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Alabama Department of Environmental Management
adem.alabama.gov

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Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

October 10, 2018

CERTIFIED MAIL 91 7199 9991 7038 0616 9536
RETURN RECEIPT REQUESTED

Mr. John Stephens
Environmental Manager
Alabama River Cellulose LLC
P.O. Box 100
Perdue Hill, Alabama 36470

Re: Permit Modification
Alabama River Cellulose Landfill
Landfill Permit No. 50-05
Monroe County, Alabama

Dear Mr. Stephens:

Enclosed is the Solid Waste Disposal Facility Permit for the Industrial Waste Landfill known as Alabama River Cellulose Landfill. The modified permit is effective October 10, 2018 and the expiration will remain April 15, 2023.

If you have any questions on this matter, please contact Mr. Blake Holden of the Solid Waste Branch at (334) 274-4248.

Sincerely,

S. Scott Story, Chief
Solid Waste Engineering Section
Land Division

SSS/bh

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)



Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

FINAL DETERMINATION

PERMIT RENEWAL

Alabama River Cellulose LLC
P.O. Box 100
Perdue Hill, Alabama 36470

Alabama River Cellulose Landfill
Permit No. 50-05

October 10, 2018

Alabama River Cellulose LLC (a subsidiary of Georgia-Pacific Corporation) has applied for a permit modification of the current Solid Waste Disposal Permit (Permit No. 50-05) for the Alabama River Cellulose Landfill. The modification requests an increase from 60 days to 90 days from the date of sampling for the facility to submit the records and results of the groundwater monitoring and analysis activities to the Department. The landfill is described as being located in the Northeast ¼ of Section 17 and the North ½ of Section 16, Township 7 North, Range 6 East, in Monroe County, Alabama. The total permitted area for the Alabama River Cellulose Landfill will remain 228.687 acres with the disposal area comprising of 160 acres. The service area for the Alabama River Cellulose Landfill would remain Alabama River Cellulose LLC facility located in Perdue Hill, Alabama, and all the Georgia-Pacific facilities located in the state of Alabama. All previously approved variances shall remain in the permit.

The waste stream for the landfill will remain as:

Filtercake: consists of solid wastewater treatment plant residues, including but not limited to bleached and unbleached pine and hardwood fibers removed at the primary clarifiers, biological solids from the activated sludge plant, and non-hazardous solids removed during routine maintenance from the mill boilers collected in the spill ponds.

Boiler Ashes: consists of the solid residue from the burning of wood, sludge, or other combustible material used to generate energy, including but not limited to uncombusted material from the mill boilers collected.

Wood wastes: consist of materials generated by the processing of wood, including but not limited to sticks, bark, grit, process sewer grit, sawdust, knots.

Lime Wastes: consist of rejected and non-reclaimed material from the chemical recovery area, including but not limited to lime mud, lime slaker rejects, lime dregs, and spill pond lime mud.

Rubbish consisting of combustible and noncombustible materials, including but not limited to pallets, machine clothing, paper, rags, cartons, rubber, plastics, glass, metal, containers rendered incapable of holding liquids, and waste from the newsprint operations that contain the above-mentioned materials. **Construction/Demolition Waste** consisting of waste building materials, packaging, and rubble, including but not limited to masonry materials, sheet rock, roofing, insulation (not including asbestos), scrap metal, and wood products. **Process residues** consisting of solid, non-hazardous process residues generated during routine and non-routine maintenance operations, including but not limited to tank residues, line residues, and sewer system deposits. **Wastes resulting from releases** consisting of solid, non-hazardous wastes generated during the clean-up of a material release, including but not limited to petroleum contaminated waste, the clean-up of non-hazardous material spills, and clean-up of materials rendered non-characteristic hazardous wastes (other than toxic and listed) during clean-up.

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

Technical Contact:
Blake Holden
Solid Waste Engineering Section
Land Division
(334) 274-4248



SOLID WASTE DISPOSAL FACILITY PERMIT

PERMITTEE: Alabama River Cellulose LLC

FACILITY NAME: Alabama River Cellulose Landfill

FACILITY LOCATION: Northeast quarter of Section 17 and in the North one-half of Section 16, Township 7 North, Range 6 East in Monroe County, Alabama. The total permitted area for the facility is 228.687 acres with 160 acres approved for disposal.

