



ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SOLID WASTE DISPOSAL FACILITY PERMIT

PERMITTEE: CEMEX Southeast, LLC

FACILITY NAME: CEMEX Southeast, LLC – Demopolis Industrial Landfill

FACILITY LOCATION: Southwest ¼ of Section 20, Township 18 North, Range 3 East in Marengo, County. The facility area consists of approximately 47.55 acres with all dedicated to disposal operations.

PERMIT NUMBER: 46-04

PERMIT TYPE: Industrial

WASTE APPROVED FOR DISPOSAL: Cement kiln dust (CKD) and plant waste such as chalk, sand, cement, clinker, gypsum, mill scale coal, petroleum coke, refractory bricks, castable, broken concrete, broken concrete block, slag, and other similar type materials

APPROVED WASTE VOLUME: Maximum Average Daily Volume of waste is 600 tons per day (1,600 cubic yards per day)

APPROVED SERVICE AREA: CEMEX Southeast, LLC, located in Demopolis, AL

In accordance with and subject to the provisions of the Alabama Solid Wastes and Recyclable Materials Management Act, as amended, Code of Alabama 1975, §§ 22-27-1 to 22-27-27 ("SWRMMA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§ 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: ???????????

EFFECTIVE DATE: ???????????

EXPIRATION DATE: ???????????

Alabama Department of Environmental Management

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

Permittee: CEMEX Southeast, LLC
P. O. Box 839
Demopolis, AL 36732

Landfill Name: CEMEX Southeast, LLC - Demopolis Industrial Landfill

Landfill Location: Southwest ¼ of Section 20, Township 18 North, Range 3 East in Marengo County, Alabama. Located at 1617 Arcola Road in Demopolis, Alabama.

Permit Number: 46-04

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 thereunder by the Alabama Department of Environmental Management (ADEM), this permit is issued CEMEX Southeast, LLC (hereinafter called the Permittee), to operate a solid waste disposal facility, known as the CEMEX Southeast LLC - Demopolis Industrial 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 Chapters 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 December 26, 2018, for permit renewal, and as amended 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 ??????????????, and shall remain in effect until ??????????????, 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 335-13. 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 the Act, 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 335-13, 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 the Act, 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 the Act.

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 inspections 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 if required.
 - f. Explosive gas monitoring records if required.
 - g. Surface water and leachate monitoring records if required.
 - 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 an annual 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. Groundwater monitoring and explosive gas monitoring are not required at this time. (See Section VIII)

4. Availability, Retention, and Disposition of Records

- a. All records, including plans, required under this permit or Division 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 Division 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 CEMEX Southeast, LLC office located in Demopolis, Alabama, the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure.

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, Land Division
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463
2. Physical Address:
Chief, Solid Waste Branch, Land Division
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 only dispose of industrial process waste at this landfill as shown in Section III.B.

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 LANDFILLS.

A. Waste Identification and Management

1. Subject to the terms of this permit, the Permittee may accept for disposal 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 CEMEX Southeast, LLC - Demopolis Industrial Landfill is approximately 47.55 acres with all dedicated to disposal operations.
3. The maximum average daily volume of waste disposed at the facility shall not exceed 600 tons per day (1,600 cubic yards per day), except as provided under Rule 335-13-5-.06(2)(a)5. 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 cement kiln dust (CKD) and plant waste such as chalk, sand, cement, clinker, gypsum, mill scale, coal, petroleum coke, refractory bricks, castable, broken concrete, broken concrete block, slag, and other similar type materials.

C. Service Area

The service area for this landfill, as contained in the permit application is CEMEX Southeast, LLC located in Demopolis, Alabama.

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 with adequate landfill equipment prior to placing additional layers of waste (See Section VIII, 3.). No cover is required until final elevations have been reached (See Section VIII.2.).

E. Liner Requirements

The Permittee shall not be required to install a liner at this time. If it is determined that a liner system is required, the Permittee must install a liner that meets the requirements of the Department. The base of the composite liner system 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 335-13.

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.

Groundwater monitoring is not required at this landfill provided that the waste stream is in accordance with Section III.B. Should any waste be disposed other than the waste streams indicated in Section III.B., the Department may require that groundwater-monitoring wells be installed.

SECTION V. GAS MONITORING REQUIREMENTS.

The permittee is not required to conduct gas monitoring. If it is determined that gas monitoring is necessary, the Permittee must conduct gas monitoring in accordance with 335-13 (See Section VIII.4.).

SECTION VI. SURFACE WATER MANAGEMENT.

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 ADEM Admin. Code 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 335-13.

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 have 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 AND SPECIAL CONDITIONS.

