PERLIMINARY DETERMINATION

Permit Renewal, Modification, & Variance

Gainestown Road Landfill, LLC
2908 W. Main Street
Whistler, Alabama 36612

Jackson Landfill
Permit No. 13-07

June 5, 2025

LaBella Associates, D.P.C. has submitted to the Alabama Department of Environmental Management (ADEM), on behalf of Gainestown Road Landfill, LLC, an application for renewal and modification of the Solid Waste Disposal Facility Permit for the Jackson Landfill (Permit No. 13-07). The modifications include revising the final closure grade elevations, redrawing and resequencing cells in Phase II, and replacing the existing sedimentation pond in the north/northeast with a new detention pond in the west/southwest portion of the landfill. Furthermore, the Permittee has requested variances to allow three to one (3:1) operating slopes, three to one (3:1) final slopes, and buffer incursions along the northwest corner of Phase II and the eastern slope of Phase I. The approved waste stream for the Jackson Landfill would remain non-putrescible and non-hazardous construction and demolition waste, including, but not limited to, non-processed wood debris, scrap tires, paving and packing materials; waste lime, non-coal boiler ash, recycle mill sludge, and compost mill sludge generated at the Boile White Paper, LLC's office paper mill. The service area for Jackson Landfill, as contained in the permit application and as approved by the Clarke County Commission, would remain as Clarke, Washington, Monroe, Wilcox, Marengo, Choctaw, and Mobile Counties of Alabama. The maximum average daily volume of waste disposed at the Jackson Landfill would remain as 400 cubic yards per day. All previously approved variances have been requested and would be granted in the renewed permit.

The Jackson Landfill is located in part of the Northwest ¼ of the of Section 15, Township 6 North, Range 2 East, and located at 1312 Gainestown Road, Jackson, in Clarke County, Alabama. The Jackson Landfill consists of approximately 81.91 acres, with a disposal area of 58.12 acres (31.12 acres in Phase I, and 27 acres in Phase II).

The Land Division has determined that the permit application complies with the requirements of ADEM's Administrative Code 335-13 regulations for a construction and demolition waste landfill.

Technical Contact:

Melissa H. Adornato
Solid Waste Engineering Section
Land Division
(334) 270-5605

Alabama Department of Environmental Management

SOLID WASTE DISPOSAL FACILITY PERMIT

PERMITTEE:	**Gainestown Road Landfill, LLC**
FACILITY NAME:	**Jackson Landfill**
FACILITY LOCATION:	**Northwest ¼ of Section 15, Township 6 North, Range 2 East in Clarke County, Alabama. The total permitted area for the facility is 81.91 acres with 58.12 acres approved for disposal.**
PERMIT NUMBER:	**13-07**
PERMIT TYPE:	**Construction/Demolition Landfill**
WASTE APPROVED FOR DISPOSAL:	**Non-putrescible and non-hazardous construction and demolition waste, including, but not limited to, non-processed wood debris, scrap tires, paving and packing materials; waste lime, non-coal boiler ash, recycle mill sludge, and compost mill sludge generated at the Boise White Paper, LLC's office paper mill.**
APPROVED WASTE VOLUME:	**400 cubic yards per day**
APPROVED SERVICE AREA:	**Choctaw, Clarke, Marengo, Mobile, Monroe, Washington, and Wilcox Counties of Alabama**

In accordance with and subject to the provisions of the Alabama 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 dispose of the above-described solid wastes at the above-described facility location.

ISSUANCE DATE:	**XXXXXXXXXXXXX**
EFFECTIVE DATE:	**XXXXXXXXXXXXX**
EXPIRATION DATE:	**XXXXXXXXXXXXX**

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Alabama Department of Environmental Management

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
SOLID WASTE PERMIT

Permittee:	Gainestown Road Landfill, LLC 2908 West Main Street Whistler, Alabama 36612
Landfill Name:	Jackson Landfill
Landfill Location:	1312 Gainestown Road, Jackson, Alabama 36545 Northwest ¼ of Section 15, Township 6 North, Range 2 East in Clarke County, Alabama
Permit Number:	13-07
Landfill Type:	Construction/Demolition Landfill

Pursuant to the Alabama Solid Wastes & Recyclable Materials Management Act, Code of Alabama 1975, §§ 22-27-1, *et seq*., as amended, and attendant regulations promulgated thereunder by the Alabama Department of Environmental Management (ADEM), this permit is issued to Gainestown Road Landfill LLC (hereinafter called the Permittee), to continue to operate a solid waste disposal facility, known as the Jackson 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 335-13-16 of the ADEM Administrative Code (hereinafter referred to as the "ADEM Admin. Code"). Rules cited are set forth in this document for the purpose of Permittee reference. Any Rule that is cited incorrectly in this document does not constitute grounds for noncompliance on the part of the Permittee. Applicable ADEM Administrative Codes are those that are in effect on the date of issuance of this permit or any revisions approved after permit issuance.

This permit is based on the information submitted to the Department on March 31, 2022, and as amended, for permit renewal, and on June 3, 2024, and as amended, for permit renewal revision and modification (hereby incorporated by reference and hereinafter referred to as the Application). Any inaccuracies found in this information could lead to the termination or modification of this permit and potential enforcement action. The Permittee must inform the Department of any deviation from or changes in the information in the Application that would affect the Permittee's ability to comply with the applicable ADEM Admin. Code or permit conditions.

This permit is effective as of XXXXXXXXXXXXXXX and shall remain in effect until XXXXXXXXXXXX, unless suspended or revoked.

_____ _____

Alabama Department of Environmental Management Date Signed

SECTION I. STANDARD CONDITIONS.

A. Effect of Permit

The Permittee is allowed to dispose of nonhazardous solid waste in accordance with the conditions of this permit and ADEM Admin. Code 335-13. Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local laws or regulations. Except for actions brought under the 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 335-13, unless this permit specifically provides otherwise; where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

1. "EPA", for purposes of this permit, means the United States Environmental Protection Agency.

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

E. Duties and Requirements

1. Duty to Comply

The Permittee must comply with all conditions of this permit except to the extent and for the duration such noncompliance is authorized by a variance granted by the Department. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit suspension, revocation, modification, and/or denial of a permit renewal application.

2. Duty to Reapply

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

3. Permit Expiration

This permit and all conditions therein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application as required by Section I.E.2., and, through no fault of the Permittee, the Department has not made a final decision regarding the renewal application.

4. Need to Halt or Reduce Activity Not A Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

5. Duty to Mitigate

In the event of noncompliance with this permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with the conditions of this permit.

7. Duty to Provide Information

If requested, the Permittee shall furnish to the Department, within a reasonable time, any information that the Department may reasonably need to determine whether cause exists for denying, suspending, revoking, or modifying this permit, or to determine compliance with this permit. If requested, the Permittee shall also furnish the Department with copies of records kept as a requirement of this permit.

8. Inspection and Entry

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

a. Enter at reasonable times the Permittee's premises where the regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

d. Sample or monitor, at reasonable times, any substances or parameters at any location for the purposes of assuring permit compliance or as otherwise authorized by the Act.

9. Monitoring, Corrective Actions, and Records

a. Samples and measurements taken for the purpose of monitoring or corrective action shall be representative of the monitored activity. The methods used to obtain representative samples to be analyzed must be the appropriate method from ADEM Admin. Code 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 120 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

Before the Permittee may commence disposal of waste in any new cell or phase:

a. The Permittee must submit a letter to the Department signed by both the Permittee and a professional engineer stating that the facility has been constructed in compliance with the permit.

b. The Department must inspect the new cells or phases unless the Permittee is notified that the Department will waive the inspection.

c. The Permittee may not commence disposal activities in any new cells or phases until approval of the new cells or phases is granted by the Department.

13. Noncompliance

The Permittee shall report all instances of noncompliance with the permit at the time noncompliance is discovered.

14. 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 r. 335-13-4-.21(1)(b).

2. The Permittee shall conduct random inspections of incoming loads.

3. Records of all inspections shall be included in the operating record.

H. Recordkeeping and Reporting

1. The Permittee shall maintain a written operating record at the location specified in Section I.I. The operating record shall include:

   a. Documentation of inspections and maintenance activities.

   b. Daily Volume reports.

   c. Personnel training documents and records.

   d. Solid/Hazardous Waste Determination Forms for Industrial Wastes, and the associated ADEM disposal approval correspondence for industrial waste and special waste.

   e. Groundwater monitoring records, if required.

   f. Explosive gas monitoring records, if required.

   g. Copies of this Permit and the Application.

   h. 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 action activities conducted pursuant to the requirements of this permit, including, but not limited to, groundwater, surface water, explosive gas and leachate monitoring. Groundwater monitoring is not required at this time, but if it is determined that monitoring is necessary, the Permittee shall conduct monitoring and submit reports as directed by the Department. 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 ADEM Admin. Code 335-13 must be furnished upon request, and made available at reasonable times for inspection by any officer, employee, or representative of the Department.

b. All records, including plans, required under this permit or ADEM Admin. Code 335-13 shall be retained by the Permittee for a period of at least three years. The retention period for all records is extended automatically during the course of any unresolved enforcement action regarding the facility, or as requested by the Department.

c. A copy of records of waste disposal locations and quantities must be submitted to the Department and local land authority upon closure of the facility.

I. Documents to be Maintained by the Permittee

The Permittee shall maintain, at the landfill, the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure.

1. Operating record.

2. Closure Plan.

J. Mailing Location

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

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

2. Physical Address
Chief, Solid Waste Branch, Land Division
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, Alabama 36110-2400

K. Signatory Requirement

All applications, reports, or information required by this permit, or otherwise submitted to the Department, shall be signed and certified by the owner as follows:

1. If an individual, by the applicant.

2. If a city, county, or other municipality or governmental entity, by the ranking elected official or by a duly authorized representative of that person.

3. If a corporation, organization, or other legal entity, by a principal executive officer, of at least the level of Vice President, or by a duly authorized representative of that person.

L. Confidential Information

The Permittee may claim information submitted as confidential pursuant to ADEM Admin. Code 335-1-1-.06.

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 335-13.

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, as provided in the Application, for the detecting and preventing the disposal of free liquids, regulated hazardous waste, PCB's, regulated medical waste, and other unauthorized waste streams at the facility.

D. Unauthorized Discharge

The Permittee shall operate the disposal facility in such a manner that there will be no water pollution or unauthorized discharge. Any discharge from the disposal facility or practice thereof may require a National Pollutant Discharge Elimination System permit under the Alabama Water Pollution Control Act.

E. Industrial Waste Disposal

The Permittee shall not dispose of industrial process waste at this landfill except for those listed in Section III.B.

F. Boundary Markers

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

G. Certified Operator

The Permittee shall be required to have an operator certified by the Department on-site during hours of operation, in accordance with the requirements of ADEM Admin. Code 335-13-12.

SECTION III. SPECIFIC REQUIREMENTS FOR C/D LANDFILLS.

A. Waste Identification and Management

1. Subject to the terms of this permit, the Permittee may accept for disposal the non-hazardous solid wastes listed in Section 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 Jackson Landfill is approximately 81.91 acres, with a disposal area of 58.12 acres (Phase I is 31.12 acres, and Phase II is 27 acres).

3. The maximum average daily volume of waste disposed at the facility, as contained in the permit application and approved by the Clarke County Commission, who gave the local approval, shall not exceed 400 cubic yards per day. Should the average daily volume exceed this value by 20% or 100 tons/day, whichever is less, for two (2) consecutive quarters the Permittee shall be required to modify the permit in accordance with ADEM Admin. Code r. 335-13-5-.06(2)(b)2. An increase in maximum average daily volume shall not be approved by the Department unless the permittee has received local approval for the increased maximum average daily volume. The average daily volume shall be computed as specified by ADEM Admin. Code r. 335-13-4-.23(2)(f).

B. Waste Streams

The Permittee may accept for disposal non-putrescible and non-hazardous construction and demolition waste, including, but not limited to, non-processed wood debris, scrap tires, paving and packing materials; waste lime, non-coal boiler ash, recycle mill sludge, and compost mill sludge generated at the Boise White Paper, LLC's or its successor, paper mill.

C. Service Area

The service area for this landfill, as contained in the permit application and approved by the Clarke County Commission, who gave local approval, is Choctaw, Clarke, Marengo, Mobile, Monroe, Washington, and Wilcox Counties of Alabama.

D. Waste Placement, Compaction, and Cover

All waste shall be confined to an area as small as possible within a single working face and spread to a depth not exceeding two feet prior to compaction, and such compaction shall be accomplished on a face slope not to exceed 3 to 1 (33.3%). (See Section VIII.6.) 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. A minimum of six inches of compacted earth or other alternative cover material, approved by the Department and listed in Section VIII, shall be added at the conclusion of each week's operation. The Permittee is approved to use a mixture of boiler ash and indigenous soil mixed at 50:50 proportions as an alternate cover material. (See Section VIII.3.) The Permittee is approved to use a mixture of compost mill sludge, a byproduct of Boise White Paper, LLC's office paper mill, and indigenous soil mixed at 50:50 proportions as an alternate cover material. (See Section VIII.5.) When using alternate cover material, it is required that a minimum of six inches of compacted earth be added at the conclusion of the last full week of operation in the month. The Permittee is approved to operate two working faces – one for scrap tire disposal and one for all other approved wastes, including construction/demolition waste and inert debris. (See Section VIII.2.) The Permittee is granted a variance for working slopes not to exceed a 3 to 1 ratio. (See Section VIII.6.)

E. Liner Requirements

The Permittee shall not be required to install a composite liner system at this time. The bottom of the construction and demolition waste shall be a minimum of five (5) feet above the highest measured groundwater level as determined by ADEM Admin. Code r. 335-13-4-.11(2)(a).

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 335-13.

L. Bulk or Noncontainerized Liquid Waste

The Permittee shall not dispose of bulk or noncontainerized liquid waste, or containers capable of holding liquids, unless the conditions of ADEM Admin. Code r. 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 ADEM Admin. Code r. 335-13-4-.23(1)(f).

R. Litter Control

The Permittee shall control litter.

S. Fire Control

The Permittee shall provide fire control measures.

SECTION IV. GROUNDWATER MONITORING REQUIREMENTS.

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

SECTION V. GAS MONITORING REQUIREMENTS.

The Permittee must install and maintain an explosive gas monitoring system in accordance with ADEM Admin. Code 335-13.

SECTION VI. SURFACE WATER MANAGEMENT.

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

SECTION VII. CLOSURE AND POST-CLOSURE REQUIREMENTS.

The Permittee shall close the landfill and perform post-closure care of the landfill in accordance with ADEM Admin. Code 335-13.

A. Final Cover

The Permittee shall grade final soil cover such that surface water does not pond over the permitted area as specified in the Application. The final cover system shall comply with ADEM Admin. Code 335-13. The permittee is approved to use alternative final cover material in addition or in lieu of soil. The material approved is recycle mill sludge, a byproduct of Boise White Paper, LLC's office paper mill. The Permittee should mix at 50:50 proportions of the recycle mill sludge with topsoil for application as final cover. (See Section VIII.1.)

The Permittee is granted a variance from ADEM Admin. Code 335-13-4-.20(2)(c)(2) requiring a maximum 4 to 1 (25%) final grade for the final closure system. The final closure system shall not exceed a final grade of 3 to 1 (33.3%). (See Section VIII.8.)

B. Vegetative Cover

The Permittee shall establish a vegetative or other appropriate cover, as approved by the Department, within

90 days after completion of final grading requirements in the Application. Preparation of a vegetative cover shall include, but not be limited to, the placement of seed, fertilizer, mulch, and water.

C. Notice of Intent

The Permittee shall place in the operating record and notify the Department of their intent to close the landfill prior to beginning closure.

D. Completion of Closure Activities

The Permittee must complete closure activities of each landfill unit in accordance with the Closure Plan within 180 days of the last known receipt of waste.

E. Certification of Closure

Following closure of each unit, the Permittee must submit to the Department a certification, signed by a registered professional engineer, verifying the closure has been completed according to the Closure Plan.

F. Post-Closure Care Period

Post-closure care activities shall be conducted after closure of each unit throughout the life of this permit and continuing for a period of a minimum 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.

G. Post-Closure Maintenance

The Permittee shall provide post closure maintenance of the facility to include regularly scheduled inspections. This shall include maintenance of the cover, vegetation, monitoring devices and pollution control equipment and correction of other deficiencies that may be observed by the Department. Monitoring requirements shall continue throughout the post closure period as determined by the Department unless all waste is removed and no unpermitted discharge to waters of the State have occurred.

H. Post-Closure Use of Property

The Permittee shall ensure that post closure use of the property never be allowed to disturb the integrity of the final cover, liner, or any other component of the containment system. This shall preclude the growing of deep-rooted vegetation on the closed area.

I. Certification of Post-Closure

Following post-closure of each unit, the Permittee must submit to the Department a certification, signed by a registered professional engineer, verifying the post-closure has been completed according to the Post-Closure Plan.

J. Recording Instrument

The Permittee must provide documentation of compliance with the requirements of the Uniform Environmental Covenants Program in ADEM Admin. Code 335-5 and shall execute the following:

1. Record a notation onto the land deed within 90 days from the certification of closure. 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.

2. File the covenant at the courthouse where the land deed is held thirty (30) days of receipt of the covenant signed by ADEM's Land Division Chief.

3. 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.

K. 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 & SPECIAL CONDITIONS.

1. The Permittee is granted a variance from ADEM Admin. Code r. 335-13-4-.20(2)(b). The permittee is approved to use alternative final cover material in addition or in lieu of soil. The material approved is recycle mill sludge, a byproduct of Boise White Paper, LLC's or its successor, paper mill. The permittee should mix at 50:50 proportions of the recycle mill sludge with topsoil for application as final cover. (See Section VII.A.)

2. A variance is granted for Jackson Landfill to operate in two working faces – one for scrap tire disposal and one for all other approved wastes, including construction/demolition waste and inert debris. (See Section III.D.)

3. Permission is granted for Jackson Landfill to use a mixture of boiler ash (excluding coal ash) and indigenous soil mixed at 50:50 proportions as an alternate cover material to be applied on a weekly basis. (See Section III.D.)

4. Permission is granted to use a mixture of waste lime and boiler ash (excluding coal ash) to construct a 100-foot-wide berm as a buffer between the active disposal areas of the landfill and facility property that is not approved for waste disposal.

5. The Permittee is granted a variance from ADEM Admin. Code r. 335-13-4-.23(1)(a)1. The Permittee is approved to use alternative cover material in addition or in lieu of soil. The material approved is compost mill sludge, a byproduct of Boise White Paper, LLC's or its successor, paper mill. The alternate cover material should be mixed with sand or other soils in the ratio of 50% soil: 50% compost mill sludge. (See Section III.D.)

6. The Permittee is granted a variance from ADEM Admin. Code r. 335-13-4-.23(1)(c) requiring working slopes not to exceed 4 to 1 (25%). The Permittee is approved to operate working slopes not to exceed 3 to 1 (33%). (See Section III.D.)

7. The Permittee is granted a variance from ADEM Admin. Code r. 335-13-4.12(2)(f) requiring a 100-foot buffer zone along the northwestern boundary of Phase II and along the eastern boundary of Phase I. In these areas, the Permittee is approved for a 50-foot buffer zone instead.

8. The Permittee is granted a variance from ADEM Admin. Code 335-13-4-.20(2)(c)2. requiring a maximum 4 to 1 (25%) final grade for the final closure system. The final cover system shall not exceed a final grade of 3 to 1 (33.3%). (See Section VII.A.)

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.

Permit No. 13-07 Renewal, Minor Mod, and Variances Application

LaBella
Powered by partnership.

PERMIT APPLICATION
TO RENEW AND MODIFY EXISTING PERMIT NO. 13-07
CONSTRUCTION/DEMOLITION LANDFILL

JACKSON LANDFILL
1312 GAINESTOWN ROAD
CLARKE COUNTY, ALABAMA
PERMIT NO.: 13-07
PROJECT NO. 2241604.00 P02

PREPARED FOR:

GAINESTOWN ROAD LANDFILL, LLC
2908 WEST MAIN STREET
WHISTLER, ALABAMA 36612

REVISED NOVEMBER 8, 2024
REVISED DECEMBER 23, 2024

PREPARED BY:

LABELLA ASSOCIATES, D.P.C.
528 MINERAL TRACE
BIRMINGHAM, ALABAMA 35244
PHONE: (205) 985-4874 FAX: (205) 518-5107

Trey Helms, P.G.
Project Geologist

Phillip D. Davis, P.E., P.G.
Senior Engineer

LaBella
Powered by partnership.

December 23, 2024

Alabama Department of Environmental Management
Post Office Box 301463
Montgomery, Alabama 36130-1463

Received
DEC 30 2024
Land Division

Attention: Mr. Blake Holden
Solid Waste Branch

RE: ADEM Landfill Permit Application
Permit Renewal & Modification
Jackson Landfill
Clarke County, Alabama
Permit No.: 13-07

Dear Mr. Holden:

On behalf of Gainestown Road Landfill, LLC, LaBella Associates, D.P.C., (LaBella) is submitting the enclosed permit renewal and modification application for the Jackson Landfill. The subsequent application and modification document has been revised in accordance with ADEM's comment letter dated November 8, 2024. Gainestown Road Landfill, LLC is requesting that the five previously approved variances be incorporated into the petition for an extension. Pursuant to the requirements of Chapter 8, of ADEM Admin. Code Division 335-13, Section VIII of Solid Waste Disposal Facility Permit #13-07, as issued on October 11, 2017, and modified on April 8, 2019, includes the following variances:

1. The Permittee is granted a variance from Rule 335-13-4-.20(2)(b). The permittee is approved to use alternative final cover material in addition or in lieu of soil. The material approved is recycle mill sludge, a byproduct of Boise White Paper, LLC's or its successor, paper mill. The permittee should mix at 50:50 proportions of the recycle mill sludge with topsoil for application as final cover (see Section VII.A.).
2. A variance is granted for Jackson Landfill to operate in two working faces - one for scrap tire disposal and one for all other approved wastes, including construction/demolition waste and inert debris (see Section III.D.).
3. Permission is granted for Jackson Landfill to use a mixture of boiler ash (excluding coal ash) and indigenous soil mixed at 50:50 proportions as an alternate cover material to be applied on a weekly basis (see Section III.D.).
4. Permission is granted to use a mixture of waste lime and boiler ash (excluding coal ash) to construct a 100-foot wide berm as a buffer between the active disposal areas of the landfill and facility property that is not approved for waste disposal.
5. The Permittee is granted a variance from Rule 335-13-4-.23(l)(a)l. The permittee is approved to use alternative cover material in addition or in lieu of soil. The material approved is compost mill sludge, a byproduct of Boise White Paper, LLC's or its successor, paper mill. The

alternate cover material should be mixed with sand or other soils in the ratio of 50% soil: 50% compost mill sludge (see Section III.D.).

Additionally, in accordance with ADEM Admin. Code r. 335-13-8-.02(2)(a), the precise extent of the relief being sought, including the specific provisions of the regulations addressed under this new variance request are as follows:

- Specific authorization for allowable landfill operating slopes to not exceed 3 to 1 (33%). Such authorization would reflect a variance from the requirements of ADEM Admin. Code r. 335-13-4-.23(1)(c), which states: *"All waste shall be...placed onto an appropriate slope not to exceed 4 to 1 (25%) or as approved by the Department."*
- Specific authorization for allowable landfill closure slopes to not exceed 3 to 1 (33%). Such authorization would reflect a variance from the requirements of ADEM Admin. Code r. 335-13-4-.20(2)(c)2, which states: *"The maximum final grade of the final cover system shall not exceed 25 percent or as specified by the Department to minimize erosion."*
- The Permittee is requesting a variance from Rule 335-13-4-.12(2)(f) requiring a 100 foot buffer around the perimeter of the disposal area. Specifically, the Permittee is requesting a buffer of less than 100 feet in the northwestern portion and along the northeastern side of the landfill as shown in Figure 8 of the Permit Application. The Permittee is notifying the Department that the disposal cells are being reconfigured, as shown in Figure 8 of the Permit Application.

As required by ADEM Admin. Code r. 335-13-8-.02(b), Gainestown Road Landfill, LLC presents the following assessment of the impacts the requested variances would impose on public health and the environment:

- The area immediately surrounding the Jackson Landfill is undeveloped, wooded property. No residences, schools, or commercial properties are located adjacent to the Landfill. Further, disposal volumes at the facility are at decreased levels, with the primary waste volume being inert sludge and ash from the nearby papermill. Gainestown Road Landfill, LLC believes the requested variances authorizing 3 to 1 slopes and reduction in the width of the buffer in the northwestern portion and along the northeastern side of the landfill would be appropriate for the type and volume of waste it is receiving for disposal and that, consistent with other similar landfills that have been granted these variances, the operation of the landfill will remain protective of public health and the environment.

In addition to the variances noted above Gainestown Road Landfill, LLC has also included a request for the following minor modifications to the facility's Permit:

- Re-drawing and re-sequencing of disposal cells within the area designated as Phase II of the current facility Permit.
- Removal of an existing sedimentation pond located in the north central portion of the landfill in accordance with the recently modified facility General NPDES Permit ALG160103
- Revision to the design of the proposed final closure grade of the landfill.

In accordance with ADEM Admin. Code r. 335-13-8-.02(d), Gainestown Road Landfill, LLC asserts that the granting of the requested variances from the particular provisions of Division 13 would not threaten the public health or unreasonably create environmental pollution. If you have any questions concerning this letter or require any additional information, please contact our office at (205) 985-4874.

Sincerely,
LaBella Associates, D.P.C.

Trey Helms, P.G.
Project Geologist

Enclosures: Renewal and Modification Permit Application
Closure and Post Closure Plan

cc: Ms. Wendy Walker, Gainestown Road Landfill, LLC

LaBella
Powered by partnership.

PERMIT APPLICATION
TO RENEW AND MODIFY EXISTING PERMIT NO. 13-07
CONSTRUCTION/DEMOLITION LANDFILL

JACKSON LANDFILL
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Trey Helms, P.G.
Project Geologist

Phillip D. Davis, P.E., P.G.
Senior Engineer

ENGINEER CERTIFICATION

I certify under penalty of law that I am a Registered Professional Engineer, licensed to practice in the State of Alabama. The information submitted herein, to the best of my knowledge and belief is true, accurate and complete.

Phillip D. Davis, PE.
Alabama Profession Engineer #19547 P.E..
Senior Engineer – Director of Regulatory Affairs
LaBella Associates, D.P.C.

12/23/2024
Date

OWNER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Wendy Walker
Gainestown Road Landfill, LLC

11/5/2024
Date

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FIGURES

APPENDICES

1.0 INTRODUCTION

The Jackson Landfill is located approximately 1.0 miles southeast of Jackson, Alabama along Clarke County Route 2 (1312 Gainestown Road) in Clarke County (Figure 1). The landfill was permitted as a construction demolition landfill by the Alabama Department of Environmental Management (ADEM) in 1994 (ADEM Solid Waste Disposal Facility Permit No. 13-07). From 1975 to 1994, this site was operated by Jackson Sand & Gravel Company as a producer of construction sand and gravel for southwest Alabama. The landfill was permitted in 1994 to reclaim the sand and gravel pit using construction and demolition wastes. The landfill was sold to Brian Walker on March 5, 2002, and the operation today is managed by Lewis and Wendy Walker. The primary wastes received by Jackson Landfill are non-processed wood debris with intermixed sand and gravel. Wastes may also consist of processed wood debris, waste building materials, packaging, and rubble such as masonry materials, sheet rock, roofing wastes, insulation (excluding asbestos), rebar, scrap metal, tires, paving material and concrete. Jackson Landfill has also received variances to use as weekly cover non-coal boiler ash, waste lime, compost mill sludge and recycled mill sludge generated at the nearby Boise White Paper, LLC Mill or its successor.

The permitted service area includes Clarke, Choctaw, Marengo, Mobile, Monroe, Washington and Wilcox Counties. This landfill has significantly reduced the burden on other local solid waste landfills. Since the original landfill was permitted in 1994, Jackson Landfill has provided a cost-effective way for other solid waste landfills to be more efficiently managed and save valuable landfill space. The renewal of the landfill permit will allow Jackson Landfill to continue to meet the need for less expensive construction demolition landfill services. The 1998 Statement of Consistency from the Alabama-Tombigbee Regional Planning and Development Commission and the 1994 Certificate of Local Approval for Solid Waste Services are included as Appendix A.

This site is not located in either a flood plain area or a wetlands area. There are no endangered or threatened species that will be impacted by the landfill operations at this site. The depth to the groundwater is greater than 25 feet below land surface (bls) and there are no public or private water supply wells within a one-mile radius of the site. The nearest airport is approximately 9,000 feet west-southwest from the landfill and consists of a single runway. There are no regularly scheduled flights from the airport and it is only intermittently staffed. There are no active faults, sinkholes, or karst terrain at the site. The Alabama Historical Commission has also certified the absence of any significant archaeological or historical items. Its letter of approval for this site is included as Appendix C.

This permit renewal application addresses all the applicable requirements for construction/demolition landfills as set forth in ADEM Administrative Code 335-13. Appendix O includes the ADEM Solid Waste Disposal Facility Permit Application (ADEM Form 439). Section 2.0 of this application contains a permit review list set forth by ADEM Division 13 regulations and includes references to section number and page number where the checklist items are addressed. The permit application has been organized according to ADEM Administrative Code 335-13-4. The permit requirements are presented in Sections 3.0 through 16.0 in the order they are discussed in the ADEM Division 13 Regulations.

This renewal application also includes a request for modification of the existing permit. Specifically, this application requests the addition of two new permit variances in addition to the renewal of the five existing permit variances previously approved. The new variances are to allow the construction of 3:1 slopes at the landfill and to allow 50-foot buffers at certain points along the landfill boundary. Neither of these variances are uncommon at other permitted landfills within the State, and have historically been routinely approved by the Department. The specifics of the requests and the supporting arguments for each are included in the application as Appendix I.

In addition to the variances noted above Gainestown Road Landfill, LLC has also included a request for the following minor modifications to the facility's Permit:

- Re-drawing and re-sequencing of disposal cells within the area designated as Phase II of the current facility Permit.
- Removal of an existing sedimentation pond located in the north central portion of the landfill in accordance with the recently modified facility General NPDES Permit ALG160103
- Revision to the design of the proposed final closure grade of the landfill.

2.0 ADEM PERMIT REVIEW LIST

For Construction/Demolition Landfill

3.0 SITING STANDARD

3.1 FLOOD PLAIN

The landfill is located in the NW 1/4 of Section 15, T6N, R2E, Clarke County, Alabama and is above the 100-year flood plain elevation and will therefore not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the flood plain, or result in washout of solid waste (Figure 1). Figure 2 is the USGS 15-minute Choctaw Bluff Quadrangle Map which delineates areas with a 1 in 100 chance of being inundated during any year. Section 15, T6N, R2E, as shown on this map is not within the flood prone area.

3.2 ENDANGERED OF THREATENED SPECIES

Appendix B contains letters from the U. S. Fish and Wildlife Service (USFWS) dated October 1, 1998 stating that there are no federally listed endangered or threatened species of plants, fish or wildlife located on the project site. The unnamed tributary to Basset Creek in the southwest portion of the project site is outside of the landfill area and will not be adversely impacted by landfill operations. Jackson Landfill has implemented sediment and erosion control practices to eliminate any adverse discharge to this tributary.

3.3 AIRPORT RUNWAYS

Jackson Municipal Airport is located approximately 9,000 feet to the west-southwest from the construction/demolition landfill site. No putrescible waste will be disposed of at this site, and thus the landfill will not pose a bird hazard to aircraft.

3.4 ZONES OF ACTIVE FAULTS, SINKHOLES, AND KARST TERRAIN

The nearest known fault to the site is the Jackson fault which is located over 900 feet to the east. This is a normal fault; the landfill is located on the foot wall. This fault zone is inactive with the latest activity preceding the Holocene epoch. There are no sinkholes on site nor is karst terrain present which might predispose sinkhole development. Figure 3 is a geologic map of a portion of Clarke County and shows the location of the landfill with respect to the Jackson Fault.

3.5 ARCHEOLOGICAL OR HISTORICAL SIGNIFICANCE

Appendix C contains a letter of approval dated February 24, 1998 from the Alabama Historical Commission. They do not have any objection to the location of the landfill.

3.6 NPDES PERMIT

A General NPDES Permit No. ALG160103 has been issued to the and has an effective date of 2-1-22 to 1-31-27. This permit is being modified to reflect current topography, current stormwater discharge locations, and best management practices (BMPs) including engineering controls, such as the addition stormwater retention ponds.

3.7 NON-POINT SOURCE POLLUTION

This facility shall not cause non-point source pollution of waters of the state. Surface water runoff will be directed to settling basins as outlined in the facility's BMP addressing erosion, siltation, and runoff.

3.8 WETLANDS

There are no wetlands present within the boundaries of the landfill. This is certified by the U.S. Army Corps of Engineers in their letter dated March 4, 1998 (Appendix D). Wetlands north of the site in the vicinity of Basset Creek will not be impacted by this construction/demolition landfill.

4.0 GENERAL DESIGN STANDARDS

4.1 ELEVATION OF GROUNDWATER TABLE OR BEDROCK

The depth to groundwater at this site is more than 25 feet bls. A review of data available from the Geological Survey of Alabama revealed no water supply wells within a 1-mile radius of the site. However, there are three public water supply wells in Jackson, AL approximately 1½ miles northeast of the landfill (Figure 1). The average depth to groundwater in these wells was greater than 40 feet below land surface.

There have been multiple groundwater investigations at the Jackson Landfill site during its 30 years of operation. During the hydrogeological assessments of this site, hydrologic data has been collected from a variety of sources. These include four separate on-site hydrologic investigations (1994, 1999, 2023 and 2024) performed by Tom Joiner and Associates (TJ&A). TJ&A also interviewed the operator of the sand and gravel pit, collected water level data from nearby properties, (Appendix E) and reviewed data supplied by the Water Resources Division of the Geologic Survey of Alabama.

A summary of the hydrogeologic investigations performed for this landfill is included as Appendix F. This summary is based on a review of four separate investigations that include:

- The initial 1994 permit application for the original 17 acre landfill
- The August 27, 1999 application to modify and expand the landfill to 58.01 acres
- A 2023 investigation of the western portion of the landfill to evaluate the relationship of groundwater to the base cell elevations
- A 2024 investigation including advancing a test pit to confirm if perched water was present in the northwest portion of the landfill as reported during the 2023 investigation.