PERMIT NUMBER: 50-05

PERMIT TYPE: Industrial

WASTE APPROVED FOR DISPOSAL: Industrial Waste listed in permit number 50-05

APPROVED WASTE VOLUME: Maximum Average Daily Volume of 2000 cubic yards per day

APPROVED SERVICE AREA: The Permittee is allowed to accept waste for disposal from the Alabama River Cellulose LLC facility located in Perdue Hill, Alabama, and all the Georgia-Pacific facilities located in the state of Alabama.

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

ISSUANCE DATE: April 16, 2018

EFFECTIVE DATE: April 16, 2018

MODIFICATION DATE: October 10, 2018

EXPIRATION DATE: April 15, 2023


Alabama Department of Environmental Management

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

Permittee: Alabama River Cellulose LLC
County Road 39, off Highway 84
Perdue Hill, Alabama 36470

Landfill Name: Alabama River Cellulose Landfill

Landfill Location: Northeast ¼ of Section 17 and in the North ½ of Section 16, Township 7 North,
Range 6 East, in Monroe County, Alabama

Permit Number: 50-05

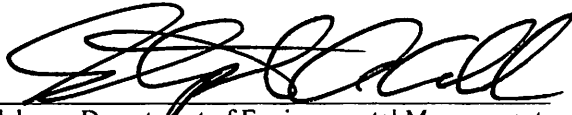
Landfill Type: Industrial

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 River Cellulose LLC (hereinafter called the Permittee), to operate a solid waste disposal facility, known as the Alabama River Cellulose 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 335-13-14 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 in the permit application dated May 30, 2011, for permit renewal, and on August 8, 2018, for permit modification and as amended (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 ADEM 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 April 16, 2018, **modified on October 10, 2018**, and shall remain in effect until April 15, 2023, unless suspended or revoked.


Alabama Department of Environmental Management

10/10/18
Date Signed

SECTION I. STANDARD CONDITIONS

A. Effect of Permit

The Permittee is allowed to dispose of nonhazardous solid waste in accordance with the conditions of this permit and ADEM Admin. Code Div. 13. Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local laws or regulations. Except for actions brought under Code of Alabama 1975, Section 22-27-1, *et seq.*, as amended, compliance with the conditions of this permit shall be deemed to be compliance with applicable requirements in effect as of the date of issuance of this permit and any future revisions.

B. Permit Actions

This permit may be suspended, revoked or modified for cause. The filing of a request for a permit modification or the notification of planned changes or anticipated noncompliance on the part of the Permittee, and the suspension or revocation does not stay the applicability or enforceability of any permit condition.

C. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

D. Definitions

For the purpose of this permit, terms used herein shall have the same meaning as those in ADEM Admin. Code Division 13, unless this permit specifically provides otherwise; where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

1. "EPA" for purposes of this permit means the United States Environmental Protection Agency.
2. "Permit Application" for the purposes of this permit, means all permit application forms, design plans, operational plans, closure plans, technical data, reports, specifications, plats, geological and hydrological reports, and other materials which are submitted to the Department in pursuit of a solid waste disposal permit.

E. Duties and Requirements

1. Duty to Comply

The Permittee must comply with all conditions of this permit except to the extent and for the duration such noncompliance is authorized by a variance granted by the Department. Any permit noncompliance, other than noncompliance authorized by a variance, constitutes a violation of Code of Alabama 1975, Section 22-27-1 *et seq.*, as amended, and is grounds for enforcement action, permit suspension, revocation, modification, and/or denial of a permit renewal application.

2. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The renewal application must be submitted to the Department at least 180 days before this permit expires.

3. Permit Expiration

This permit and all conditions therein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application as required by Section 1.,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 ADEM, within a reasonable time, any 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 the Department with copies of records kept as a requirement of this permit.