1. The Permittee is granted a variance from Rule 335-13-4-.12 requiring a 100 foot buffer zone.
2. The Permittee is granted a variance from Rule 335-13-4-.23(1)(a)1 requiring weekly cover. Final cover shall be required after reaching final fill elevations (See Section III.D.).
3. The Permittee is granted a variance from Rule 335-13-4-.23(1)(b) requiring all waste to be thoroughly compacted weekly. The Permittee shall be required to thoroughly compact all waste prior to placing additional layers of waste (See Section III.D.).
4. The Permittee is granted a variance from Rule 335-13-4-.16 requiring explosive gas monitoring (See Section V).

5. The Permittee has been approved for reclamation activities at the CEMEX Southeast, LLC – Demopolis Industrial Landfill. The Permittee will extract Cement Kiln Dust (CKD) from the landfill for beneficial reuse purposes.

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.

APPLICATION



December 21, 2018



Mr. Blake Holden
Solid Waste Branch
Land Division
Alabama Department of Environmental Mgmt.
P. O. Box 301463.
Montgomery, AL 36130-1463

Re: CEMEX, Inc. - Demopolis Landfill
Permit Number 46-04
Renewal Application

Dear Mr. Holden:

As we briefly discussed please find attached the application prepared by Rockcastle Consulting, LLC to renew the above permit, and the receipt for the payment of \$4075.00 to cover the application fee.

Cemex would like to retain all the variances in the current permit. A copy of the current permit is included with this application.

This landfill does not accept any offsite waste. All materials going to the landfill are approved by Cemex personnel prior to disposal. The contract personnel hauling the materials to the landfill have written instructions with the list of approved materials. They inspected the materials as it is loaded into the dump trucks. They also inspect the landfill daily when the plant is operating to ensure no unacceptable waste has been place in the landfill. A copy of the Landfill Inspection form is included with this application.

All plant trash is put in two 30- yard rolloffs serviced by Advance Disposal.

If you have any questions or comments, please contact me at 334-287-3537 or by email at mike.gandy@cemex.com.

Sincerely,

Mike Gandy
Environmental Manager
cover12 20 2018



PO Box 1081, Tuscaloosa, AL 35403
205-454-0882

December 18, 2018

Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, Alabama 36130-1463

Attn: Mr. Blake Holden
Solid Waste Branch/Land Division

Re: CEMEX Southeast, LLC.
Demopolis, Alabama
Industrial Landfill Permit Renewal Application
Permit Number 46-04 (Demopolis Industrial Landfill)

Dear Mr. Holden:

On behalf of CEMEX Southeast, LLC., attached for your information and review are three copies of the permit application and subsequent figures and narrative. This information is provided in accordance with ADEM's Administrative Code, Division 13.

Along with this permit renewal is a copy of the Final Closure Plan that reduces some of the final slopes near the southern property edge and increases capacity near the center of the site. The new life calculations are included in the narrative.

The application fees are included with this report. This application should meet the requirements needed for ADEM to issue a permit renewal for this facility. If you need more information or have any questions feel free to contact me at (205) 454-0882.

Sincerely,

Chip Cates, P.G.
Manager

**INDUSTRIAL LANDFILL PERMIT
RENEWAL APPLICATION
PERMIT NUMBER 46-04**



**CEMEX Southeast, LLC.
DEMOPOLIS, ALABAMA**

ALEJANDRO PEREZ, PLANT MANAGER
MICHAEL E. GANDY, ENVIRONMENTAL MANAGER

DECEMBER 2018

Prepared by



P.O. Box 1081, Tuscaloosa, Alabama 35403
205-454-0882

Project Number: 2018-33

1. Facility Type: Municipal Solid Waste Landfill (MSWLF)
 X Industrial Landfill (ILF)
 Other (explain)_____

2. Facility Name CEMEX Southeast, LLC. – Demopolis Industrial Landfill (Permit
No 46-04)_____

Telephone: (334) 289-4400

Township 18N **Range** 3E
Section 20 **County** Marengo

Telephone: (334) 289-4400

Solid Waste Permit Application

6. **Contact Person:**

Name: Mr. Michael Gandy

Position or

Affiliation: Environmental Manager

Address: 1617 Arcola Road
Demopolis, AL 36732

Telephone: (334) 287-3537

7. **Size of Facility:**

Size of Disposal Area(s):

47.55 Acres

47.55 Acres

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

CEMEX Southeast, LLC. will be the only user of the landfill facility.

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

600 Tons/Day 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.):**

Cement Kiln Dust (CKD) will be the primary waste stream to be deposited in the landfill. A small amount of raw materials/products (chalk, sand cement, clinker, gypsum, mill scale, coal, petroleum coke, refractory bricks, castable, and etc.) will be disposed of in the facility on a non-routine as needed basis.

