

PRELIMINARY DETERMINATION

INITIAL PERMIT AND VARIANCE

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

William C. Gorgas Electric Generating Plant
Permit No. 64-12

November 10, 2021

Alabama Power Company submitted to the Alabama Department of Environmental Management (ADEM) an application for the initial issuance and variance of the Coal Combustion Residuals (CCR) Permit to Close for the Plant Gorgas Ash Pond, Gypsum Pond and Bottom Ash Landfill and CCR Permit to Operate for the Plant Gorgas CCR and Gypsum Landfill at the William C. Gorgas Electric Generating Plant (Permit No. 64-12).

The Plant Gorgas Ash Pond is a CCR surface impoundment located in Sections 20, 21, 28 and 29, Township 16 South, Range 6 West in Walker County, Alabama consisting of approximately 1467.01 acres with a disposal area that consists of approximately 423.32 acres.

The Plant Gorgas Gypsum Pond is a CCR surface impoundment located in Section 13, Township 16 South, Range 6 West in Walker County, Alabama consisting of approximately 57.10 acres with a disposal area that consists of approximately 18.70 acres.

The Plant Gorgas Bottom Ash Landfill is a CCR Landfill located in Section 17, Township 16 South, Range 6 West in Walker County, Alabama consisting of approximately 287.06 acres with a disposal area that consists of approximately 44.92 acres.

The Plant Gorgas CCR and Gypsum Landfill is a CCR landfill located in Section 13, Township 16 South, Range 6 West in Walker County, Alabama consisting of approximately 287.06 acres with a disposal area that consists of approximately 44.04 acres. The waste stream for the Plant Gorgas CCR and Gypsum Landfill would be CCR, including fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity. The service area for the Plant Gorgas CCR and Gypsum Landfill would be Alabama Power Company. The maximum average daily volume of waste disposed at the Plant Gorgas CCR and Gypsum Landfill would be 2,000 cubic yards/day.

The proposed permit would require the Permittee to manage CCR in accordance with the conditions of the proposed permit, ADEM Admin. Code r. 335-13-15, "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," and the approved permit application.

Groundwater monitoring and corrective action requirements in the proposed permit establish a groundwater monitoring system of wells that provides an accurate representation of the groundwater quality underlying the units and a groundwater monitoring plan to establish appropriate sampling and analysis of the system to detect the presence of CCR constituents. For units where CCR constituents exceed acceptable levels, the proposed permit establishes corrective action requirements to remediate contamination caused by the units.

Closure criteria in the proposed permit establish requirements for all units to close in accordance with specified standards and timeframes. Post-closure criteria in the proposed permit require each unit be maintained for a period of time after closure, including maintaining groundwater monitoring and corrective action to ensure the long term safety of units that are closing.

Operating criteria in the proposed permit establish requirements for the disposal of CCR in all units approved to accept waste, including the allowable waste streams and daily volumes permitted to be disposed of, plans to control fugitive dust, run-off and run-on and inspection requirements.

The Permittee must comply with all conditions of the proposed permit except to the extent and for the duration such noncompliance is authorized by a variance granted by ADEM. The first variance requests the final grade of the cover system be less than 5 percent and greater than 25 percent for the Plant Gorgas Ash Pond, Bottom Ash Landfill and CCR and Gypsum Landfill. The second variance requests using erosion control measures, as specified in the Permit Application, other than horizontal terraces, for the Plant Gorgas Ash Pond.

Previously approved variances to exclude boron as an Appendix IV assessment monitoring constituent and from 335-13-15-.06(6)(h)2., to the extent that provision precludes the use of federal groundwater protection standards (GWPS) of 6 micrograms per liter ($\mu\text{g/L}$) for cobalt; 15 $\mu\text{g/L}$ for lead; 40 $\mu\text{g/L}$ for lithium; and 100 $\mu\text{g/L}$ for molybdenum are no longer necessary because the Department amended ADEM Admin. Code r. 335-13-15 on February 15, 2021 to remove boron as an Appendix IV constituent and establish GWPS for Cobalt at 6 $\mu\text{g/L}$, Lead at 15 $\mu\text{g/L}$, Lithium at 40 $\mu\text{g/L}$ and Molybdenum at 100 $\mu\text{g/L}$ in order to maintain consistency with the federal regulations. Therefore, these variances have not been included in the draft permit.