In 1994, the landfill was permitted in the footprint of the former Jackson Sand and Gravel pit. The regulatory requirements at this time required that the base elevation of the disposal area be 5 feet or more above the seasonal high groundwater table. The proposed method of disposal was to land apply waste on the surface of the former sand and gravel pit. To show that the base elevation of the disposal area was 5 feet above the groundwater table, TJA supervised the excavation of four test pits to depths ranging from 16 to 23 feet below land surface. All test pits were dry the following day and ADEM approved the hydrogeologic investigation.

In 1999, the landfill was expanded to 58 acres. TJA used the same approach for the hydrogeologic investigation. Three test pits (TP-5, 6, 7) were excavated and all were dry. ADEM issued the permit and

added a proviso to the permit that required the permittee to survey, certify and obtain ADEM approval of the new cell before any waste could be placed in the cell.

TJA conducted a 2023 Hydrogeologic Investigation by drilling three piezometers as designated by ADEM.

In 2024, LaBella Associates, D.P.C. (LaBella), at the request of ADEM, advanced a test pit (TP-8) just west of PZ-1. This test pit was advanced to confirm groundwater was not present in the area of PZ-1.

LaBella, evaluated the 1994, 1999, 2023 and 2024 investigations to define a contoured surface elevation that is 10 feet above the groundwater elevations. The results of the LaBella Limited Hydrogeologic Evaluation are included as Appendix F.

As stated above, the landfill was originally permitted within the footprint of the former Jackson Sand and Gravel surface mine. The original Permit issued in 1994 permitted method of disposal as land applying waste on the surface of the former sand and gravel pit. This Permit renewal application does not include any request to change or alter the base grade elevation of any current or future disposal cell. The method of disposal will remain the land application of waste to the existing surface grade.

5.0 PLANS REQUIRED

5.1 COMPLIANCE

Plans and operational reports for construction, operation, maintenance, closure and post closure care of landfill units will be prepared and kept on site.

5.2 ON-SITE CONTROL

Figure 5 includes a Boundary Survey for the site completed by McVay Surveying. The site boundaries (permitted landfill boundary and property boundary), benchmarks, gas monitoring wells, bar holes, test pit excavations, piezometers and control points are shown on Figures 4 and 6.

5.3 DETAIL PRESENTATION OF GEOLOGICAL UNITS

Seven test pits advanced during the 1994 and 1998 investigations in the base of the sand and gravel pit to depths of 20 feet below land surface. These pits are shown on Figure 4 and their purpose was to demonstrate that the groundwater was more than 10 feet below the land surface. Samples were collected and geologic logs of each test pit are included in Appendix F. The geologic strata at this site are massive cross- bedded deposits of sand and gravel. These deposits vary in color from yellowish-white to purplish-gray to purplish-red. Correlation of the geologic units between test pits was not possible due to the massive cross-bedded nature of the deposits. TJA also conducted a hydrologic piezometer study in 2023 to evaluate the groundwater elevation beneath the western half of the landfill. A discussion of the site geology and hydrogeology is presented in Section 6.0.

5.4 BOUNDARY PLAT AND LEGAL PROPERTY DESCRIPTION

Figure 4 contains the boundary plat prepared and signed by Ralph McVay, registered land surveyor in the State of Alabama. Appendix G contains the legal property descriptions for the landfill.

5.5 INITIAL AND FINAL TOPOGRAPHICS

Southern Resource Mapping was hired in 2023 to conduct an aerial survey and then produce a current topographic map (Figure 5). The proposed final topography is discussed in Section 13.0 (Closure) of this report.

5.6 EXISTING AND PROPOSED SURFACE DRAINAGE

The landfill has been developed by disposing of materials within a former sand and gravel pit. The sand and gravel pit had been developed by excavating into a hill which resulted in the creation of a highwall that surrounds the waste disposal area. Incident rainfall is currently drained away from active waste

disposal areas to the north and south. This water will be discharged as non- point source water or as point source water from a pond in the southern and southwestern portions of the landfill.

The waste disposal plan for the landfill is to deposit wastes from topographically higher elevation areas to lower areas. Working in this fashion, waste disposal will continue within the permit boundaries as discussed in Section 10.0. Incident rainfall will be drained away from the active area of disposal to stormwater retention ponds designed for the 25-year 24-hour storm event (Appendix H).

5.7 Buffer Zones

The buffer zone surrounding the existing permitted landfill is shown on Figure 8. Existing trees within this buffer zone will be undisturbed except where roads or ditches are required. No disposal or storage practices will take place within this buffer zone without the permission of the adjoining property owner and the approval of variances by ADEM. It should be noted that a request for buffer width variance is included as part of this application. Specifically, the variance requests a 50 foot wide buffer in the northwest corner and along the northeast side of the landfill. These areas are identified on Figure 8.

5.8 Detail Plans for Temporary and Permanent Access Roads

The landfill site is located adjacent and south of Clarke County Route 2 (Gainestown Road). There is one access road and entrance into the landfill is through a secured metal gate on Clarke County Road 2. The access road is constructed of sand and gravel and is usable in all weather conditions. The width of the road is wide enough to allow passage of collection vehicles.

5.9 Summary of Siting Standards

This site offers Clarke, Choctaw, Marengo, Washington, Mobile, Mobile, Monroe, Wilcox and Washington Counties a convenient and environmentally sound construction/demolition landfill. The Clarke County Solid Waste Management Plan mentions the need for a construction/demolition landfill and this landfill meets that need. There are no endangered or threatened species that are impacted by this landfill. The groundwater surface beneath the current landfill is greater than 25 feet below the land surface of any waste disposal in this landfill and there are no public or private water supply wells within a 1-mile radius of the site. The nearest airport is approximately 9,000 feet from the site and consists of a single runway. There are no regularly scheduled flights from the airport and it is only intermittently staffed. There are no active faults, sinkholes, or karst terrain present at the site. The Alabama Historical Commission has also certified the absence of any significant archaeological or historical resources and the U.S. Army Corps of Engineers has reported there are no jurisdictional wetlands within the permitted landfill boundaries.

5.10 Locations of Solid Waste Areas

The area of solid waste disposal is shown on Figure 5. All waste disposal will be within the permitted boundaries of the landfill. Waste disposal will proceed within the permit boundaries as discussed in Section 10.0.

5.11 Presentation of Special Engineering Features

There are no special engineering features or considerations for this site.

5.12 Quality Assurance/Quality Control Plan for any Liner, Leachate Collection, or Cap System

This site will not contain a liner or leachate collection system. The final soil cover is discussed in Section 13.3.

5.13 Monitoring Points

The permitted materials to be disposed of at this site include non-putrescible and non- hazardous construction demolition waste including, but not limited to non-processed wood debris, scrap tires, paving and packaging materials, and waste lime, non-coal boiler ash, recycled mill sludge, and compost mill sludge generated at the Boise White Paper, LLC or it's successor, Jackson, Alabama. In addition, the depth to groundwater is greater than 25 feet below the base of the landfill and there is no groundwater usage in the area. Therefore, groundwater monitoring is not proposed. Gainestown Road Landfill, LLC currently monitors for explosive gas via gas monitoring wells or bar holes annually in accordance with the ADEM Permit 13-07 and the Explosive Gas Monitoring Plan is contained in Section 9.0. Surface water runoff is permitted in accordance with a general NPDES permit (See Section 3.6).

6.0 SITE GEOLOGY AND HYDROLOGY

The major structural features exposed in Clarke County near the landfill site are the Hatchetigbee anticline and the Jackson fault. The Hatchetigbee anticline trends to the northwest from west central Clarke County and terminates just north of the city of Jackson. The Jackson fault is one of the principal faults in the county and is located to the southeast of the Hatchetigbee anticline.

The landfill is located on the hanging wall of the Jackson fault, a normal fault that trends to the north-northeast in the vicinity of the site (Figure 3). The displacement of this fault is reported to range from 50 to 1,400 feet with the maximum displacement being noted at Salt Mountain approximately 3 miles to the south of the site. The geologic units strike to the northwest and dip to the southwest at about 40 feet per mile and consist of sedimentary deposits of sand, clay, gravel, silt, claystone, sandstone, marl and limestone. Surface exposures near the site consist of Tertiary-age Pliocene and Miocene deposits of the Citronelle Formation, Catahoula Sandstone and Paynes Hammock Sand. Stratigraphically underlying these deposits are the Eocene deposits of the Jackson Group, Gosport Sand, Lisbon Formation, Tallahatta Formation, Hatchetigbee Formations, Tuscahoma Sand and then Paleocene deposits of the Salt Mountain Limestone and the Naheola Formation. The combined thickness of these units is reported to be in excess of 2,000 feet and the upper Pliocene and Miocene deposits are reported to reach a maximum thickness of 300 feet in

The local geology at the site consists of massive deposits of cross-bedded sands, sandy clays, clayey sands and clays of the Pliocene and Miocene deposits. Within the boundaries of the landfill, no direct correlation of any distinct units within the excavations is possible due to the cross- bedded nature of the deposits. However, it is apparent from the excavations that there is no confining layer or zone of saturation within 25 feet below the base of land surface.

The landfill is situated on a ridge that is surrounded on three sides by intermittent and perennial streams. Based on the local topography, and a more recent November 2023 hydrogeologic investigation the depth to groundwater below the land surface is estimated to range from 30 to 100 feet below land surface and the inferred direction of groundwater flow at this site is to the east, north and west toward the creek and tributaries that border the landfill. LaBella evaluated the three hydrogeologic investigations (Appendix F) and then developed a landfill wide contoured surface elevation that is at least 10 feet above the seasonal high groundwater elevation. This contoured surface elevation will be used for future cell disposal surface elevation comparisons in the undeveloped portions of the landfill.

The original Permit issued in 1994 permitted method of disposal as land applying waste on the surface of the former sand and gravel pit. This Permit renewal application does not include any request to change or alter the base grade elevation of any current or future disposal cell. The method of disposal will remain the land application of waste to the existing surface grade.

7.0 GROUNDWATER RESOURCES

See Section 6.0

8.0 COVER

8.1 SUITABILITY AND VOLUME OF SOILS

Cover material for landfilled wastes will be either local sand and gravel or other alternative cover materials approved by ADEM. A minimum of six inches of cover materials will be placed weekly on the top, sides, and face of each cell as directed by ADEM.

8.2 ALTERNATIVE COVER SYSTEMS

Cover material will be sand and gravel or alternate cover approved by ADEM. LaBella accessed ADEM's online eFile web portal in an effort to find documentation about previously approved cover materials. Documentation related to previously approved cover materials is attached in Appendix M. The following previously approved cover materials were identified:

- Recycled mill sludge (a byproduct of Boise White Paper, LLC or it's successor) mixed at 50:50 proportions with indigenous soil as a final cover material
- Boiler ash (resulting exclusively from the combustion of fossil fuels or wood) mixed at 50:50 proportions with indigenous soil as a weekly cover material
- Compost mill sludge (a byproduct of Boise White Paper, LLC or it's successor) mixed at 50:50 proportions with indigenous soil as an alternate cover material

9.0 EXPLOSIVE GAS MONITORING AND REPORTING PLAN

9.1 PERMANENT MONITOR STATIONS

Gas monitor stations are located along the perimeter of the landfill at spacings not exceeding 300 feet (see Figure 6). These stations include monitor wells and bar hole locations that encompass the past and future areas of land disposal. Soil conditions at this site consist of well sorted, permeable sand and gravels. As a result, any gas accumulated on-site should soon dissipate into the atmosphere or be dispersed through adjacent soils.

There are two structures within 1,000 feet of the landfill boundary. One is a private residence located on 2 acres, in the northwest comer of Section 15, another is the offsite office trailer used by the landfill. These structures are topographically lower in elevation than the landfill base. The lower elevation of these structures should preclude them from the impact of accumulated gas releases, since methane gas generally migrates upwards. Any gases coming from the landfill would occur at elevations higher than these structures. As shown on Figure 6 there is a 100-foot spacing between monitoring stations along the property boundaries adjacent to a 2-acre parcel located on the northwest corner of Section 15.

Each gas monitoring station and the office trailer are identified on Figure 6. The exact number and location of these stations are subject to field verification and development of the landfilled area. Monitoring stations may be added or deleted within the guidelines of this plan.

9.2 MONITORING PROCEDURES

Once a year, monitoring stations and the interior of the office trailer are monitored for explosive gas. Measurements of gas are expressed in percent lower explosive limit (LEL) and percent volume. A visual inspection of the facility site is also conducted at this time to identify areas of unexplained distressed vegetation or dying trees which may indicate the presence of methane. Additional monitoring may be implemented in areas if distressed vegetation occurs. Annual monitoring reports are submitted to ADEM and placed in the operating record of the facility within 30 days of the monitoring event.

Each report contains the following data:

1. Name and permit number of the facility;
2. Date of monitoring;
3. Weather conditions (temperature, barometric pressure and general conditions);
4. Equipment used;
5. Identification number of monitor station and percent of gas concentration;

6. Layout plan showing the location of the monitor points; and
7. Name and signature of person performing the testing.

If a monitoring station detects gas above the lower explosive limit (LEL), the following action will be taken:

1. Immediately take all necessary steps to ensure protection of human health and property.
2. Immediately notify ADEM concerning the gas levels detected and steps taken to protect human health and property.
3. Within 7 days, place in the operating record of the facility, the explosive gas levels detected and the immediate steps taken to protect human health and property.
4. Within 20 days of detection, submit to ADEM for approval, a Remedial Plan for the explosive gas release. This plan will describe the nature and extent of the problem and the proposed remedy.
5. The remedial plan will be implemented upon approval by ADEM, but at least within 60 days of detection.
6. Within 60 days of detection, a copy of the remedial plan will be placed in the operating record of the facility and ADEM will be notified that the plan has been implemented.

9.3 Gas Monitor Station Construction

Gas monitoring is conducted using either Permanent gas monitoring stations or bar holes. Permanent stations are constructed using the following procedures:

1. Drill a 4-inch diameter hole to a depth of approximately 7 feet.
2. Place two 5-foot sections of 2-inch Schedule 30 or 40 PVC threaded pipe within 2 to 3 inches of the bottom of the bore hole. The lower 5-foot section of pipe shall be slotted screen with 0.010 machine slots. The pipe should be of sufficient length to extend 3 to 4 feet above ground so as to be easily visible and prevent inadvertent damage during site maintenance.
3. Backfill the hole with coarse sand or fine gravel to within 1 foot of ground elevation.
4. Place a seal of concrete or other suitable material in the final 1 foot of the bore hole.
5. Cap the PVC pipe with a threaded end plug.
6. Drill a 0.052 foot diameter sampling port in riser pipe and place removable neoprene stopper in port.

9.4 Gas Monitoring Equipment

Monitoring will focus on concentrations of explosive gas greater than the LEL (10% by volume in air) at the perimeter of the landfill. Typical equipment used to monitor the specified concentration is commonly referred to as a combustible gas indicator and readings are expressed in percent (%) of natural gas by volume. A meter that measures the concentration of gas as a percent of the LEL may be used in place of

the gas indicator. However, should the meter detect concentrations at 10.0% LEL, additional equipment will be needed to determine the exact concentration of gas.

10.0 DRAINAGE

The existing disposal area is located within the eastern half of the permitted Jackson Landfill boundary shown on Figure 5 and consists of approximately 31 acres. Final grading will be conducted in accordance with Figure 9. Stormwater runoff will be routed to either a stormwater retention pond or it will be discharged as non-point source discharge according to the ADEM General NPDES Permit. Disposal of waste in the western half of the landfill will progress from Cell 2 in the northwest portion of Jackson Landfill to Cell 6 in the southwest comer of the landfill (Figure 8). The disposal plan works with the natural grade of the topography and will direct all drainage away from the active areas of disposal.

Jackson Landfill will design on-site drainage so that incident precipitation that falls within the disposal area will be drained away from the area of active land disposal to a stormwater retention pond. One stormwater retention pond will be constructed in the southern portion of the western half of the landfill. Water discharge from this pond will be via a permitted NPDES outfall. Design calculations for the pond are based on the 25-year, 24-hour storm event for Mobile, Alabama (Appendix H).

The landfill operator has applied for a modification to its current NPDES General Permit to reflect current topography, current stormwater discharge locations, and best management practices (BMPs) including engineering controls. The modification will delete three outfall locations and add four new outfall locations and includes BMPs associated with stormwater management. The current runoff drainage patterns and outfall locations are illustrated in Figure 10. Engineered operational and post closure erosion and sediment control details are provided in Figures 11 through 13.

11.0 LINERS

No liner is proposed for this construction/demolition landfill.

12.0 ACCESS

The landfill is located South and adjacent to Clarke County Route 2 (Gainestown Road). The main all weather access road leads into the facility from the paved road. The entrance onto this access road is secured by locked gates during non-operational hours.

13.0 CLOSURE

13.1 SUBMITTAL

The closure/post-closure plan for this facility is discussed in this Section. Upon issuance of the ADEM permit, these provisions will become part of the operating record.

13.2 WRITTEN CLOSURE PLAN

Landfill closure activities will be incorporated throughout the active life of the landfill. As waste disposal areas reach their final elevations, the wastes will be capped with a final cover as described in Section 13.3.

Prior to beginning closure activities ADEM will be notified of the intent to close. No later than 30-days after final receipt of wastes, final closure activities will be initiated. Closure activities will be completed within 180 days following the last known receipt of wastes.

13.3 FINAL SOIL COVER

The final soil cover will consist of an infiltration layer containing a minimum of 18 inches of compacted earthen material. Overlying the infiltration layer will be a 6-inch earthen erosion layer capable of sustaining plant growth.

13.4 GRADE

As different areas of the landfill are completed, grading will be developed according to the final grading plan (Figure 9). The final grading plan is intended as a general guide and the final contours shown are approximations. If significant changes to the final grading plan are needed Jackson Landfill will request a modification to the permit.

(a) The final soil cover will be graded so that water does not pond over the landfill unit.

(b) The maximum grade of the final cover will range from 5% to 33%.

(c) Final grading of the cover will be completed within 90 days after the landfill has reached its final elevation or landfilling has permanently ceased.

(d) Slopes longer than 25 feet will require horizontal terraces, of sufficient width to allow for equipment operation, for every 20 feet of elevation change (rise) or other methods as approved by ADEM. These slopes are incorporated into the final grading plan (Figure 9).

13.5 VEGETATIVE COVER WITHIN 90 DAYS AFTER FINAL GRADING

Within 90 days of the completion of final grading, the cover surface shall be prepared for the establishment of vegetative cover. As a minimum, preparation shall include fertilizing, liming, seeding, and mulching. Watering and maintenance will continue until the vegetation has been established. Maintenance will involve routine inspections (for rills, gullies, or ponding of water). Eroded areas will be inspected, reworked and revegetated as needed. Ponded areas will be filled in, graded, and vegetated. Appropriate types and amount of grass seed, fertilizer and lime will be applied consistent with the recommendations of the Soil Conservation Service. Deep-rooted vegetation (that would extend below the 6-inch erosion layer) will not be used.

13.6 PRIOR TO CLOSURE

Prior to beginning closure, the owner will submit to ADEM a notice of the intent to close the landfill unit. A copy of this notice will be placed in the operating record of the landfill.

13.7 START OF CLOSURE

Closure activities will begin within 30 days after the known final receipt of wastes.

13.8 COMPLETION OF CLOSURE

Closure activities (in accordance with the closure plan) shall be completed within 180 days after the last known receipt of wastes.

13.9 CLOSURE CERTIFICATION

Following closure of a landfill unit, the Permittee will submit to ADEM a certification signed by an independent registered professional engineer verifying that closure has been completed in accordance with the ADEM approved closure plan. A copy of this certification shall be placed in the landfill operating record.

13.10 RECORD NOTATION ON LAND DEED

Within 90 days after the permit expires, or after closure requirements are achieved as determined by ADEM, a notation will be recorded on the land deed and/or some other legal instrument normally examined during a title search, that will in perpetuity, notify any potential purchaser of the property of the following:

(a) The land has been used as a construction/demolition landfill unit.

(b) Use of the land is restricted by items contained in Section 335-13-4.20(3)(c) and 335-13-4-.20(3)(d) of the ADEM Administrative Code.

(c) The location and dimensions of the landfill with respect to permanently surveyed benchmarks and section comers, contained on a plat prepared and sealed by a land surveyor.

(d) The survey plat shall prominently display the name of the Permittee, the type of landfill (construction/demolition) and the dates operated (from beginning to closure).

(e) Certification by an engineer or land surveyor that all closure requirements have been completed as required by ADEM.

13.11 Certification of Notation on Land Deed

A certified copy of the recording instrument outlined above shall be sent to ADEM and a copy shall be placed in the operating record within 120 days after permit expiration.

13.12 Final Contour and Grading Plan

The proposed final contours and grading plan for closure of the landfill unit are shown on Figure 9.

13.13 Post-Closure Care and Maintenance

Post-closure care will be conducted for a minimum of 30 years. During post-closure, maintenance at the site will include:

(a) Filling in of eroded areas and revegetation

(b) Filling in of ponded surface water, grading, and revegetation

(c) Correction of extensive cracks to prevent surface water infiltration

(d) Maintenance of an appropriate surface cover

(e) Controlled access to the site will continue and signs will be posted notifying of facility closure and location of nearest permitted landfill unit

(f) Waste dumped following closure will be removed to an approved landfill unit

(g) Monitoring devices and pollution control equipment, such as gas monitoring systems, erosion and surface water controls will be maintained. Monitoring shall continue throughout the post-closure period. Routine inspections will be conducted quarterly during the first 2 years and semi-annually thereafter until the end of the post-closure period.

13.14 Length of Post-Closure Care

The length of the post-closure care period may be decreased by the Department if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this

demonstration is approved by the Department; The Department may also lengthen the post-closure monitoring period if necessary to protect human health and the environment.

13.15 Placement of Closure Plan in Operating Record

The post-closure plan as discussed in this Section will be submitted to ADEM for approval and a copy will be placed in the landfill operating record.

13.16 Post-Closure Use of Property

There are no future uses planned for the landfill after closure. The closed landfill will remain as grassed slopes unless other uses are submitted and approved by ADEM.

13.17 Post-Closure Certification

Following completion of the post-closure care period, the owner will submit to ADEM a certification by an independent registered professional engineer verifying that post-closure care has been completed in accordance with the post-closure plan. A copy of the certification will be placed in the landfill operating record.

13.18 Removal of Wastes from Landfill

The owner or subsequent owner will not remove wastes or disturb the site unless approval is received from ADEM. Permission to remove the notation from the recording instruments may also be requested from ADEM if all wastes and contaminated soils are removed and no unpermitted discharges to water have occurred.

14.0 GENERAL OPERATIONAL STANDARDS

14.1 OPERATION AND USE OF THE LANDFILL

The landfill will be operated and utilized only as stipulated in the permit.

14.2 ACCEPTABLE WASTES

This landfill will only accept selected wastes suitable for disposal m a construction/demolition landfill. Personnel trained in the recognition of waste materials such as free liquids, regulated hazardous wastes, treated medical wastes, and regulated PCB wastes will oversee the unloading of wastes accepted at this facility. To ensure that none of the above wastes are accepted, random inspections will be made of incoming loads. All suspicious loads will be thoroughly inspected. Records of all inspections, including origin of suspicious wastes, transporters, handlers en route, and certification from generators will be maintained on file in the operating record of the facility. A sample inspection form is contained in Appendix J. Facility personnel will receive formal training in the recognition and identification of hazardous and infectious wastes. If, inspections discover regulated hazardous wastes, treated medical wastes or regulated PCB wastes, the landfill supervisor shall immediately notify ADEM by telephone, followed by written confirmation.

All industrial users of the facility and their transporters shall be recorded on the daily log to be kept by the landfill supervisor (Appendix J). No out of state wastes will be accepted at the facility.

14.3 INDUSTRIAL WASTE CERTIFICATION

Industrial wastes that are not by-products or wastes from industrial processes may be accepted for disposal. Prior to disposal, a written certification will be obtained from each generator of the industrial waste being proposed for disposal at this facility. The generator must certify that the material to be disposed is not a by-product or waste from an industrial process and that it does not contain free liquids, treated medical wastes, regulated hazardous wastes, or regulated PCB wastes. If required by ADEM, copies of analyses supporting this certification shall be submitted. Industrial waste certification will be submitted to ADEM for approval prior to disposal. The Department shall have five (5) working days to respond. If no response is given, disposal of the material may proceed. Certification will be renewed or revised biennially or if operational changes are made so that the waste characteristics change. Copies of these certifications will be maintained on file in the landfill operating record and will be available for inspection by ADEM. Certification records shall include:

1. Place of waste origin (state, county, municipality).

2. Certification from generator that the waste does not contain free liquids, regulated hazardous wastes, treated medical wastes, or regulated PCB wastes.
3. Certification from the collector or generator that the wastes were collected and transported in accordance with all regulatory requirements of the State.
4. If available, certification from a governmental official where government oversight of shipment is involved.
5. Contact persons shall be identified including the collector, transporter, local and state regulatory authorities and include name of contact person, address, and telephone number.

14.4 UNAUTHORIZED DISCHARGE

The landfill unit shall be operated in such a manner that there will be no water pollution or unauthorized discharge.

14.5 PERMANENT MARKERS

Permanent boundary markers will be installed as required by ADEM Admin. Code r. 335-13-4-.21(1)(e).

14.6 MEASURING AND WEIGHING DEVICES

Solid wastes disposed at this site will be measured by volume.

14.7 OPEN BURNING

Open burning of solid waste at the landfill site will be prohibited unless approved by the Department as follows:

(a) Clearing debris such as trees and stumps may be burned if prior approval is received from ADEM and Alabama Forestry Commission.

(b) Emergency cleanup debris resulting from catastrophic incidents may be burned if these actions are consistent with the ADEM Land Division and Air Division requirements. Prior approval must first be obtained from ADEM and other appropriate agencies.

(c) If approved, burning will not occur over previously filled areas or within 200 feet of existing disposal operations.

A request for permission to burn solid waste will be made in writing to ADEM outlining the reasons for the request. This request for permission will include the area to be utilized, types of wastes to be burned, projected starting and completion dates, and days and hours of burning.

15.0 SPECIFIC REQUIREMENTS FOR C/DLF

15.1 COVER

Covering of waste is addressed in Section 8.0 of this permit application. Final cover is addressed in Section 13.0 of this permit application.

15.2 UNLOADING AND COMPACTING

Waste will be spread in approximately 2-foot layers and compacted weekly with landfill equipment prior to additional layers of waste being added. Figure 7 is a schematic of the trench design to be used in filling operations. The operator will compact each 2-foot layer of waste by making 2 to 5 passes over the waste with landfill equipment.

15.3 CONFINED WASTE AREA AND OPERATING SLOPE

Daily waste will be confined to as small an area as possible and placed in the previously excavated sand and gravel pit location. An appropriate slope of 3 to 1 (horizontal to vertical), or 33% will be used. Area fill operations will begin in the southern comer of the site and progress to the north. The waste will be unloaded at the toe of the working face.

15.4 APPROVED PLANS AND PERMITS

This facility will be operated in accordance with approved plans and permits.

15.5 SITE ACCESS CONTROL

This item is addressed in Section 12.0.

15.6 SIGN

A sign shall be posed at the landfill entrance stating:

(a) Name of Permittee
(b) Owner and/or Operator
(c) Name of Landfill
(d) Days and Hours of Operation
(e) Waste Types Accepted
(f) Disposal Fees for Landfill Use

15.7 ADVERSE WEATHER

The all-weather access roads at the site will allow vehicles access to the landfill area during adverse weather. If necessary, disposal operations will be curtailed or discontinued during extreme conditions.

15.8 ADEQUATE PERSONNEL

A Certified Landfill Manager will be located at the site to assure that operations are conducted in accordance with the Permit Requirements and ADEM regulations. The Certified Operator will perform inspections, record data on the daily log, and oversee the general operations on site. Equipment operators will perform the daily unloading, compacting, and covering as well as site maintenance. All personnel will be trained in landfill techniques.

15.9 ADEQUATE EQUIPMENT

Personnel facilities will be provided and include shelter, phone, lavatory and toilets. These facilities will be kept clean and in working order. Equipment used at the facility shall be sufficient to keep the site properly maintained.

15.10 LIQUID WASTES

Liquid wastes will not be accepted at this site.

15.11 EMPTY CONTAINERS

Empty containers larger than 10 gallons will be rendered unsuitable for holding liquids prior to disposal in the landfill unit unless otherwise approved by the Department.

15.12 SCAVENGING AND SALVAGING

Scavenging will be prohibited at the landfill. Recycling or salvaging operations will be conducted prior to transporting the wastes to the landfill area. Should salvaging or recycling operations be considered in the future, a plan for these operations will be submitted to ADEM for approval.

15.13 LITTER CONTROL

Litter will be controlled along the entrance, access roads and adjoining property by weekly policing. Wind-blown litter will be reduced by limiting the size of the active working face and weekly cover.

15.14 CLOSURE OF COMPLETED SITES OR PORTIONS OF SITES

This item is addressed in Section 13.0.

15.15 ALL WEATHER ACCESS ROADS

An all-weather access road will be provided to the dumping face.

15.16 MONITORING AND TREATMENT STRUCTURES

Environmental monitoring and treatment structures shall be protected and maintained in good repair and be easily accessible. Periodic inspections of the structures will detect the need for repair or replacement.

15.17 RECORDS – DAILY VOLUME, QUARTERLY REPORTS

Appendix J contains the Daily Inspection Log and Daily Log for the landfill facility. A quarterly report summarizing the daily volume of wastes received will be submitted to ADEM and maintained in the landfill operating record.

15.18 VECTOR CONTROL

Disease vectors are unlikely to be a problem at this site since putrescible waste will not be disposed of. However, all waste will be covered with at least 6 inches of earthen material weekly. A more frequent application of earthen cover may be implemented depending on the volume and type of waste received. Due to the disposal of scrap tires, mosquito control may be necessary seasonally.

16.0 RECORD KEEPING REQUIREMENTS

16.1 OPERATING RECORD

The Landfill Operating Record will be maintained on site at the facility office. The operating record will include the following:

(a) Solid Waste Disposal Facility Permit issued by ADEM.

(b) Permit application, operational narrative and engineering drawings such as closure/post-closure plans, gas monitoring plan, daily logs, inspection forms or other data submitted to ADEM.

(c) Reports or documentation generated during normal operation of the facility such as gas monitoring results, inspection records, training procedures, water monitoring data, analytical data, industrial waste certifications, quarterly reports, and any other documents generated as a part of facility operations.

(d) Any cost estimates or financial assurance documents as required by 40 CFR 258 Subpart G.

16.2 DEPARTMENT NOTIFICATION

ADEM will be notified when documents for submittal have been placed in or added to the operating record. All information in the operating record will be furnished to ADEM upon request or be made available for inspection at all reasonable times.