8. Inspection and Entry

Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the employees of the Department or their authorized representative to:

- a. Enter at reasonable times the Permittee's premises where the regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.
- d. Sample or monitor, at reasonable times, any substances or parameters at any location for the purposes of assuring permit compliance or as otherwise authorized by Code of Alabama 1975, Section 22-27-1 *et seq.*

9. Monitoring, Corrective Actions, and Records

- a. Samples and measurements taken for the purpose of monitoring or corrective action shall be representative of the monitored activity. The methods used to obtain representative samples to be analyzed must be the appropriate method from Chapter 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 non-sudden 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., 1. The operating record shall include:
 - a. Documentation of inspection and maintenance activities.
 - b. Daily Volume reports.
 - c. Personnel training documents and records.
 - d. Solid/Hazardous Waste Determination Forms for Industrial Wastes, and associated ADEM disposal approval correspondence for industrial waste and special waste.
 - e. Groundwater monitoring records.
 - f. Explosive gas monitoring records.
 - g. Surface water and leachate monitoring records. Monitoring is subject to applicable conditions of Section VI. of the permit.
 - 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.

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 Alabama River Pulp Company, Inc. office, the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure of the permitted landfill.

1. Operating record.
2. Closure Plan.

J. Mailing Location

All reports, notifications, or other submissions which are required by this permit should be sent via signed mail (i.e. certified mail, express mail delivery service, etc.) or hand delivered to:

Mailing Address:
Chief, Solid Waste Branch, Land Division
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463

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 can dispose of industrial waste at this landfill as stipulated in this permit.

F. Boundary Markers

The Permittee shall ensure that the facility is identified with a sufficient number of permanent boundary markers that are at least visible from one marker to the next.

SECTION III. SPECIFIC REQUIREMENTS FOR INDUSTRIAL WASTE LANDFILLS

A. Waste Identification and Management

1. Subject to the terms of this permit, the Permittee may dispose of the nonhazardous solid wastes listed in III.B. Disposal of any other wastes is prohibited, except waste granted a temporary or one time waiver by the Director.
2. The total permitted area for the Alabama River Cellulose Landfill is 228.687 acres with the disposal area comprising of 160 acres.
3. The maximum average daily volume of waste disposed at the facility shall not exceed 2000 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 Rule 335-13-5-.06(2)(a)5.(i).

B. Waste Streams

Filtercake: consists of solid wastewater treatment plant residues, including but not limited to bleached and unbleached pine and hardwood fibers removed at the primary clarifiers, biological solids from the activated sludge plant, and non-hazardous solids removed during routine maintenance from the mill boilers collected in the spill ponds.

Boiler Ashes: consists of the solid residue from the burning of wood, sludge, or other combustible material used to generate energy, including but not limited to uncombusted material from the mill boilers collected.

Wood wastes: consist of materials generated by the processing of wood, including but not limited to sticks, bark, grit, process sewer grit, sawdust, knots.

Lime Wastes: consist of rejected and non-reclaimed material from the chemical recovery area, including but not limited to lime mud, lime slaker rejects, lime dregs, and spill pond lime mud.

Rubbish consisting of combustible and noncombustible materials, including but not limited to pallets, machine clothing, paper, rags, cartons, rubber, plastics, glass, metal, containers rendered incapable of holding liquids, and waste from the newsprint operations that contain the above-mentioned materials.

Construction/Demolition Waste consisting of waste building materials, packaging, and rubble, including but not limited to masonry materials, sheet rock, roofing, insulation (not including asbestos), scrap metal, and wood products.

Process residues consisting of solid, non-hazardous process residues generated during routine and non-routine maintenance operations, including but not limited to tank residues, line residues, and sewer system deposits.

Wastes resulting from releases consisting of solid, non-hazardous wastes generated during the clean-up of a material release, including but not limited to petroleum contaminated waste, the clean-up of non-hazardous material spills, and clean-up of materials rendered non-characteristic hazardous wastes (other than toxic and listed) during clean-up.