The Solid Waste Engineering Section has determined that the permit application complies with the requirements of ADEM's Administrative Code Division 13 regulations for CCR units.

Technical Contact:
Mr. Devin M. Jenkins
Solid Waste Engineering Section
Land Division



COAL COMBUSTION RESIDUAL FACILITY PERMIT

PERMITTEE: Alabama Power Company

FACILITY NAME: William C. Gorgas Electric Generating Plant

FACILITY ADDRESS: 460 Gorgas Road
Parrish, Alabama 35580-5715

PERMIT NUMBER: 64-12

UNITS PERMITTED: Plant Gorgas Ash Pond
Plant Gorgas Gypsum Pond
Plant Gorgas Bottom Ash Landfill
Plant Gorgas CCR and Gypsum Landfill

In accordance with and subject to the provisions of the Solid Wastes & 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 manage coal combustion residuals at the above-described facility location.

ISSUANCE DATE: ??????????????

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

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

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
COAL COMBUSTION RESIDUAL PERMIT**

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

Facility Name: William C. Gorgas Electric Generating Plant

Facility Address: 460 Gorgas Road
Parrish, Alabama 35580-5715

Permit Number: 64-12

Units Permitted: Plant Gorgas Ash Pond
Plant Gorgas Gypsum Pond
Plant Gorgas Bottom Ash Landfill
Plant Gorgas CCR and Gypsum Landfill

Pursuant to the 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 to Alabama Power Company (hereinafter called the Permittee) for the coal combustion residual units located at the William C. Gorgas Electric Generating Plant.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions set forth herein (including those in all attachments), and the applicable regulations contained in Chapters 335-13-1 through 335-13-16 of the ADEM Administrative Code (referred to as the "ADEM Admin. Code" or "335-13"). Rules cited are set forth in this document for the purpose of Permittee reference. A 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 the revisions approved after permit issuance.

This permit is based on the information submitted to ADEM on December 5, 2018, and as amended, and known as the Permit Application (hereby incorporated by reference and hereinafter referred to as the Application). Inaccuracies found in this information could lead to the termination or modification of this permit and potential enforcement action. The Permittee must inform ADEM of deviations 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 XXXX, and shall remain in effect until XXXX, unless suspended or revoked.

Alabama Department of Environmental Management

Date Signed

SECTION I. SUMMARY OF UNITS.

A. Plant Gorgas Ash Pond.

1. Unit Type. Surface Impoundment.
2. Status. Permit to Close.
3. Location. Sections 20, 21, 28 and 29, Township 16 South, Range 6 West in Walker County, Alabama.
4. Size. The facility boundary consists of approximately 1467.01 acres with a disposal area that consists of approximately 423.32 acres.

B. Plant Gorgas Gypsum Pond.

1. Unit Type. Surface Impoundment.
2. Status. Permit to Close.
3. Location. Section 13, Township 16 South, Range 6 West in Walker County, Alabama.
4. Size. The facility boundary consists of approximately 57.10 acres with a disposal area that consists of approximately 18.70 acres.

C. Plant Gorgas Bottom Ash Landfill.

1. Unit Type. Landfill.
2. Status. Permit to Close.
3. Location. Section 17, Township 16 South, Range 6 West in Walker County, Alabama.
4. Size. The facility boundary consists of approximately 287.06 acres with a disposal area that consists of approximately 44.92 acres.

D. Plant Gorgas CCR and Gypsum Landfill.

1. Unit Type. Landfill.
2. Status. Permit to Operate.
3. Location. Section 13, Township 16 South, Range 6 West in Walker County, Alabama.
4. Size. The facility boundary consists of approximately 287.06 acres with a disposal area that consists of approximately 44.04 acres.

SECTION II. STANDARD CONDITIONS.