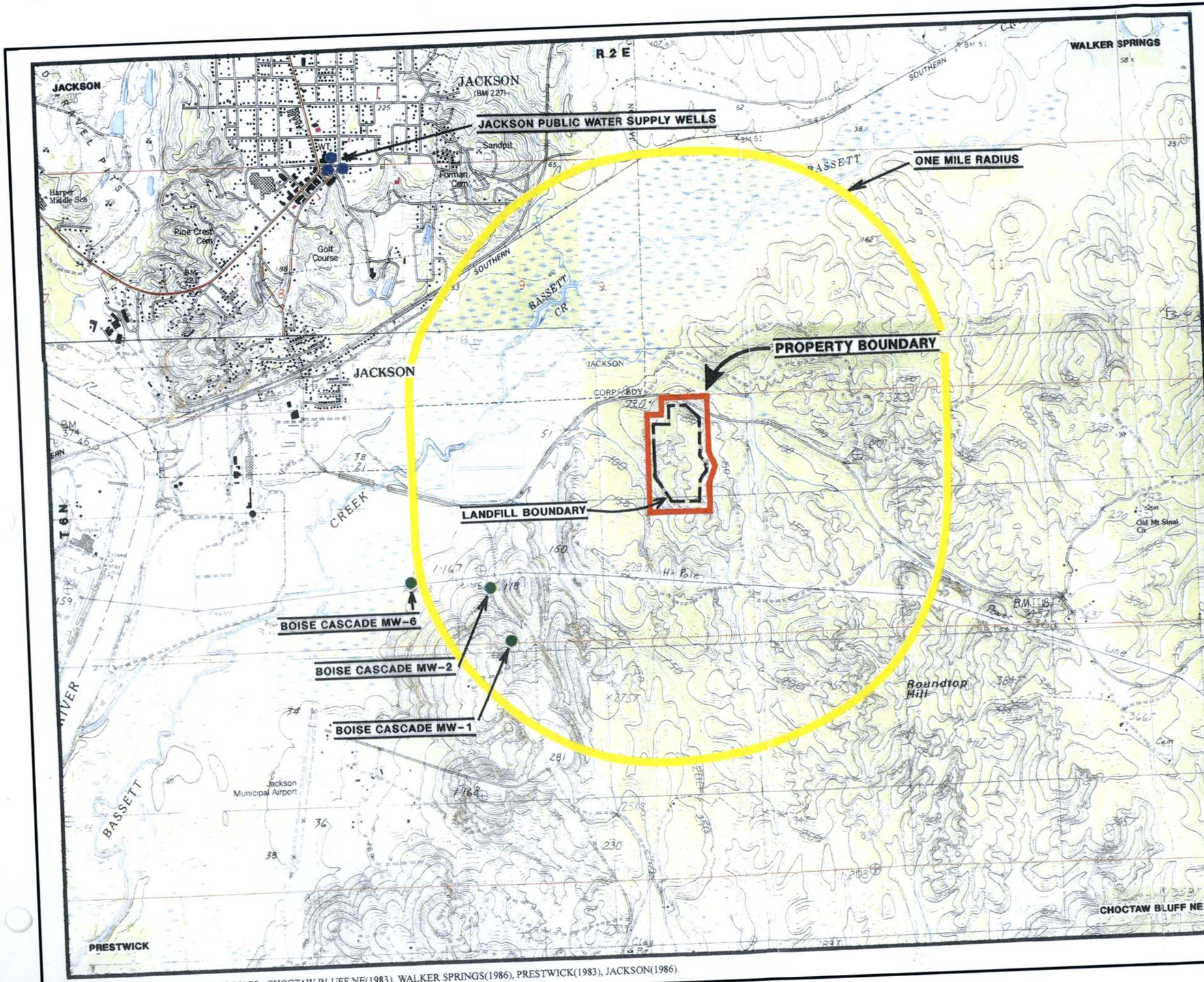


FIGURE 1

SITE LOCATION MAP

JACKSON LANDFILL
JACKSON, ALABAMA

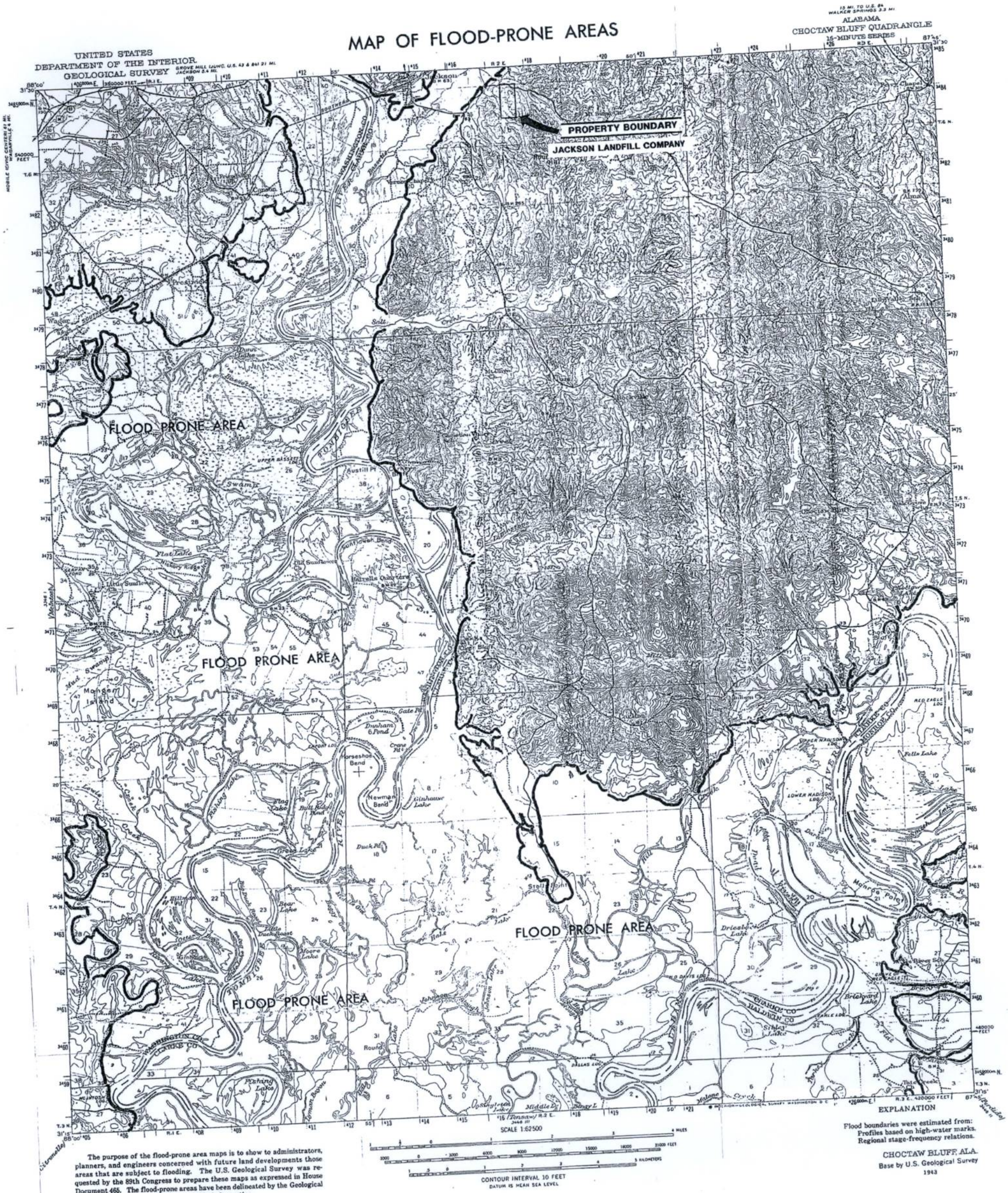
CONTOUR INTERVAL
VARIES BETWEEN 5' & 10'

N

0 2000'
SCALE IN FEET

SOURCE: U.S.G.S. 7.5' TOPOGRAPHIC MAPS: CHOCTAW BLUFF NE(1983), WALKER SPRINGS(1986), PRESTWICK(1983), JACKSON(1986).

MAP OF FLOOD-PRONE AREAS



1970

The purpose of the flood-prone area maps is to show to administrators, planners, and engineers concerned with future land developments those areas that are subject to flooding. The U.S. Geological Survey was requested by the 89th Congress to prepare these maps as expressed in House Document 465. The flood-prone areas have been delineated by the Geological Survey on the basis of readily available information.

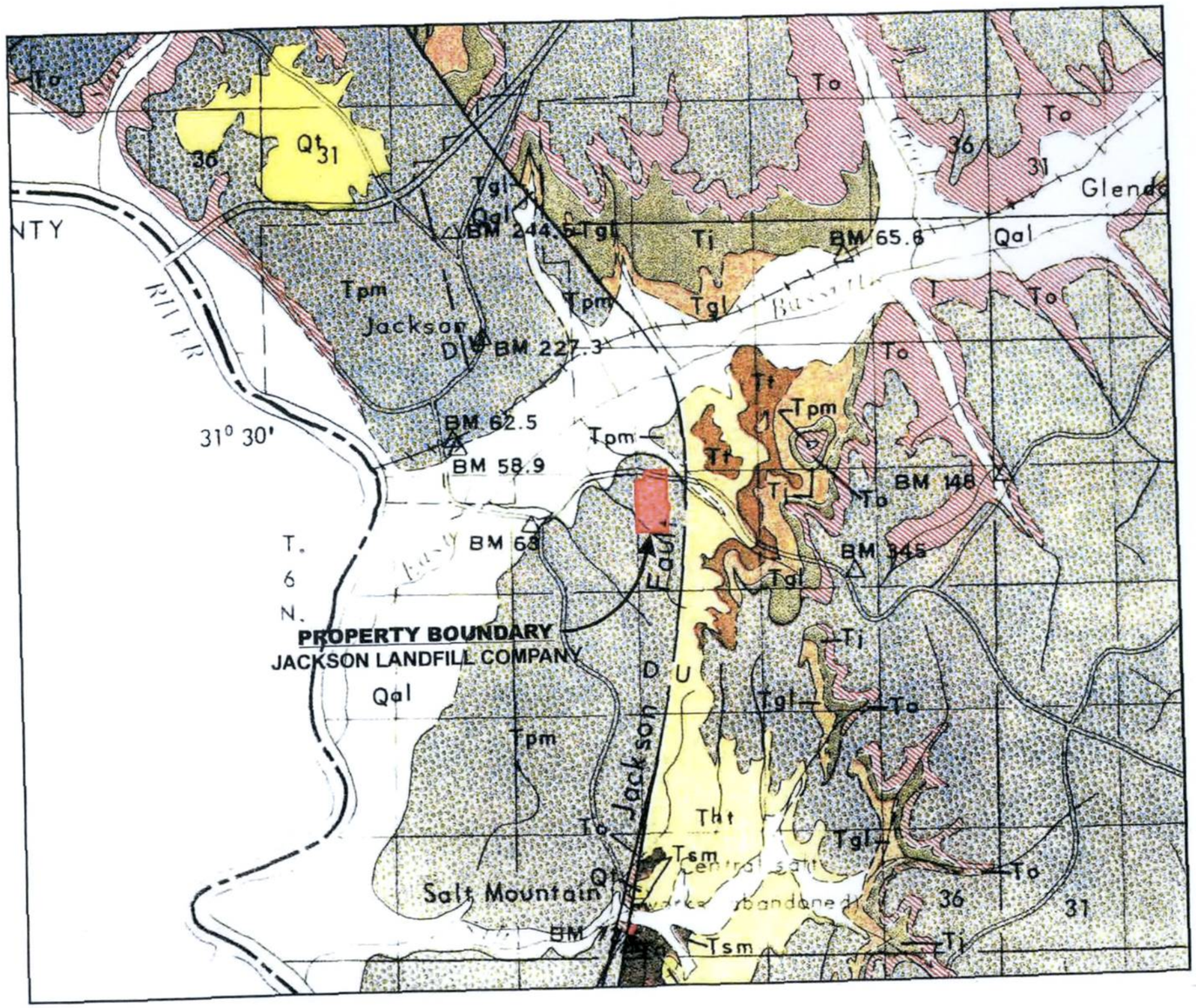
Flood-prone area maps were delineated for those areas that meet the following criteria: (1) Urban areas where the upstream drainage area exceeds 25 square miles, (2) rural areas in humid regions where the upstream drainage area exceeds 100 square miles, and (3) rural areas in semiarid regions where the upstream drainage area exceeds 250 square miles.

The flood-prone areas shown on this map have a 1 in 100 chance on the average of being inundated during any year. Flood areas have been delineated without consideration of present or future flood-control storage that may reduce flood levels.

Flood-hazard reports provide the detailed flood information that is needed for economic studies, for formulating zoning regulations, and for setting design criteria to minimize future flood losses. When detailed information, such as that contained in the flood-hazard reports, is required, contact the U.S. Army, Corps of Engineers; the U.S. Geological Survey; or the Tennessee Valley Authority in the areas of their jurisdiction.

FIGURE 2

USGS FLOOD PRONE MAP
CHOCTAW BLUFF, AL. QUADRANGLE



EXPLANATION

Qal

Alluvium and low terrace deposits

Qt

High terrace deposits

Tpm

Pliocene and Miocene Series
(includes Citronelle Formation, Catahoula Sandstone, and Paynes Hammock Sand)

To

Oligocene Series
(includes Chickasawhay Limestone, Byram Formation, Marianna Limestone, and Red Bluff Clay)

Tt

Jackson Group
(includes Yazoo Clay and Moodys Branch Formation)

Tgl

Gosport Sand and Lisbon Formation

Tt

Tallahatta Formation

Th

Hatchetigbee Formation

Tht

Hatchetigbee Formation and Tuscahoma Sand undifferentiated (may include strata equivalent to Nanafalia Formation in Salt Mountain area)

Tsm

Tuscahoma Sand

Pleistocene and Holocene — QUATERNARY

Miocene and Pliocene

Oligocene — Eocene — TERTIARY

Jackson Group — Claiborne Group — Wilcox Group

FIGURE 3

GEOLOGIC MAP OF CLARKE COUNTY

SOURCE: CAUSEY & NEWTON, 1971.
GEOLOGIC MAP OF CLARKE COUNTY, ALABAMA, GSA MAP 95

SCALE: 1" = 1 MILE

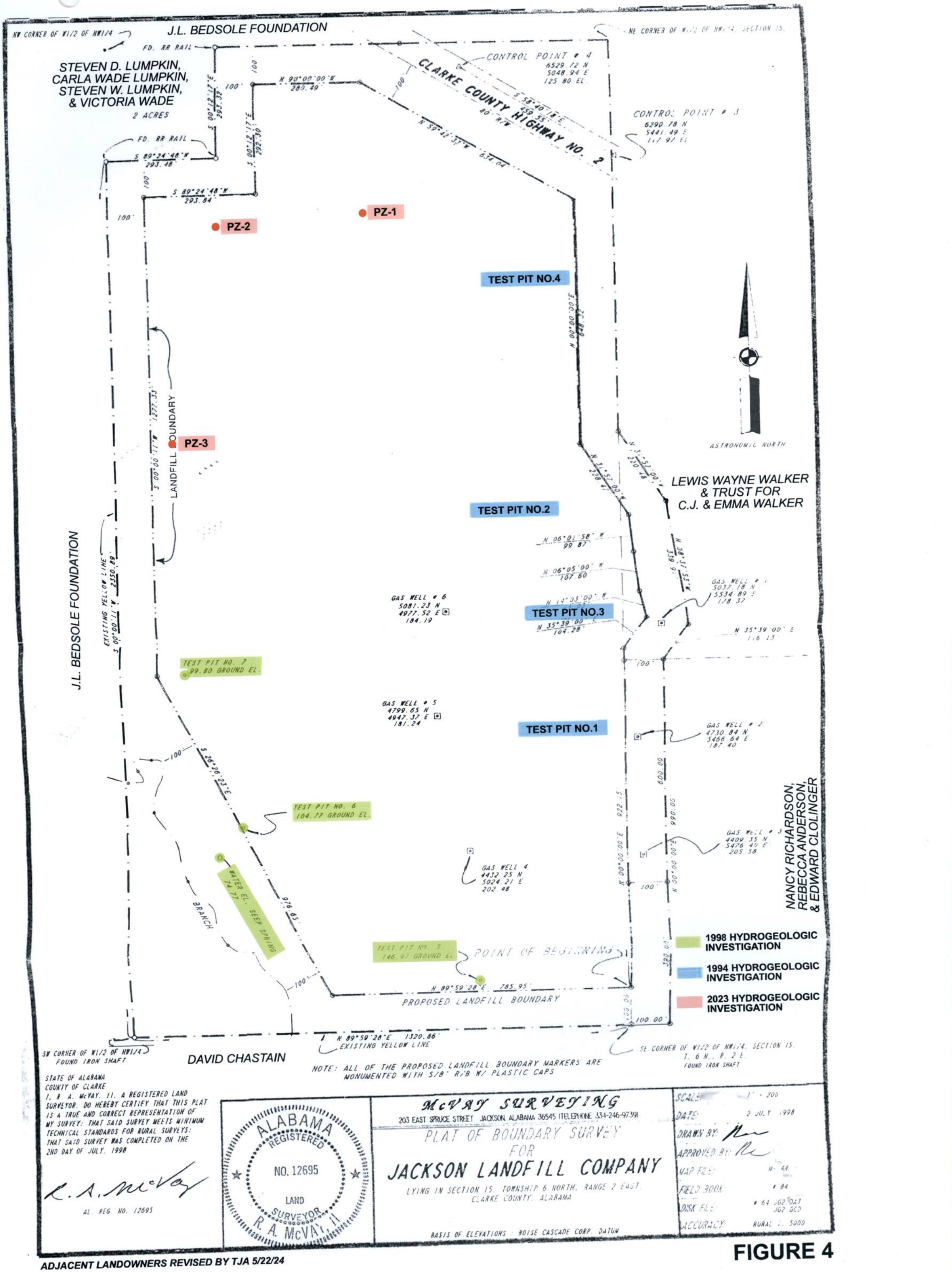
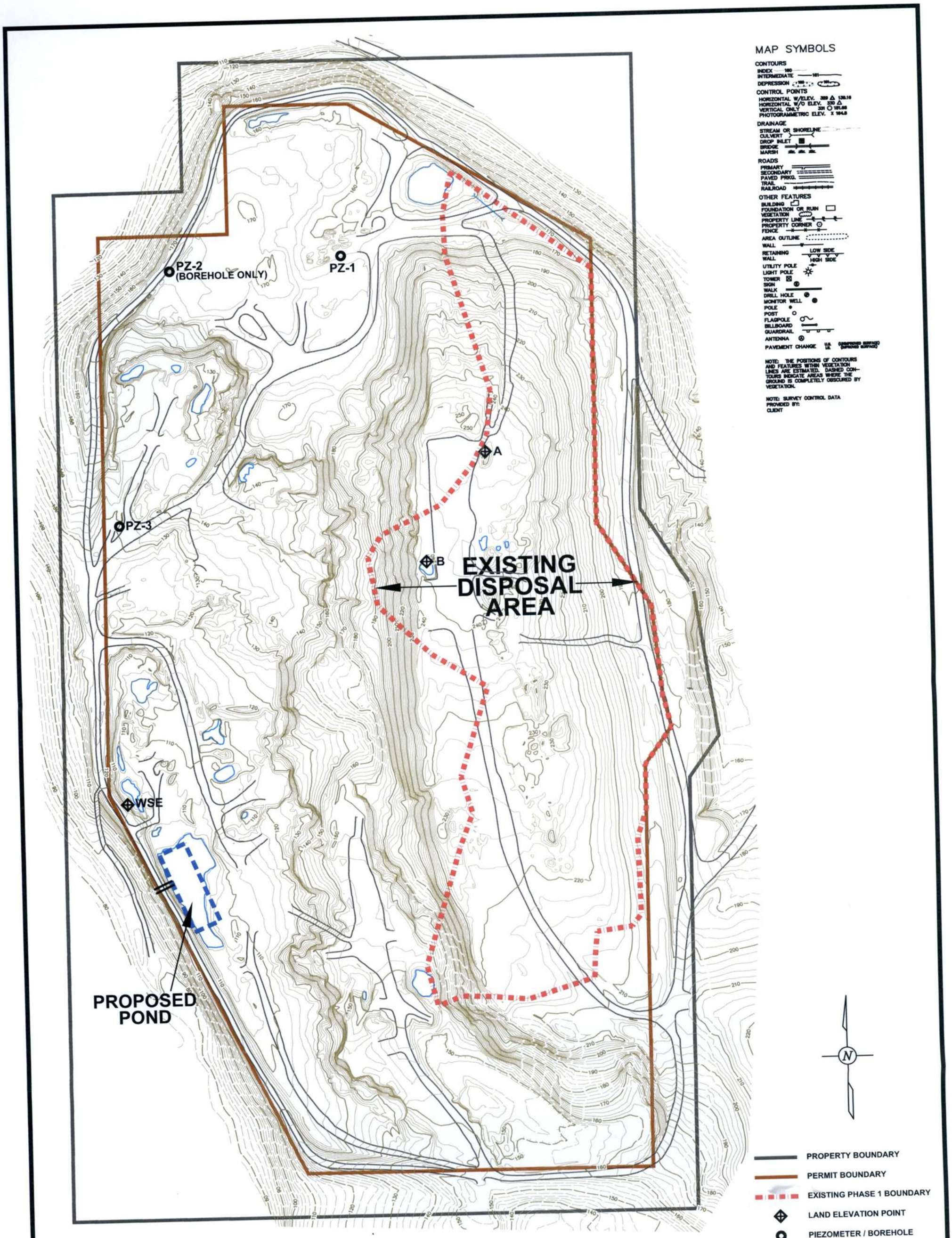


FIGURE 4

ADJACENT LANDOWNERS REVISED BY TJA 5/22/24



MAP SYMBOLS

CONTOURS
INDEX 180
INTERMEDIATE 181
DEPRESSION

CONTROL POINTS
HORIZONTAL W/ELEV. 328 △ 139.10
HORIZONTAL W/O ELEV. 330 △
VERTICAL ONLY 331 ○ 101.66
PHOTOGRAMMETRIC ELEV. X 104.8

DRAINAGE
STREAM OR SHORELINE
CULVERT
DROP INLET
BRIDGE
MARSH

ROADS
PRIMARY
SECONDARY
PAVED PRKG.
TRAIL
RAILROAD

OTHER FEATURES
BUILDING
FOUNDATION OR RUIN
VEGETATION
PROPERTY LINE
PROPERTY CORNER
FENCE
AREA OUTLINE
WALL
RETAINING WALL — LOW SIDE / HIGH SIDE
UTILITY POLE
LIGHT POLE
TOWER
SIGN
WALK
DRILL HOLE
MONITOR WELL
POLE
POST
FLAGPOLE
BILLBOARD
GUARDRAIL
ANTENNA
PAVEMENT CHANGE U.S. / LE. (UNDERGROUND ELECTRICAL) (IMPROVED SURFACE)

NOTE: THE POSITIONS OF CONTOURS AND FEATURES WITHIN VEGETATION LINES ARE ESTIMATED. DASHED CONTOURS INDICATE AREAS WHERE THE GROUND IS COMPLETELY OBSCURED BY VEGETATION.

NOTE: SURVEY CONTROL DATA PROVIDED BY: CLIENT

FIGURE 5
TOPOGRAPHIC SITE MAP
JACKSON LANDFILL

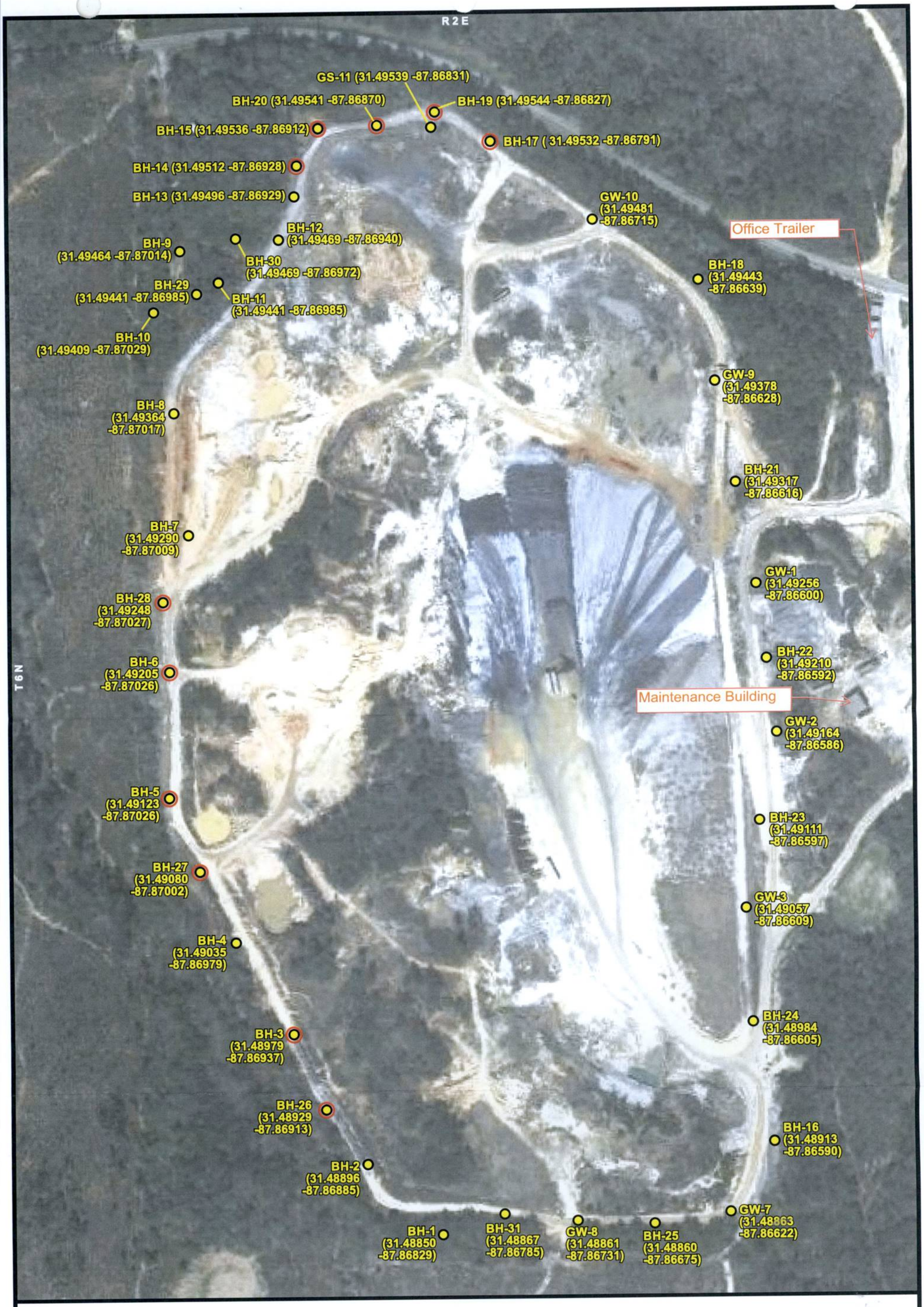
FIGURE 6

JACKSON LANDFILL COMPANY

JACKSON, ALABAMA

12/11/2023

SOURCE: GOOGLE EARTH (IMAGERY DATE: 3/5/2013)



GAS MONITORING LOCATION

MARKER REPLACED 10/16/2018

SOURCE: GOOGLE EARTH (IMAGERY DATE: 3/5/2013)

FIGURE 6

JACKSON LANDFILL COMPANY

JACKSON, ALABAMA

12/11/2023

N

0 200'

SCALE IN FEET

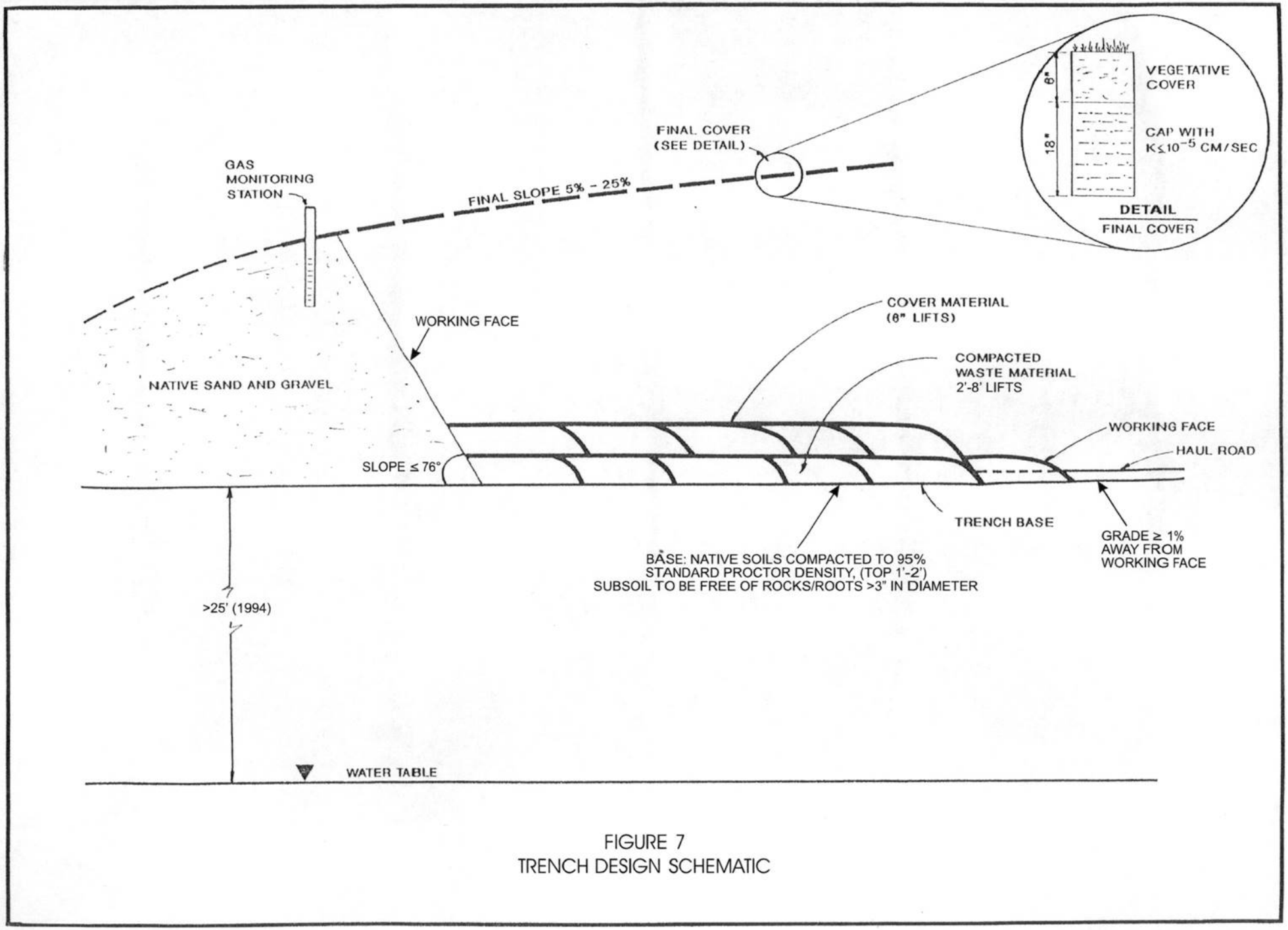
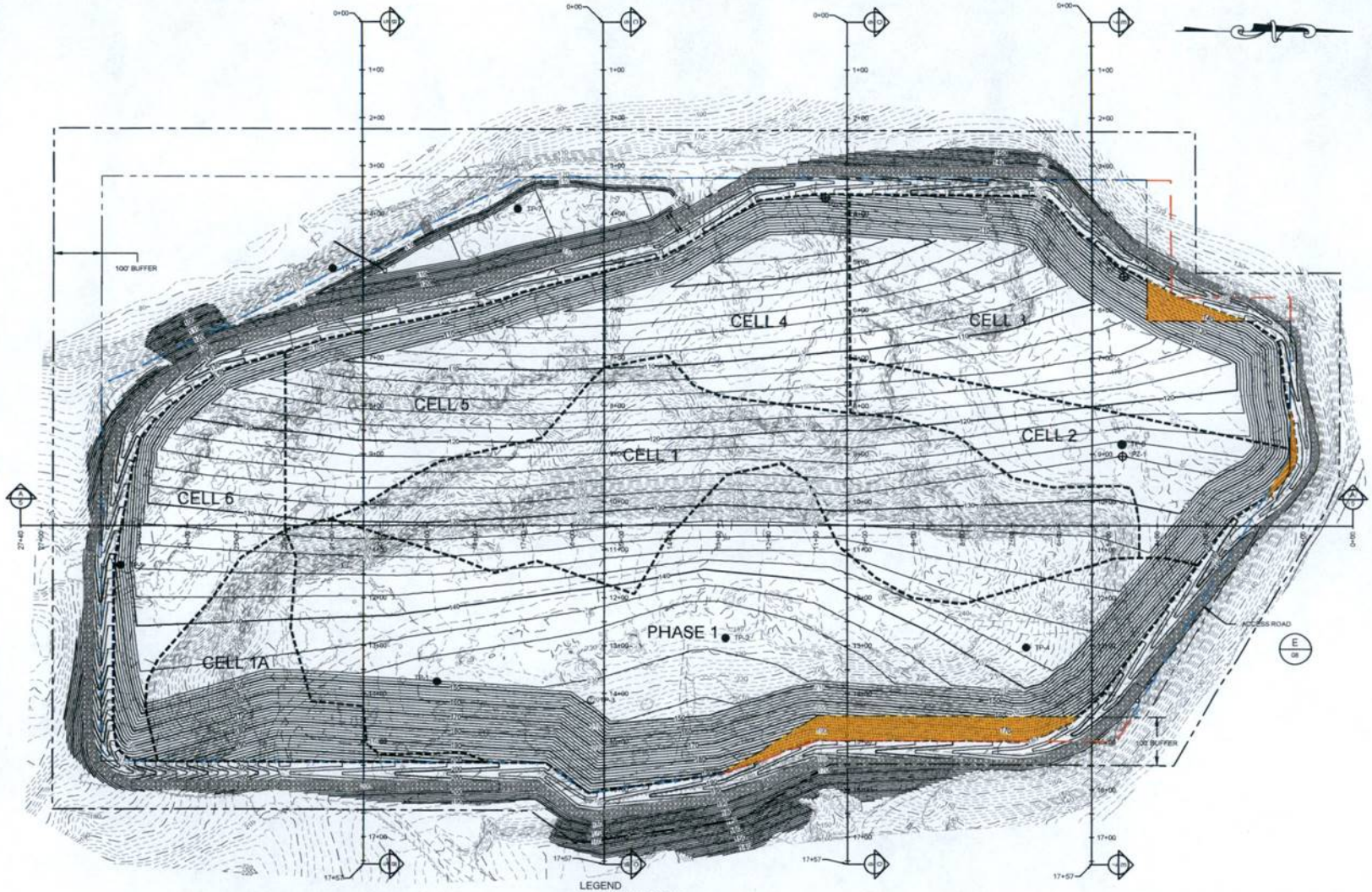


FIGURE 7
TRENCH DESIGN SCHEMATIC



LEGEND

- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- APPROXIMATE PROPERTY BOUNDARY
- 100' BUFFER
- PROPOSED 10' BASE GRADES
- PROPOSED 2' BASE GRADES
- EXISTING DIRT ROADS
- EXISTING TREELINE
- EXISTING WATER SURFACE
- APPROXIMATE LIMITS OF WASTE
- APPROXIMATE PERMIT BOUNDARY
- UPDATED PERMIT BOUNDARY
- 100' BUFFER ENCROACHMENT
- PZ-3 PIEZOMETER LOCATION
- TP-1 TEST PIT LOCATION

GRAPHIC SCALE
0 50 100 200
(FEET)

NOTE

1. EXISTING TOPOGRAPHY WAS BASED ON MARCH 14, 2023 AERIAL PHOTOGRAPH AND COMPILED BY SOUTHERN RESOURCES MAPPING CORPORATION, 2808-4 MCFARLAND BOULEVARD, NORTHPORT, ALABAMA 35476.
2. BASE GRADES ARE A MINIMUM OF 10 FEET ABOVE GROUNDWATER SURFACE

L:\Alabama\Jackson\dwg\2024 Major Permit\SURFACE 10 FT ABOVE GW.dwg Layout=Layout1

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HOOVER, AL 35244
(205) 985-4874
labellapc.com

NOT FOR CONSTRUCTION

GAINESTOWN ROAD LANDFILL, LLC
PO BOX 850415
MOBILE, ALABAMA 36685

JACKSON LANDFILL
1312 GAINESTOWN ROAD
JACKSON, AL 36545

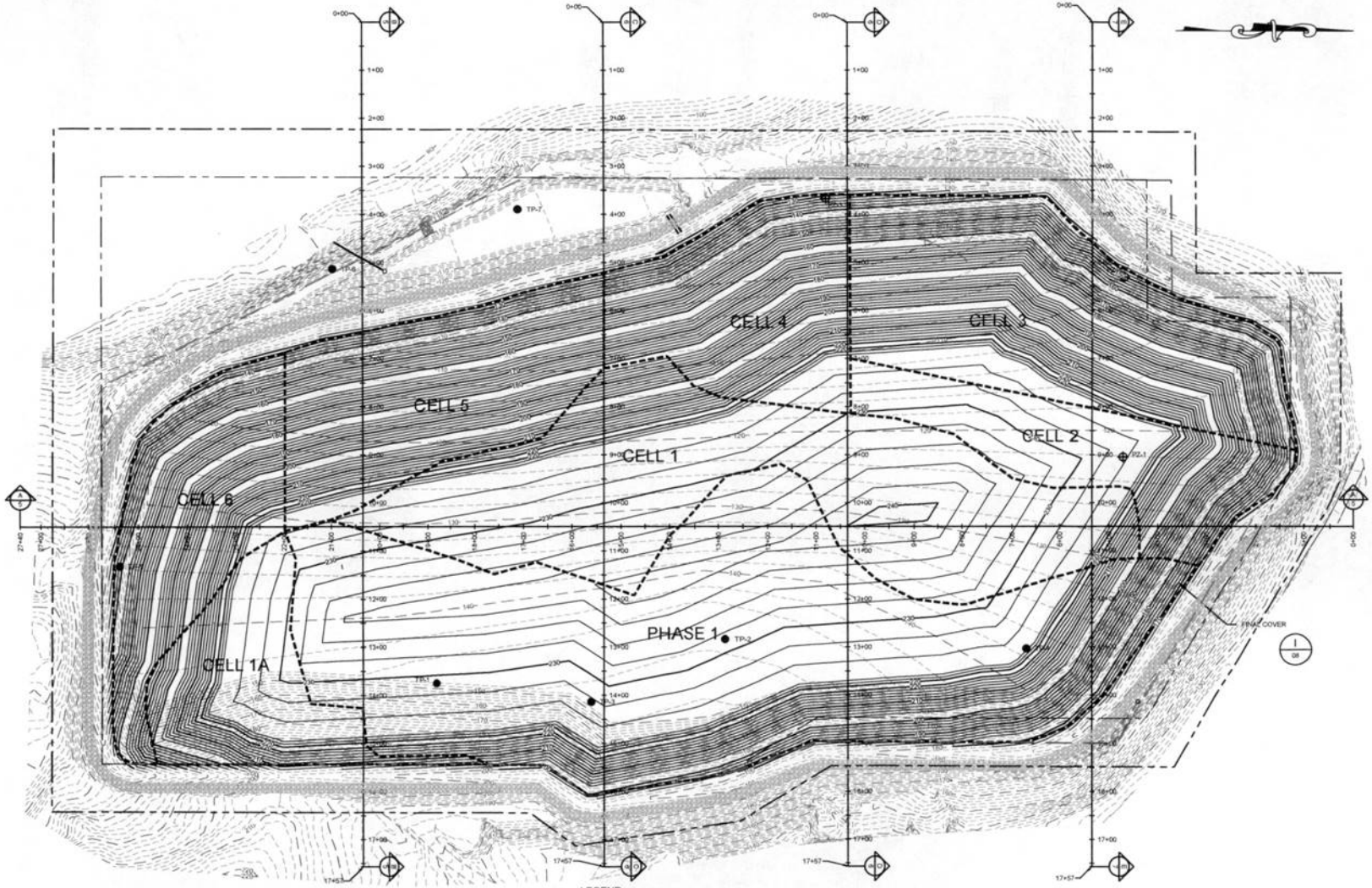
NO.	DATE	DESCRIPTION
Revisions		

PROJECT NUMBER: 2242248.03
DRAWN BY: BWW
REVIEWED BY: DWT
ISSUED FOR:
DATE: 11/1/2024
DRAWING NAME:

SURFACE 10' ABOVE GROUNDWATER

DRAWING NUMBER:

8



LEGEND

- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- APPROXIMATE PROPERTY BOUNDARY
- 100' BUFFER
- PROPOSED 10' BASE GRADES
- PROPOSED 2' BASE GRADES
- EXISTING DIRT ROADS
- APPROXIMATE LIMITS OF WASTE
- APPROXIMATE PERMIT BOUNDARY
- UPDATED PERMIT BOUNDARY
- PZ-3 PIEZOMETER LOCATION
- TP-1 TEST PIT LOCATION

GRAPHIC SCALE
0 50 100 200
(FEET)

NOTE

1. EXISTING TOPOGRAPHY WAS BASED ON MARCH 14, 2023 AERIAL PHOTOGRAPH AND COMPILED BY SOUTHERN RESOURCES MAPPING CORPORATION, 2808-4 MCFARLAND BOULEVARD, NORTHPORT, ALABAMA 35476.