C. Service Area:

The Permittee is allowed to accept waste for disposal from the Alabama River Cellulose LLC facility located in Perdue Hill, Alabama, and all the Georgia-Pacific facilities located in the state of 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%). All waste shall be spread in layers two feet or less in thickness and compacted weekly with adequate landfill equipment prior to placing additional layers of waste or placing the weekly cover. The Permittee is granted a variance from Rule 335-13-4-.23(1)(a)(1) requiring waste to be covered at the conclusion of each week's operation. The Permittee shall not be required to cover the waste until closure (see Section VIII.1.)

E. Liner Requirements

The Permittee shall install a composite liner system as described in the Application consisting of 12 inches of 1 x 10⁻⁷ cm/sec compacted soil, geosynthetic clay liner, a 60 mil HDPE geomembrane, 16 osy geocushion, 12 inches graded aggregate drainage layer with a minimum hydraulic conductivity of 1x10⁻² cm/sec and 6 inches of select granular material. The base of the composite liner system shall be a minimum of five (5) feet above the temporal fluctuation of the groundwater table.

The Permittee is allowed to lower the base grade elevations for phase 2 to phase 6. The base grade elevations are depicted on drawing 38304-C07 of major modification application dated January 2010.

The Permittee may not commence disposal of waste in a new lined cell 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 liner has been constructed in compliance with 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 cells before the owner or operator can commence waste disposal unless the Permittee is notified that ADEM will waive the inspection.

F. Security

The Permittee shall provide artificial and/or natural barriers, which prevent entry of unauthorized vehicular traffic to the facility.

G. All Weather Access Roads

The Permittee shall provide an all-weather access road to the dumping face that is wide enough to allow passage of collection vehicles.

H. Adverse Weather Disposal

The Permittee shall provide for disposal activities in adverse weather conditions.

I. Personnel

The Permittee shall maintain adequate personnel to ensure continued and smooth operation of the facility.

J. Environmental Monitoring and Treatment Structures

The Permittee shall provide protection and proper maintenance of environmental monitoring and treatment structures.

K. Vector Control

The Permittee shall provide for vector control as required by ADEM Admin. Code Division 13.

L. Bulk or Noncontainerized Liquid Waste

The Permittee shall not dispose of bulk or noncontainerized liquid waste, or containers capable of holding liquids, unless the conditions of Rule 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 Rule 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

A. The Permittee shall install and/or maintain a groundwater monitoring system, as specified below.

1. The permittee shall maintain the groundwater monitoring wells and piezometers identified in Table IV.1. at the locations specified in the Application, and any other groundwater monitoring wells which are added (Section IV.,A.,3.) during the active life and the post closure care period.

2. The Permittee shall maintain groundwater monitoring wells MW 11, MW 12, and MW 16 as the upgradient groundwater monitoring wells for the entire facility. On March 16, 2010, a permit modification has been accepted by the Department to move the groundwater monitoring well MW-11 twenty feet north of its existing location. The replacement well will be listed as monitoring well MW-11R.
3. 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 the ADEM Admin. Code.
4. Prior to installing any additional groundwater monitoring wells, the Permittee shall submit a report to the Department with a permit modification request specifying the design, location and installation of any additional monitoring wells. This report shall be submitted within ninety (90) days prior to the installation which, at a minimum, shall include.
 - a. Well construction techniques including proposed casing depths, proposed total depth, and proposed screened interval of well(s);
 - b. Well development method(s);
 - c. A complete analysis of well construction materials;
 - d. A schedule of implementation for construction; and
 - e. 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).
5. The Permittee is approved to use an interwell approach for statistical analysis.