- A. Effect of Permit. The Permittee is required to manage coal combustion residuals (CCR) in accordance with the conditions of this permit and 335-13. Issuance of this permit does not convey property rights of any sort or an exclusive privilege, nor does it authorize the injury to persons or property, the invasion of other private rights, or the 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 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 a provision of this permit, or the application of a 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" means the United States Environmental Protection Agency.
 2. "Permit Application" 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 ADEM in pursuit of a CCR permit.
 3. "Permit to Close" means written authorization granted to a person by the Department to close a CCR unit consistent with the Application, this permit, and 335-13.
 4. "Permit to Operate" means written authorization granted to a person by the Department to operate a CCR unit consistent with the Application, this permit, and 335-13.
- 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 ADEM. A 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 ADEM at least 270 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 II.E.2., and, through no fault of the Permittee, ADEM 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 ADEM, within a reasonable time, the information that ADEM 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 ADEM 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 ADEM 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, the records that must be kept under the conditions of this permit.
 - c. Inspect, at reasonable times, the facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
 - d. Sample or monitor, at reasonable times, the substances or parameters at a location for the purposes of assuring permit compliance or as otherwise authorized by Code of Alabama 1975, §§22-27-1 *et seq.*
 9. Reporting Planned Changes. The Permittee shall notify ADEM, in the form of a request for permit modification, at least 90 days prior to any change described in 335-13-15-.13(1) and (2), or change in the design or operating procedure as described in this permit, including planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
 10. 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 ADEM. 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.
 11. Noncompliance. The Permittee shall report all instances of noncompliance to the Department within 30 days of its finding, unless otherwise required by 335-13-15.
 12. Other Information. If the Permittee becomes aware that information required by the Application was not submitted or was incorrect in the Application or in a report to ADEM, the Permittee shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to ADEM, within a reasonable time, information related to compliance with the permit.
- F. Signatory Requirement. All applications, reports or information required by this permit, or otherwise submitted to ADEM, shall be signed and certified by the owner as follows:
1. If a city, county, or other municipality or governmental entity, by the ranking elected official, or by a duly authorized representative of that person.
 2. 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.
- G. 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.

- H. State Laws and Regulations. Nothing in this permit shall be construed to preclude the initiation of a legal action or to relieve the Permittee from the responsibilities, liabilities, or penalties established pursuant to an applicable state law or regulation.

SECTION III. GENERAL OPERATING CONDITIONS.

- A. Operation of Facility. The Permittee shall operate and maintain the facility:
1. Consistent with the Application, this permit, and 335-13-15.
 2. To minimize the possibility of an unplanned sudden or nonsudden release of contaminants (including leachate) to air, soil, groundwater, or surface water, which could threaten human health or the environment.
- B. Boundary Markers. The Permittee shall ensure that the disposal boundaries of operational units and units in post-closure are identified with a sufficient number of permanent boundary markers that are at least visible from one marker to the next.
- C. Open Burning. The Permittee shall not allow open burning without prior written approval from ADEM and other appropriate agencies. A burn request should be submitted in writing to ADEM 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.
- D. Equipment. Adequate equipment shall be provided to insure continued operation in accordance with the permit and regulations.
- E. Security. The Permittee shall provide artificial and/or natural barriers, which prevent entry of unauthorized vehicular traffic to the facility.
- F. Personnel. The Permittee shall maintain adequate personnel to ensure continued and smooth operation of the facility.
- G. Adverse Weather Disposal. The Permittee shall provide for disposal activities in adverse weather conditions.
- H. Environmental Monitoring and Treatment Structures. The Permittee shall provide protection and proper maintenance of environmental monitoring and treatment structures.
- I. Identification Marker. The Permittee shall provide a permanent identification marker for each CCR unit, at least six feet high showing the permit number, name and owner of the unit.
- J. Beneficial Use. The Permittee may store and remove coal combustion residuals from a unit for the purpose of beneficial use as it is defined in 335-13-15-.02(8). The Permittee must request and receive prior approval from the Department.
- K. Hydrologic and Hydraulic Capacity Requirements for Surface Impoundments.
1. The Permittee must design, construct, operate, and maintain an inflow design flood control system as specified in 335-13-15-.05(3)(a).
 2. The Permittee must operate in accordance with the inflow design flood control system plan as specified in 335-13-15-.05(3)(c).

