Environmental Fate Information

No information available.

Section 13. Disposal Considerations

Activated carbon in pure form is not a hazardous material but spent carbon could potentially be a hazardous waste depending on the application. Dispose in accordance with applicable federal, state, and local government regulations.

Section 14. Transport Information

Additional Shipping Paper Description

Shipping name: Activated Carbon.

This product is NOT considered spontaneously combustible under the "Self-Heating Test for Carbon" protocol listed in the United Nations Manual of Tests and Criteria [33.3.1].

Section 15. Regulatory Information

U.S. Regulatory Information

Toxic Substance Control Act (TSCA): All ingredients of the product are listed on the TSCA 8(b) Chemical Substance Inventory or are exempt.

Product is not classifiable under any of the five SARA Title III hazard ratings.

Product does not have a CERCLA RQ.

SARA Section 313 Notification

This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

Canadian Regulatory Information

Product is not regulated or controlled under WHMIS (Canada). This product is not classifiable as hazardous under the Canadian Hazardous Products Act (HPA).

DSL: 6798

Section 16. Other Information

Issue Date: 6/15/2015



Non Halogenated Emission Control Series

NFPA Rating

Health: 1

Fire: 1

Reactivity: 0

HMIS Rating

Health: 0

Fire: 0

Reactivity: 0

Personal Protection: B

Disclaimer

This information relates to the product designated herein and does not relate to its use in combination with any other material or in any other process. To the best of ADA Carbon Solutions' knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability, and completeness are not guaranteed. Users are responsible to verify this data for their own particular use and they assume all risks of their reliance upon information contained herein. ADA Carbon Solutions, LLC, shall under no circumstances be liable for incidental or consequential damages as a result of reliance upon information contained herein.

NO WARRANTY: ADA CARBON SOLUTIONS MAKES NO WARRANTY OF MERCHANTABILITY OR OF ANY OTHER KIND WITH RESPECT TO INFORMATION CONTAINED HEREIN, EITHER EXPRESSED OR IMPLIED. ADA CARBON SOLUTIONS ASSUMES NO LIABILITY WITH RESPECT TO THE USE OF INFORMATION CONTAINED HEREIN.

LIMIT OF LIABILITY: ADA Carbon Solutions shall not be liable for, and Buyer assumes responsibility for, personal injury and property damage resulting from the handling, possession, use, storage, or resale of the product, whether used or in combination.

ADA Carbon Solutions, LLC



600 North 18th Street / 12N-0831
Birmingham, Alabama 35203
(205) 257-4150 tel
(205) 257-4349 fax
(205) 504-3000 cell
egrinder@southernco.com

December 5, 2019

Mr. Eric Sanderson, Chief
Solid Waste Branch
Land Division
Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, AL 36130-1463

**RE: Barry Steam Plant Landfill – Landfill Permit Renewal
(Permit 49-18)
Alabama Power Company
Barry Steam Plant
15300 Highway 43
Bucks, Alabama 36512**

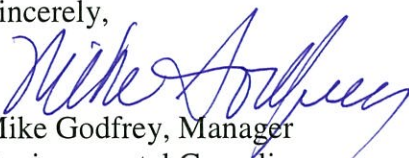
Dear Mr. Sanderson:

The Alabama Power Company (APC) Barry Steam Plant Landfill Permit (Permit #49-18) is currently being evaluated by the Alabama Department of Environmental Management (ADEM) for renewal. APC would like to request that variances granted by the ADEM in currently approved permit 49-18 also be considered for approval during this permit renewal. These variances consist of the following: 1) Permittee is granted a variance from groundwater monitoring; 2) Permittee is granted a variance from ADEM Rule 335-13-4-.16 explosive gas monitoring; 3) Permittee is granted a variance from ADEM Rule 335-13-4-.13(2)(f) requiring a 100 foot buffer; and 4) Permittee is granted a variance from weekly cover and is now required to cover monthly.

APC would also like to note that the Barry Steam Plant Landfill is located within the plant boundaries and property owned by Alabama Power Company adjoins the permitted boundaries of Barry Steam Plant Landfill on each side.

If additional information is needed, please contact Ms. Elizabeth Grinder at (205) 257-4150.

