

STATE OF MISSISSIPPI SOLID WASTE MANAGEMENT PERMIT

TO OPERATE A SOLID WASTE MANAGEMENT FACILITY IN
ACCORDANCE WITH THE REGULATIONS GOVERNING
SOLID WASTE MANAGEMENT

THIS CERTIFIES THAT

Holcim (US), Inc.

has been granted permission to operate a solid waste management facility

located at

Section: 4 Township: 17 North, Range: 16 East

of Lowndes County

under the name of

Holcim CKD Landfill

This permit is issued in accordance with the provisions of the Mississippi Code Annotated, and the regulations and guidelines adopted and promulgated thereunder

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

AUTHORIZED SIGNATURE

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued:
Expires: December 2018

Permit No. SW0440040578

CONDITIONS

A. EFFECT OF PERMIT

This permit is being issued for the development of a solid waste landfill facility to be used for the relocation and disposal of nonhazardous cement kiln dust wastes and other associated materials from an existing disposal unit at the site. The permittee shall develop the landfill facility and shall transfer and place the wastes at the permitted disposal area in accordance with the Mississippi Nonhazardous Solid Waste Management Regulations, applicable state and federal regulations, and conditions of this permit.

B. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for noncompliance with the terms and conditions of the permit. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.

C. SEVERABILITY

The provisions of the 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. DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the solid waste law and regulations promulgated thereunder and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.
2. Duty to Reapply. If the permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the permittee must submit a complete application for a new permit at least 180 days before this permit expires.
3. Duty to Mitigate. The permittee shall take all reasonable steps to minimize, prevent, or correct any adverse impact on human health or the environment resulting from noncompliance with this permit.

4. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all equipment and systems which are installed or used by the permittee to achieve compliance with the conditions of this permit and application as submitted and approved by the Department of Environmental Quality (Department).
5. Duty to Provide Information. The permittee shall furnish to the Department, within a reasonable time, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
6. Inspection and Entry. The permittee shall allow an authorized representative of the Department upon the presentation of credentials and other documents as may be required by law to:
 - (a) Enter on the permittee's premises where a regulated 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, practices, or operations regulated or required under this permit;
 - (d) Sample or monitor at reasonable times for the purposes of assuring permit compliance.
7. Anticipated Noncompliance. The permittee shall give written notice to the Department at least 30 days in advance of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this permit or the Mississippi Nonhazardous Solid Waste Management Regulations.
8. Modification of Permits. Any proposed modification to the approved application or plan of operations resulting in an expansion of the facility or a significant change in the method of waste management must be approved by the Permit Board or the Board's designee prior to implementation. Other proposed modification to the approved facility design or operations must be approved by the Department prior to implementation.
9. Signature Requirements. The permittee shall ensure that an application for the reissuance, modification or transfer of this permit and all reports required by this permit or by state regulations shall be signed in

accordance with Rule 1.2.G of the Mississippi Nonhazardous Solid Waste Management Regulations.

E. SITE SPECIFIC CONDITIONS

1. Site Preparation and Construction Requirements

- a. The permittee shall ensure the site preparation and construction activities of the Cement Kiln Dust (CKD) Landfill are conducted in accordance with the Regulations and the approved plans as submitted to the Department.
- b. The permittee shall submit a detailed construction quality assurance plan for the construction of the liner system to the Department for approval prior to initiation of site preparation activities. This plan shall include a tentative site preparation and constructions schedule, planned construction drawings, etc.
- c. The permittee shall ensure that the construction of the components of the landfill is conducted by qualified and experienced personnel.
- d. The permittee shall ensure that the CKD Landfill and any individual cell or construction phase is prepared and constructed in accordance with the following:
 1. Prior to construction or preparation of the new disposal cell at the site, the cell boundaries shall be appropriately located and marked by a land surveyor licensed by the State of Mississippi to ensure construction within the approved area. Property line setback distances as indicated in the permit application shall be established and maintained.
 2. In preparation of the areas for waste placement, the insitu subbase shall be inspected for cracks, large stones, other protrusions, and for soil material which would not be suitable liner material. Areas where unsuitable soil materials or groundwater seeps exist shall be excavated and the soils replaced with soil materials having a permeability equal to or less than 1×10^{-6} cm/sec. The surface shall be compact, smooth, uniform and free of desiccation cracks.
 3. The constructed liner for the landfill shall consist of a minimum of 1 foot of re-compacted soil having a permeability of 1×10^{-7} cm/sec. Prior to the construction of the 1-foot re-compacted soil liner, the surface of the prepared subbase shall be scarified for proper bonding with the liner. The liner shall be constructed in 8-inch lifts of loose materials that are re-compacted to 6 inch lifts. Each lift shall be evenly compacted to the density and moisture content required. Placement of the liner on the side slopes shall be in lifts along the slope, not in

horizontal lifts. Between lifts, the surface shall be scarified for proper bonding.