L:\Alabama\Jackson\dwg\2024 Major Permit\03 FINAL GRADING PLAN.dwg Layout\Layout1

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NOT FOR CONSTRUCTION

ALABAMA 37900 PROFESSIONAL 6/14/2024 ENGINEER

GAINESTOWN ROAD LANDFILL, LLC
PO BOX 850415
MOBILE, ALABAMA 36685

JACKSON LANDFILL
1312 GAINESTOWN ROAD
JACKSON, AL 36545

NO.	DATE	DESCRIPTION
Revisions		

PROJECT NUMBER: 2242248.03
DRAWN BY: MW
REVIEWED BY: DWT
ISSUED FOR: PERMIT MODIFICATION
DATE: 6/14/2024
DRAWING NAME:

FINAL GRADING PLAN

DRAWING NUMBER:

9

Legend

- Facility Entrance
- Discharge Points
- Stormwater Flow Direction
- Diversion Ditches with Check Dams
- Berm Surrounding Perimeter Road

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(205) 985-4874

TITLE:
Stormwater Flow Diagram

Jackson Landfill
1312 Gainestown Road
Jackson, Alabama 36545

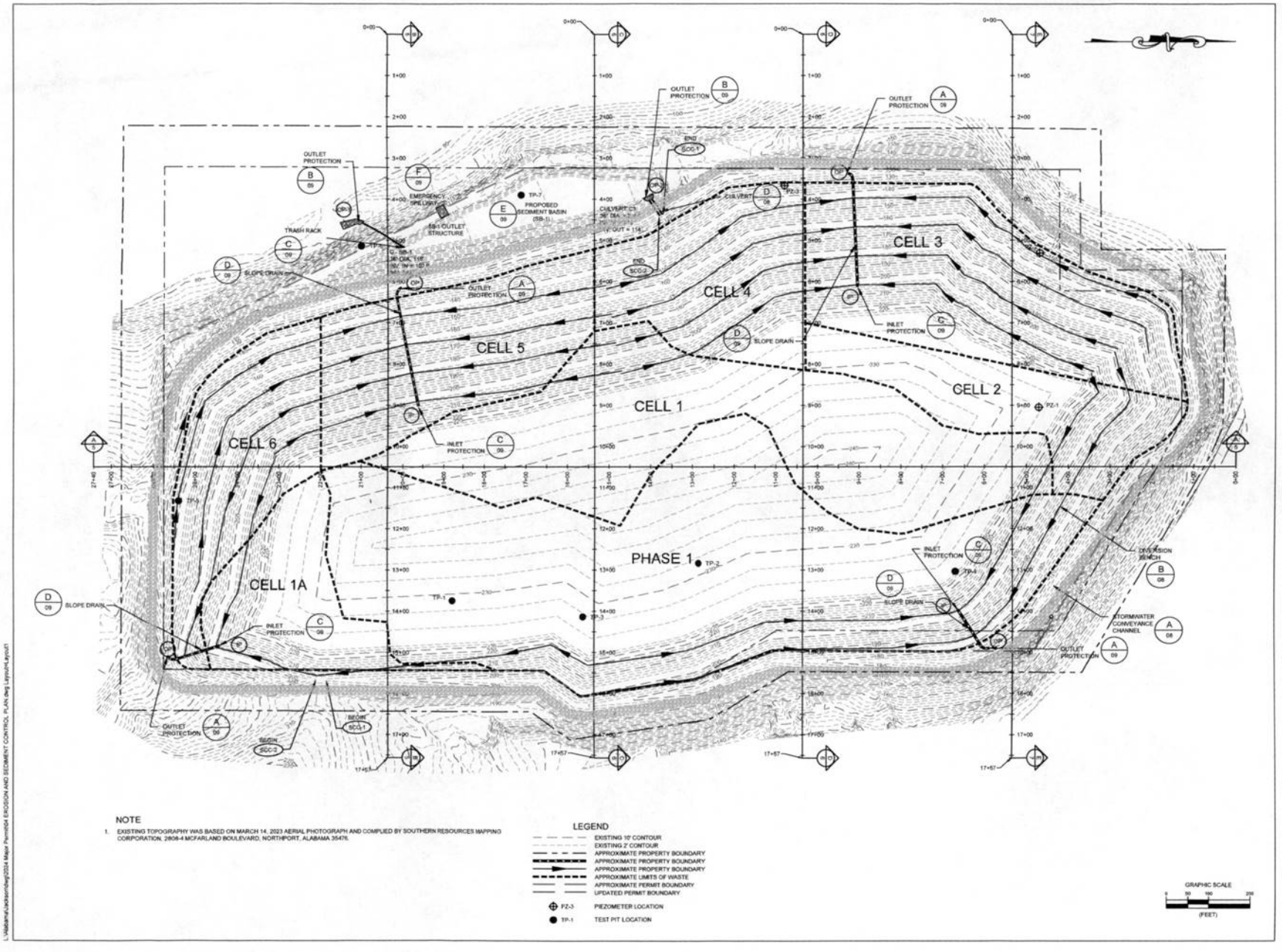
SCALE: 0 175 350
1 inch = 350 feet

FIGURE NO. 10

PROJECT NO. 2241604

DRAWN BY MJI

DATE DRAWN 10/28/2024



NOTE

1. EXISTING TOPOGRAPHY WAS BASED ON MARCH 14, 2023 AERIAL PHOTOGRAPH AND COMPILED BY SOUTHERN RESOURCES MAPPING CORPORATION, 2808-4 MCFARLAND BOULEVARD, NORTHPORT, ALABAMA 35476.

LEGEND

- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMITS OF WASTE
- APPROXIMATE PERMIT BOUNDARY
- UPDATED PERMIT BOUNDARY
- PZ-3 PIEZOMETER LOCATION
- TP-1 TEST PIT LOCATION

GRAPHIC SCALE
0 100 200
(FEET)

L:\Alabama\Jackson\dwg\2024 Major Permit\04 EROSION AND SEDIMENT CONTROL PLAN.dwg Layout\Layout1

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1312 GAINESTOWN ROAD
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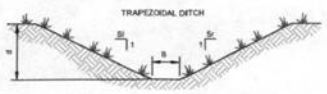
DRAWING NAME:

EROSION AND SEDIMENT CONTROL PLAN

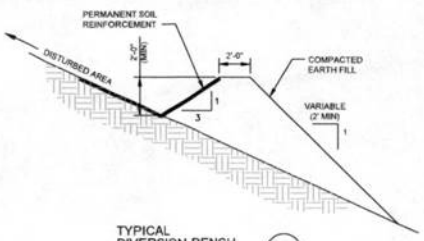
DRAWING NUMBER:

11

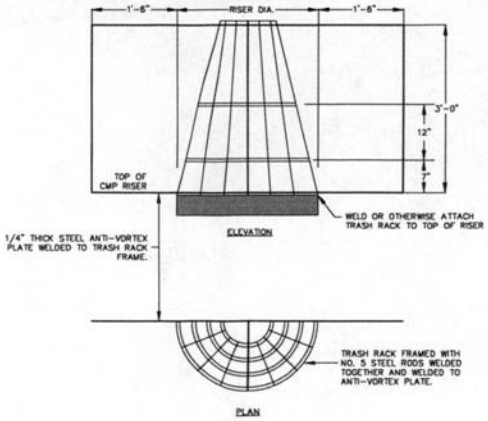


STORMWATER CHANNEL SCHEDULE						
CHANNEL SECTION NO.	CHANNEL TYPE	BOTTOM WIDTH (B) (FT)	TOTAL DEPTH (d) (FT)	LANDFILL SIDE SLOPE (SS)	OTHER SIDE SLOPE (SC)	CHANNEL LINING (ALL CHANNELS)
SCC - 1	TRAPEZOIDAL	5	3	3:1	3:1	EC-3, TYPE 2
SCC - 2	TRAPEZOIDAL	5	3	3:1	3:1	EC-3, TYPE 2

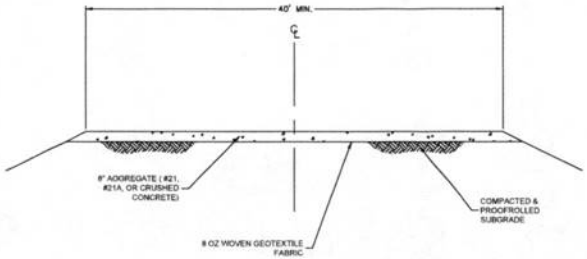
STORMWATER CONVEYANCE CHANNEL TYPICAL DETAIL
N.T.S. (A)



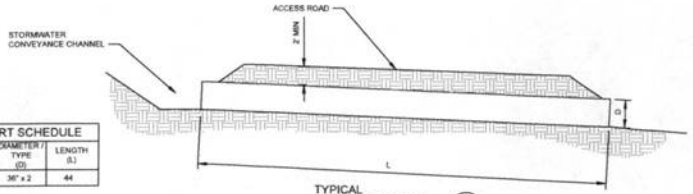
TYPICAL DIVERSION BENCH
N.T.S. (B)



TYPICAL TRASH RACK DETAIL
N.T.S. (C)

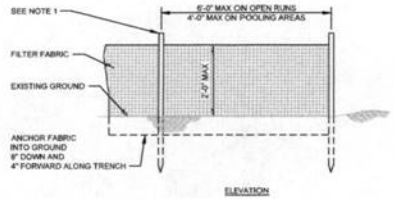


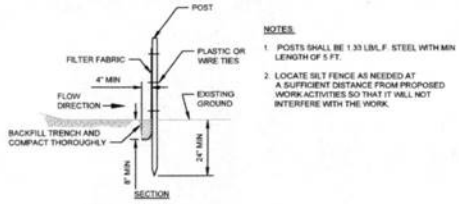
TYPICAL ACCESS ROAD
N.T.S. (E)



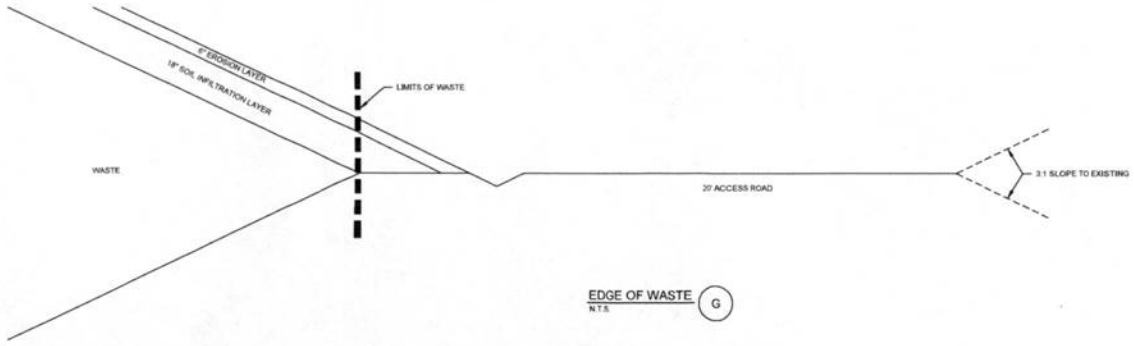
CULVERT SCHEDULE		
PIPE NO.	DIAMETER / TYPE (D)	LENGTH (L)
C-1	36" x 2	44

TYPICAL CULVERT SECTION
N.T.S. (D)

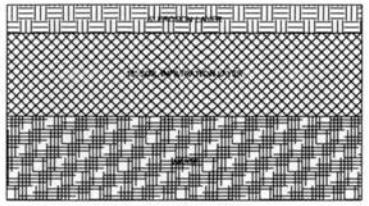




SILT FENCE DETAIL
N.T.S. (F)



EDGE OF WASTE
N.T.S. (G)



FINAL COVER
N.T.S. (I)

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GAINESTOWN ROAD LANDFILL, LLC
PO BOX 850415
MOBILE, ALABAMA 36685

JACKSON LANDFILL
1312 GAINESTOWN ROAD
JACKSON, AL 36545

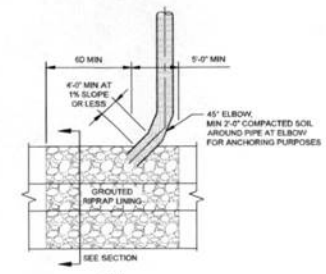
NO.	DATE	DESCRIPTION
Revisions		

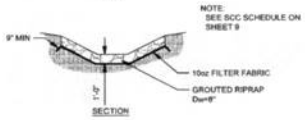
PROJECT NUMBER: 2242248.03
DRAWN BY: MW
REVIEWED BY: DWT
ISSUED FOR: PERMIT MODIFICATION
DATE: 6/14/2024
DRAWING NAME:

DETAILS

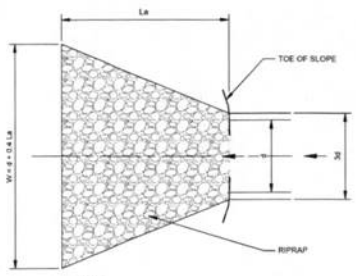
DRAWING NUMBER:

12





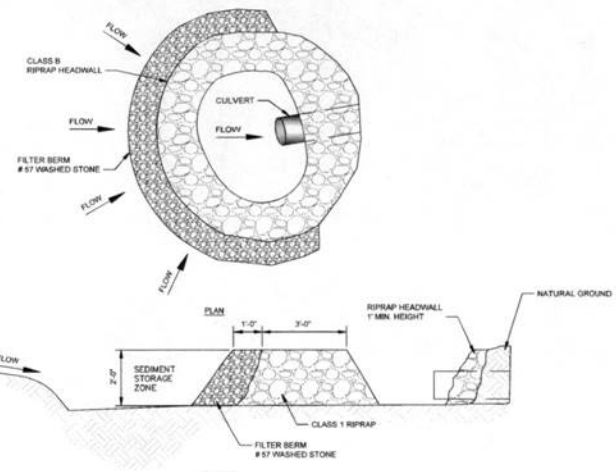
OUTLET PROTECTION DETAIL - TYPE I
N.T.S.
A



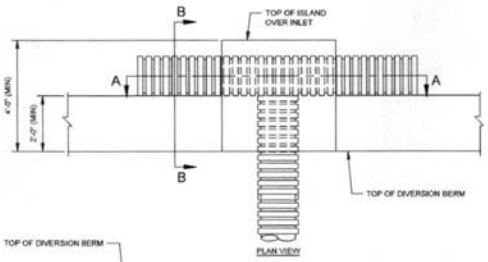
NOTES:
1. INSTALL FILTER FABRIC BETWEEN RIPRAP AND SOIL FOUNDATION.

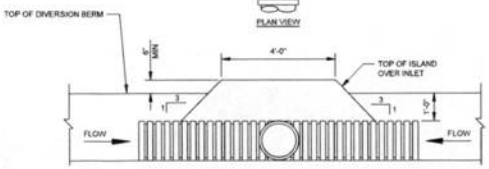
OUTLET PROTECTION SCHEDULE						
OUTLET NO	La	d	3d	W	D_w RIPRAP	THICKNESS (t)
OP-1	74'	3'	12'	33'	18"	1.8'
OP-2	60'	3'	9'	27'	9"	1.6'

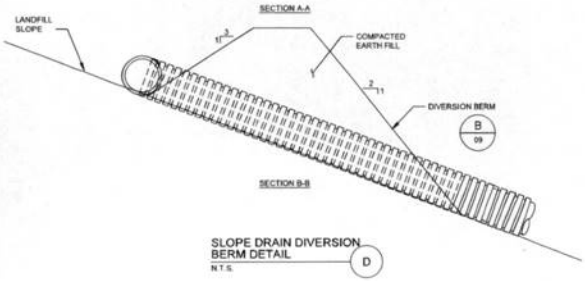
OUTLET PROTECTION DETAIL - TYPE II OP-1 THROUGH OP-2
N.T.S.
B



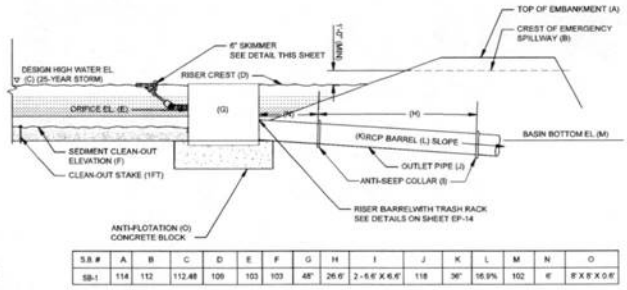
INLET PROTECTION
N.T.S.
C





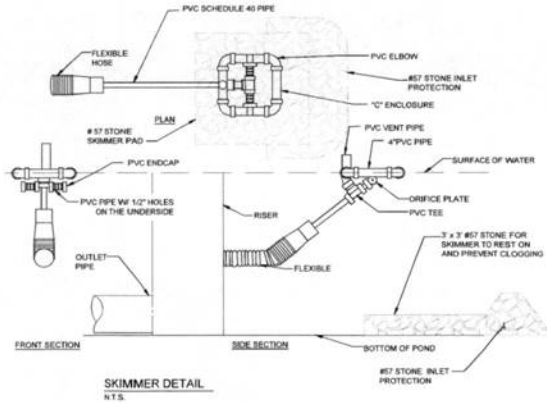


SLOPE DRAIN DIVERSION BERM DETAIL
N.T.S.
D

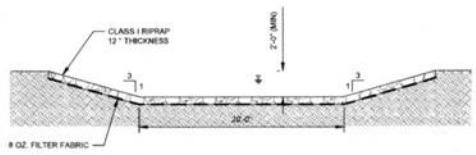


S.B.#	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
SB-1	114	112	112.48	109	103	103	48"	26.6'	2 - 6.6' X 6.6'	118	36"	16.9%	102	6'	8' X 8' X 0.6'

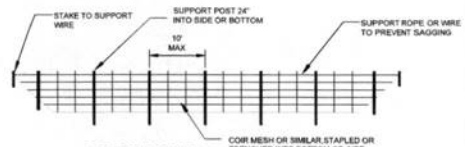
TYPICAL SEDIMENT BASIN SCHEMATIC
N.T.S.
E



SKIMMER DETAIL
N.T.S.



EMERGENCY SPILLWAY DETAIL
N.T.S.
F



POROUS BAFFLE
N.T.S.
G

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GAINESTOWN ROAD LANDFILL, LLC
PO BOX 850415
MOBILE, ALABAMA 36685

JACKSON LANDFILL
1312 GAINESTOWN ROAD
JACKSON, AL 36545

NO	DATE	DESCRIPTION
Revisions		

PROJECT NUMBER: 2242248.03
DRAWN BY: IWW
REVIEWED BY: DWT
ISSUED FOR: PERMIT MODIFICATION
DATE: 6/14/2024
DRAWING NAME:

DETAILS

DRAWING NUMBER:

13

L:\Alabama\Jackson\dwg\2024 Major Permit\08 - 09 - Details.dwg Layout=ESC-04

STATEMENT OF CONSISTENCY

The Alabama-Tombigbee regional planning and development commission received a request for a statement of consistency from Jackson Landfill Company (applicant) on October 22, 1998 (date). Local approval for this proposal was given by Clarke County Commission (host government) on October 13, 1998 (date).

The Alabama-Tombigbee regional planning and development commission has evaluated the proposal using the provisions of the current regional solic waste management needs assessment, in particular the available existing capacity within the region and projected lifetime of such capacity. The commission has identified that the proposed capacity ~~is~~ (is not) in excess of the expected regional needs.

Based upon our evaluation of the proposal using the above criteria, the undersigned has determined that this proposal (is) ~~is not~~ consistent with the Clarke County current regional solid waste management needs assessment.

Frank B Dobson Jr
Signature of Authorized Official of
Regional Planning and Development Commission

10-22-98
Date

Signature of Notary Public

10-22-98
Date

CERTIFICATE OF LOCAL APPROVAL
FOR
SOLID WASTE MANAGEMENT SERVICES

On May 24, 1994, JACKSON LANDFILL COMPANY, INC., applied to the Clarke County Commission with a proposal to contract for services described in the Solid Waste Management Plan.

JACKSON LANDFILL COMPANY, INC., proposed to provide non-hazardous industrial waste disposal and non-hazardous construction demolition waste including waste building materials, packaging, and rubble such as masonry material, sheet rock, roofing wastes, insulation, rebar, scrap metal, paving material and concrete.

On April 21, 1994, the Clarke County Commission did cause to be published in a newspaper of general circulation in the County (copy enclosed) and in the official gazette of the jurisdiction a notice of a public hearing on whether Clarke County Commission should deny or approve the contract proposal made by JACKSON LANDFILL COMPANY, INC.

Furthermore, the notice was given at least 30 days, but not more than 45 days, prior to the published date of said hearing.

The notice contained the following information:

1. A description of the proposed action to be considered.

2. The relevancy and consistency of the proposed action on the solid waste management facility with the Solid Waste Management Plan.

3. The notice identified a contact person from whom interested parties can obtain additional information and can review copies of both the local Solid Waste Management Plan and the application or proposal of JACKSON LANDFILL COMPANY, INC.

All pertinent documents relating to the proposal for services made by JACKSON LANDFILL COMPANY, INC., were made available for public inspection at the Clarke County Courthouse, a location readily accessible to the public, during normal business hours of 8:00 a.m. to 5:00 p.m.

On May 24, 1994, at a public meeting the Clarke County Commission did approve the contract for services proposed by JACKSON LANDFILL COMPANY, INC.

The testimony proved that there is a need for said facility and that the JACKSON LANDFILL COMPANY, INC., will provide safe, efficient service.

Rubye Andrews

RUBYE ANDREWS, Chairperson Clarke County Commission

7/22/94

DATE

SIGNATURE OF NOTARY

7/22/94

DATE

The Clarke County Democrat

Clarke County's Oldest and Best Read Newspaper•Established 1856

Our 139th Year, No. 10 | Grove Hill, Alabama 36451 | Thursday, April 21, 1994 | 32 Pages, 3 Sections—50 Cents

PUBLIC NOTICE

The Clarke County Commission is considering an application by Jackson Recycling Company for a construction/demolition landfill to be located in the NW/4 of Section 15 T6N, R2E. This facility is consistent with the overall Clarke County Solid Waste Management Plan and conforms to the tenets of the plans. Interested parties may contact Mr. James L. Griffin, P. O. Box 278, Jackson, AL 36545 for additional information. All pertinent documents relating to the application are available for public inspection at Clarke County Department of Utilities, during normal business hours of 8:00 A.M. to 5:00 P.M., Monday through Friday. A public hearing will be held on May 24, 1994 - Commissioners Courtroom, County Courthouse, Grove Hill, Ala., 10:30 A.M.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. Drawer 1190
Daphne, AL 36526

IN REPLY REFER TO:
4-3-94-118S.2/98-0420

October 1, 1998

Mr. Joseph Patrick
Tom Joiner and Associates
P.O. Box 1490
Tuscaloosa, Alabama 35403

Dear Mr. Patrick:

As part of the permit requirements for the Jackson Landfill, Clarke County, you requested that we update our March 29, 1994 letter to your office concerning federally listed species and wetland habitats. We have reviewed the information you enclosed and have the following comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.):

A. Fish and Wildlife Coordination Act:

As described in our previous letter, an unnamed tributary of Bassett Creek runs through the southwest portion of the project site. This tributary and its riparian zone provides important fish and wildlife habitat, serve as a storm water storage basin and filters upland runoff. In order to minimize impacts to this wetland habitat, we recommend avoiding drainage into or filling this tributary.

B. Endangered Species Act

According to our records, there are no federally listed species or critical habitat located on the project site. Therefore, no further endangered species consultation is required for this project unless (1) new information on federally listed or proposed species becomes available, (2) new species are proposed or listed or critical habitat is designated or (3) the proposed action is modified.

If you need further information regarding our concerns, please contact Sharon Delchamps of our office at 334/441-5181 ext. 31.

Sincerely yours,

Larry E. Goldman
Field Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE

[redacted]
P. O. Drawer 1190
Daphne, Alabama 36526

IN REPLY REFER TO:

98-0904.a

August 24, 1998

Mr. Joseph Patrick
Tom Joiner and Associates, Inc.
P.O. Box 1490
Tuscaloosa, Al 35403

Dear Mr. Patrick:

Per your telephone request on August 20, 1998, we have added our comments regarding the Endangered Species Act for the proposed expansion of the Jackson Landfill, Clarke County from 17 acres to 50 acres. We hope this information is sufficient for your review.

Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.)

As described in your letter, you plan to meet the requirements set forth in our March 29, 1994 comments to the construction of this landfill for preventing drainage into Bassett Creek using sediment ponds, silt fences and vegetation practices. We concur with these practices. However, we recommend contacting the Army Corps of Engineers for further information on the presence of jurisdictional wetlands on the project site and required permits, if needed.

Endangered Species Act (87 State. 884, as amended; 16 U.S.C. 1531 et seq.).

According to our records, there are no federally listed species located in the project area. Therefore, no further endangered species consultation is required for this project unless (1) new information on federally listed or proposed species becomes available, (2) new species are proposed or listed, or critical habitat is designated or (3) the proposed action is modified.

Should you have further questions regarding our concerns, please contact Sharon Delchamps of my staff at 334/441-5181 ext. 31.

Sincerely,

Larry Goldman
Field Supervisor

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 South Perry Street
MONTGOMERY, ALABAMA 36130-0900

F. LAWERENCE OAKS
EXECUTIVE DIRECTOR

TELEPHONE NUMBER
334-242-3184

February 24, 1998

Mr. Joseph E. Patrick
Tom Joiner & Assoc.
P. O.Box 1490
Tuscaloosa, AL 35403

Re: 98-0414
Jackson Landfill Expansion
Clarke County, AL

Dear Mr. Patrick:

Based upon the additional information forwarded by your office the Alabama Historical Commission has determined that the proposed activities will not have an effect on any known cultural resources listed on or eligible for the National Register of Historic Places. Therefore, our office concurs with the proposed activities.

However, should cultural resources be encountered during project activities, work shall cease and our office shall be consulted immediately.

We appreciate your efforts on this issue. If we may be of further service or if you have any questions or comments, please contact Greg Rhinehart of our office.

Sincerely,

Thomas A. Walker

for: Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/GCR/gtj

DEPARTMENT OF THE ARMY
MOBILE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

REPLY TO
ATTENTION OF:

March 4, 1998

Regulatory Branch
Operations Division

SUBJECT: Wetland Delineation in Clarke County, Alabama - Jurisdictional Number ALJ98-00356-R

Tom Joiner and Associates
Attention; Mr. Joseph E. Patrick
Post Office Box 1490
Tuscaloosa, Alabama 35403

Dear Mr. Patrick:

Per your request, this office has completed a review of the proposed expansion of the Jackson Landfill. Specifically, the project site is located within Section 15, Township 6 North, Range 2 East, Clarke County, Alabama.

After a review of available topographical and soils data, and the fact that the project will be located at least 20-feet above normal ground water level, it appears that there will be no wetland impacts associated with this project. A Department of the Army Permit pursuant to Section 404 of the Clean Water Act of 1977 (33 USC 1344), will not be required.

Please be advised that this jurisdictional determination reflects current policy and regulation and is based upon criteria contained in the January 1987 U.S. Army Corps of Engineers' Wetlands Delineation Manual. If after a 5-year period this jurisdictional determination has not been specifically revalidated by the U.S. Army Corps of Engineers, it shall automatically expire.

This letter grants no property rights and does not obviate the necessity for you to obtain any other local, State, or Federal authorization that may be required.

Thank you for your cooperation with our permit program. If you have any questions or require further information concerning this matter, please contact Mr. Medrick R. Northrop of the Enforcement Section at (334) 694-3784.

Sincerely,

Ronald A. Krizman
Chief, Regulatory Branch
Operations Division

APPENDIX E

Geological Survey of Alabama Well Data

Taken from Map 201B "Selected Wells and Springs in Southwestern Alabama"

	Owner	Purpose	Depth	Drilled	Altitude	Aquifer	Water Level	Other
PP-2	City of Jackson	Unused, Publ. Supply	446	1923	227	Miocene Citronelle Ocala LS	107	142' casing, 10' screen, 142'-152'
PP-3	City of Jackson	Unused, Publ. Supply	171	1941	227	Miocene Citronelle	125	131' casing, screen, 131'-156'
PP-4	City of Jackson	Unused, Publ. Supply	263	1965	246	Miocene Citronelle Ocala LS	125	229' casing, screen, 159'-189', 229-239'

LIMITED HYDROGEOLOGIC EVALUATION

PROPOSED PERMIT MODIFICATION
JACKSON LANDFILL
JACKSON, ALABAMA
PERMIT NO,: 13-07
PROJECT NO.: 2242248.03

PREPARED FOR:

GAINESTOWN ROAD LANDFILL, LLC
POST OFFICE BOX 850415
MOBILE, ALABAMA 36685

REVISED
November 21, 2024

PREPARED BY:

LABELLA ASSOCIATES, D.P.C.
528 MINERAL TRACE
BIRMINGHAM, ALABAMA 35244
PHONE (205) 985-4874

Adam J. Hughes, P.G.
Project Geologist

William W. Cooch, P.G.
Principal Geologist

OWNER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Wendy Walker
Gainestown Road Landfill, LLC

11/5/2024
Date

GEOLOGIST CERTIFICATION

I certify under penalty of law that I am a Registered Professional Geologist, licensed to practice in the State of Alabama and experienced in conducting hydro-geological investigations. The information submitted herein, to the best of my knowledge and belief is true, accurate and complete.

William W. Cooch, P.G. 0152
Principal Geologist
LaBella Associates, D.P.C.

November 21, 2024
Date

TABLE OF CONTENTS

FIGURES

ATTACHMENTS

1.0 INTRODUCTION AND SITE HISTORY

This limited hydrogeologic evaluation for the Jackson Landfill (Landfill) in Jackson, Clarke County, Alabama, Permit Number 13-07, was conducted to determine the minimum elevation of the existing and future cells to ensure the base elevation of future cells will have sufficient separation from the first water-bearing zone beneath the Landfill.

The Landfill is located in Northwest ¼ of Section 15, Township 6 North, Range 2 East in Clarke County, Alabama. The Landfill consists of approximately 81.91 total acres with 58.12 acres permitted for disposal of construction and demolition debris. A Site Location Map is included as Appendix F - Figure 1.