Sincerely,


Mike Godfrey, Manager
Environmental Compliance



600 North 18th Street / 12N-0831

Birmingham, Alabama 35203

(205) 257-4150 tel

(205) 257-4349 fax

(205) 504-3000 cell

December 31, 2019

Mr. Devin M. Jenkins
Solid Waste Branch
Land Division
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, Alabama 36110

**RE: Alabama Power Company
Barry Steam Plant Landfill
15300 Highway 43 North
Bucks, Alabama 36512
Solid Waste Disposal Facility Permit No.: 49-18**

Dear Mr. Jenkins:

Alabama Power Company (APC), respectfully submits the following suggested revisions to the Draft Solid Waste Disposal Facility Permit issued by the Alabama Department of Environmental Management (ADEM) issued on December 9, 2019.

1. Solid Waste Disposal Facility Permit Cover Page, Waste Approved for Disposal

Waste Approved for Disposal: Non-hazardous, non-putrescible, construction and demolition waste, rubbish as defined by ADEM Rule 335-13-1-.03, wood products, pipe, insulation, paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, friable asbestos, spent anion/cation resins, and sandblasting waste. Additionally, the permittee may accept for disposal pulverized or ground limestone, spent desiccant, carbon capture system filter cake, sodium carbonate anhydrous (Soda Ash), reverse osmosis pre-filter and membrane cartridges, off-spec elemental sulfur (molten sulfur), and off-spec activated carbon.

Recommended Revision – The Waste Approved for Disposal should be revised to remove off-spec elemental sulfur (molten sulfur) and should read as follows:

Non-hazardous, non-putrescible, construction and demolition waste, rubbish as defined by ADEM Rule 335-13-1-.03, wood products, pipe, insulation, paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, friable asbestos, spent anion/cation resins, and

sandblasting waste. Additionally, the permittee may accept for disposal pulverized or ground limestone, spent desiccant, carbon capture system filter cake, sodium carbonate anhydrous (Soda Ash), reverse osmosis pre-filter and membrane cartridges, and off-spec activated carbon.

2. Section III – Specific Requirements for Industrial Waste Landfills, B – Waste Streams

Waste Streams - The Permittee may accept for disposal non-hazardous, non-putrescible, construction and demolition waste, rubbish as defined by ADEM Rule 335-13-1-.03, wood products, pipe, insulation, paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, friable asbestos, spent anion/cation resins, sandblasting waste, pulverized or ground limestone, spent desiccant, carbon capture system filter cake, and sodium carbonate anhydrous (Soda Ash). Additionally, the permittee may accept for disposal reverse osmosis pre-filter and membrane cartridges, off-spec elemental sulfur (molten sulfur), and off-spec activated carbon.

Recommended Revision – The Waste Streams should be revised to remove off-spec elemental sulfur (molten sulfur) and should read as follows:

The Permittee may accept for disposal non-hazardous, non-putrescible, construction and demolition waste, rubbish as defined by ADEM Rule 335-13-1-.03, wood products, pipe, insulation, paper products, cartons, cardboard, pallets, scrap metal, tires, furniture, friable asbestos, spent anion/cation resins, sandblasting waste, pulverized or ground limestone, spent desiccant, carbon capture system filter cake, and sodium carbonate anhydrous (Soda Ash). Additionally, the permittee may accept for disposal reverse osmosis pre-filter and membrane cartridges, and off-spec activated carbon.

If you have additional questions regarding the above responses, please do not hesitate to contact me at (205) 257-4150.

Respectfully,

A handwritten signature in black ink that reads "Mike Godfrey". The signature is written in a cursive, flowing style.