- L. Inspections. The Permittee must inspect all CCR surface impoundments as specified in the Application and 335-13-15-.05(4).

SECTION IV. SPECIFIC REQUIREMENTS FOR OPERATIONAL CCR UNITS.

- A. Waste Management.
1. The permitted facility boundary for the Plant Gorgas CCR and Gypsum Landfill is approximately 287.06 acres with a CCR disposal area that consists of approximately 44.04 acres.
 2. The maximum average daily volume of waste disposed at the Plant Gorgas CCR and Gypsum Landfill, as contained in the permit application, shall not exceed 2,000 cubic yards/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 Section II.E.9.
 3. 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.
- B. Waste Streams. The Permittee may accept for disposal, at the Plant Gorgas CCR and Gypsum Landfill, coal combustion residuals, including fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity.
- C. Service Area. The service area for the Plant Gorgas CCR and Gypsum Landfill is limited to the waste listed in Section VI.B. generated from Alabama Power Company.
- D. Liner Requirements.
1. The liner for the Plant Gorgas CCR and Gypsum Landfill consists of a composite liner that meets the design criteria for CCR Landfills as specified in 335-13-15-.04(1).
 2. The Permittee may not commence disposal of waste in a new phase of a unit in operation until the Permittee has submitted to ADEM, by certified mail or hand delivery, a letter signed by both the Permittee and a professional engineer stating that the phase has been constructed in compliance with the permit. An engineer must attest or certify that the installation, seaming, etc., as described in the approved plans or layout, would meet the standards or criteria prescribed, or required by the manufacturers of the components and ADEM's regulations, and that the panels or components would be expected to perform satisfactorily, without failure, to the required standards over a normally expected lifetime or performance period for typical panels or components. ADEM must inspect the constructed phases before the owner or operator can commence waste disposal unless the Permittee is notified that ADEM will waive the inspection.
- E. Prevention of Unauthorized Disposal. The Permittee shall prevent the unauthorized disposal of free liquids in the CCR and Gypsum Landfill.
- F. Cover Requirements. The outer slopes of the disposal area at the Plant Gorgas CCR and Gypsum Landfill shall be covered at the conclusion of each weeks' activities. (See Section IX.C)
- G. Compaction. All waste shall be thoroughly spread in layers two feet or less in thickness and thoroughly compacted with adequate equipment prior to placing additional layers of waste or placing cover.

H. Air Criteria.

1. The Permittee must adopt measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads and other CCR management and material handling activities.
2. The Permittee must operate in accordance with a CCR fugitive dust control plan as specified in 335-13-15-.05(1)(b)1. through 7. and any applicable standards under the Occupational Safety and Health Act.

I. Run-on and Run-off Control Requirements for Landfills.

1. The Permittee must design, construct, operate, and maintain a run-on and run-off control system as specified in 335-13-15-.05(2)(a).
2. The Permittee must operate in accordance with the run-on and run-off control system plan as specified in 335-13-15-.05(2)(c).

J. Inspections. The Permittee must inspect all CCR landfills as specified in the Application and 335-13-15-.05(5).

K. Other Requirements. ADEM may enhance or reduce the requirements for operating and maintaining the Plant Gorgas CCR and Gypsum Landfill as deemed necessary by the Land Division.

L. Other Permits. The Permittee shall operate the Plant Gorgas CCR and Gypsum Landfill according to this and other applicable permits.

SECTION V. GROUNDWATER MONITORING AND CORRECTIVE ACTION REQUIREMENTS.

A. Groundwater Monitoring System. The Permittee shall install and/or maintain a groundwater monitoring system, identified in Table 1, as specified in 335-13-15-.06(2) and the approved groundwater monitoring plan.