This investigation was completed using historic subsurface information gathered using test pits and recently gathered groundwater data all obtained by Tom Joiner & Associates (TJA). Four test pits (1 through 4) were advanced during the original landfill siting activities in 1994. Three test pits (5 through 7) were advanced as part of a 1999 major permit modification that included the expansion of the landfill and a test (TP-8) advanced in 2024. The 2023 subsurface information was collected using piezometers advanced in the north and northwestern portion of the landfill. The permitted disposal boundaries of the Landfill and the approximate locations of the test pits and piezometers area included are illustrated in Appendix F - Figure 2.

The Jackson landfill was originally permitted within the footprint of the former Jackson Sand and Gravel surface mine. The original Permit issued in 1994 permitted the method of disposal as land applying waste on the surface of the former sand and gravel pit. This study was completed anticipating no change in operation or alteration to the base grade elevation of any current or future disposal cell will occur in the future and that method of disposal will remain the land application of waste to the existing surface grade.

2.0 ENVIRONMENTAL SETTING

2.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

According to geologic information published by the Geological Survey of Alabama, the Landfill contains Miocene deposits described as sediment of Miocene Series Undifferentiated Geologic Unit. This unit is reported as being approximately 300 feet thick in Clarke County and consists primarily of vari-colored sand, gravel, marl, and sandstone. A geologic map is provided as Appendix F - Figure 3.

According to the *Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama; Area 10,* 1989 prepared by the United States Geological Survey (USGS), the subject facility is located in the Southern Pine Hills Physiographic District. The major aquifer in the area is identified as the Miocene Pliocene Aquifer. The subject facility is located within the recharge area of the Miocene-Pliocene Aquifer.

2.1.1 Groundwater Flow Direction

Based on review of topographic information and the flow direction of nearby surface water bodies, the groundwater flow direction in the local area of the Landfill is estimated to be southwest to the towards an unnamed tributary of Bassett Creek.

2.2 REGIONAL SOILS

According to the *Soil Survey of Clarke County, Alabama*, published by the United States Department of Agriculture (USDA) Soil Conservation Service, the soils underlying the subject property consist of sandy and clayey loams formed from sedimentary rock residuum, alluvium, and marine deposits. The subsoil is typically sand loams and clay loams. The underlying bedrock is of the Pliocene and Miocene Series including the Citronelle Formation, the Catahoula Formation, and the Paynes Hammock Formation. The Citronelle bedrock consists of sandy limestone with clay lenses. The Catahoula Formation in the area consists largely of tuffaceous and hard silicified sandstones with some loose sand and clay layers. The Paynes Hammock Formation consists of blue-green, argillaceous and calcareous sandstones with infrequent beds of sandy limestone.

3.0 TEST PIT INVESTIGATIONS

3.1 1994 SITE INVESTIGATION ACTIVITIES

Test Pits (TP-1 through TP-4) were advanced in the eastern portion of the landfill in 1994 using a track excavator as part of the original permitting activities and were completed under the supervision of TJA personnel. The subsurface materials were logged in the field by TJA personnel and were generally described as predominantly sand with interbedded clay lenses. The surface elevation for Test Pits 1 and 2 was determined by a professional surveyor licensed to practice in the Alabama . A summary of the test details is provided in Table 3.1.

TABLE 3.1 - 1994 TEST PIT SUMMARY

Test Pit No.	Total Depth ft-bls	Surface Elevation (ft-amsl)	Base Elevation (ft-amsl)
TP-1	20	156.44	136.44
TP-2	20	158.58	138.58
TP-3	16	NA	NA
TP-4	23	NA	NA

ft-bls - feet below land surface
ft-amsl - feet above mean sea level
NA - Not Available

Based on observations made during this investigation, no groundwater was reported in any of the four test pits. Test Pit logs are included as Attachment A

3.2 1999 PERMIT MODIFICATION

Test Pits (TP-5 through TP-7) were advanced in the southwestern portion of the landfill in 1999 using a track excavator as part of a major permit modification to allow for the expansion of the landfill. These test pits were completed under the supervision of and logged by TJA personnel. The subsurface materials encountered in the test pits were generally described as predominantly sand with thin interbedded clay lenses. The surface elevation was established by professional surveyor licensed to practice in the Alabama and refenced to mean sea level. A summary of the test details is provided in Table 3.2.

TABLE 3.2 – 1999 TEST PIT SUMMARY

Test Pit No.	Total Depth ft-bls	Surface Elevation (ft-amsl)	Base Elevation (ft-amsl)
TP-5	20	146.97	126.97
TP-6	15	104.77	89.77
TP-7	25	99.80	74.80

ft-bls – feet below land surface
ft-amsl – feet above mean sea level

Based on observations made during this investigation, no groundwater was reported in any of the three test pits. Test Pit logs for TP-5 through TP-7 are also included as Attachment A.

3.3 2023 HYDROLOGIC INVESTIGATION

In accordance with a request from the Alabama Department of Environmental Management (ADEM) Solid Waste Branch, TJA personnel supervised the drilling of three borings to depths ranging from 50 to 70 feet below land surface (bls). The borings were designated as piezometers PZ-1, PZ-2 and PZ-3 the locations of which were selected as a result of an onsite meeting with ADEM personnel on August 9, 2023. A complete copy of the TJA report dated January 11, 2024, is included as Attachment B. A summary of the findings of TJA investigation is provided below.

Piezometer PZ-1 was located in the northeast corner of what was originally designated as Phase 2 of the permitted disposal area. This boring identified the presence of buried tires from a depth of 2 to 35 bls; below 35 feet, native sands were penetrated to roughly 40 feet then 10 feet of clay (to 50 feet bls). The boring was terminated in the clay and a 2-inch piezometer was installed to 48 feet bls (the lower 10 feet was a 0.010- inch slotted screen). Due to the presence of tires from 2 to 35 feet, the piezometer was completed without a sand pack; instead the top 10 feet of the borehole was completed with Bentonite pellets. The piezometer was abandoned by tremie grouting on December 11, 2023.

Boring PZ-2 was located on the northwestern perimeter of the landfill along the access road (See Figure 2). This boring was advanced to a depth of 70 feet bls and was determined to be dry. The top 24 feet was identified as fill material installed to create a perimeter berm for Phase 2. Below 24 feet the boring penetrated native material (sand, clay and sand and gravel). No waste was encountered in this boring and as a result of it being dry, no piezometer was installed. Instead, the borehole was abandoned from 0 to 66 feet on November 29, 2023, using bentonite pellets.

The boring for Piezometer PZ-3 was located at the southwest corner of Phase 2 disposal area. There was no evidence of waste disposal below the land surface at this location. The boring was completed at

a depth of 68 feet bls. The lithology consisted of sand and gravel to a depth of 48 feet bls. At this depth, the presence of water was noted. The lithology continued as a sand and gravel to roughly 50 feet bls and then a silty-clay to clay to 68 feet bls. Upon completion, a 2-inch diameter piezometer was installed with the bottom 30 feet (38-68 feet) being a 0.010-inch slotted well screen. A 20/40 sand pack was installed to a depth of 36 feet bls then the remainder of the borehole annulus was filled with bentonite pellets. This piezometer was abandoned on December 11, 2023, by tremie grouting to land surface through the casing.

Piezometer PZ-1 was completed in a clay that was penetrated at 40 feet bls. The measured depth to water (DTW) on December 11, 2023, was 45.58 feet below top of casing (btoc) or approximately 43.70 feet bls. This appears to be perched water retained in the clay that was penetrated from 40 to 50 feet bls. The top of clay is 5 feet below the base of tires penetrated in this boring. Boring PZ-2 was completed as a dry hole to 70 feet bls and boring PZ-3 was completed to a depth of 68 feet bls. According to TJA, the water elevation in PZ-3 is representative of the first zone of saturation in the subsurface along A-A'. The depth to water in PZ-3 was measured at 82.05 feet above mean sea level (amsl) on December 11, 2023.

The water elevation correlates well with the elevation of an unnamed tributary (UT) of Basset Creek that is at an approximate elevation of 70 feet amsl on the western boundary of the landfill.

TABLE 3.3 – 2023 HYDROLOGIC INVESTIGATION SUMMARY

Piezometer No.	Total Depth[1] (ft-bls)	Top of Casing Elevation (ft-amsl)	Bottom Boring Elevation (ft-amsl)	Depth to Groundwater (ft-btoc)	Groundwater Elevation (ft-amsl)
PZ-1	50.0	163.42	113.5	45.58	117.84*
PZ-2	70.0	NA	96.7	< 96.67	Dry
PZ-3	68.0	128.776	60.8	48.65	82.025

ft-bls – feet below land surface
ft-amsl – feet above mean sea level
ft-btoc – feet below top of casing
* - Suspected to be perched water

As noted above, groundwater encountered in PZ-1 is suspected to be perched and not representative of a laterally expansive first water-bearing zone beneath the Landfill. As described in the boring log for PZ-1, the boring encountered a thickness of approximately 35 feet of buried tires which are suspected to have been placed in an excavated trench and then covered with the uncompacted soil. It is the opinion of LaBella that this trench burial would allow for the accumulation of water in and below the base of the trench with water that percolates through the waste mass during wet weather. This opinion is supported by the fact that no groundwater seeps occur within the boundaries of the landfill at existing surface elevations that are at or above the measured water elevation of 115.95 ft-amsl as would be

expected if the water at PZ-1 reflected a continuous laterally expansive saturated zone beneath the Landfill. This is further supported by the identification of at least one seep that was observed during the 1999 Investigation. The seep was located outside the buffer zone boundary in the southwest corner of the landfill and near a unnamed tributary of Bassett Creek. The elevation of the seep was surveyed to be 74.77 ft-amsl and correlates well with the elevation of surface water observed in the unnamed tributary of Bassett Creek.

3.4 2024 Investigation Activities

To further address the perched groundwater identified at PZ-1, LaBella supervised the excavation of an additional Test Pit (TP-8) located approximately 40 feet west of the former piezometer. Since the installation of PZ-1, this area had received an additional 3 feet of cover raising the surface above the elevation surveyed in December 2023. The approximate location of TP-8 is shown in Figure 2.

The. Test Pit excavation, conducted on August 6, 2024, was advanced using a track excavator operated by landfill personnel to a total depth of approximately 23.0 feet. The subsurface materials were logged by a LaBella geologist experience in subsurface investigations. The subsurface materials encountered in the test pit is generally described as sand and buried tires. The tires present in the excavation extended to a depth of approximately 23 feet bls, beginning just below 3 feet and. the tires were directly underlain by a of a silty, clayey sand layer.

Following excavation, TP-8 was allowed to stand open at depth for approximately 90 minutes to observe for signs of groundwater infiltration in the base of the excavation. After 90 minutes, no accumulated water in the pit base or signs of moisture in the pit walls was evident. The lack of water in TP-8 supports the position that the water encountered in PZ-1 in December 2023 was perched within a former burial trench and not representative of the first water-bearing zone beneath the landfill. The Test Pit boring log for TP-8 is included as Attachment A.

Table 3.4- 2024 Test Pit Summary

Test Pit No.	Total Depth ft-bls	Surface Interval (ft-amsl)	Base Elevation (ft-amsl)
TP-8	23.50	163.90	140.40

ft-bls - feet below land surface
ft-amsl - feet above mean sea level

3.5 Site Specific Lithology

The soil (overburden) at the site was described as primarily of sand, clay and sand and gravel to depths of up to 70 feet bls.

4.0 OPERATIONAL CONSIDERATIONS AND CELL CERTIFICATION

The property containing the Jackson Landfill was originally used to mine sand gravel and once mining was completed, the property was permitted for the disposal of C&D waste. The original and continuing disposal practices, with the exception of the tires discussed above that were placed in an excavated trench, is to place waste on the existing ground surface within the disposal footprint. There has been no plan by the past and current owners to excavate overburden materials to lower the cell base elevations and increase the disposal volume area. As such, the base of any future cell will be the existing grade of that cell area at the time of cell certification.

As evidenced by the findings of the 1994, 1998, 2023 and 2024 investigations, the first water-bearing zone in the local area of the landfill occurs at an elevation of approximately 82.0 ft-amsl (PZ-3, TJA, 2023). This is further evidenced by the presence of the groundwater seep near the elevation of the creek surveyed as having an elevation of approximately 74 ft-amsl (TJA, 1998).

In an effort to ensure sufficient separation from groundwater, using the elevation of the base of each of the previously excavated test pits and the depth to water measured in PZ-3, the minimum base elevation within the current permitted disposal boundary was determined by adding 10 feet to the test pit base elevations and the water level measured in piezometer PZ-3. Using the calculated minimum elevations, a contoured surface was calculated using the elevation data are summarized in Table 4.0 below and illustrated in Appendix F - Figure 4.

TABLE 4.0 – MINIMUM BASE GRADE ELEVATIONS

Well I.D.	Total Depth	Land Surface Elevation (ft-amsl)	Maximum Depth Elevation (ft-amsl)	10 Feet Above Groundwater Elevation (ft-amsl)
TP-1	20	156.44	136.44	146.44
TP-2	20	158.58	138.58	148.58
TP-3	16	NA	NA	NA
TP-4	23	NA	NA	NA
TP-5	20	146.97	126.97	136.97
TP-6	15	104.77	89.77	99.77
TP-7	25	99.80	74.80	84.80
TP-8	23.50	163.90	140.40	150.40
PZ-3	68	128.776	82.02	92.02

ft-amsl – feet above mean sea level
ft-btoc – feet below top of casing

Given that no groundwater was encountered in any of the test pits, using an elevation 10 feet above the base of each pit and a base elevation that is 10 feet above the water-bearing zone encountered in PZ-3, the calculated contoured surface illustrating a minimum of 10 feet of separation to groundwater and the planned application of waste to the existing surface of a disposal cell provides a separation from the

first water-bearing zone well above the required minimum separation of five feet required by ADEM Admin Code r. 335-13- 4-.11(2)(a).

4.1 CELL CERTIFICATION

As part of future cell certifications, the boundary of the new cell will be marked using posts or other permanent markers sufficient to delineate the boundary. Following establishment of the cell boundary, the new cell will be surveyed by a Professional Land Surveyor licensed to practice in the State of Alabama. The survey will include the boundary and a topographic map of the cell surface. The pre-disposal existing grade elevations will be compared to the proposed base grade elevations, as illustrated in Figure 4 to ensure that the existing grade elevations are at or above the cell base elevations. In addition to the comparison of the existing surface elevation within a cell to the contoured surface that is a minimum of 10 above the expected level of groundwater, a minimum of two test pits will be advanced to 10 feet bgs within the cell to be certified to confirm groundwater is not present within the 10 feet of the surface. The confirmation that the cell surface elevations are at or above the contoured surface elevations illustrating the 10 foot of separation to groundwater and no groundwater is encountered in any test pit, the cell will be certified by a Professional Engineer licensed in the State of Alabama. The certification will be submitted to ADEM for review and approval. No waste will be disposed in the new cell until the ADEM personal have completed their site visit to confirm the certification, or such site visit is waived by the Department.

5.0 FINDINGS AND CONCLUSIONS

Based on the findings of this limited hydrogeologic evaluation of the Jackson Landfill, LaBella offers the following conclusions:

- A total of eight test pits have been advanced at the landfill, four as part of the original permit application 1994, three as part of the 1999 permit modification, and one as part of the 2024 proposed permit modification to depths ranging from 15 to 25 feet bls.
- No groundwater was encountered in any of the test pits.
- Three piezometers (PZ-1 through PZ-3) were advanced as part of 2023 hydrogeologic evaluation to depths ranging from 50 to 70 feet bls. Groundwater was only encountered in PZ-3 at a depth of approximately 48 bls.
- The elevation of groundwater encountered in PZ-3 (82.02 ft-amsl) correlates well with the elevation of a groundwater seep (approximately 74 ft-amsl) near the southwestern property and just east of the UT of Bassett Creek indicating the first water-bearing zone within the landfill boundary occurs at approximately 48 feet bls.
- The original and continuing disposal practices, with the exception of the tires encountered during the drilling of PZ-1, is to place waste on the existing ground surface within the disposal footprint.
- Using the contoured surface 10 feet above the base of each test pit and a base elevation 10 feet above the water-bearing zone encountered in PZ-3, the application of waste to the existing land surface (Figure 4) provides a separation from the first water-bearing zone well above the required minimum separation of five feet required by ADEM Admin Code r. 335-13- 4-.11(2)(a).
- As part of future cell certifications, the pre-disposal existing grade elevations will be compared to the calculated base grade elevations to ensure that the existing grade elevations are at or above the proposed cell base elevations.

6.0 REFERENCES

Alabama Department of Environmental Management Administrative Code R. 334-13-4-.11 through 334-13-4.14.

Tom Joiner & Associates, Inc. Hydrogeologic Evaluation, 1994.

Tom Joiner & Associates, Inc. Hydrogeologic Evaluation, 1998

Tom Joiner & Associates, Inc. Hydrogeologic Evaluation, 2023

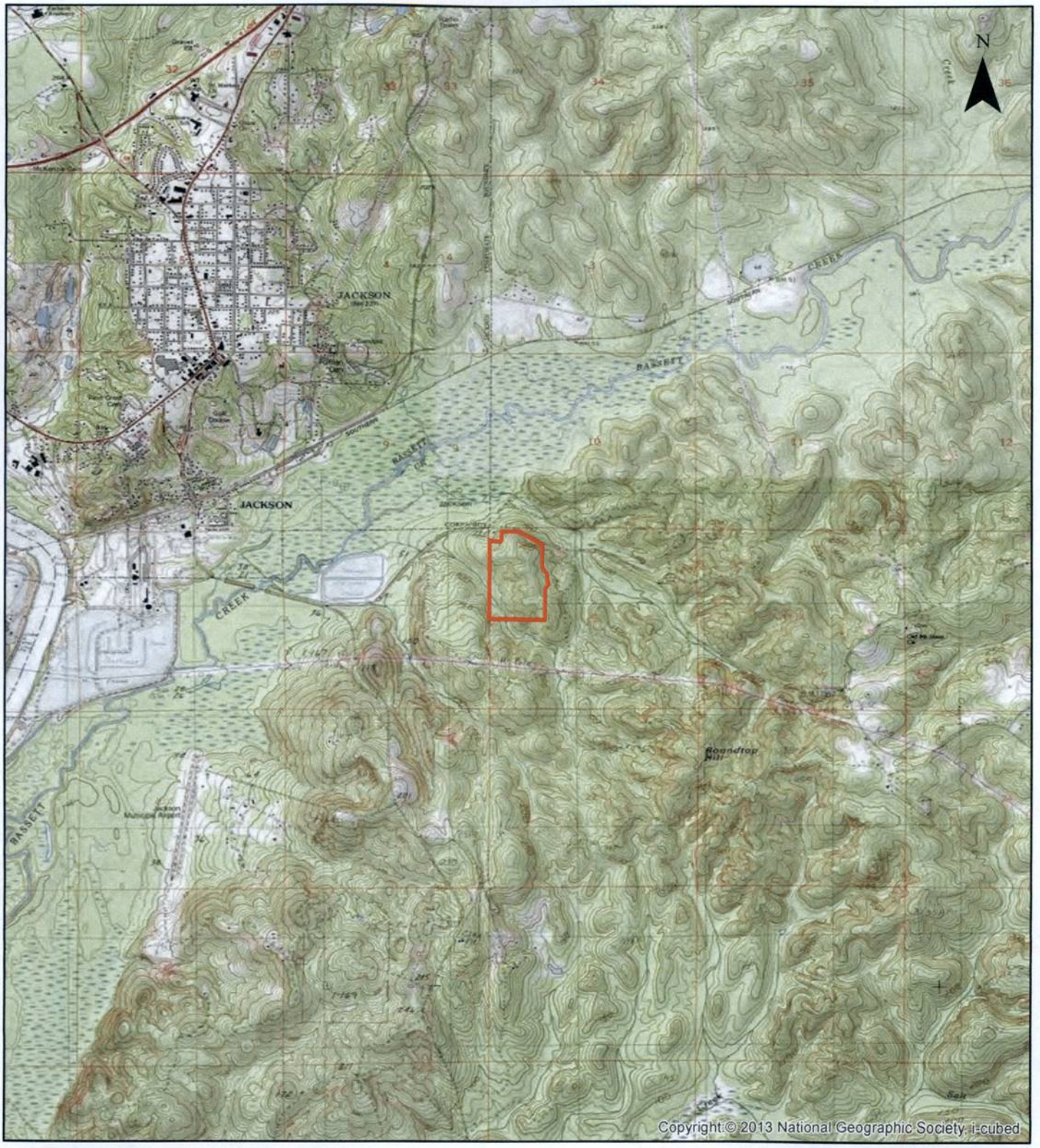
Panert, Michael, Pritchett, Jr., James L., United States Geological Survey. Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama; Area 10: Water Resources Investigations Report 88-4077, 1989.

USGS Topographic Map, Alma, AL, 7.5 Minute Quadrangle, 2020

Web Soil Survey of Clarke County, Alabama, USDA, Soil Conservation Service, May 2024.

Special Map 221, Geologic Map of Alabama: Geological Survey of Alabama, 1989.

FIGURES



Legend

Approximate Property Area

LaBella
Powered by partnership

528 MINERAL TRACE
HOOVER, AL 35244
(205) 985-4874

TITLE:
Site Location Map
Jackson Landfill
Jackson, Clarke County, AL

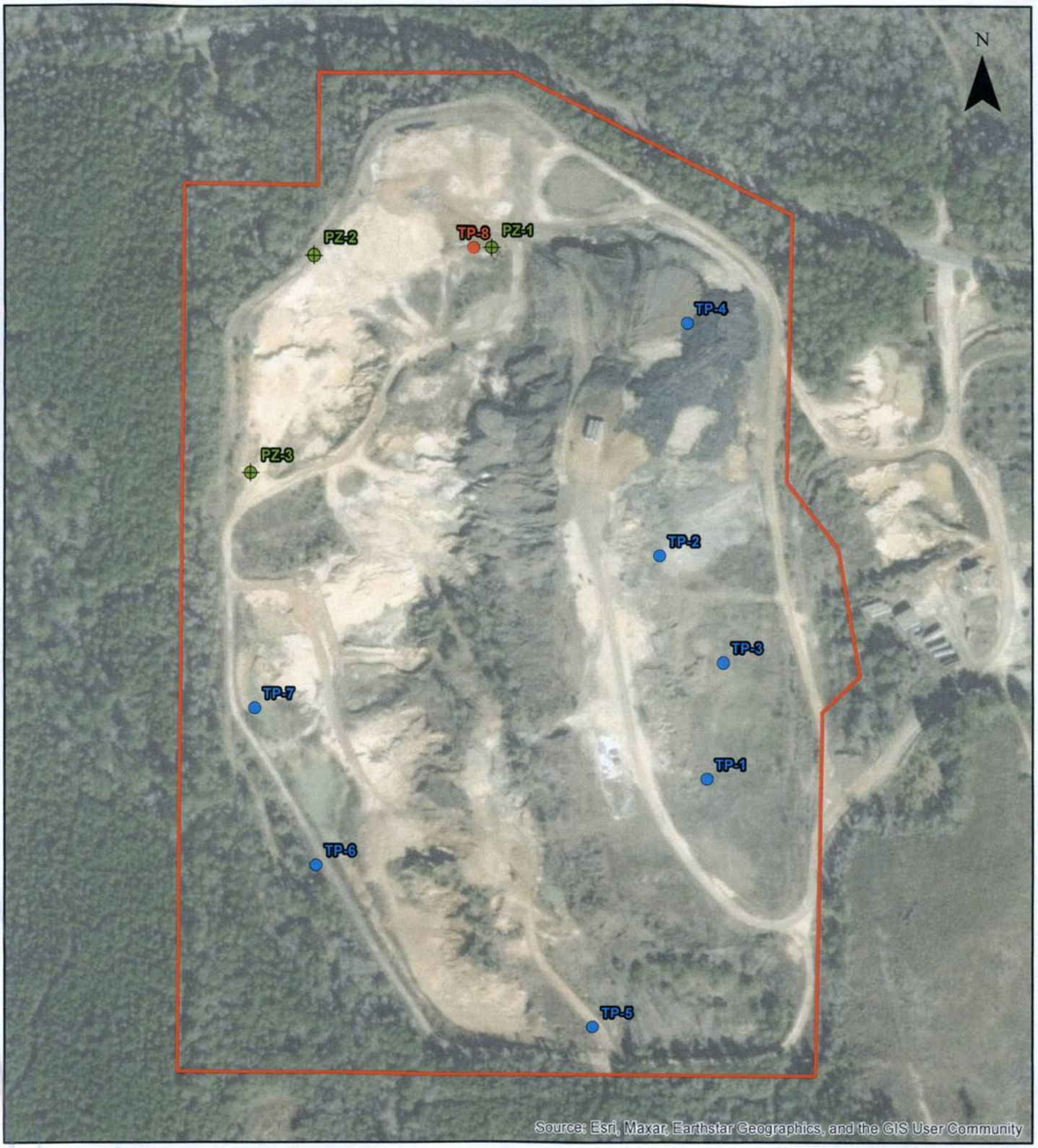
SCALE: 0 2,100 4,200
1 inch = 4,000 feet

FIGURE NO.
Appendix F Figure 1

PROJECT NO.
2242248.03

DRAWN BY
AJH

DATE DRAWN
5/6/2024



Legend

- Piezometer
- Test Pit
- New Test Pit
- Approximate Property Area

LaBella
Powered by partnership.

528 MINERAL TRACE
HOOVER, AL 35244
(205) 985-4874

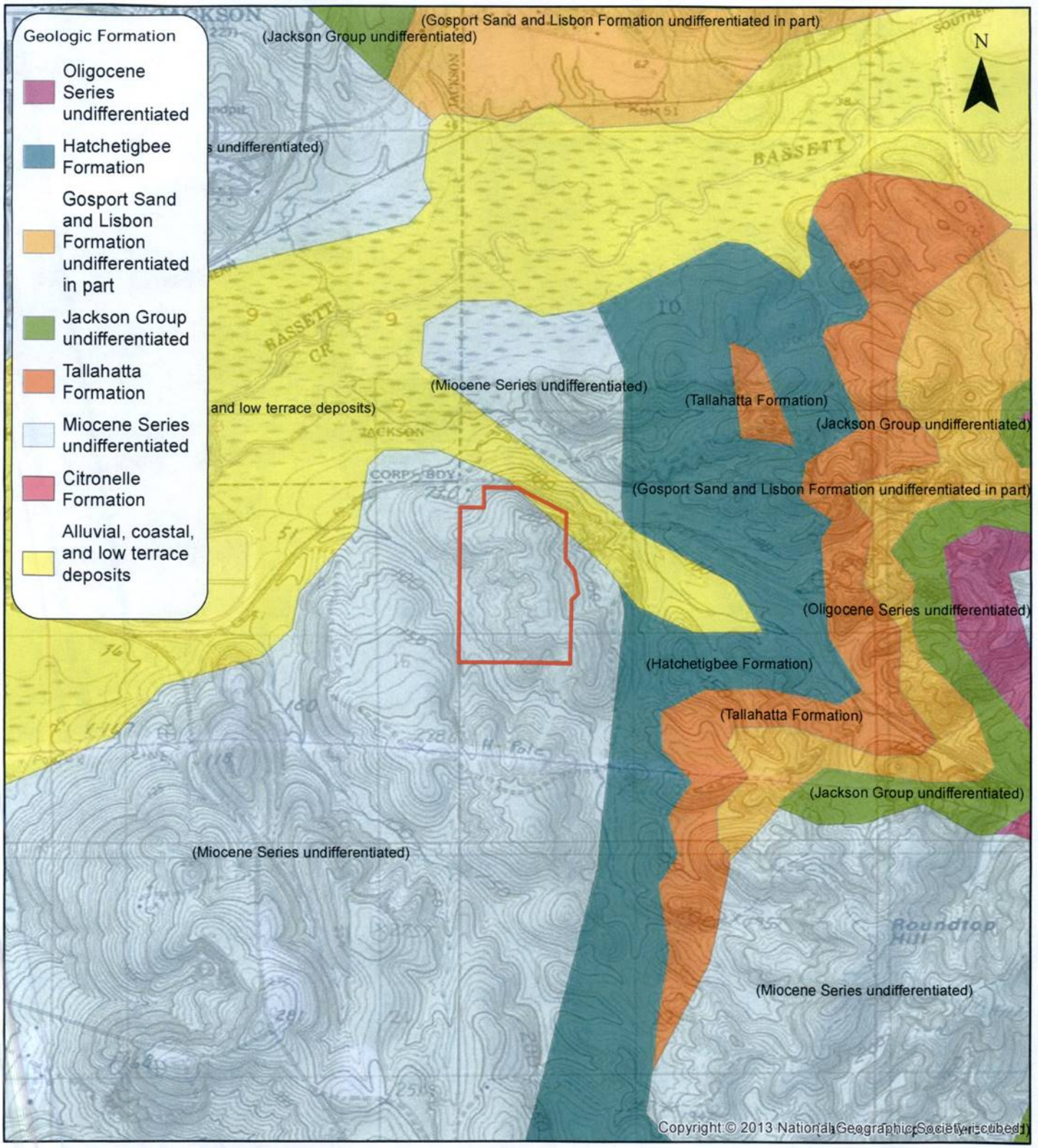
TITLE: Test Pit & Piezometer Location Map

Jackson Landfill

Jackson, Clarke County, AL

SCALE: 0 175 350
1 inch = 350 feet

FIGURE NO.	2
PROJECT NO.	2241604
DRAWN BY	AJH
DATE DRAWN	08-19-2024



Legend

Approximate Property Area

LaBella
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528 MINERAL TRACE
HOOVER, AL 35244
(205) 985-4874

TITLE:
Geologic Map
Jackson Landfill
Jackson, Clarke County, AL

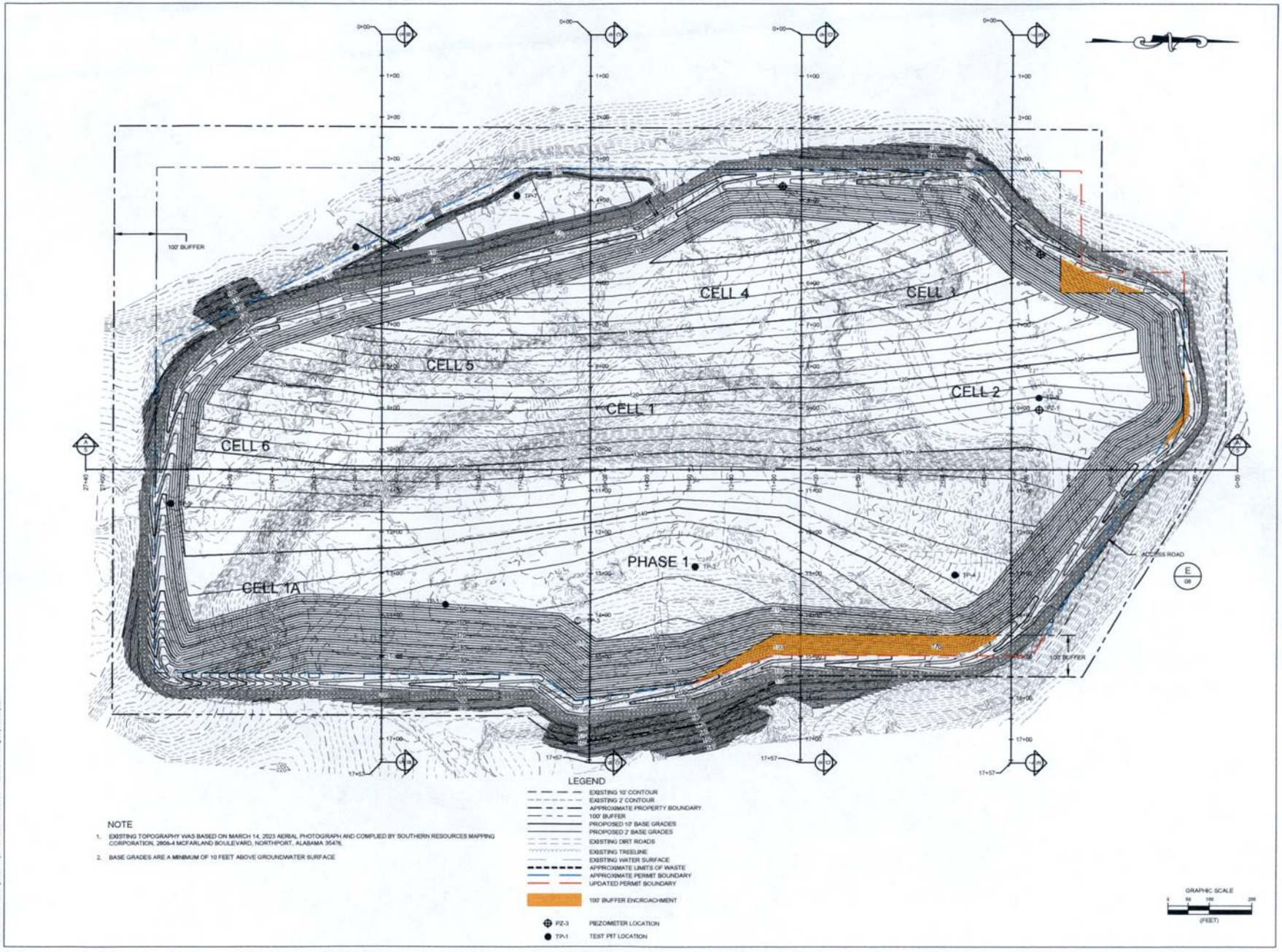
SCALE: 0 1,000 2,000
1 inch = 2,000 feet

FIGURE NO.
Appendix F Figure 3

PROJECT NO.
2242248.03

DRAWN BY
AJH

DATE DRAWN
5/6/2024



NOTE

1. EXISTING TOPOGRAPHY WAS BASED ON MARCH 14, 2023 AERIAL PHOTOGRAPH AND COMPILED BY SOUTHERN RESOURCES MAPPING CORPORATION, 2808-4 MCFARLAND BOULEVARD, NORTHPORT, ALABAMA 35476.
2. BASE GRADES ARE A MINIMUM OF 10 FEET ABOVE GROUNDWATER SURFACE

L:\Alabama\Jackson\dwg\2024 Major Permit\SURFACE 10 FT ABOVE GW.dwg Layout\Layout1

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(205) 985-4874
labellapc.com

NOT FOR CONSTRUCTION

GAINESTOWN ROAD LANDFILL, LLC
PO BOX 850415
MOBILE, ALABAMA 36685

JACKSON LANDFILL
1312 GAINESTOWN ROAD
JACKSON, AL 36545

NO.	DATE	DESCRIPTION
Revisions		

PROJECT NUMBER: 2242248.03
DRAWN BY: WW
REVIEWED BY: DWT
ISSUED FOR:
DATE: 11/1/2024
DRAWING NAME:

SURFACE 10' ABOVE GROUNDWATER

DRAWING NUMBER:

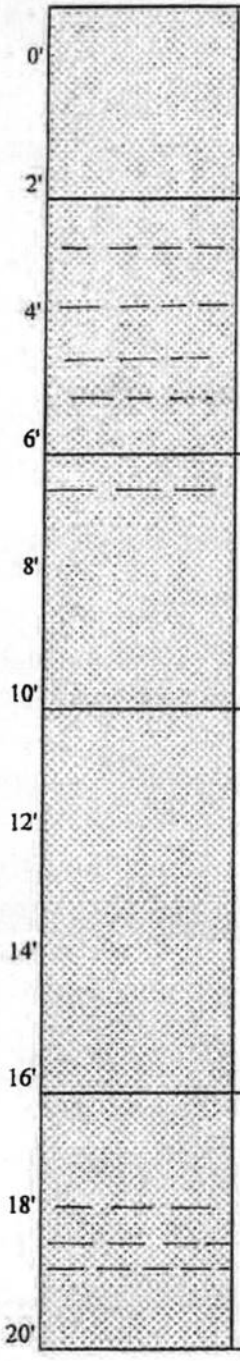
APPENDIX F
FIGURE 4

ATTACHMENT A

JACKSON LANDFILL COMPANY

TEST PIT #1

Surface Elevation: 156.44



DESCRIPTION	
0'-2'	Sand -silty, tan to brown grades to mottled light gray and purple red,very fine grained.
2'-6'	Sand -silty,interbedded yellow, mottled gray slightly clayey very fine grained.
6'-10'	Sand , as above,2"-4" of clay at 6.5', moderately stiff.
10'-16'	Sand, as above.
16'-20'	Sand, as above, minor interbedded clayey sand, finer grained with depth,18"-19" plastic, moderately stiff.