 12/21/2018
SIGNATURE (JESUS OLIVARES TREJO, ACTING PLANT MANAGER) DATE

1.0 INTRODUCTION

Cemex Southeast, LLC operates a portland cement manufacturing plant in Demopolis, Alabama on 850 acres of land south of Klies Bend on the Black Warrior River. The facilities and former quarries can be seen on Figure 1 Project Location Map.

A by-product of the manufacturing process is cement kiln dust (CKD), an inorganic non-hazardous alkali rich carbonate dust. CEMEX Southeast, LLC. disposes of CKD in the Demopolis Industrial Landfill (DIL), which is located in a former chalk quarry located in the northwestern portion of the CEMEX Southeast, LLC property (Figure 1). The pit is approximately 30 feet deep and covers approximately 34 acres. There is also a small amount of inorganic plant waste consisting of sand, limestone, clinker, cement, etc. placed in the DIL on a non-routine basis. Historically the landfill has been permitted to receive 600 tons of waste per day but recent calculations have found the daily volume to be approximately 244 tons per day. CEMEX Southeast, LLC. is the only permitted user of the DIL. The purpose of this document is to provide the Alabama Department of Environmental Management (ADEM) with the necessary information to issue a permit application renewal. The existing permit number 46-04 was issued on June 27, 2014, was modified on October 1, 2015 and expires on June 26, 2019

The information in this document was collected by research of former permit applications and reports, personal communication with CEMEX Southeast, LLC. and ADEM personnel, a site visit by Rockcastle Consulting on December 11, 2018 and consulting the Proposed Landfill Hydrogeological Site Evaluation March 25, 1993 by Enid Bittner of ADEM/Groundwater Branch. ADEM should already have access to these documents and they could be produced upon request.

2.0 SITTING STANDARDS

The DIL is located in a former chalk quarry and is not located in a floodplain as seen on Figure 2. There are no known endangered or threatened species in the area of the existing landfill. The CEMEX Southeast, LLC. facility currently operates under NPDES Individual Permit AL0027341 that authorizes discharge into the Black Warrior River. Any discharge from the DIL is integrated into the facility storm water management system and will be covered under the existing NPDES Individual Permit. There is some standing water and vegetation in the sedimentation pond. However, no wetlands are impacted by the DIL. The nearest airport is 9.5 miles west from the facility. There are vertical faults in the adjacent active quarry but no recent seismic activity has been reported. It is unlikely that groundwater contamination would occur through the fractures. There is no karst terrain associated with the Selma Chalk. There are no known archeological or historical significance associated with the area around the former quarry.

3.0 SITE GEOLOGY AND HYDROLOGY

The DIL is located in the Cretaceous Demopolis Chalk Formation of the Selma Chalk Group as shown on Figure 3. Chalk is essentially impermeable and is over 400 feet thick

in the area of the CEMEX Southeast, LLC. facility. The underlying aquifer is the Cretaceous Eutaw Formation. Because of the depth to groundwater, no borings or wells are utilized by this report. There is no sampling data, groundwater monitoring or direction of groundwater flow required for this renewal permit application.

4.0 COVER, EXPLOSIVE GASES, DRAINAGE, LINERS, AND ACCESS

There are no existing daily cover requirements. Upon reaching final disposal fill elevations, each cell will be covered with 18 inches of clay, six inches of topsoil and will be seeded and mulched for establishing final vegetative cover, as specified by the **CLOSURE** requirements. The largest area requiring final cover during the active life of the landfill is estimated to be approximately 45 acres. There is no current explosive gas monitoring at the DIL because of the inorganic nature of the waste. The drainage system of the DIL is self-contained where all rainwater accumulates at the base of the quarry and either evaporates or is pumped into the stormwater management system of the CEMEX Southeast, LLC. facility. Due to the impermeability of the bedrock and nature of the waste stream, there are no liner requirements. An all weather permanent roadway provides access to the site and there are no artificial or natural barriers that deny access to the site.

5.0 CLOSURE

Upon reaching final disposal fill elevations each cell will be covered with an 18" clay cap which has a maximum permeability rate of 1×10^{-5} cm/sec. A six inch topsoil layer will then be placed on top of the clay cap and the area will be seeded and mulched for establishing final vegetative cover. The clay material used for capping will come from onsite and will be placed periodically throughout the life of the landfill as needed. The final elevations will be reached first along Arcola Road and will gradually progress north throughout the life of the landfill. The final cap is designed with slopes and drainage to withstand a 24 hour 25 year rain event.