B. Groundwater Sampling and Analysis Requirements.

1. The Permittee shall use the techniques and procedures as specified in 335-13-15-.06(4) thru (9) and the approved groundwater monitoring plan to provide an accurate representation of groundwater quality when sampling and analyzing the monitoring wells identified in Table 1.
2. In addition, the Permittee shall record water levels, mean sea level elevation measuring point, depth to water, and the results of field tests for pH and specific conductance at the time of sampling for each well.
3. Samples shall be collected, preserved, and shipped (when shipped off-site for analysis) in accordance with the procedures specified in the approved groundwater monitoring plan.
4. Samples shall be analyzed according to the procedures specified of the approved groundwater monitoring plan, 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), or other appropriate methods approved by this Department. All field tests must be conducted using approved EPA test kits and procedures.
5. Samples shall be tracked and controlled using the chain-of-custody and QA/QC procedures specified of the approved groundwater monitoring plan.

6. Samples shall be conducted within a period of six weeks for each semi-annual sampling event, beginning with the effective date of this permit.
7. The Permittee shall install and maintain additional groundwater monitoring wells as necessary to assess changes in the rate and extent of any plume of contamination or as otherwise deemed necessary to maintain compliance with 335-13-15-.06. A plan in the form of a permit modification request should be submitted to the Department as required by Section V.D.

C. Corrective Action.

1. Assessment of Corrective Measures. The Permittee must initiate an assessment of corrective measures as specified in 335-13-15-.06(7) if any constituent listed in Appendix IV of 335-13-15 has been detected at a statistically significant level exceeding the groundwater protection standard, or immediately upon detection of a release from the CCR unit.
 - a. The permittee must continue to monitor groundwater in accordance with the assessment monitoring program while assessing corrective measures.
2. Selection of Remedy. Based on the results of the corrective measures assessment, the Permittee must select a remedy as specified in 335-13-15-.06(8).
3. Implementation of the Corrective Action Program. Within 90 days of selecting a remedy, the Permittee must initiate remedial activities as specified in 335-13-15-.06(9), and shall be required to modify the permit in accordance with Section II.E.9.

D. Permit Modification. The Permittee shall submit a report to ADEM with a permit modification request specifying the design, location and installation of additional monitoring wells. This report shall be submitted within ninety (90) days prior to the installation which, at a minimum, shall include.

1. Well construction techniques including proposed casing depths, proposed total depth, and proposed screened interval of well(s);
2. Well development method(s);
3. A complete analysis of well construction materials;
4. A schedule of implementation for construction; and
5. Provisions for determining the lithologic characteristics, hydraulic conductivity and grain-size distribution for the applicable aquifer unit(s) at the location of the new well(s).

E. Recordkeeping and Reporting.

1. Recordkeeping. Records of monitoring and corrective action information shall include:
 - a. The exact place, date, and time of sampling or measurement.
 - b. The individual(s) and company who performed the sampling or measurements.
 - c. The date(s) analyses were performed.
 - d. The individual(s) and company who performed the analyses.
 - e. The analytical techniques or methods used.

- f. The results of such analyses.
2. Reporting. The Permittee shall submit reports on all monitoring and corrective activities conducted pursuant to the requirements of this permit and 335-13-15. The reports should contain all monitoring results and conclusions from samples and measurements conducted during the sampling period.