Bottom Elevation: 136.44

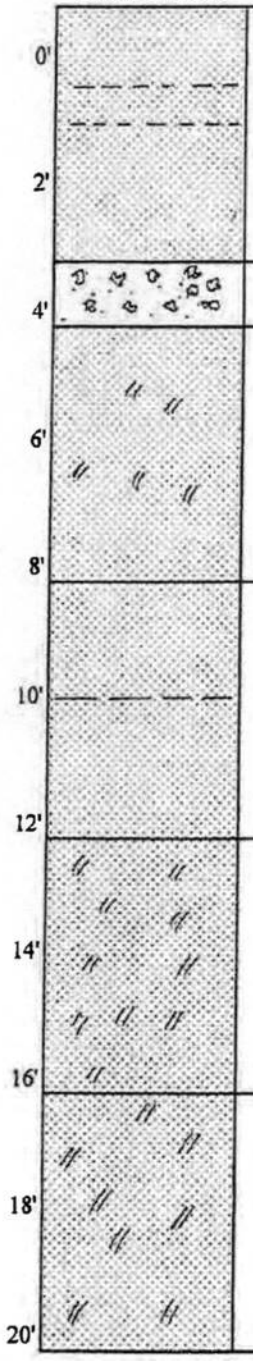
Appendix E

Test Pit #1

Geologic Log

JACKSON LANDFILL COMPANY

TEST PIT #2 Surface Elevation: 158.58



	DESCRIPTION
0'-3'	Sand, fine to coarse grained, subangular to subrounded, tan, brown , minor clay lenses <2" thick.
3'-4'	Gravel, quartz with coarse grained sand, well rounded to subangular, granule to pebble size.
4'-8'	Sand, fine grained to coarse grained white to yellow, minor crossbedding yellow sand is medium grained quartz sand subrounded to subangular.
8'-12'	Sand, as above, mottled purple gray, sandy clay at 10', clay is light gray, plastic, 3"-6" thick.
12'-16'	Sand, yellowish white to reddish orange, crossbedded, fine to medium grained, slightly moist, well sorted, subrounded to subangular, no fines.
16'-20'	Sand, yellow,redwith streaks of purple, crossbedded, subrounded to subangular.

Bottom Elevation: 136.58

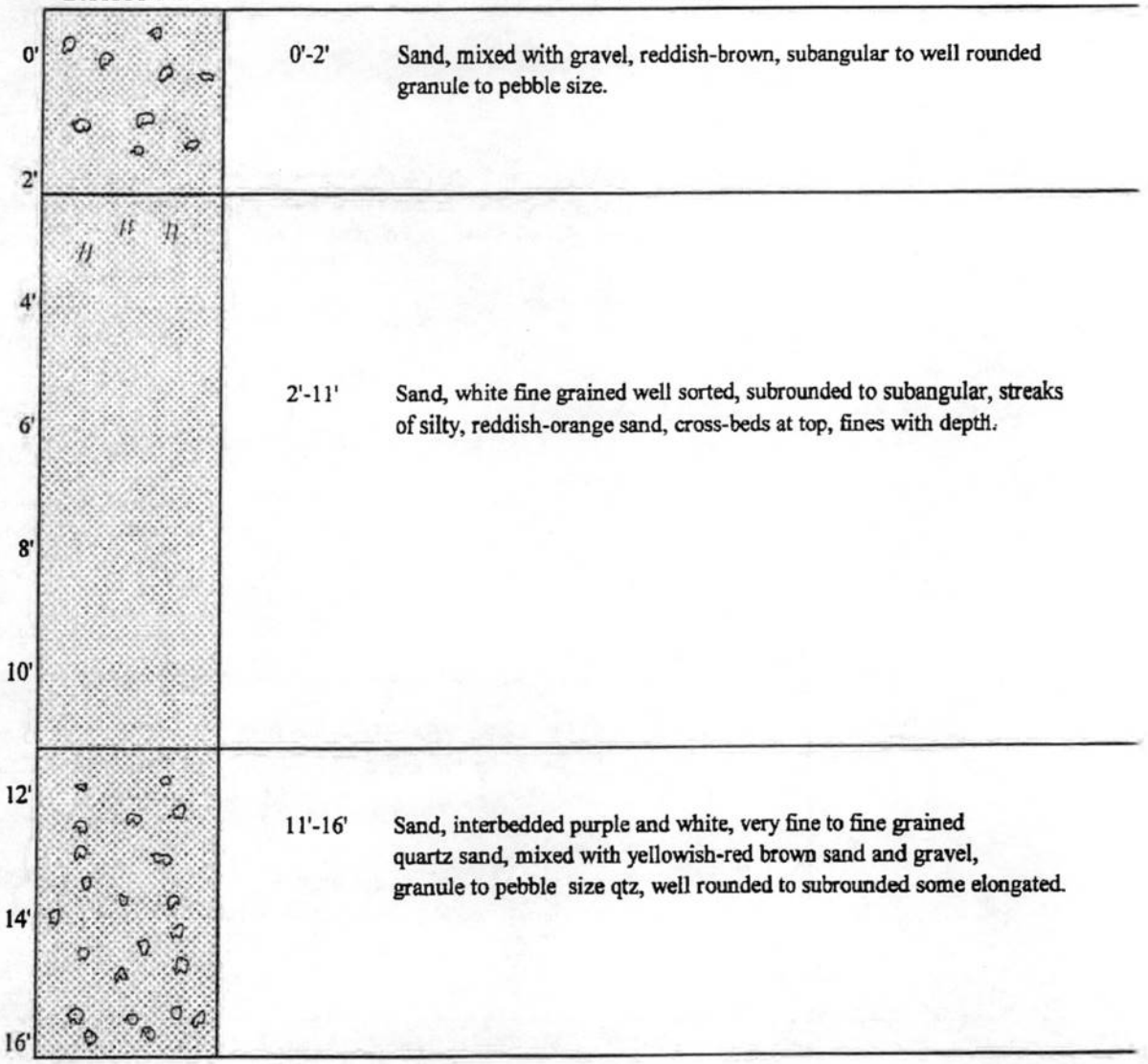
Appendix E

Test Pit #2

Geologic Log

JACKSON LANDFILL COMPANY

TEST PIT #3 Surface Elevation: NA



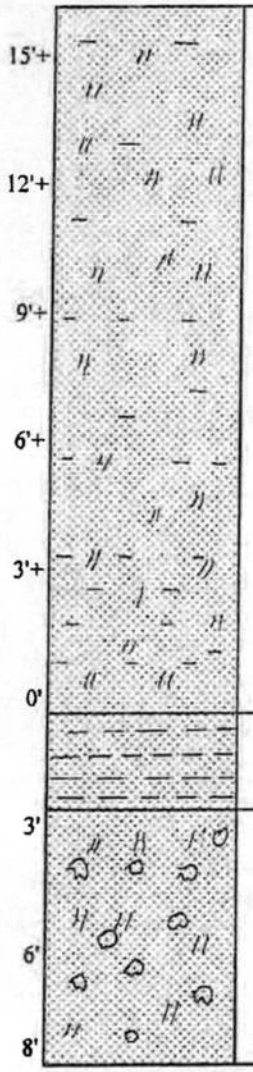
Appendix E

Test Pit #3

Geologic Log

JACKSON LANDFILL COMPANY

TEST PIT #4 Surface Elevation: NA



LITHOLOGY		DESCRIPTION
	15'-0'	Sand , purple, yellowish-white , reddish brown, fine grained crossbedded, well sorted, well rounded to subrounded, reddish brown layers are slightly silty.
	0'-2.5'	Clay, mottled gray-purple red, moderately stiff, silty/sandy interbedded with very fine grained silty sand.
	2.5'-8'	Sand, sand and gravel, purple to tan brown with limonite, crossbedded fine grained to coarse grained, gravel, well rounded to subrounded quartz.

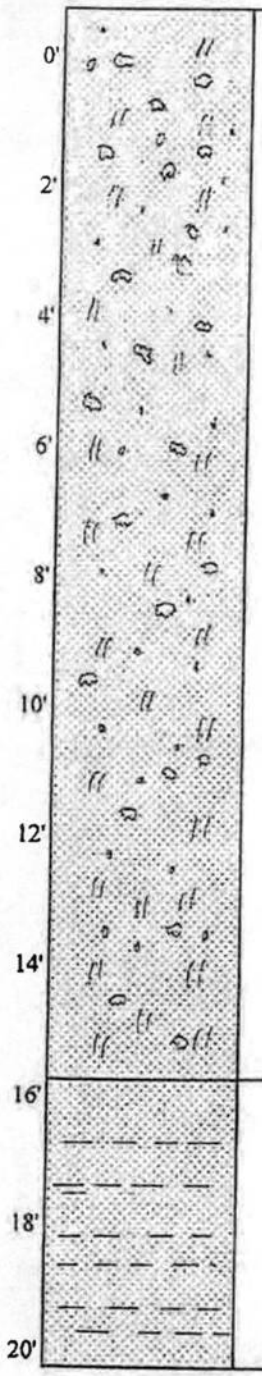
Appendix E

Test Pit #4

Geologic Log

JACKSON LANDFILL COMPANY

TEST PIT #5 Surface Elevation: 146.97



DESCRIPTION

0-16'	Sand and Gravel, lenticular,crossbedded, light brown (5 yr 5/6) to dark yellowish orange (10 yr 6/6), sand is fine to very coarse grained, poorly sorted ; gravel is granule to pebble sized quartz, rounded to angular.
16'-20'	Clay, silty/sandy, alternating laminations of light gray (5 yr 7/1) and yellowish red (5 yr 4/6), moderately stiff, dry.

Bottom Elevation: 126.97

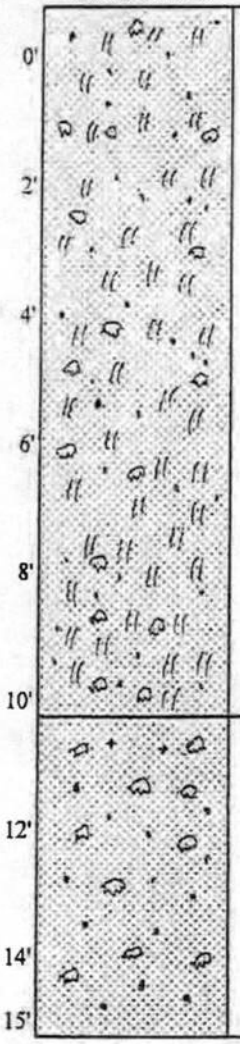
Appendix I

Test Pit #5

Geologic Log

JACKSON LANDFILL COMPANY

TEST PIT #6 Surface Elevation: 104.77



DESCRIPTION	
0-10'	Sand and Gravel, massive, crossbedded, reddish yellow (5yr 7/8); sand is fine to very coarse grained, poorly sorted , angular; Gravel is granule to pebble sized tabular to elongate, subrounded to rounded.
10'-15'	Sand and Gravel, reddish yellow (5yr 6/8); sand is very fine to coarse grained, moderately sorted, angular; Gravel is granule to pebble sized, rounded quartz.

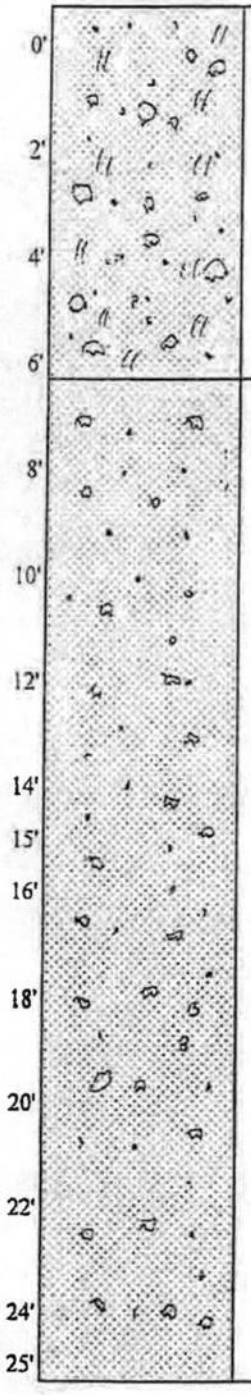
Bottom Elevation: 89.77

Appendix E
Test Pit #6
Geologic Log

JACKSON LANDFILL COMPANY

TEST PIT #7

Surface Elevation: 99.80



	DESCRIPTION
0'-6'	Sand and Gravel, lenticular, crossbedded, (root fragments 0-1); yellowish brown (10 yr 5/8), sand is fine to very coarse grained, poorly sorted, angular; Gravel is granule to pebble sized, tabular to elongate, rounded to subrounded quartz.
10'-25'	Sand and Gravel, very pale brown (10 yr 8/3) and dark yellowish brown (10 yr 4/6), very fine to coarse grained, poorly sorted; Gravel is granule to pebble sized, rounded to subrounded quartz.

Bottom Elevation: 74.80

Appendix E

Test Pit #7

Geologic Log

LaBella
Powered by partnership.

Site	Gainestown Road Landfill Jackson, AL	Log of	Test Pit 8 Near PZ-1
Project	2241604		

Date Started	: 08/06/2024	Drilling Company	: Gainestown Rd Landfill
Date Completed	: 08/06/2024	Driller	: Ryan Gates
Hole Diameter	: N/A	Latitude	: 31.49459
Drilling Method	: Excavator	Longitude	: -87.86840
Sampling Method	: N/A	Logged By	: Aaron Engi

Depth in Feet (bgs)	Surf Elev.	USCS	GRAPHIC	PID Result	DESCRIPTION	Sample Locations	Well: Elev.:
0		SP			0'-3' Sand, poorly-graded, tan to reddish-yellow, medium to fine with trace silt		
5		SP			3'-23' Tires and other man-made debris with sand		
10							
15							
20							
25		SM			23'-23.5' Silty sand, tan mottled with grey, medium to fine, slightly clayey 23.5' End of Excavation		
30							

ATTACHMENT B

TOM JOINER & ASSOCIATES, Inc.

Consulting Geologists & Engineers

Ken P. Hanby
President

Joseph E. Patrick
Vice President

January 11, 2024

Blake Holden
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36110-2400

RE: Jackson Landfill
Permit No.: 13-07
Hydrologic Monitoring for Phase 2 (of Landfill)
For Certification of Cells A, B, C

Dear Blake:

In accordance with a August 9, 2023 meeting with Wendy and Lewis Walker (Jackson Landfill), Blake Holden (ADEM), Joe Patrick and Minda Paxton (Tom Joiner & Associates, Inc. (TJA)) at the Jackson Landfill, TJA, on behalf of Jackson Landfill, has conducted the work necessary to identify the depth to water below the land surface of cells A, B and C in the Phase 2 area of the Jackson Landfill. This work was done to supplement our 1995 hydrologic evaluation when the depth to groundwater was determined to be more than 5 feet below the base of the disposal cells of the landfill. The vicinity and site map of the Landfill are included as Figures 1 and 2, respectively.

To accomplish this, TJA supervised the drilling of three borings to depths ranging from 50 to 70 feet bls. The borings are identified as piezometers PZ-1, PZ-2 and PZ-3 on Figure 2. These locations were selected following our meeting on August 9, 2023 and their purpose was to identify if the groundwater elevation was more than 5 feet below the base of the proposed land disposal in Phase 2 of the Landfill. Boring logs and Piezometer construction are attached.

Piezometer PZ-1 was located in the northeast corner of the Phase 2 disposal area. This boring identified the presence of waste tires from 2 to 35 feet below land surface (bls); below 35 feet, native sands were penetrated to roughly 40 feet then 10 feet of clay (to 50 feet bls). The boring was terminated in the clay and a 2-inch piezometer was installed to 48 feet bls (the lower 10 feet was a 0.010-

inch slotted screen). Due to the presence of tires from 2 to 35 feet, the piezometer was completed without a sand pack, instead the top 10 feet of the borehole was completed with Bentonite pellets, The piezometer was abandoned by tremie grouting on 12-11-23.

Boring PZ-2 was located on the northwestern perimeter of the landfill along the access road (See Figure 2). This boring was advanced to a depth of 70 feet bls and was determined to be dry. The top 24 feet was identified as fill material installed to create a perimeter berm for Phase 2. Below 24 feet the boring penetrated native material (sand, clay and sand and gravel). No waste was penetrated in this boring and as a result of it being dry, a piezometer was not installed. Instead, the borehole was abandoned from 0 to 66 feet on 11-29-23 using bentonite pellets.

The boring for Piezometer PZ-3 was located at the southwest corner of Phase 2 disposal area. There was no evidence of waste disposal below the land surface here. The boring was completed at a depth of 68 feet bls. The lithology consisted of sand and gravel to a depth of 48 feet bls. At this depth the presence of water was noted. The lithology continued as a sand and gravel to roughly 50 feet bls and then a silty-clay to clay to 68 feet bls. Upon completion, a 2-inch diameter piezometer was installed with the bottom 30 feet (38-68 feet) being a 0.010-inch slotted well screen. A 20/40 sand pack was installed to a depth of 36 feet bls then the remainder of the borehole annulus was filled with Bentonite pellets. This piezometer was abandoned on 12-11-23 by tremie grouting to land surface through the casing.

A line of section (A-A', Figure 2) was used to create a hydrogeologic cross section (Figure 3) to identify the relationship of the proposed cells (Cell A, B, and C) that must be certified. This cross section identifies each piezometer and the existing land surface elevation along A-A' (Figure 2). Piezometer PZ-1 is completed in a clay that was penetrated at 40 feet bls. The measured DTW on 12-11-23 was 45.58 feet BTOC or about 43.70 feet bls. This appears to be perched water retained in the clay that was penetrated from 40 to 50 feet bls.. The top of clay is 5 feet below the base of tires penetrated in this boring. Boring PZ-2 was completed as a dry hole to 70 feet bls and boring PZ-3 was completed to a depth of 68 feet bls. The water elevation in PZ-3 is representative of the first zone of saturation in the subsurface along A-A'. The depth to water in PZ-3 was measured at 82.05 feet AMSL on 12-11-23. The water elevation correlates well with the elevation of an UT of Basset Creek that is at an approximate elevation of 70 feet AMSL on the western boundary of the landfill (Figure 1). Based on this depth, the groundwater is more than five feet below the base of waste disposal beneath Cells A, B and C. Cell C is an area with no disposal and the depth to

water in PZ-3 indicates that the cell base could be constructed as low as 87 to 88 feet AMSL.

As always, please contact me if you have any questions. You can reach me by phone at (205) 345-2311 or by email at jpatrick@tjacge.com.

Sincerely,

Joseph E. Patrick

Enclosures: Figures 1-3
Boring Logs (PZ-1, PZ-2, PZ-3)
Piezometer Construction Diagrams (PZ-1 and PZ-3)
Table 1 - Groundwater Elevation Table

xc: Wendy Walker with Enclosures

87E-BH-Groundwter Elevation Study-1-11-24.jep

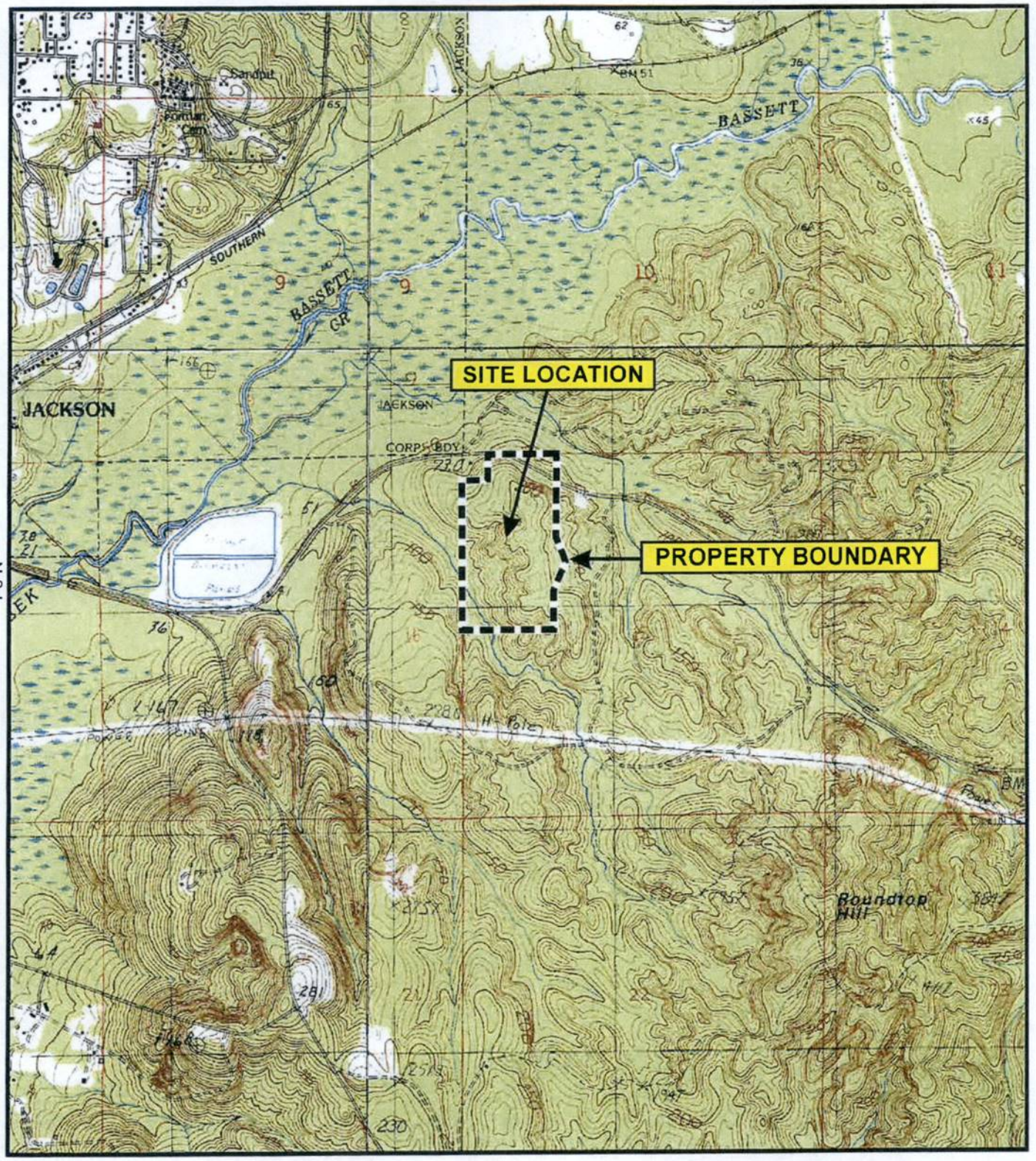


FIGURE 1

VICINITY MAP

JACKSON LANDFILL

SOURCES: JACKSON 7.5' USGS QUADRANGLE (1978), WALKER SPRINGS 7.5' USGS QUADRANGLE (1978), PRESTWICK 7.5' USGS QUADRANGLE (1983) AND CHOCTAW BLUFF NE 7.5' USGS QUADRANGLE (1983)

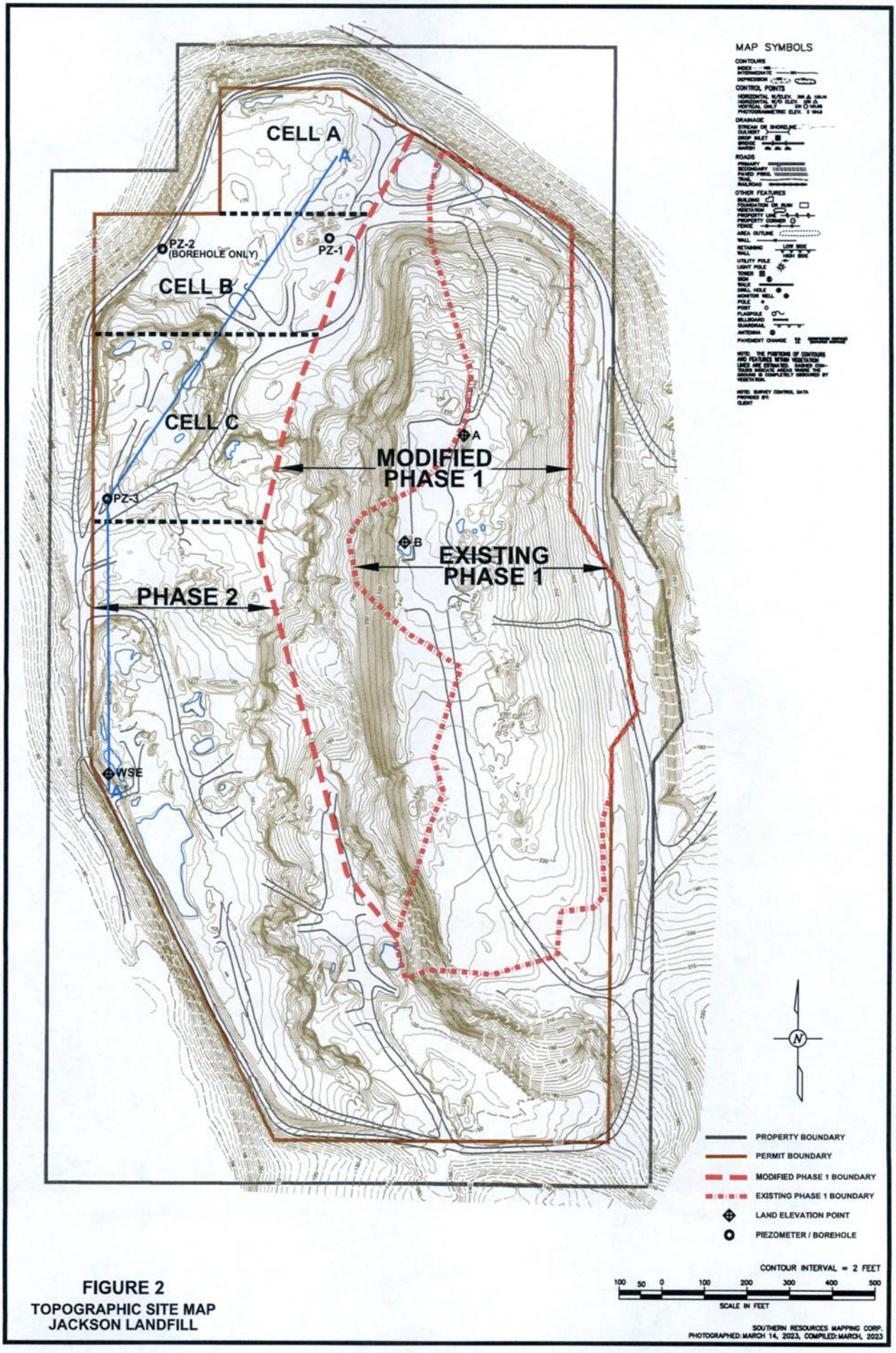


FIGURE 2
TOPOGRAPHIC SITE MAP
JACKSON LANDFILL

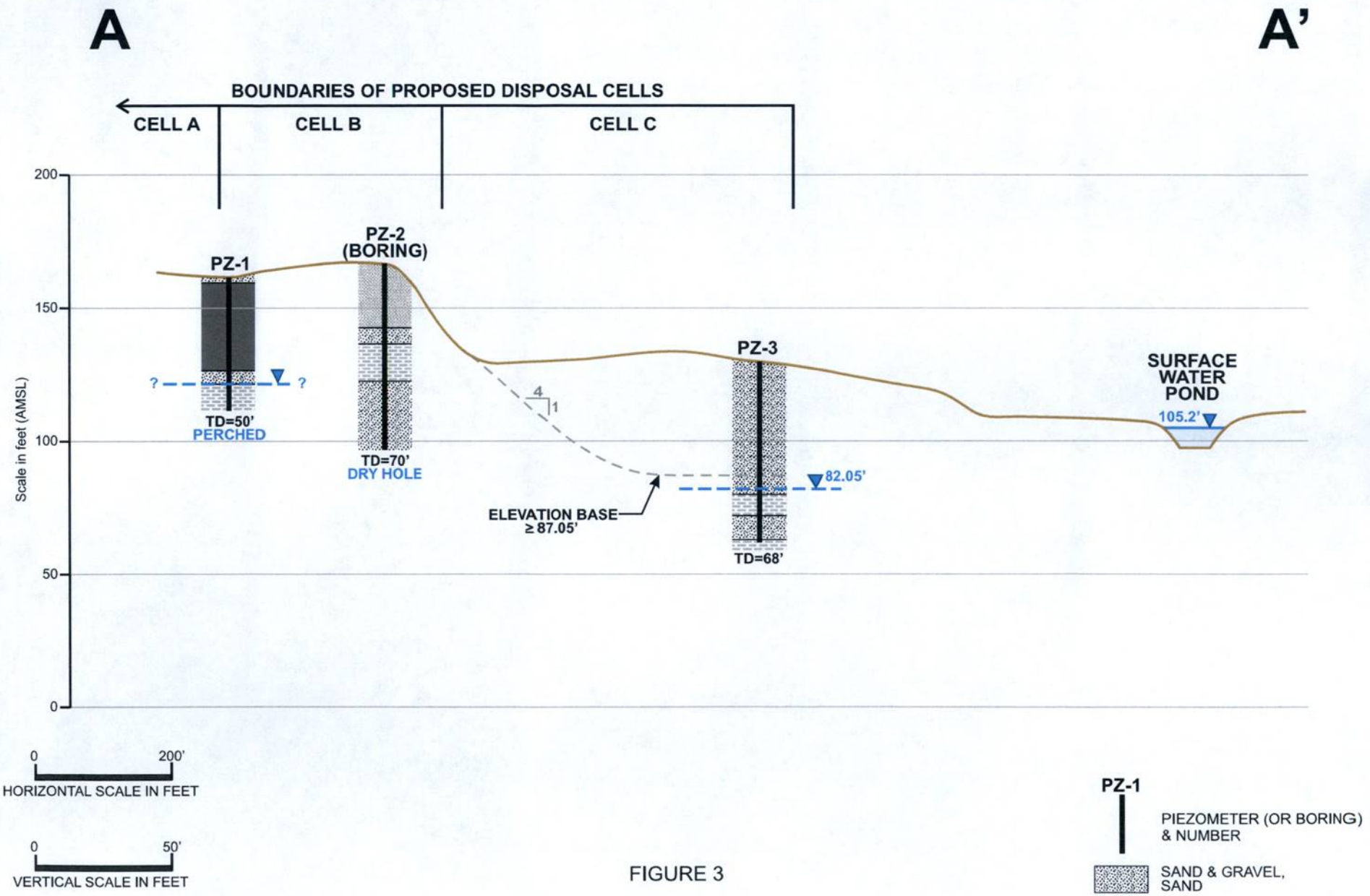


FIGURE 3

CROSS SECTION A-A'

JACKSON LANDFILL

LINE OF CROSS SECTION SHOWN ON FIGURE 2

BORING LOG

WELL NUMBER:	PZ-1	LOCATION:	Jackson Landfill
DRILLER:	Walker Hill Env		
DRILLING METHOD:	Sonic		Jackson, AL
DATE:	11/28/2023	BOREHOLE DIA.(in.):	4
TD DRILLED (ft.):	50		
WATER LEVEL:	Perched	TJ&A REP :	Joseph E. Patrck
Ground Elevation	161.5		

Ground Surface Elevation	SAMPLE INTERVAL (Feet)	DESCRIPTION
0.0	0-10	0-2 feet, Sand and gravel (tires fragments blocked sample tube from 2-10 feet, no recovery)
10.0	10-20	
20.0	20-25	Tires with sand (to 35 feet)
	25-30	
30.0	30-40	
		35-40 feet, Sand, reddish-yellow (7.5 YR 7/8), loose, fine to medium grained (native)
40.0	40-50	40-50 feet, Clay, pink to light gray (7.5 YR 7/8--7/1), silty, with minor sand laminae (<1 inch)
		Moisture in hole on top of clay (at 40 feet) , Install temporary 2-inch piezometer with lower 10 feet 0.010 inch slot screen to TD of 48 Feet BLS; borehole sealed with bentonite chips for top 10 feet
50.0		
60.0		
70.0		