B. Groundwater Monitoring Requirements

1. The Permittee shall determine the groundwater surface elevation at each monitoring well and piezometer identified in Table IV.1. each time the well or piezometer is sampled and at least semi-annually throughout the active life and post-closure care period.
2. The Permittee shall determine the groundwater flow rate and direction in the first zone of saturation, at least annually or each time groundwater is sampled and submit as required by ADEM Admin. Code Division 13.
3. Prior to the initial receipt of waste at the facility, the Permittee shall sample, and analyze for the parameters listed in Appendix I of Rule 335-13-4-.27, and/or any other parameters specified by the Department, all monitoring wells identified in Section IV.,A.,2. to establish background water quality and/or as directed by Rule 335-13-4-.27(2)(j) and 335-13-4-.27(2)(a)(1).
4. The Permittee shall sample, and analyze all monitoring wells identified in Table IV.1 for the parameters listed in Appendix I of Rule 335-13-4-.27(3), and/or any other parameters specified by the Department in Table IV.2, on a semi-annual basis throughout the active life of the facility and the post- closure care period in accordance with Rule 335-13-4-.27(3). Sampling shall be conducted during March and September of each year, beginning with the effective date of this permit. **The records and results of this sampling and analysis activity shall be submitted to the Department, within ninety (90) days of the date of sampling.**
5. In addition to the requirements of Section IV., B.,1., B.,2., B.,3. and B.,4., 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.

C. Sampling and Analysis Procedures

The Permittee shall use the following techniques and procedures when obtaining and analyzing samples from the groundwater monitoring wells described in Section IV.,A. to provide a reliable indication of the quality of the groundwater.

1. Samples shall be collected, preserved, and shipped (when shipped off-site for analysis) in accordance with the procedures specified in the Application. Monitoring wells shall be bailed or pumped to remove at least three to five times the well volume of water. Slow recharge wells shall be bailed until dry. Wells shall be allowed to recharge prior to sampling.
2. Samples shall be analyzed according to the procedures specified of the Application, 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.
3. Samples shall be tracked and controlled using the chain-of-custody and QA/QC procedures specified of the Application.

D. Recordkeeping and Reporting Requirements

1. Recording of Results

For each sample and/or measurement taken pursuant to the requirements of this permit, the Permittee shall record the information required by Section I.,E.,9.,c.

2. Recordkeeping

Records and results of all groundwater monitoring, sampling, and analysis activities conducted pursuant to the requirements of this permit shall be included in the operating record required by Section I.,I.,1.

E. Permit Modification

If at any time the Permittee or the Department determines that the groundwater monitoring system no longer satisfies the requirements of 335-13-4-.14 or Section IV.,A. of this permit, the Permittee must, within 90 days, submit an application for a permit modification to make any necessary and/or appropriate changes to the system.

TABLE IV.1.
GROUNDWATER MONITORING WELLS

Monitoring Well Number	Top of Casing (feet msl)	Part Monitored
UPGRADIENT MONITORING WELLS		
MW-11R	61.04	Phase 1 thru Phase 8
MW-12	61.69	Phase 1 thru Phase 8
MW-16	N/A	Phase 9 thru Phase 14
DOWNGRADIENT MONITORING WELLS		
MW-13	61.24	Phase 1 thru Phase 8
MW-14	60.18	Phase 1 thru Phase 8
MW-15	57.76	Phase 1 thru Phase 8
MW-17	N/A	Phase 9 thru Phase 14
MW-18	N/A	Phase 9 thru Phase 14

TABLE IV.2.
SEMI-ANNUAL GROUNDWATER MONITORING PARAMETERS

The parameters to be monitored are those Appendix I metals; 1, 2-dibromomethane; and 1, 2-dibromo-3-chloropropane.

NOTE: The parameters to be monitored for in this Table are those listed in Appendix I of Chapter 335-13-4, and/or any other waste stream specific parameters.

SECTION V. GAS MONITORING REQUIREMENTS

- A. The permittee shall design, construct, and operate the facility so as to control and monitor the generation and emission of explosive gases (such as methane), and so as to prevent said gases from collecting in, or around structures at concentrations exceeding the limits imposed by this permit.

B. Systems and Equipment

The Permittee shall provide, install, and maintain gas monitoring and/or recovery systems and equipment.

C. Concentration Limits

The Permittee shall prevent explosive gases from exceeding:

1. The lower explosive limit at the facility boundary.
2. Twenty-five percent (25%) of the lower explosive limit in any facility structure other than those those are components of the gas control and/or recovery system.