6.0 REVISED LIFE CALCULATIONS

Density (CKD) = 75 lbs/ft³

Rate of Disposal = 244 tons/day = 488,000 lbs/day

Landfill volume required per day: $488,000 \text{ lbs/day} \div 75 \text{ lbs/ft}^3 \div 27 \text{ ft}^3/\text{cy} = 240 \text{ cy/day}$

Estimated useable landfill volume: 561,670 cy

Yearly landfill volume required: $240 \text{ cy/day} * 262 \text{ working days year} = 62,880 \text{ cy/year}$

Given the above information, the facility appears to have approximately **9** years of life at the present daily disposal rate. The present daily rate is based on disposal amounts during the last quarter of 2017 and the first three quarters of 2018.

After final closure the facility will contain approximately 2,800,000 cy of waste.

7.0 GENERAL OPERATION STANDARDS AND SPECIFIC REQUIREMENTS

The policies set forth in the present permit shall continue to be obeyed.

8.0 RUNOFF CALCULATIONS

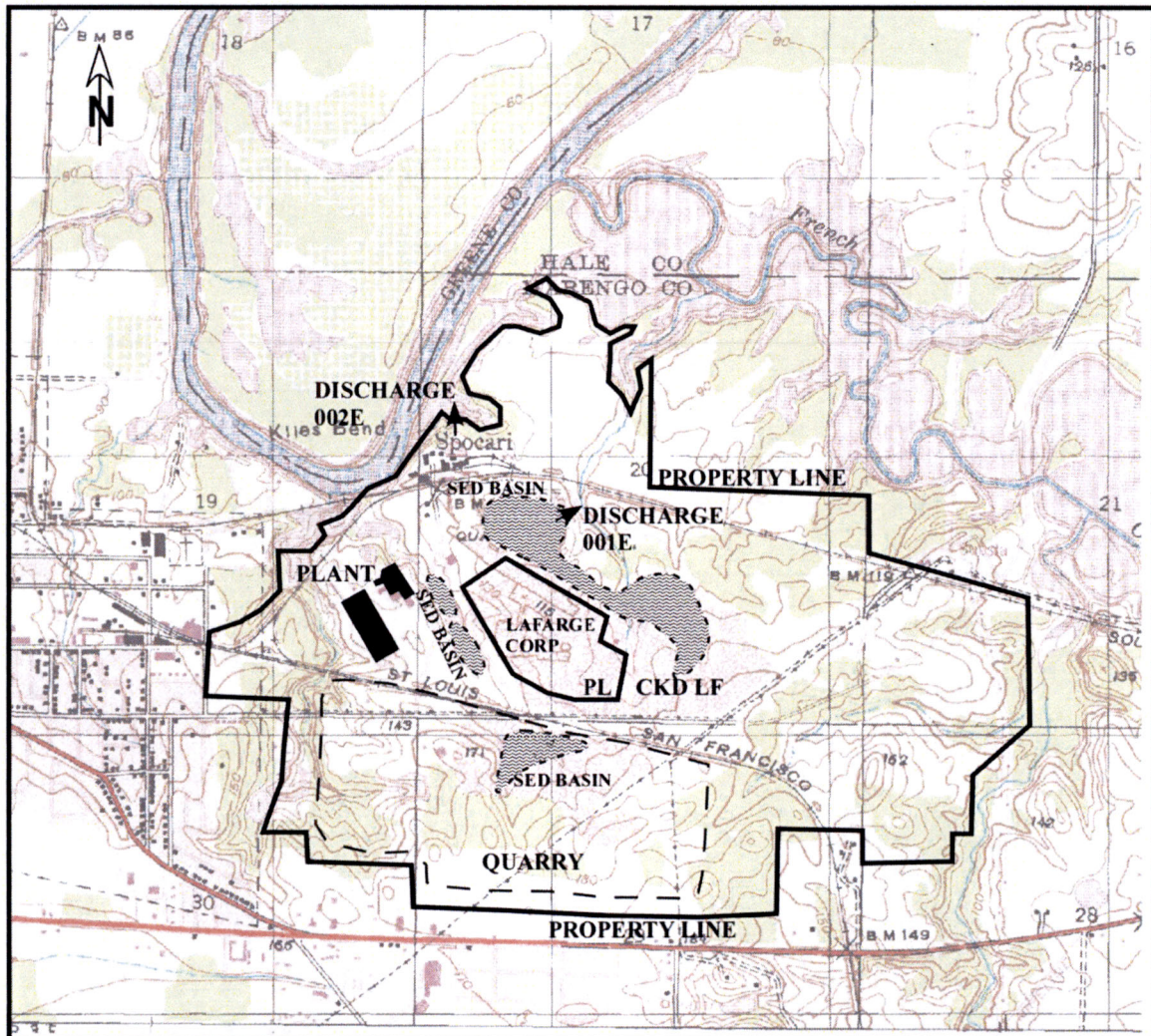
In determining the size of the sediment basin the following information was used. The former quarry is used as a sediment basin for the entire plant operations. The plant utilizes several sediment ponds and basins controlled by pumps and gravity to treat stormwater before it empties into the former quarry. The treated stormwater is pumped from the former quarry as needed into French Creek.