BORING LOG

WELL NUMBER:	PZ-2 (borehole only)	LOCATION:	Jackson Landfill
DRILLER:	Walker Hill Env		
DRILLING METHOD:	Sonic		Jackson, AL
DATE:	11/28/2023	BOREHOLE DIA.(in.):	4
TD DRILLED (ft.):	70		
WATER LEVEL:	Dry hole	TJ&A REP.:	Joseph E. Patrck
Ground Elevation	166.7		

DEPTH (Feet)	SAMPLE INTERVAL (Feet)	DESCRIPTION
0.0		
	0-10	0 to 2.9 feet, Sand, red brown (2.5 YR 5/8)
		2.9 to 5 feet, Ash, , black
		5-6 feet Sand , dark red (2.5 YR 3/3)
		(no recovery 6-10 feet)
10.0	10-20	
		10-11 feet, Ash, black
		11 -15 feet, Sand as above, loose , dark red (2.5 YR 4/8)
		(no recovery 15-20 feet)
20.0		
	20-30	20-21.3 feet, Ash, black
		21.3-24 feet, Sand, clayey
		24-27.5 feet, Sand, red with interbeds of clay (native material)
		(no recovery 27.5-30 feet)
30.0		
	30-40	
		30-39.25 feet, Clay, reddish-gray (2.5 YR 7/1), stiff, siltier with depth
		(no recovery 39 25-40 feet)
40.0	40-50	
		40-44 feet, Clay, as above
		44-46 feet, Sand, loose, red brown, dry
		(no recovery 46-50 feet)
50.0		
	50-60	
		50-53 feet, Sand, light red (2.5 YR 7/8) to pink (5 YR 7/4) with gravel
		(no recovery 53-60 feet)
60.0		
	60-70	
		60-70 feet, Sand with gravel (as above)
		Dry hole, no piezometer installed
		(no recovery 65-70 feet)
70.0		

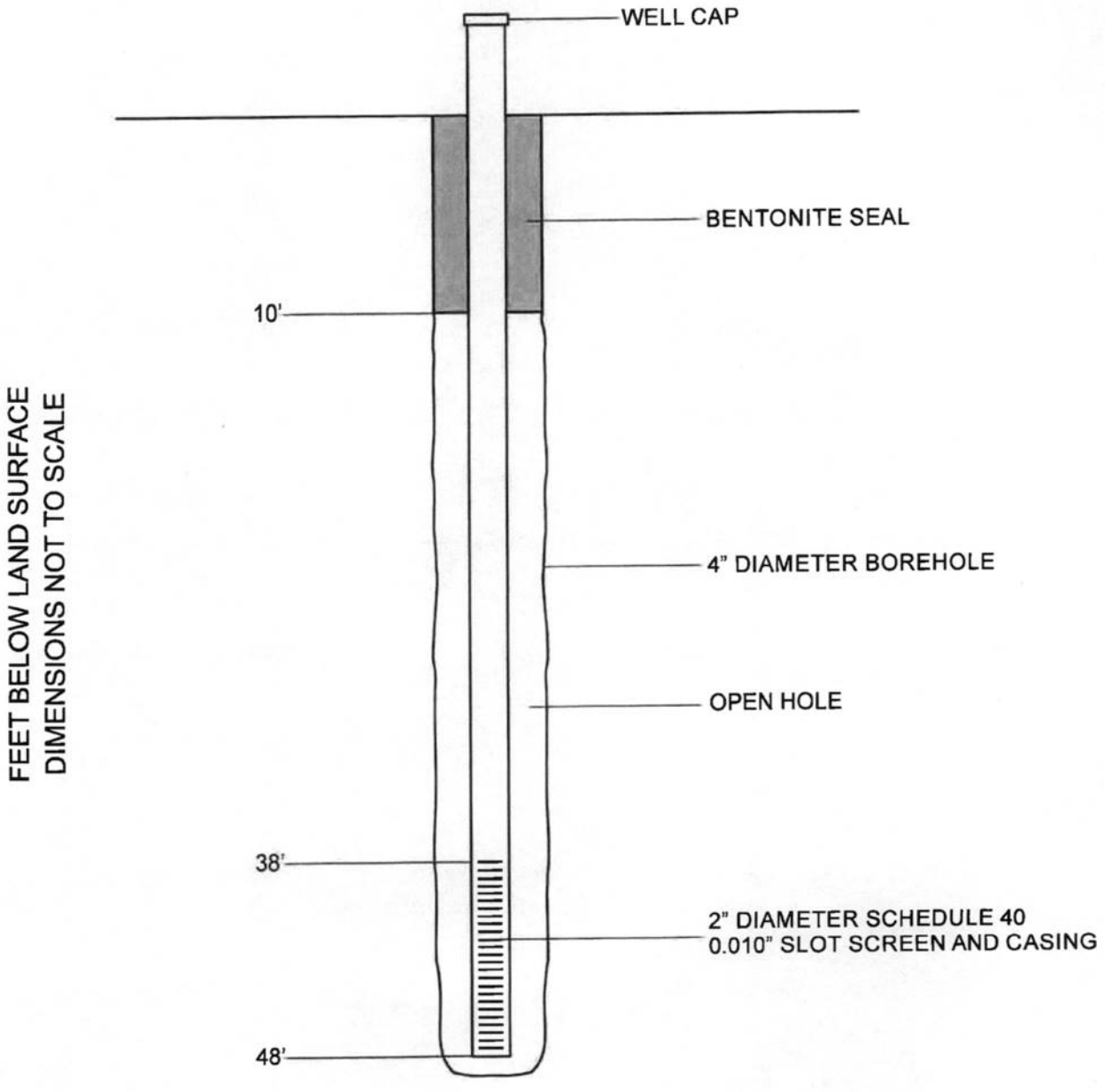
BORING LOG

WELL NUMBER:	PZ-3	LOCATION:	Jackson Landfill
DRILLER:	Wlaker Hill Env.		
DRILLING METHOD:	Sonic		Jackson, AL
DATE:	11/28/2023	BOREHOLE DIA.(in.):	6
TD DRILLED (ft.):	68		
WATER LEVEL:		TJ&A REP.:	Joseph E. Patrck
Ground Elevation	128.8		

DEPTH (Feet)	SAMPLE INTERVAL (Feet)	DESCRIPTION
0.0		
	0-8	0-6 feet, Sand with gravel, reddish -yellow (7.5 YR 6/8) silty , loose
		(no recovery 6-8 feet)
10.0	8-18	
		8-13 feet, Sand and gravel, as above, dry
		(no recovery 13-18 feet)
20.0	18-28	
		18-25 feet, Sand and gravel as above, dry
		(no recovery 25-28 feet)
30.0	28-38	
		28-38 feet, Sand and gravel as above, moist at 34-37 feet, less gravel
40.0	38-48	
		38-47 feet, Sand with gravel, red-brown, some clayey zones to 47 feet
		47-48 feet, white sand, then clayey sand and gravel
		appears wet at 48 feet; measure DTW in borehole no water
50.0	48-58	
		48-50 feet, Sand and gravel, wet
		50-58 feet, Clay, silty and clay to 58, moderately stiff
60.0	58-68	
		58-67 feet, Sand and gravel, lower 1 foot is dark gray clay, stiff
		67-68 feet, Clay, dark gray, stiff
		Sand and gravel is not saturated
70.0		Drill to 68 feet bls and install 2-inch piezometer, screen from 38-68 ft bls

PROJECT: JACKSON LANDFILL WELL NO.: PZ-1

PROJECT NO.: 87



WELL DEPTH 48'

DRILLER WALKER HILL ENVIRONMENTAL

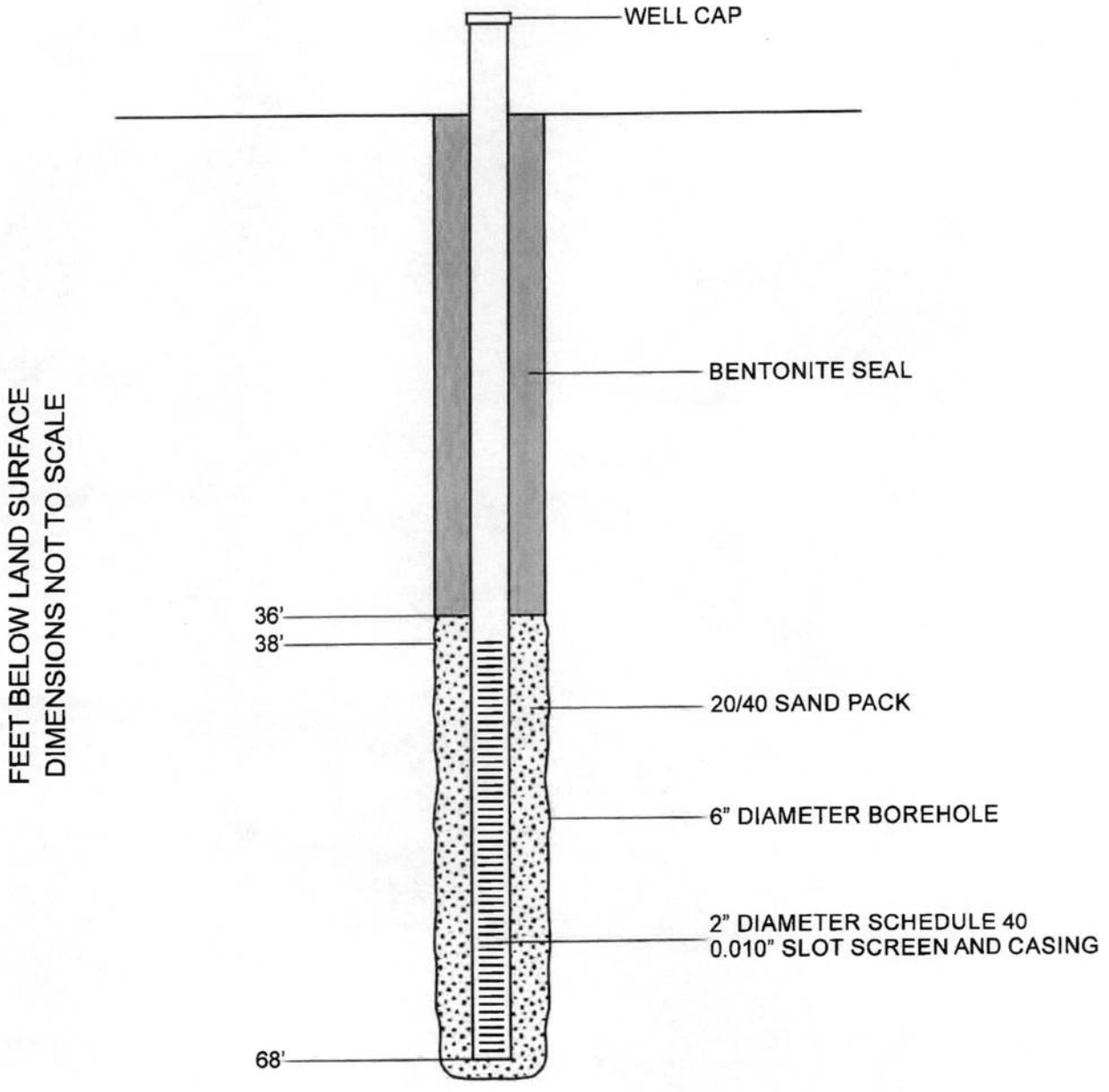
DRILLING METHOD SONIC

DATE INSTALLED 11-28-2023

TEMPORARY PIEZOMETER CONSTRUCTION DIAGRAM

PROJECT: JACKSON LANDFILL WELL NO.: PZ-3

PROJECT NO.: 87



WELL DEPTH 68' DRILLER WALKER HILL ENVIRONMENTAL

DRILLING METHOD SONIC DATE INSTALLED 11-28-2023

TEMPORARY PIEZOMETER CONSTRUCTION DIAGRAM

Table 1-Groundwater Elevation table
Jackson Landfill
ADEM Permit 13-07

Piezometer	Date	Total Depth	TOC Elevation	LS Elevation	DTW	Groundwater Elevation
		(ft BLS)	(ft AMSL)	(ft AMSL)	(ft BTOC)	(FT AMSL)
PZ-1	12/11/2023	50.00	163.425	161.53	45.58*	*
PZ-2 (borehole)	11/28/2023	70.00	NA	166.657	Dry	<96.657
PZ-3	12/11/2023	68.00	130.675	128.776	48.65	82.025

TOC	Top of casing
ft BTOC	feet below TOC
ft AMSL	Feet above mean sea level
ft BLS	Feet below land surface
*	Water level may not be representative of Groundwater, suspect perched water

McVay Surveying

SURVEYORS SINCE 1905

203 E. SPRUCE STREET
JACKSON, AL 36545
Telephone (334) 246-9739

334

2 July, 1998

JACKSON LANDFILL COMPANY
Description of Enlarged Landfill

Beginning at a point located 100.00 feet due North of the SE corner of the $W\frac{1}{2}$ of the $NW\frac{1}{4}$, Section 15, T. 6 N., R. 2 E.; thence due North 992.15 feet; thence N. 35°39'00" E. 104.28 feet; thence N. 14°03'00" W. 74.03 feet; thence N. 06°05'00" W. 107.60 feet; thence N. 06°01'58" W. 99.87 feet; thence N. 31°57'00" W. 228.47 feet; thence due North 648.32 feet; thence N. 59°42'33" W. 634.04 feet; thence due West 280.49 feet; thence S. 00°12'17" E. 292.30 feet; thence S. 89°24'48" W. 293.84 feet; thence S. 00°00'11" W. 1277.33 feet; thence S. 26°26'23" E. 976.65 feet; thence N. 89°59'28" E. 785.95 feet to the point of beginning, containing 58.12 acres, more or less, and being a part of the $W\frac{1}{2}$ of the $NW\frac{1}{4}$, Section 15, Township 6 North, Range 2 East, Clarke County, Alabama.

McVay Surveying

SURVEYORS SINCE 1905

203 E. SPRUCE STREET
JACKSON, AL 36545
Telephone ~~(205)~~ 246-973
334

2 July, 1998

JACKSON LANDFILL COMPANY
Description of Parcel to be Acquired from J. O. Griffin

Beginning at a point located 990.00 feet due North of the SW corner of the E½ of the NW¼, Section 15, T. 6 N., R. 2 E.; thence due East 100.00 feet; thence N. 35°39'00" E. 116.13 feet; thence N. 08°37'53" W. 339.91 feet; thence N. 31°57'00" W. 220.48 feet; thence due South 617.51 to the point of beginning, containing 1.637 acres, more or less, and being a part of the E½ of the NW¼, Section 15, Township 6 North, Range 2 East, Clarke County, Alabama.

McVay Surveying

SURVEYORS SINCE 1905

203 E. SPRUCE STREET
JACKSON, AL 36545
Telephone (205) 246-9739
334

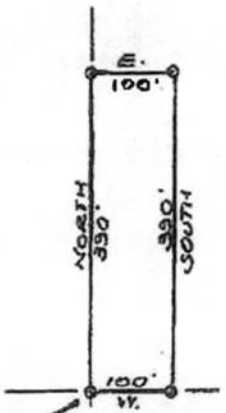
23 June, 1998

JACKSON LAND FILL COMPANY

Parcel to be purchased from Clolinger

Beginning at the SW corner of the E½ of the NW¼ of Section 15, T. 6 N., R. 2 E.; thence North 390.00 feet; thence East 100.00 feet; thence South 390.00 feet; thence West 100.00 feet to the point of beginning, containing 0.895 acre, more or less, and being a part of the E½ of the NW¼ of Section 15, Township 6 North, Range 2 East, Clarke County, Alabama.

Note: The above description does not reflect a field survey by me.



SW CORNER OF E½ OF NW¼, SEC. 15, T. 6 N., R 2 E.

Description Prepared By:

R. A. McVay, II, Al. Reg. No. 12695

McVay Surveying
SURVEYORS SINCE 1905

203 E. SPRUCE STREET
JACKSON, AL 36545
Telephone (205) 246-9739

25 November, 1994

78 ACRES

FIRST PURCHASE FROM CLOLINGER

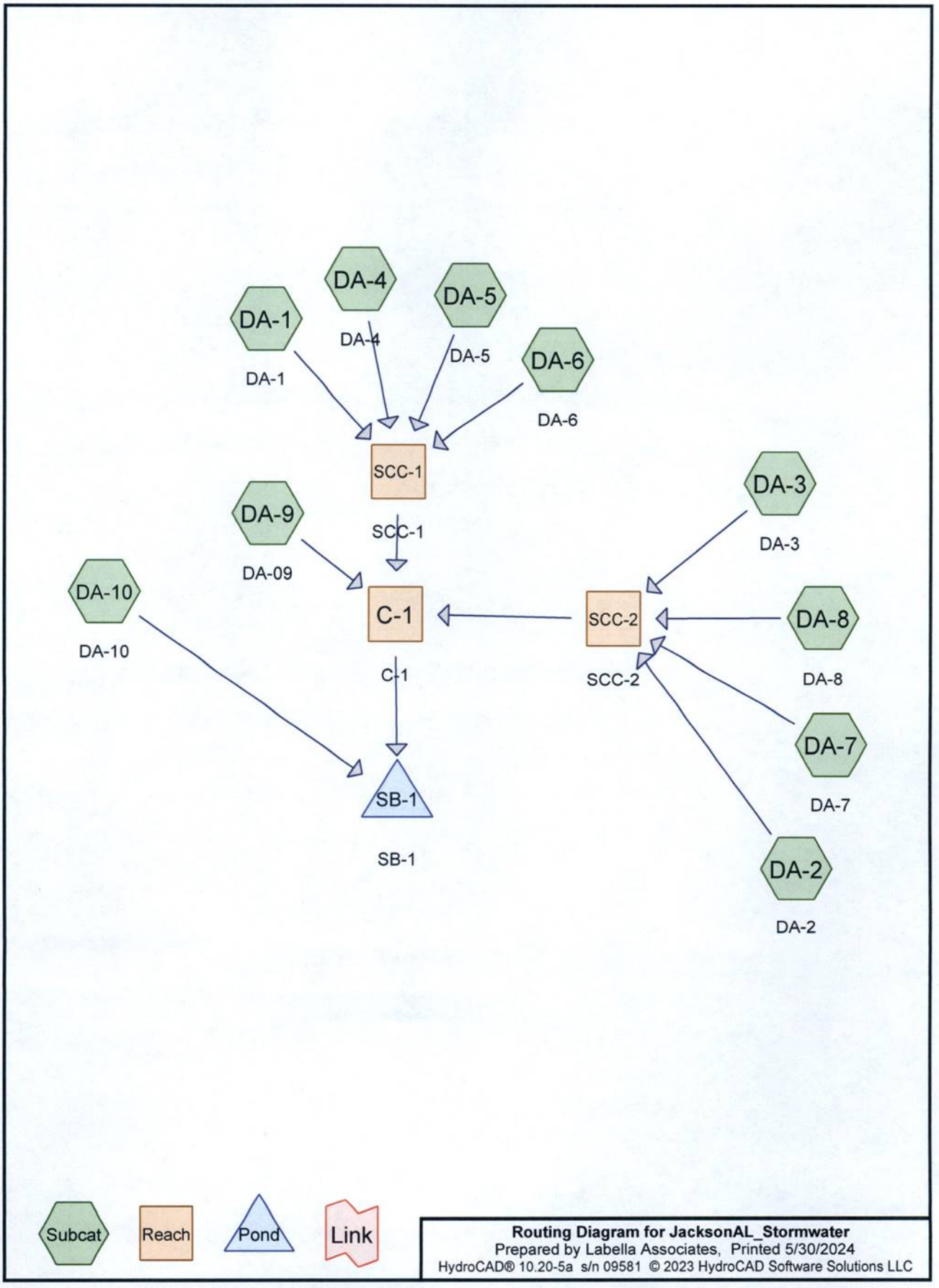
Description of James O. Griffin Property

PARCEL 1 The W½ of the NW¼ of Section 15, Township 6 North, Range 2 East, except 2 acres located in the NW corner thereof, said 2 acres being described in that certain deed recorded in Deed Record 272 at Page 401 in the Office of the Judge of Probate, Clarke County, Alabama.
(Ref.: Bk. 934, Pg. 254)

PARCEL 2 Beginning at a found iron pipe marking the SW corner of the SE¼ of the NW¼ of Sec. 15, T. 6 N., R. 2 E., run North 390' to the point of beginning; thence continue North 600'; thence East 100'; thence South 600'; thence West 100' back to the point of beginning. Containing 1.38 acres, more or less and being a part of the SE¼ of the NW¼ of Sec. 15, T. 6 N., R. 2 E., Clarke County, Alabama.
(REf.: that survey and plat by L. Junior McMillan RLS No. 13657, dated: 7/25/94)

Note: the above descriptions are taken from deed and survey plat and do not reflect a field survey or certification by me.

R. A. McVay, II, Al. Reg. No. 12695


DA-4
DA-5
DA-1
DA-4
DA-5
DA-6
DA-1
DA-6
SCC-1
SCC-1
DA-3
DA-9
DA-3
DA-09
DA-10
C-1
SCC-2
DA-8
DA-10
C-1
SCC-2
DA-8
DA-7
DA-7
SB-1
SB-1
DA-2
DA-2
Subcat
Reach
Pond
Link
Routing Diagram for JacksonAL_Stormwater
Prepared by Labella Associates, Printed 5/30/2024
HydroCAD® 10.20-5a s/n 09581 © 2023 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	25Yr	Type II 24-hr		Default	24.00	1	8.87	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
35.800	49	50-75% Grass cover, Fair, HSG A (DA-1, DA-10, DA-2, DA-3, DA-4, DA-6, DA-7, DA-8, DA-9)
12.730	79	50-75% Grass cover, Fair, HSG C (DA-1, DA-2, DA-3, DA-4, DA-5, DA-7)
13.340	84	50-75% Grass cover, Fair, HSG D (DA-1, DA-3, DA-4, DA-5, DA-6)
0.960	96	Gravel surface, HSG A (DA-10, DA-8, DA-9)
0.120	96	Gravel surface, HSG C (DA-7)
0.880	96	Gravel surface, HSG D (DA-6)
63.830	**64**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
36.760	HSG A	DA-1, DA-10, DA-2, DA-3, DA-4, DA-6, DA-7, DA-8, DA-9
0.000	HSG B	
12.850	HSG C	DA-1, DA-2, DA-3, DA-4, DA-5, DA-7
14.220	HSG D	DA-1, DA-3, DA-4, DA-5, DA-6
0.000	Other	
63.830		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
35.800	0.000	12.730	13.340	0.000	61.870	50-75% Grass cover, Fair	DA-1, DA-10, DA-2, DA-3, DA-4, DA-5, DA-6, DA-7, DA-8, DA-9
0.960	0.000	0.120	0.880	0.000	1.960	Gravel surface	DA-10, DA-6, DA-7, DA-8, DA-9
36.760	**0.000**	**12.850**	**14.220**	**0.000**	**63.830**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	C-1	116.00	114.00	44.0	0.0455	0.012	0.0	36.0	0.0	
2	SB-1	102.00	82.00	118.0	0.1695	0.013	0.0	36.0	0.0	

Time span=0.00-32.00 hrs, dt=0.05 hrs, 641 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DA-1: DA-1 Runoff Area=15.930 ac 0.00% Impervious Runoff Depth=3.04"
Flow Length=634' Tc=13.2 min CN=52 Runoff=64.24 cfs 4.029 af

Subcatchment DA-10: DA-10 Runoff Area=3.150 ac 0.00% Impervious Runoff Depth=3.39"
Flow Length=729' Tc=14.3 min CN=55 Runoff=13.82 cfs 0.891 af

Subcatchment DA-2: DA-2 Runoff Area=11.830 ac 0.00% Impervious Runoff Depth=3.39"
Flow Length=490' Tc=11.8 min CN=55 Runoff=56.77 cfs 3.346 af

Subcatchment DA-3: DA-3 Runoff Area=6.780 ac 0.00% Impervious Runoff Depth=5.10"
Flow Length=1,041' Tc=20.3 min CN=69 Runoff=37.90 cfs 2.880 af

Subcatchment DA-4: DA-4 Runoff Area=12.270 ac 0.00% Impervious Runoff Depth=6.57"
Flow Length=1,193' Tc=24.6 min CN=81 Runoff=77.71 cfs 6.715 af

Subcatchment DA-5: DA-5 Runoff Area=3.110 ac 0.00% Impervious Runoff Depth=6.81"
Flow Length=1,713' Tc=5.9 min CN=83 Runoff=34.44 cfs 1.765 af

Subcatchment DA-6: DA-6 Runoff Area=5.480 ac 0.00% Impervious Runoff Depth=5.10"
Flow Length=1,898' Tc=5.4 min CN=69 Runoff=48.90 cfs 2.328 af

Subcatchment DA-7: DA-7 Runoff Area=1.070 ac 0.00% Impervious Runoff Depth=5.10"
Flow Length=436' Tc=5.5 min CN=69 Runoff=9.51 cfs 0.455 af

Subcatchment DA-8: DA-8 Runoff Area=1.840 ac 0.00% Impervious Runoff Depth=3.27"
Flow Length=1,289' Tc=5.0 min CN=54 Runoff=10.81 cfs 0.502 af

Subcatchment DA-9: DA-09 Runoff Area=2.370 ac 0.00% Impervious Runoff Depth=3.51"
Flow Length=670' Tc=5.0 min CN=56 Runoff=14.99 cfs 0.694 af

Reach C-1: C-1 Avg. Flow Depth=1.94' Max Vel=23.88 fps Inflow=230.69 cfs 22.715 af
36.0" Round Pipe x 2.00 n=0.012 L=44.0' S=0.0455 '/' Capacity=308.10 cfs Outflow=230.61 cfs 22.715 af

Reach SCC-1: SCC-1 Avg. Flow Depth=1.82' Max Vel=7.65 fps Inflow=178.42 cfs 14.837 af
n=0.030 L=3,955.0' S=0.0197 '/' Capacity=424.86 cfs Outflow=146.31 cfs 14.837 af

Reach SCC-2: SCC-2 Avg. Flow Depth=1.27' Max Vel=8.24 fps Inflow=100.11 cfs 7.183 af
n=0.030 L=2,304.0' S=0.0339 '/' Capacity=556.64 cfs Outflow=90.60 cfs 7.183 af

Pond SB-1: SB-1 Peak Elev=112.48' Storage=303,808 cf Inflow=238.63 cfs 23.606 af
Primary=102.01 cfs 21.654 af Secondary=21.96 cfs 0.545 af Outflow=123.97 cfs 22.199 af

Total Runoff Area = 63.830 ac Runoff Volume = 23.606 af Average Runoff Depth = 4.44"
100.00% Pervious = 63.830 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment DA-1: DA-1

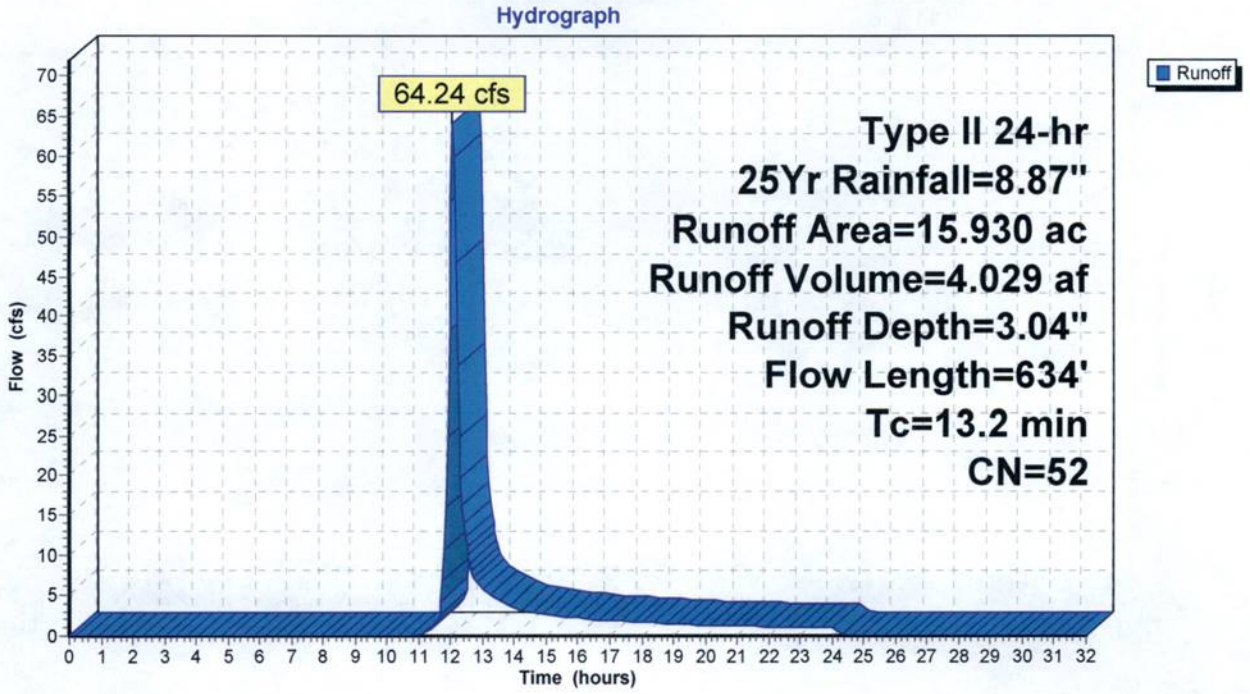
Runoff = 64.24 cfs @ 12.06 hrs, Volume= 4.029 af, Depth= 3.04"
Routed to Reach SCC-1 : SCC-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
14.400	49	50-75% Grass cover, Fair, HSG A
1.380	79	50-75% Grass cover, Fair, HSG C
0.150	84	50-75% Grass cover, Fair, HSG D
15.930	52	Weighted Average
15.930		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	100	0.0472	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
5.1	534	0.0620	1.74		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.2	634	Total			

Subcatchment DA-1: DA-1



Summary for Subcatchment DA-10: DA-10

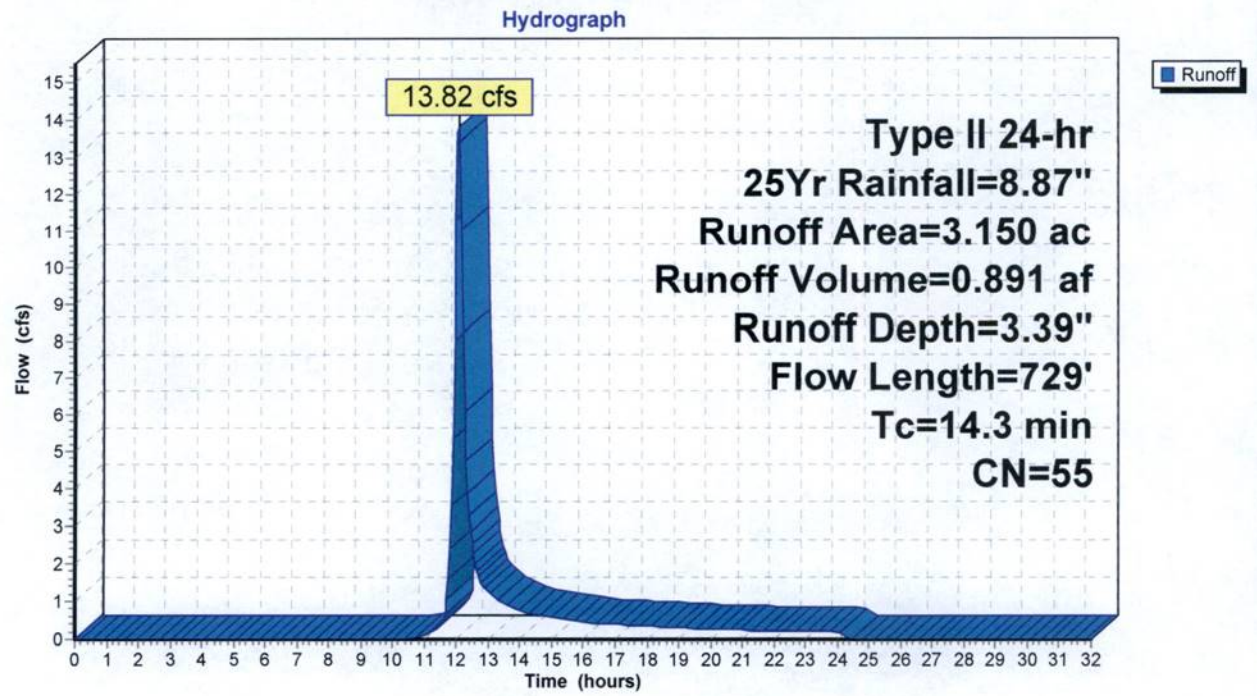
Runoff = 13.82 cfs @ 12.07 hrs, Volume= 0.891 af, Depth= 3.39"
Routed to Pond SB-1 : SB-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
2.720	49	50-75% Grass cover, Fair, HSG A
0.430	96	Gravel surface, HSG A
3.150	55	Weighted Average
3.150		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	100	0.0566	0.22		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
6.7	629	0.0506	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
14.3	729	Total			