TABLE 1
GROUNDWATER MONITORING WELLS

| <u>Monitoring Well Number</u> | <u>Top of Casing (feet msl)</u> | <u>Unit Monitoring¹</u> |
|-------------------------------|---------------------------------|------------------------------------|
| <u>Background Wells</u> | | |
| GS-AP-MW-8 | 434.61 | AP |
| GS-AP-MW-13 | 464.20 (Abandoned) | AP |
| GS-AP-MW-16S | 462.42 | AP |
| GS-AP-MW-17V | 531.45 | AP |
| MW-1 | 502.25 | GP/BALF/CLF/GLF |
| MW-2 | 502.12 | GP/BALF/CLF/GLF |
| MW-3 | 525.90 | GP/BALF/CLF/GLF |
| MW-4 | 518.63 | GP/BALF/CLF/GLF |
| MW-13 | 445.04 | GLF |
| MW-14 | 429.90 | GLF |
| MW-15 | 406.05 | GLF |
| <u>Compliance Wells</u> | | |
| GS-AP-MW-01R | To Be Installed | AP |
| GS-AP-MW-2 | 522.03 | AP |
| GS-AP-MW-3 | 512.29 | AP |
| GS-AP-MW-3V | To Be Installed | AP |
| GS-AP-MW-05R | To Be Installed | AP |
| GS-AP-MW-6S | 274.67 | AP |
| GS-AP-MW-6D | 274.50 | AP |
| GS-AP-MW-7 | 313.45 | AP |
| GS-AP-MW-09R | To Be Installed | AP |
| GS-AP-MW-9V | 420.86 | AP |
| GS-AP-MW-10R | To Be Installed | AP |
| GS-AP-MW-11R | To Be Installed | AP |
| GS-AP-MW-12 | 450.67 | AP |
| GS-AP-MW-12V | 449.74 | AP |
| GS-AP-MW-13R | To Be Installed | AP |
| GS-AP-MW-14R | To Be Installed | AP |
| GS-AP-MW-15 | 454.89 | AP |
| GS-AP-MW-15V | 455.89 | AP |
| GS-AP-MW-16D | 462.27 | AP |
| GS-AP-MW-17 | 531.88 | AP |
| GS-AP-MW-18R | To Be Installed | AP |
| GS-AP-MW-18VR | To Be Installed | AP |
| GS-AP-MW-19 | 495.58 | AP |
| GS-AP-MW-21 | 509.48 | AP |
| GS-AP-MW-21V | 509.84 | AP |

TABLE 1, CONTINUED
GROUNDWATER MONITORING WELLS

| <u>Monitoring Well Number</u> | <u>Top of Casing (feet msl)</u> | <u>Unit Monitoring¹</u> |
|--|---------------------------------|------------------------------------|
| <u>Compliance Wells, Continued</u> | | |
| GS-AP-MW-46 | To Be Installed | AP |
| GS-AP-MW-47 | To Be Installed | AP |
| GS-AP-PZ-16 | 462.29 | AP |
| GS-AP-PZ-18R | To Be Installed | AP |
| GS-AP-PZ-22 | 532.38 | AP |
| GS-GSA-MW-3 | 442.63 | GP |
| GS-GSA-MW-4 | 442.10 | GP |
| GS-GSA-MW-8 | 404.38 | GP |
| MW-5 | 474.55 | CLF |
| MW-6 | 412.99 | CLF |
| MW-7 | 394.59 | BALF/CLF |
| MW-8 | 416.10 | BALF/CLF |
| MW-10 | 395.10 | BALF |
| MW-11 | 406.96 | BALF |
| MW-12 | 474.24 | BALF |
| MW-16 | 414.57 | GLF |
| MW-17R | 434.57 | GLF |
| MW-18 | 414.42 | GLF |
| MW-19 | 377.32 | GLF |
| MW-20 | 332.89 | GLF |
| <u>Delineation Wells [RESERVED]</u> | | |
| Pending Final Assessment of Corrective Measures | | |
| <u>Piezometers (Water Level Reading)</u> | | |
| GS-AP-MW-4 | 507.90 | AP |
| GS-AP-MW-7V | 312.14 | AP |
| GS-AP-MW-20 | 528.15 | AP |
| GS-AP-MW-25H | 461.79 | AP |
| GS-AP-MW-27H | 535.03 | AP |
| GS-AP-MW-30H | 582.49 | AP |
| GS-AP-MW-30HS | 582.53 | AP |
| GS-AP-MW-37H | 459.28 | AP |
| GS-AP-MW-39H | 451.13 | AP |
| GS-AP-MW-7VR | 313.89 | AP |
| GS-GSA-MW-10H | 339.52 | GP |

¹ Abbreviations: AP, Ash Pond; GP, Gypsum Pond; CLF, CCR Landfill; GLF, Gypsum Landfill; BALF, Bottom Ash Landfill

SECTION VI. LEACHATE AND SURFACE WATER MANAGEMENT REQUIREMENTS.