The existing height of the high wall of the former quarry basin is 113 feet. Normal pool in the sediment basin former quarry is 85 feet. Hydraflow Hydrographs 2002 with the Rational Method was used in determining the necessary size of the basin for the runoff from the quarry site. The area draining to the sediment basin measures approximately 850 acres and a runoff coefficient of 0.95 was used for this area. This data along with the time of concentration of the runoff, 24 hours, was used to determine the peak flow for a 25-year storm event. The resulting flow to the sediment basin was 2570.09 cfs. The sediment basin is approximately 28 feet deep in front of the high wall (bottom elevation of 85 feet). The basin measures 18 acres to catch the runoff from the entire plant.

Using Hydraflow a maximum storage volume required for a 25-year storm event is 18,673,538 cubic feet. Assuming the sediment basin is normal pool (elevation 85 feet) and the 25-year storm event occurs then the event would be completely contained and the maximum elevation of the sediment basin would reach 109 feet, below the top of high wall elevation of 113 feet.

(See Appendix A for calculations)

Figure 1
Topographic Map

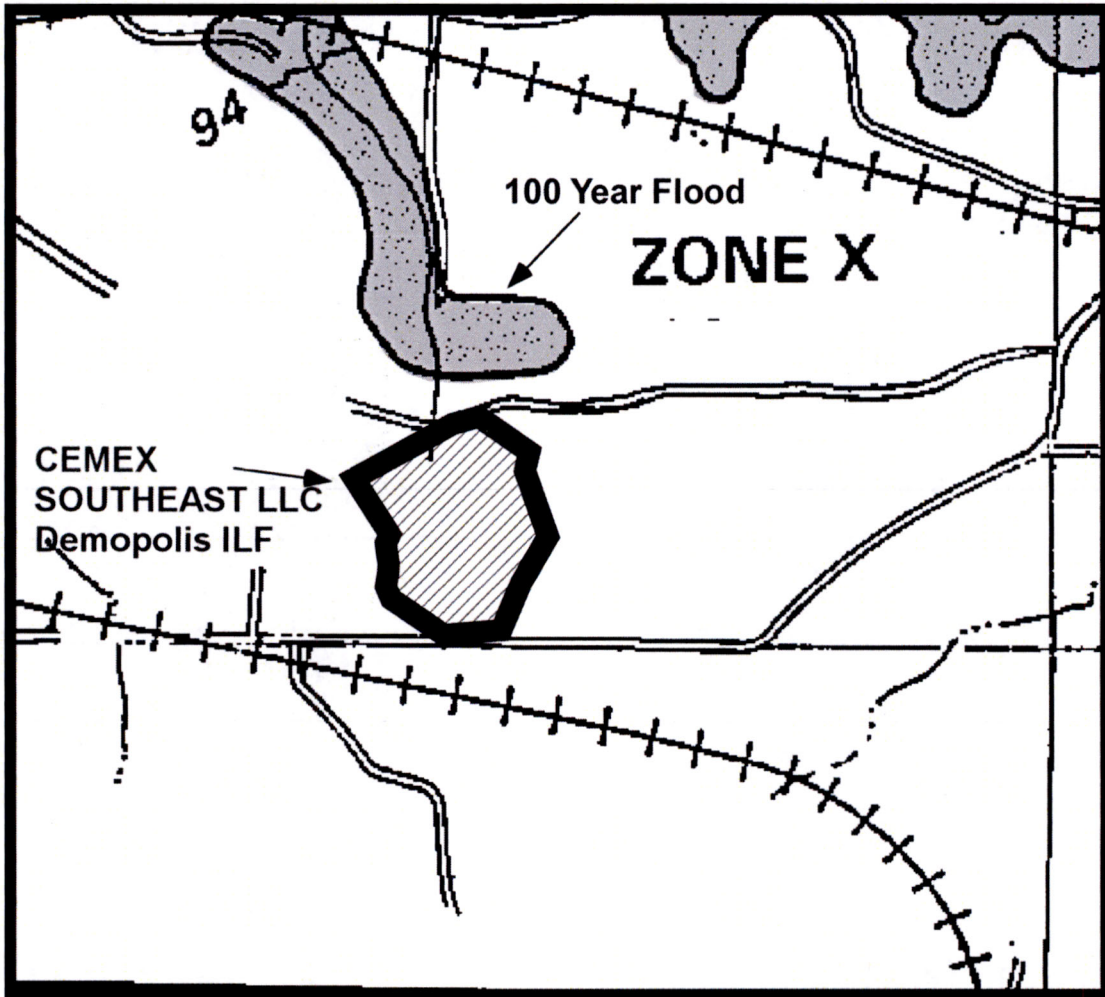


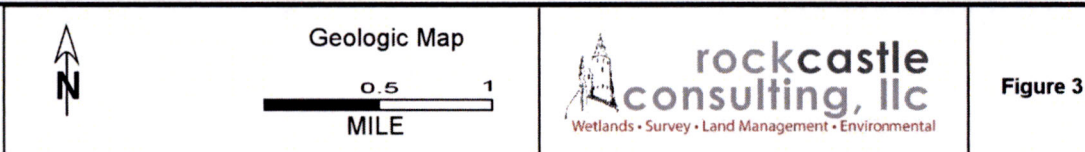
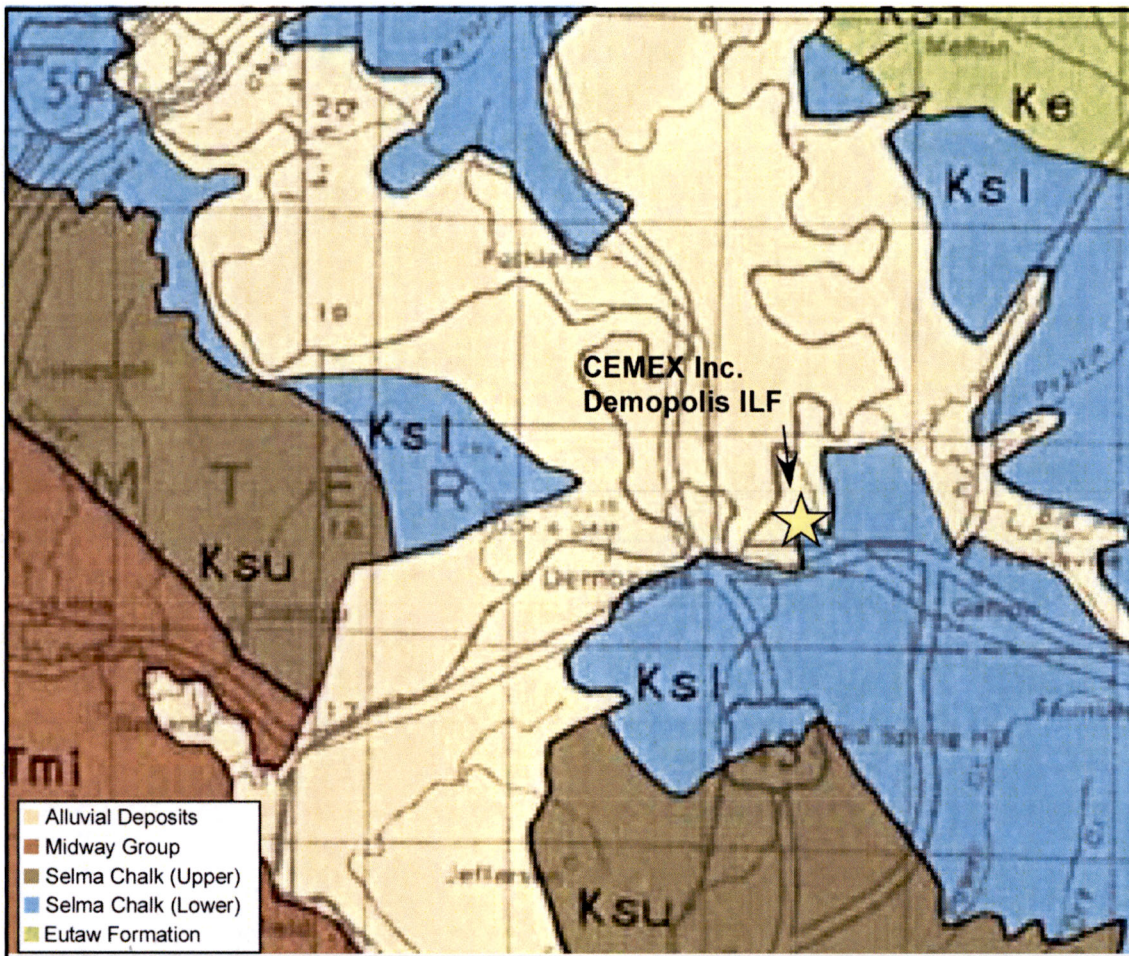
SCALE: =2000'
DEMOPOLIS QUADRANGLE
CEMEX SOUTHEAST, LLC
CKD LANDFILL PERMIT RENEWAL
MARENGO COUNTY, ALABAMA
T18N, R3E, S19, 20, 21, 28, 29, & 30