Mike Godfrey, Manager
Environmental Compliance

cc: Elizabeth Grinder, APC Environmental Affairs
Tamala Davis, Barry Steam Plant

PERMIT APPLICATION

FEE SHEET FOR SOLID WASTE PERMITS

ADEM No.: 547

Applicant: Alabama Power Company

Location: 15300 Highway 43

Bucks, Alabama 36512

31.00438, -88.02570

Permit No.: 49-18

Date Application Received: 01/22/19

| Permit Fees Required | Initial Issuance | Modification | Reissuance | Total |
|-----------------------------------|------------------|--------------|------------|---------|
| Municipal Solid Waste Landfill | \$83,880 | | \$37,270 | |
| Minor Modification ¹ | | \$3,275 | | |
| Major Modification ² | | \$32,615 | | |
| Construction/Demolition Landfill | \$7,145 | | \$5,400 | |
| Minor Modification ¹ | | \$1,460 | | |
| Major Modification ² | | \$2,915 | | |
| Industrial Landfill | \$12,670 | | \$8,150 | \$8,150 |
| Minor Modification ¹ | | \$1,460 | | |
| Major Modification ² | | \$4,375 | | |
| Compost Facility | \$4,860 | | \$3,670 | |
| Minor Modification ¹ | | \$1,225 | | |
| Major Modification ² | | \$1,945 | | |
| Environmental Covenants | | | | |
| Engineering Controls | \$6,425 | \$1,610 | | |
| Registry Fee for Class 1 Controls | \$13,705 | \$635 | | |
| Registry Fee for Class 2 Controls | \$9,420 | \$635 | | |
| Registry Fee for Class 3 Controls | \$5,245 | \$635 | | |

| Additional Fees | | | | |
|-----------------------------------|---------|---------|---------|--|
| Geological Review: | \$4,865 | \$3,275 | \$3,275 | |
| Greenfield Site: | \$1,610 | | | |
| Public Hearing: | \$8,450 | \$8,450 | \$8,450 | |
| Name Change/Transfer: | | \$800 | | |
| Variance Request | \$1,460 | \$1,460 | \$1,460 | |
| Solid Waste Disposal Notification | \$215 | \$215 | \$215 | |

¹ These are modifications as included in ADEM Admin. Code Rule 335-13-5-.06(2)

² These are modifications as included in ADEM Admin. Code Rule 335-13-5-.06(1)

RECEIVED

OCT 09 2019

**ADEM
EDDS**

| | |
|------------------------------------|-----------|
| Total Fee Due: | \$8,150 |
| Amount Submitted with Application: | \$4,075 |
| Amount Received: | \$4,075 |
| Amount to be Billed: | \$4,075 |
| Amount Received: | \$4,075 |
| Date Received: <i>JHC 10-10-19</i> | 10/4/2019 |
| Amount to be Refunded: | <i>0</i> |

Fee Schedule Prepared by: *DMJ*

Date: *10/9/19*

Fee Schedule Reviewed by: *SSS*

Date: *10/9/19*

"10042019"

Jenkins, Devin M

From: Grinder, Elizabeth <EGRINDER@southernco.com>
Sent: Friday, October 4, 2019 9:30 AM
To: dmjenkins@adem.state.al.us
Subject: FW: ADEM General Invoice payments - 20191004000011062

Devin,

We received approval from Alabama Power Company Barry Steam Plant for the additional fee associated with the 10 year solid waste landfill permit. Below is the email confirmation I received from ADEM for payment of the additional 5 year permit extension fee of \$4,075.00. Please let me know if you need any additional information in order to proceed with issuance of the permit.

Thank you,
Elizabeth Grinder

From: receipts@alabamainteractive.org <receipts@alabamainteractive.org>
Sent: Friday, October 4, 2019 9:24 AM
To: Grinder, Elizabeth <EGRINDER@southernco.com>
Subject: ADEM General Invoice payments - 20191004000011062

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OCT 09 2019

ADEM
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EXTERNAL MAIL: Caution Opening Links or Files

**Your transaction is complete.
Please PRINT the receipt below for your records.**

Receipt Confirmation Page

ADEM requires that when you pay online, you **MUST** print out the confirmation information and submit it as proof of payment with your permit application or any other correspondence requiring proof of payment.

| Payment Summary | |
|--|-------------------|
| Payment Item | Fee |
| Online Payment - 10/04/2019 09:23:30 | \$4,075.00 |
| Total Fee through Alabama.gov (more info Alabama.gov) | \$4,197.25 |

Receipt Confirmation Number: 20191004000011062

General Invoice Information

Choose the type of payment you are making: 5359-LAND- SOLID WASTE LANDFILL PERMIT

Description of Other Fees:

Additional Information/Fee Description: Alabama Power Company Barry Steam Plant - Landfill Permit Renewal (49-18)

Number on your ADEM invoice:

Date on your ADEM invoice:

Contact Information

Company/Facility or Individual Name: Alabama Power Company

Facility Permit Number (if applicable): 49-18

Company or Facility Phone: 205-257-4150

Contact Person: Elizabeth Grinder

Contact Phone: 205-257-4150

Contact email address: egrinder@southernco.com

Name of an ADEM Program Staff Member (if known): Devin Jenkins

This is a system generated message.
Please do not reply to this email.