4. In the portion of the CKD Landfill that contains a historic, closed cement kiln dust disposal area, the existing cover system shall be utilized as the liner for the new disposal activity. The erosion layer of the cover system shall be removed and infiltration layer shall be repaired and/or reprocessed, if needed, to ensure the layer remains consistent with the permeability and thickness requirements of Condition E.1.d.3. Verification that the layer remains consistent with the permeability and thickness requirements of Condition E.1.d.3 and certification of any repairs shall be conducted in accordance with the approved construction quality assurance plan.
5. In construction/preparation of the buffer subbase and the soil liner, the surface shall not be allowed to dry out and crack before placement of the next layer. If desiccation cracks do form, the surface shall be rewetted, re-homogenized, and re-compacted to the depth of the cracks before placement of the succeeding layer.
6. Field density, moisture content, and permeability tests shall be conducted in accordance to the approved plan. Test holes in the soil liner shall be sealed with bentonite, or another method approved by the Department.
7. At least two weeks prior to the placement of cement kiln dust in the newly constructed cell, a construction quality assurance (CQA) report shall be submitted to the Department that demonstrates compliance with all applicable sections of the state regulations. The report shall contain a certification from an independent registered professional engineer (registered in the State of Mississippi) that the area has been constructed according to the approved design plans and all applicable sections of the state regulations. The report shall also include field logs, results of testing, subgrade survey, top of liner survey and construction testing methods.
8. The perimeter stormwater management system and the surficial runoff collection system across the facility including the perimeter and interior diversion ditches and dikes, access road stormwater ditches, stormwater collection swales, side slope diversion swales, downchutes, and the runoff collection basin shall be constructed as per the approved plans, prior to the placement of any cement kiln dust and in such a manner so as to inhibit erosion and minimize stormwater contact with the waste.

2. Operating Conditions

- a. The permittee shall ensure the waste transfer and placement activities are conducted in accordance with the approved plans as submitted to the Department.
- b. The permittee is authorized to transfer approximately 230,000 cubic yards of cement kiln dust from the existing Holcim Cement Kiln Dust Management Unit to the CKD Landfill as described in the approved plan. A portion of the CKD Landfill disposal area contains a historic, closed cement kiln dust disposal area. Other solid waste shall not be deposited in the CKD Landfill unless approved by the Department
- c. The permittee shall ensure that the placement of the cement kiln dust is restricted to the approved permitted area, consisting of approximately 15 acres and shall be within approved elevations.
- d. The permittee shall maintain security at the facility to prohibit unauthorized access and disposal.
- e. The permittee shall take appropriate actions to inhibit cement kiln dust from becoming windblown off the facility property. In addition, appropriate dust control measures shall be conducted as necessary to contain and/or suppress fugitive dust emissions at the landfill and from access and transport roads.
- f. The permittee shall ensure that the storm water management system and the surficial runoff collection system at the facility including the perimeter and interior diversion ditches and dikes, access road storm water diversion ditches, storm water collection areas, side slope diversion swales, down chutes, and the runoff collection basin are properly maintained. Erosion, sloughing, or other damage shall be promptly repaired.
- g. The permittee shall ensure that storm water which contacts cement kiln dust shall be treated and discharged as per the applicable National Pollutant Discharge Elimination System (NPDES) permit requirements. The permittee shall ensure that the CKD Landfill is operated and monitored in such a manner so as to prevent a discharge of pollutants into the waters of the state, including wetlands, that violates any requirements of the Clean Water Act or the Mississippi Air and Water Pollution Control Act.

3. Closure/Post Closure Requirements

- a. At least 30 days prior to the initiation of final closure, the permittee shall submit a closure/post-closure plan for the CKD Landfill. This plan must be approved by the Department prior to initiating closure activities. This plan

shall include, at a minimum:

1. A description of the construction details for the final cover system and surface water control structures;
 2. A construction quality assurance (CQA) plan for the final cover system components, drainage system features and any other appropriate closure components;
 3. A proposed schedule of closure activities; and
 4. A description of the post-closure monitoring and maintenance plans for the landfill.
- b. The permittee shall ensure that within 60 days of completion of final closure that the following documents are submitted to the Department:
1. a certification, signed by a registered professional engineer, verifying that the final cover system has been completed in accordance with the regulations and the approved closure plan;
 2. a survey drawing, prepared by a registered surveyor, depicting final contours and the boundaries of the CKD Landfill; and
 3. a report documenting the final volume and tonnage of cement kiln dust deposited in the CKD Landfill.
- c. The permittee shall ensure that within 90 days of completion of final closure activities the deed for the property is notated in accordance with Rule 1.4.E(2)(g) of the Mississippi Nonhazardous Solid Waste Management Regulations.
- d. The post closure monitoring period for the CKD Landfill shall be a minimum of 30 years, unless otherwise approved by the Department. At minimum, post closure monitoring activities shall include:
1. quarterly inspections of the final cover system by company personnel. Erosion, cracks, ponding, and similar problems shall be promptly repaired, and
 2. routine mowing and maintenance of the established vegetative cover.
- e. While this permit does not require groundwater monitoring as part of the routine facility operations, the Department reserves the right to require implementation of an appropriate groundwater monitoring system and program at the facility should conditions warrant such actions.