- A. Discharges.
1. The Permittee shall not cause a discharge of pollutants into waters of the State, including wetlands, that is in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES), Alabama Water Pollution Control Act, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 and/or section 404 of the Clean Water Act, or cause non-point source pollution.
 2. The Permittee shall not cause non-point source pollution of waters of the State, including wetlands, that violates any requirements of an area wide and statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.
- B. Stormwater Permit. Surface water discharges from drainage control structures shall be permitted through the ADEM Water Division's NPDES Program.
- C. Leachate Management. The Permittee must collect and remove leachate that is generated at the Plant Gorgas CCR and Gypsum Landfill. The Permittee shall install a leachate collection system designed to maintain less than 12 inches (30 cm) depth of leachate over the liner. Discharges may be subject to the requirements of the ADEM Water Division.

SECTION VII. CLOSURE AND POST- CLOSURE REQUIREMENTS.

- A. Closure Timeframe and Notifications. The Permittee shall close their CCR units as specified in 335-13-15-.07(2), this permit and the Application.
- B. Criteria for Closure.
1. Cover. Closure of a CCR landfill, surface impoundment, or any lateral expansion of a CCR unit must be completed by either leaving the CCR in place and installing a final cover system or through removal of the CCR and decontamination of the CCR unit, as described in 335-13-15-.07(3)(b) through (j). The minimum and maximum final grade of the final cover system may be less than 5 percent and greater than 25 percent, as specified in the Permit Application, for the Plant Gorgas Ash Pond, Bottom Ash Landfill and CCR and Gypsum Landfill. The Plant Gorgas Ash Pond may utilize erosion control measures, as specified in the Permit Application, other than horizontal terraces. (See Section IX.A. and B.)
 2. Written Closure Plan. The written closure plan, as part of the Application, must include, at a minimum, the information specified in 335-13-15-.07(3)(b)1.(i) through (vi).
 3. Initiation of Closure Activities. Except as provided for in 335-13-15-.07(3)(e)4 and 335-13-15-.07(4), the owner or operator of a CCR unit must commence closure of the CCR unit no later than the applicable timeframes specified in either 335-13-15-.07(3)(e)1 or 2.
 4. Completion of closure activities. Except as provided for in 335-13-15-.07(3)(f)2, the owner or operator must complete closure of the CCR unit subject to the requirements in 335-13-15-.07(3)(f)1.(i) through (ii).
 5. Notifications. No later than the date the owner or operator initiates closure of a CCR unit, the owner or operator must prepare a notification of intent to close a CCR unit. The notification must include the certification by a qualified professional engineer for the design of the final cover system as required by 335-13-15-.07(3)(d)3.(iii), if applicable. The owner or operator has completed the notification when it has been submitted to the Department and placed in the facility's operating record as required by 335-13-15-.08(1)(i)7.