D. Gas Monitoring Program

1. The Permittee shall monitor explosive gases at the facility. The gas monitoring program shall monitor explosive gas concentrations in the atmosphere, in the soil, and inside all structures at the facility, including but not limited to buildings, under bridges, and any other location which is conducive to gas accumulation. Gas monitoring data shall be included in the operating record and be made available to the Department during inspections and at other times upon request.
2. The Permittee shall conduct the gas monitoring at least once in each calendar year. The Permittee shall submit a report to the Department within thirty (30) days after each monitoring event documenting the levels of explosive gases measured at the facility.
3. In the event that explosive gas levels exceed, at any time, the limits specified in this permit, the Permittee shall:
 - a. Immediately take all necessary steps to ensure immediate protection of human health and property.
 - b. Immediately notify the Department of the explosive gas levels detected and the immediate steps taken to protect human health and property.
 - c. Within twenty (20) days, submit to the Department for approval a remedial plan for the explosive gas releases. This plan shall describe the nature and extent of the problem and the proposed remedy. The plan shall be implemented upon approval by the Department, but within sixty (60) days of detection. Within the sixty (60) days the plan shall be placed in the operating record of the facility and the Department notified that the plan has been implemented.
4. Monitoring points for the measurement of explosive gas concentrations in the soil and/or atmosphere shall be located along the landfill boundaries and shall be spaced no more than 300 feet apart. In areas where the landfill boundary is within 1000 feet of a structure, the monitoring points shall be not more than 100 feet apart.

SECTION VI. LEACHATE AND SURFACE WATER MANAGEMENT REQUIREMENTS

The Permittee must collect and dispose of the leachate that is generated at the facility. The Permittee shall install a leachate collection system designed to maintain less than 12 inches (30 cm) depth of leachate over the liner. Prior to disposal, the permittee shall provide the Department with a letter from the receiving publicly or privately owned treatment works, approving the acceptance of the leachate. Discharges to publicly or privately owned treatment works may be subject to the requirements of the ADEM Water Division's State Indirect Discharge (SID) Program. The permittee shall construct and maintain run-on and run-off control structures. Surface water discharges from drainage control structures shall be permitted through the ADEM Water Division's National Pollutant Discharge Elimination System (NPDES) Program.

Alabama River Cellulose LLC is permitted to lower the base grades in phase 2 thru 6 and an addition of new lift station, additional piping, and new pump main for handling leachate in the southern portion of Phase 2 through Phase 6.

SECTION VII. CLOSURE AND POST-CLOSURE REQUIREMENTS

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

A. Final Cover

The Permittee shall grade final soil cover such that surface water does not pond over the permitted area as specified as required by Rule 335-13-4-.20(2)(c). The final grade of the final cover shall not exceed

25 percent unless otherwise approved by ADEM and shall be a minimum of five percent. Final grading shall be provided within 90 days after landfilling has either reached the final approved elevations, or ceased to occur. (Rule 335-13-4-.20(2)(c)).

The final cover may consist of 18 inches of earthen material with a permeability no greater than 1×10^{-5} cm/sec. The infiltration layer shall be placed in layers of 4 to 6 inches and compacted until 18 inches is achieved. The erosion layer must consist of a minimum 6 inches of earthen material that is capable of supporting native plant growth.

The Permittee has been granted approval for an alternate final cover in accordance with Rule 335-13-4-.20(2)(b)3. The final cover will consist of 12 inch layer of select waste (ash), 36 inch fiber sludge layer (consolidated to 24 inch thickness) and the erosion layer must consist of 6 inches of earthen material that is capable of supporting native plant growth. The permittee must submit in writing to the Department before closure which final cover will be constructed.

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

If the Permittee constructs the alternate final cover (fiber sludge cap), the disposal area shall be sectioned into a grid system and the depth of the fiber sludge layer shall be measured at one per acre and one permeability test per three acres shall be required. The results shall be submitted to the Department annually. If the data collected can show that there will be no further consolidation or degradation of the fiber sludge layer, the depth measurements and permeability tests, as per the request of the Permittee, shall be discontinued.

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 ADEM. 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

1. The Permittee is granted a variance from Rule 335-13-4-.23(1)(a)(1) requiring waste to be covered at the conclusion of each week's operation. The Permittee shall not be required to cover waste until closure. (See Section III.D)

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