FEE SHEET FOR SOLID WASTE PERMITS

ADEM No.: _____

Applicant: Alabama Power Company

Location: 15300 Highway 43

Bucks, Alabama 36512

31.00438, -88.02570

Permit No.: 49-18

Date Application Received: 01/22/19

| Permit Fees Required | Initial Issuance | Modification | Reissuance | Total |
|-----------------------------------|------------------|--------------|------------|---------|
| Municipal Solid Waste Landfill | \$83,880 | | \$18,635 | |
| Minor Modification ¹ | | \$3,275 | | |
| Major Modification ² | | \$32,615 | | |
| Construction/Demolition Landfill | \$7,145 | | \$2,700 | |
| Minor Modification ¹ | | \$1,460 | | |
| Major Modification ² | | \$2,915 | | |
| Industrial Landfill | \$12,670 | | \$4,075 | \$4,075 |
| Minor Modification ¹ | | \$1,460 | | |
| Major Modification ² | | \$4,375 | | |
| Compost Facility | \$4,860 | | \$1,835 | |
| Minor Modification ¹ | | \$1,225 | | |
| Major Modification ² | | \$1,945 | | |
| Environmental Covenants | | | | |
| Engineering Controls | \$6,425 | \$1,610 | | |
| Registry Fee for Class 1 Controls | \$13,705 | \$635 | | |
| Registry Fee for Class 2 Controls | \$9,420 | \$635 | | |
| Registry Fee for Class 3 Controls | \$5,245 | \$635 | | |

| Additional Fees | | | | |
|-----------------------------------|---------|---------|---------|--|
| Geological Review: | \$4,865 | \$3,275 | \$3,275 | |
| Greenfield Site: | \$1,610 | | | |
| Public Hearing: | \$8,450 | \$8,450 | \$8,450 | |
| Name Change/Transfer: | | \$800 | | |
| Variance Request | \$1,460 | \$1,460 | \$1,460 | |
| Solid Waste Disposal Notification | \$215 | \$215 | \$215 | |

¹ These are modifications as included in ADEM Admin. Code Rule 335-13-5-.06(2)

² These are modifications as included in ADEM Admin. Code Rule 335-13-5-.06(1)

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Total Fee Due:

Amount Submitted with Application:

Amount Received:

Amount to be Billed:

Amount Received:

Date Received: JHC 3-13-19

Amount to be Refunded:

| |
|----------------|
| \$4,075 |
| \$4,075 |
| \$4,075 |
| |
| <u>4075</u> |
| <u>3-11-19</u> |
| <u>⊖</u> |

Fee Schedule Prepared by: DMJ

Date: 3/5/19

Fee Schedule Reviewed by: ESS

Date: 3/8/19

"01222019"

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



(334) 271-7700 1400 Coliseum Blvd. Montgomery, AL 36110
mailing address: Post Office Box 301463, Montgomery, AL 36130-1463

Receipt Confirmation Page

ADEM requires that when you pay online, you MUST print out the confirmation information and submit it as proof of payment with your permit application or any other correspondence requiring proof of payment.

| Payment Summary | |
|--|-------------------|
| Payment Item | Fee |
| Online Payment - 01/22/2019 09:55:32 | \$4,075.00 |
| Total Fee through Alabama.gov (more info) | \$4,197.25 |

Receipt Confirmation Number: 20190122000022608

General Invoice Information

Choose the type of payment you are making: 5359-LAND- SOLID WASTE LANDFILL PERMIT

Description of Other Fees:

Additional Information/Fee Description: Alabama Power Company Barry Steam Plant - Landfill Permit Renewal (49-18)

Number on your ADEM invoice:

Date on your ADEM invoice:

Contact Information

Company/Facility or Individual Name: Alabama Power Company

Facility Permit Number (if applicable): 49-18

Company or Facility Phone: 205-257-4150

Contact Person: Elizabeth Grinder

Contact Phone: 205-257-4150

Contact email address: egrinder@southernco.com

Name of an ADEM Program Staff Member (if known): Devin Jenkins

Policy Related Questions: 334-271-7700

Application Support: 866-353-3468 or support@alabamainteractive.org

Version 2.0.0

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