- a. Within 30 days of completion of closure of the CCR unit, the owner or operator must prepare a notification of closure of a CCR unit. The notification must include the certification by a qualified professional engineer as required by 335-13-15-.07(3)(f)3. The owner or operator has completed the notification when it has been submitted to the Department and placed in the facility's operating record as required by 335-13-15.08(1)(i)8.
 6. Deed Notations. The Permittee must submit deed notations as specified in 335-13-15-.07(3)(i)1 through 4.
 7. Post Closure. Following closure, the owner or operator of a CCR unit must comply with the Uniform Environmental Covenants Program as specified in 335-5 and provide an environmental covenant to the Department. The owner or operator must place the executed environmental covenant in the facility's operating record as required by 335-13-15-08(1)(i)10.
- C. Post Closure Requirements.
1. Applicability. Except as provided by either 335-13-15-.07(5)(a)2., this section applies to owners or operators of CCR landfills, CCR surface impoundments, and all lateral expansions of CCR units that are subject to the closure criteria under 335-13-15-.07(3).
 - a. An owner or operator of a CCR unit that elects to close a CCR unit by removing CCR as provided by 335-13-15-.07(3)(c) is not subject to the post closure care criteria under this section.
 2. 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. ADEM 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.
 - a. If at the end of the post-closure care period the owner or operator of the CCR unit is operating under assessment monitoring in accordance with 335-13-15-.06(6), the owner or operator must continue to conduct post-closure care until the owner or operator returns to detection monitoring in accordance with 335-13-15-.06(6)(e)
 3. 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 ADEM. Monitoring requirements shall continue throughout the post closure period as determined by ADEM unless all waste is removed and no unpermitted discharge to waters of the State have occurred.
 4. 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 other components of the containment system. This shall preclude the growing of deep-rooted vegetation on the closed area.
 5. Written Post Closure Plan.
 - a. Content of the plan. The owner or operator of a CCR unit must prepare and submit to the Department as part of the permit application a written post closure plan that includes, at a minimum, the information specified in 335-13-15-.07(5)(d)1.(i) through (iii).
 - b. Amendment. Amendments to the post closure written plan must be made in accordance with 335-13-15-.07(5)(d)3. (i) through (iii). The Permittee shall be required to modify the permit in accordance with Section II.E.9.

6. Notification. Notification of completion of post-closure care period. No later than 60 days following the completion of the post-closure care period, the owner or operator of the CCR unit must prepare a notification verifying that post closure care has been completed. The notification must include the certification by a qualified professional engineer verifying that post-closure care has been completed in accordance with the closure plan specified in 335-13-15-.07(5)(d) and the requirements of this section. The owner or operator has completed the notification when it has been submitted to the Department and placed in the facility's operating record as required by 335-13-15-.08(1)(i)14.
- D. 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. REPORTING, RECORDKEEPING, NOTIFICATION, AND POSTING REQUIREMENTS.

- A. Reporting. All applications, certifications, demonstrations, designs, documentation, plans, reports and/or requests which are required by this permit or 335-13-15 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
- B. Recordkeeping. The Permittee must maintain a written operating record at the facility that includes:
 1. All information required by this permit or 335-13-15-.08(1).
 2. Copies of this Permit and the Application.
 3. Copies of all variances granted by ADEM, including copies of all approvals of special operating conditions.
- C. Retention. The Permittee must retain each file for at least ten years following the documentation date. This period may be extended by the request of ADEM at any time and are automatically extended during the course of an unresolved enforcement action regarding this facility.
- D. Availability. 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 an officer, employee, or representative of ADEM.
- E. Notification. The Permittee must submit the notifications required under 335-13-15-.08(2) to the Director before the close of business on the day the notification is required to be completed and, unless otherwise required, within 30 days of placing the notice in the operating record.
- F. Posting of Information to the Internet. The Permittee must maintain a publicly accessible internet site, titled, "CCR Rule Compliance Data and Information," containing the information specified in 335-13-15-.08(3).

Unless otherwise required, postings must be made within 30 days of placing the information in the operating record.

SECTION IX. VARIANCES AND SPECIAL CONDITIONS.

- A. The Permittee is granted a variance from ADEM Admin. Code r. 335-13-15-.07(3)(d)3.(i)(III) & (IV). The minimum and maximum final grade of the final cover system may be less than 5 percent and greater than 25 percent, as specified in the Permit Application, for the Plant Gorgas Ash Pond, Bottom Ash Landfill and CCR and Gypsum Landfill. (See Section VII.B.1.)
- B. The Permittee is granted a variance from ADEM Admin. Code r. 335-13-15-.07(3)(d)3.(i)(V) requiring horizontal terraces, and may utilize other erosion control measures, as specified in the Permit Application, for the Plant Gorgas Ash Pond. (See Section VII.B.1.)
- C. The Permittee is not required to cover interior slopes within the disposal area at the Plant Gorgas CCR and Gypsum Landfill. All exterior slopes within the disposal area must be covered weekly. (See Section IV.F)

Any variance granted by ADEM may be terminated by ADEM whenever ADEM 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.