 **rockcastle**
consulting, llc
Wetlands • Survey • Land Management • Environmental

December 05, 2018

<u>POINT</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
001E	32° 31' 00"N	87° 48' 27"W
002E	32° 31' 12"N	87° 48' 47"W





APPENDIX A RUNOFF CALCULATIONS

1

Hydrograph Report

Hydroflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020

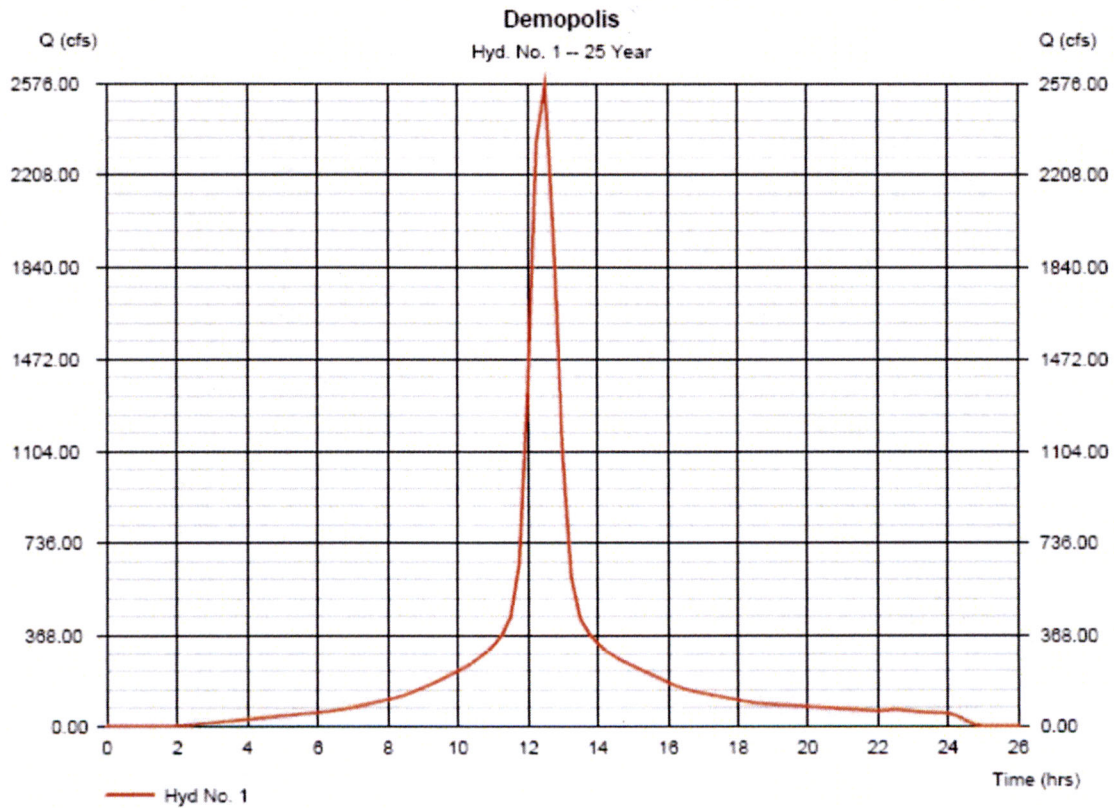
Monday, 12 / 17 / 2018

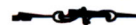
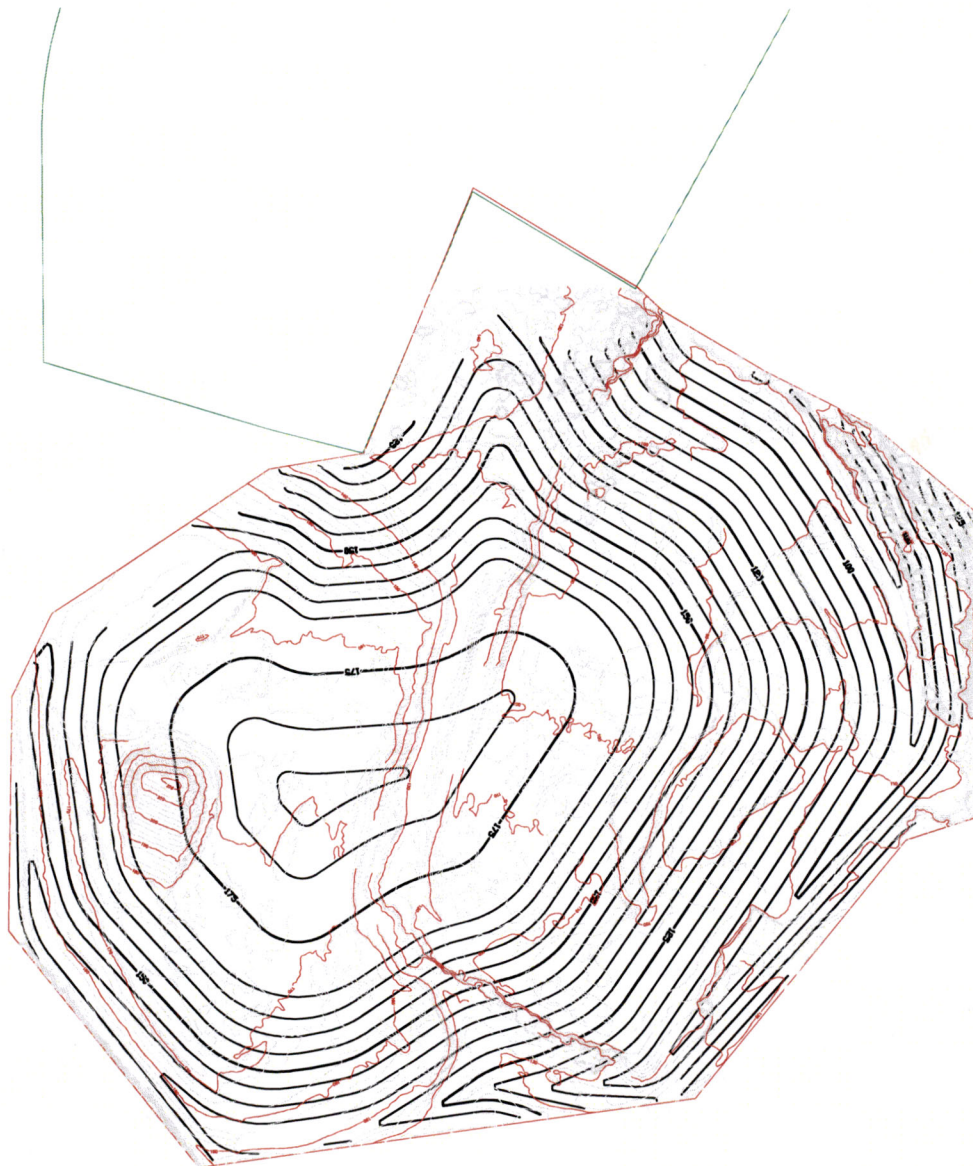
Hyd. No. 1

Demopolis

Hydrograph type = SCS Runoff
Storm frequency = 25 yrs
Time interval = 15 min
Drainage area = 850.000 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 7.05 in
Storm duration = 24 hrs

Peak discharge = 2570.09 cfs
Time to peak = 12.50 hrs
Hyd. volume = 18,673,538 cuft
Curve number = 95
Hydraulic length = 0 ft
Time of conc. (Tc) = 30.00 min
Distribution = Type III
Shape factor = 484





C-1

SHEET 1 OF 1

CEMEX CKD LANDFILL SITE CLOSURE PLAN

DATE: 12/19/18	REVISION
PLOTTED: 12/19/18	REVISION
DRAWN BY: JMS CHECKED BY:	REVISION
FILE:	REVISION

SCALE 1" = 100'



4400 LEWISBURG ROAD
BIRMINGHAM, AL 35207
(205) 290-0400

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CEMEX Southeast, LLC – Demopolis Plant

Landfill Haul Ticket

Waste permitted for Disposal – CKD and plant waste such as chalk, sand, cement, clinker, gypsum, mill scale coal, petroleum coke, refractory bricks, castable, broken concrete, broken concrete block, slag, and other similar type materials.

DATE

11-24-18

Truck Loads:

17

Tanker Loads:

0

Other Loads
(Note location and material):

12 L WALL

Landfill inspection: There is no sign of illegal dumping of trash, hazardous waste, medical waste or waste containing free liquids. All materials are approved by CEMEX before loading. All loads are inspected during the loading process.

Note any unsafe conditions not corrected before end of shift.

Supervisor

A handwritten signature in blue ink, appearing to be "J. M. [unclear]", written over a horizontal line.



CEMEX CKD LANDFILL
SITE CLOSURE PLAN

DATE: 12/19/18	REVISION
PLOTTED: 12/19/18	REVISION
DRAWN BY : JMS	REVISION
CHECKED BY :	REVISION
FILE:	REVISION



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