Subcatchment DA-10: DA-10



Summary for Subcatchment DA-2: DA-2

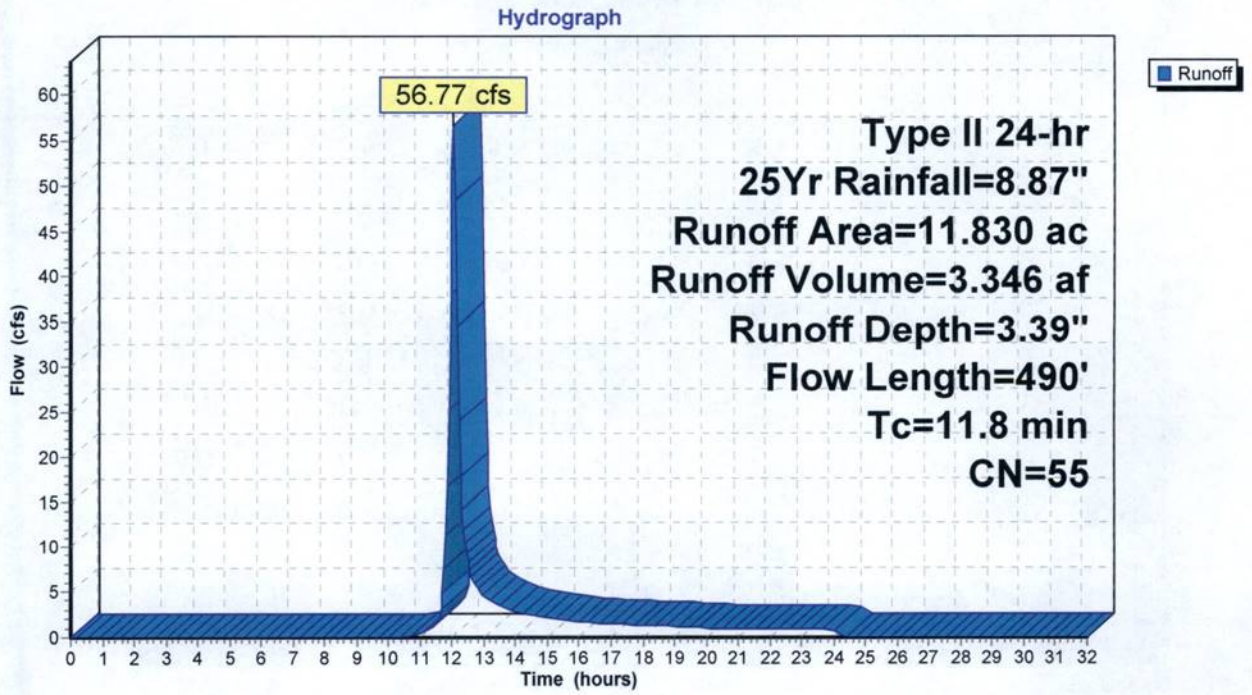
Runoff = 56.77 cfs @ 12.04 hrs, Volume= 3.346 af, Depth= 3.39"
Routed to Reach SCC-2 : SCC-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
2.510	79	50-75% Grass cover, Fair, HSG C
9.320	49	50-75% Grass cover, Fair, HSG A
11.830	55	Weighted Average
11.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	100	0.0436	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
3.4	390	0.0765	1.94		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.8	490	Total			

Subcatchment DA-2: DA-2



Summary for Subcatchment DA-3: DA-3

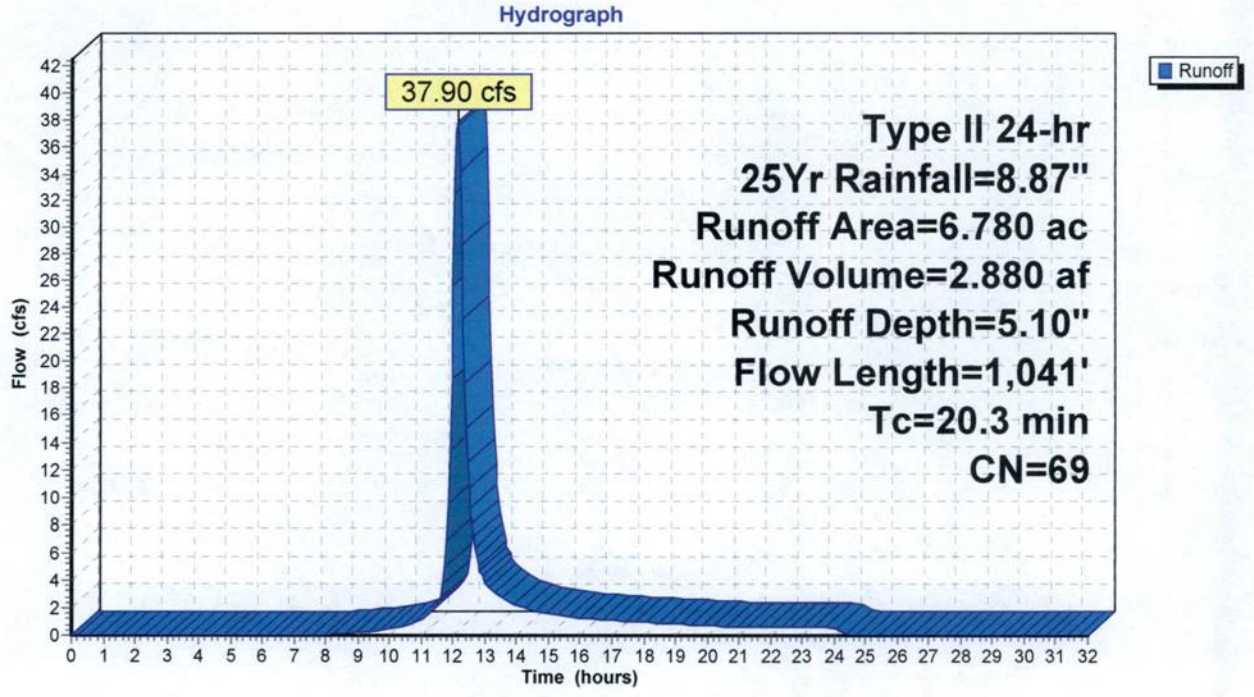
Runoff = 37.90 cfs @ 12.13 hrs, Volume= 2.880 af, Depth= 5.10"
Routed to Reach SCC-2 : SCC-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
3.440	79	50-75% Grass cover, Fair, HSG C
2.320	49	50-75% Grass cover, Fair, HSG A
1.020	84	50-75% Grass cover, Fair, HSG D
6.780	69	Weighted Average
6.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0488	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
12.3	941	0.0330	1.27		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
20.3	1,041	Total			

Subcatchment DA-3: DA-3



Summary for Subcatchment DA-4: DA-4

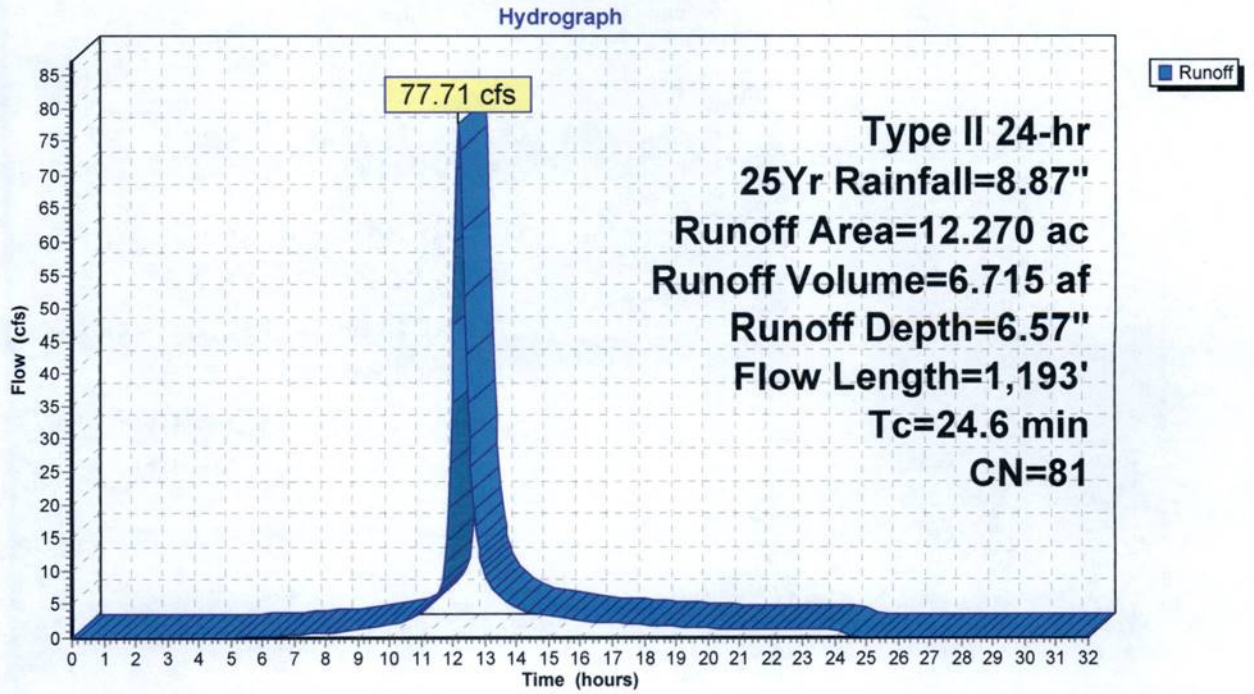
Runoff = 77.71 cfs @ 12.17 hrs, Volume= 6.715 af, Depth= 6.57"
Routed to Reach SCC-1 : SCC-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
4.420	79	50-75% Grass cover, Fair, HSG C
0.280	49	50-75% Grass cover, Fair, HSG A
7.570	84	50-75% Grass cover, Fair, HSG D
12.270	81	Weighted Average
12.270		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0370	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
15.6	1,093	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
24.6	1,193	Total			

Subcatchment DA-4: DA-4



Summary for Subcatchment DA-5: DA-5

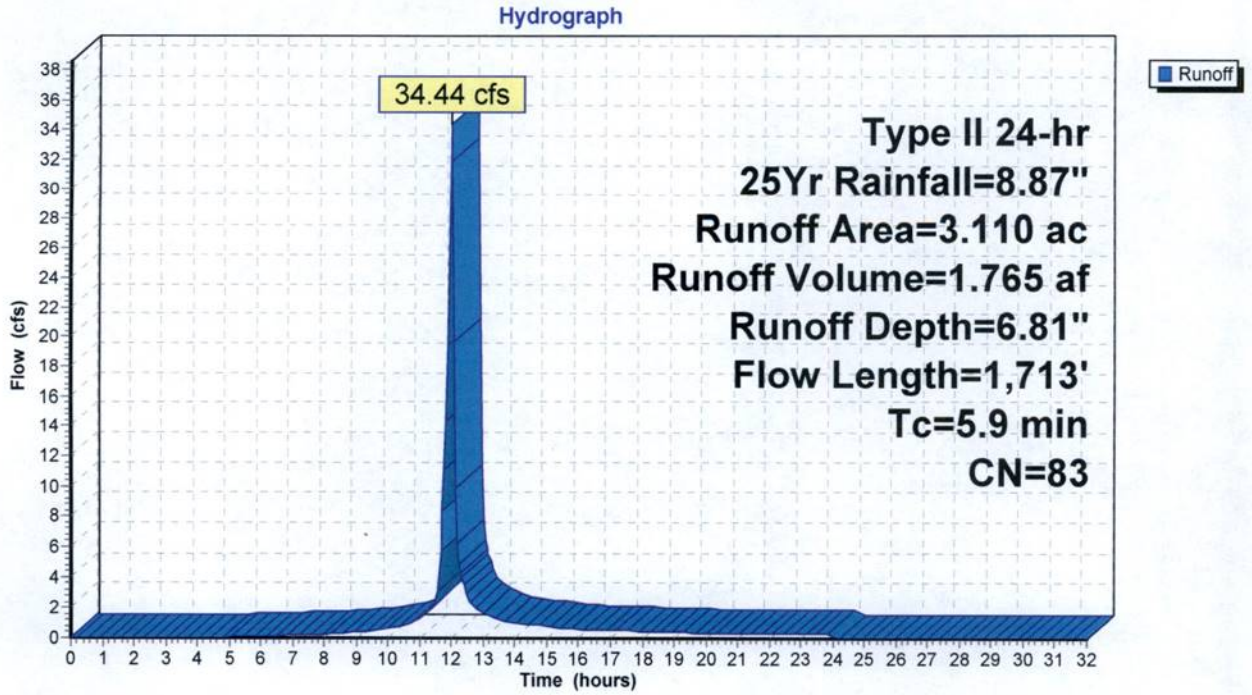
Runoff = 34.44 cfs @ 11.96 hrs, Volume= 1.765 af, Depth= 6.81"
Routed to Reach SCC-1 : SCC-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
0.460	79	50-75% Grass cover, Fair, HSG C
2.650	84	50-75% Grass cover, Fair, HSG D
3.110	83	Weighted Average
3.110		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	72	0.2600	0.38		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
2.7	1,641	0.0197	10.10	424.35	**Trap/Vee/Rect Channel Flow,** Bot.W=5.00' D=3.00' Z= 3.0 '/' Top.W=23.00' n= 0.030 Earth, grassed & winding
5.9	1,713	Total			

Subcatchment DA-5: DA-5



Summary for Subcatchment DA-6: DA-6

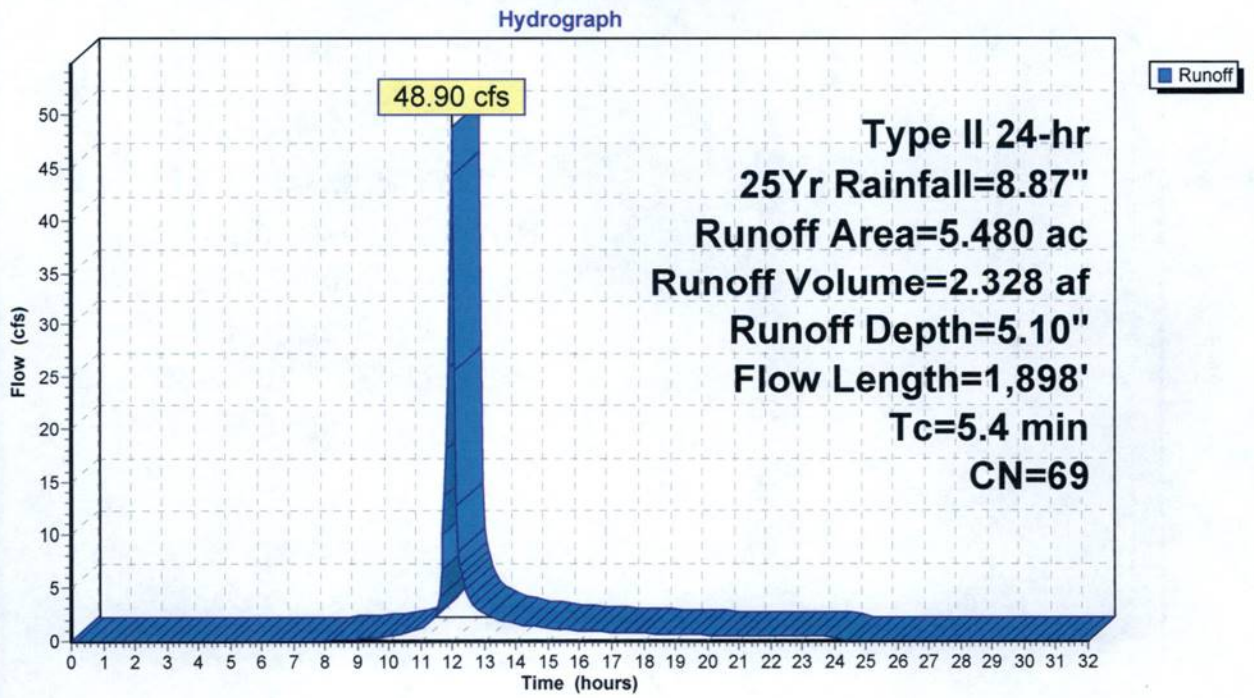
Runoff = 48.90 cfs @ 11.96 hrs, Volume= 2.328 af, Depth= 5.10"
Routed to Reach SCC-1 : SCC-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
2.650	49	50-75% Grass cover, Fair, HSG A
1.950	84	50-75% Grass cover, Fair, HSG D
0.880	96	Gravel surface, HSG D
5.480	69	Weighted Average
5.480		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	58	0.2550	0.36		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
2.7	1,840	0.0247	11.31	475.16	**Trap/Vee/Rect Channel Flow,** Bot.W=5.00' D=3.00' Z= 3.0 '/' Top.W=23.00' n= 0.030
5.4	1,898	Total			

Subcatchment DA-6: DA-6



Summary for Subcatchment DA-7: DA-7

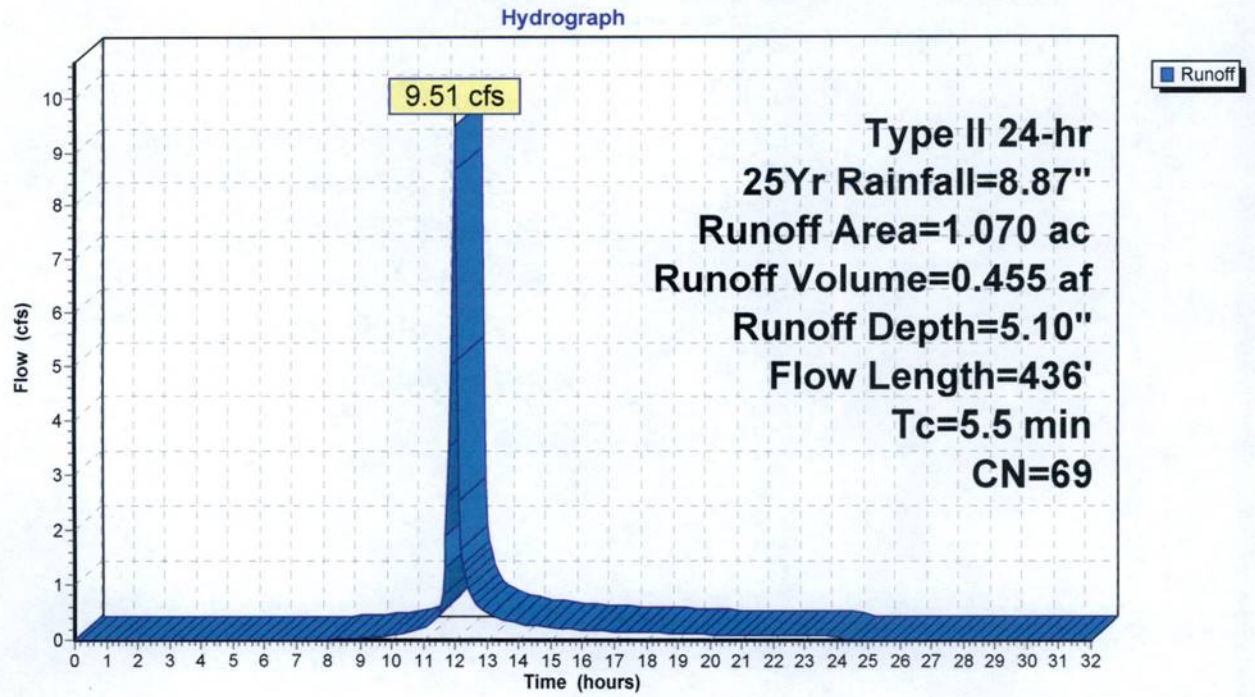
Runoff = 9.51 cfs @ 11.96 hrs, Volume= 0.455 af, Depth= 5.10"
Routed to Reach SCC-2 : SCC-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
0.520	79	50-75% Grass cover, Fair, HSG C
0.430	49	50-75% Grass cover, Fair, HSG A
0.120	96	Gravel surface, HSG C
1.070	69	Weighted Average
1.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.1368	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
0.2	336	0.1182	24.75	1,039.44	**Trap/Vee/Rect Channel Flow,** Bot.W=5.00' D=3.00' Z= 3.0 '/' Top.W=23.00' n= 0.030
5.5	436	Total			

Subcatchment DA-7: DA-7



Summary for Subcatchment DA-8: DA-8

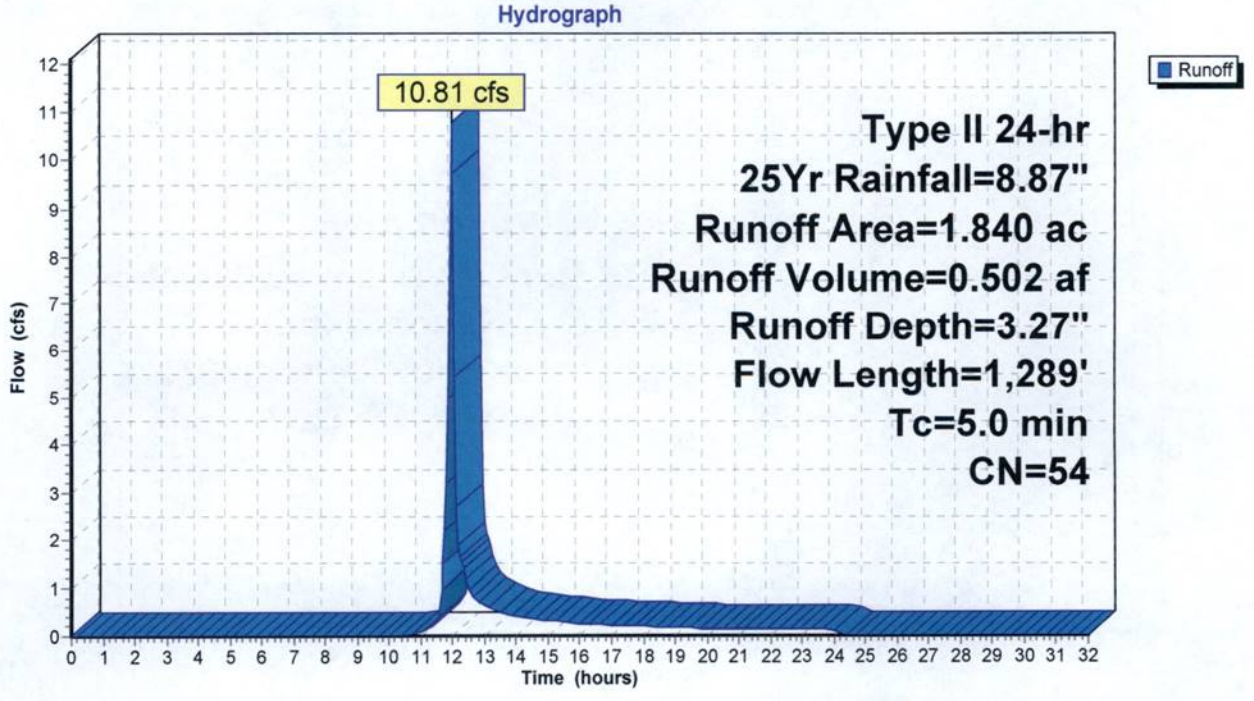
Runoff = 10.81 cfs @ 11.96 hrs, Volume= 0.502 af, Depth= 3.27"
Routed to Reach SCC-2 : SCC-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
1.640	49	50-75% Grass cover, Fair, HSG A
0.200	96	Gravel surface, HSG A
1.840	54	Weighted Average
1.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	78	0.2360	0.37		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
1.5	1,211	0.0364	13.73	576.82	**Trap/Vee/Rect Channel Flow,** Bot.W=5.00' D=3.00' Z= 3.0 '/' Top.W=23.00' n= 0.030
5.0	1,289	Total			

Subcatchment DA-8: DA-8



Summary for Subcatchment DA-9: DA-09

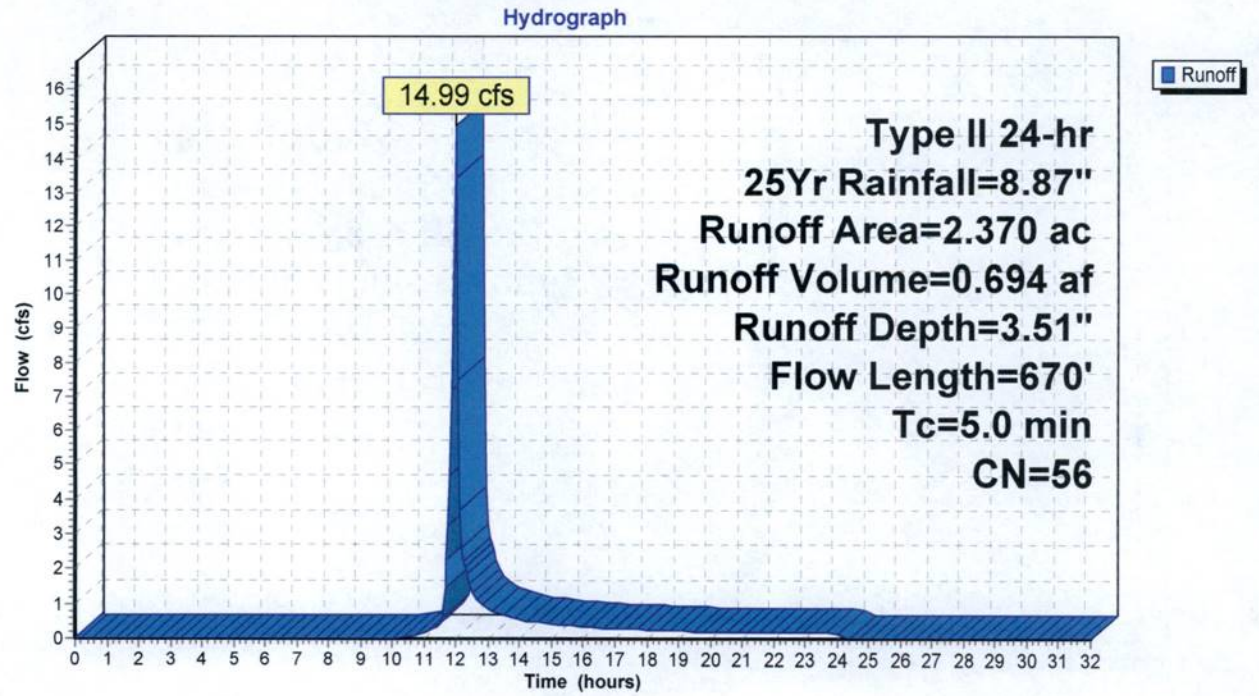
Runoff = 14.99 cfs @ 11.96 hrs, Volume= 0.694 af, Depth= 3.51"
Routed to Reach C-1 : C-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Type II 24-hr 25Yr Rainfall=8.87"

Area (ac)	CN	Description
2.040	49	50-75% Grass cover, Fair, HSG A
0.330	96	Gravel surface, HSG A
2.370	56	Weighted Average
2.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	24	0.1500	0.24		**Sheet Flow,** Grass: Dense n= 0.240 P2= 4.95"
2.2	646	0.0045	4.83	202.81	**Trap/Vee/Rect Channel Flow,** Bot.W=5.00' D=3.00' Z= 3.0 '/' Top.W=23.00' n= 0.030
3.8	670	Total, Increased to minimum Tc = 5.0 min			

Subcatchment DA-9: DA-09



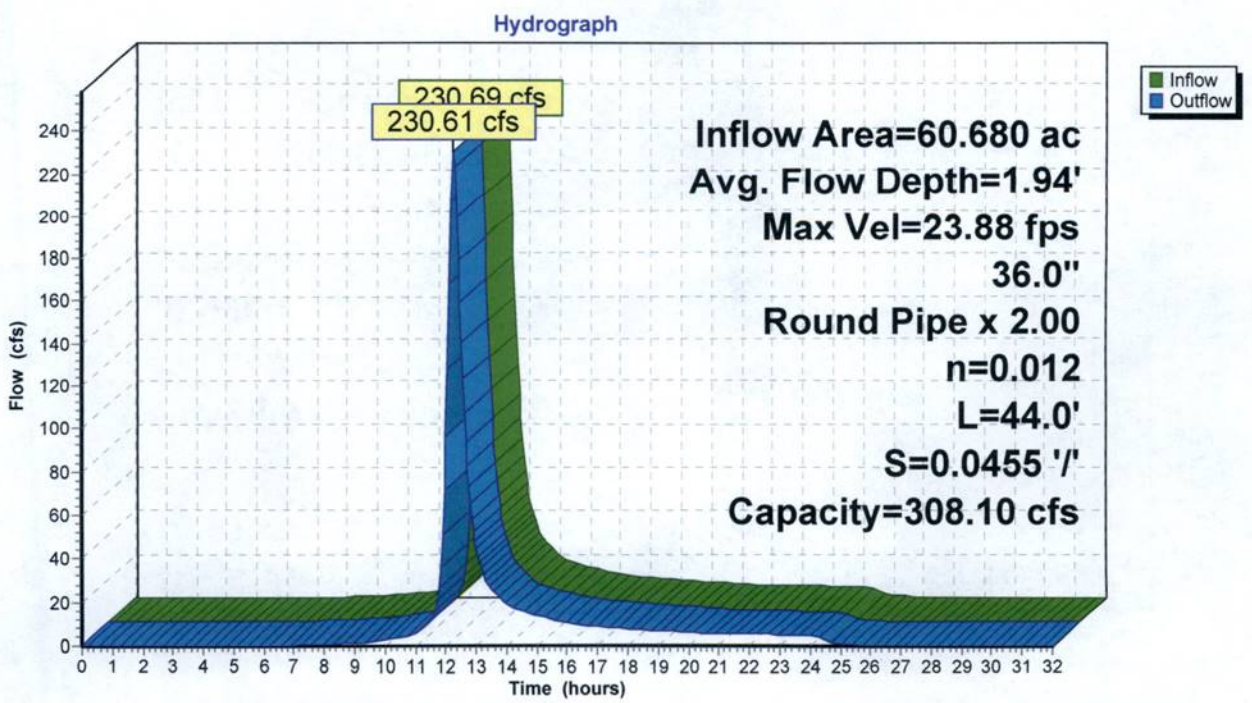
Summary for Reach C-1: C-1

Inflow Area = 60.680 ac, 0.00% Impervious, Inflow Depth = 4.49" for 25Yr event
Inflow = 230.69 cfs @ 12.23 hrs, Volume= 22.715 af
Outflow = 230.61 cfs @ 12.23 hrs, Volume= 22.715 af, Atten= 0%, Lag= 0.1 min
Routed to Pond SB-1 : SB-1

Routing by Stor-Ind+Trans method, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Max. Velocity= 23.88 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.89 fps, Avg. Travel Time= 0.1 min

Peak Storage= 425 cf @ 12.23 hrs
Average Depth at Peak Storage= 1.94' , Surface Width= 5.74'
Bank-Full Depth= 3.00' Flow Area= 14.1 sf, Capacity= 308.10 cfs

A factor of 2.00 has been applied to the storage and discharge capacity
36.0" Round Pipe
n= 0.012
Length= 44.0' Slope= 0.0455 '/'
Inlet Invert= 116.00', Outlet Invert= 114.00'



Summary for Reach SCC-1: SCC-1

Inflow Area = 36.790 ac, 0.00% Impervious, Inflow Depth = 4.84" for 25Yr event
Inflow = 178.42 cfs @ 12.01 hrs, Volume= 14.837 af
Outflow = 146.31 cfs @ 12.27 hrs, Volume= 14.837 af, Atten= 18%, Lag= 15.7 min
Routed to Reach C-1 : C-1

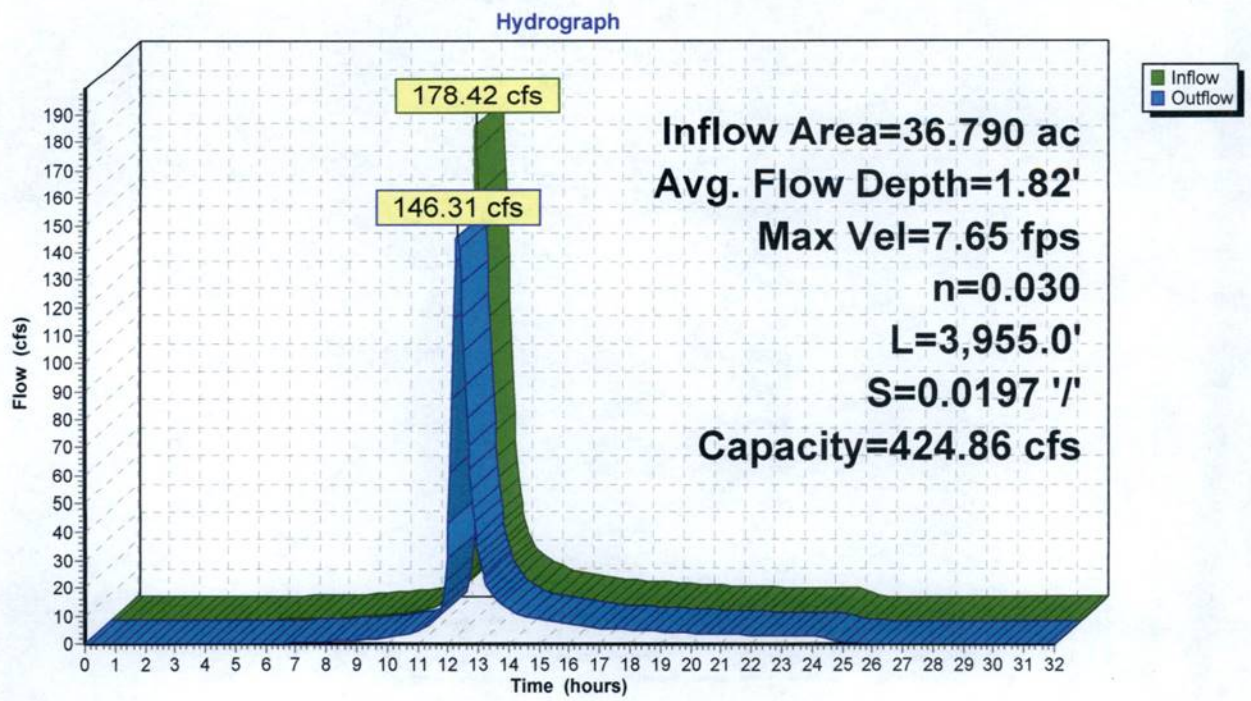
Routing by Stor-Ind+Trans method, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.65 fps, Min. Travel Time= 8.6 min
Avg. Velocity = 2.11 fps, Avg. Travel Time= 31.2 min

Peak Storage= 75,508 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.82' , Surface Width= 15.94'
Bank-Full Depth= 3.00' Flow Area= 42.0 sf, Capacity= 424.86 cfs

5.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 '/' Top Width= 23.00'
Length= 3,955.0' Slope= 0.0197 '/'
Inlet Invert= 194.10', Outlet Invert= 116.00'

‡

Reach SCC-1: SCC-1



Summary for Reach SCC-2: SCC-2

Inflow Area = 21.520 ac, 0.00% Impervious, Inflow Depth = 4.01" for 25Yr event
Inflow = 100.11 cfs @ 12.04 hrs, Volume= 7.183 af
Outflow = 90.60 cfs @ 12.18 hrs, Volume= 7.183 af, Atten= 10%, Lag= 8.2 min
Routed to Reach C-1 : C-1

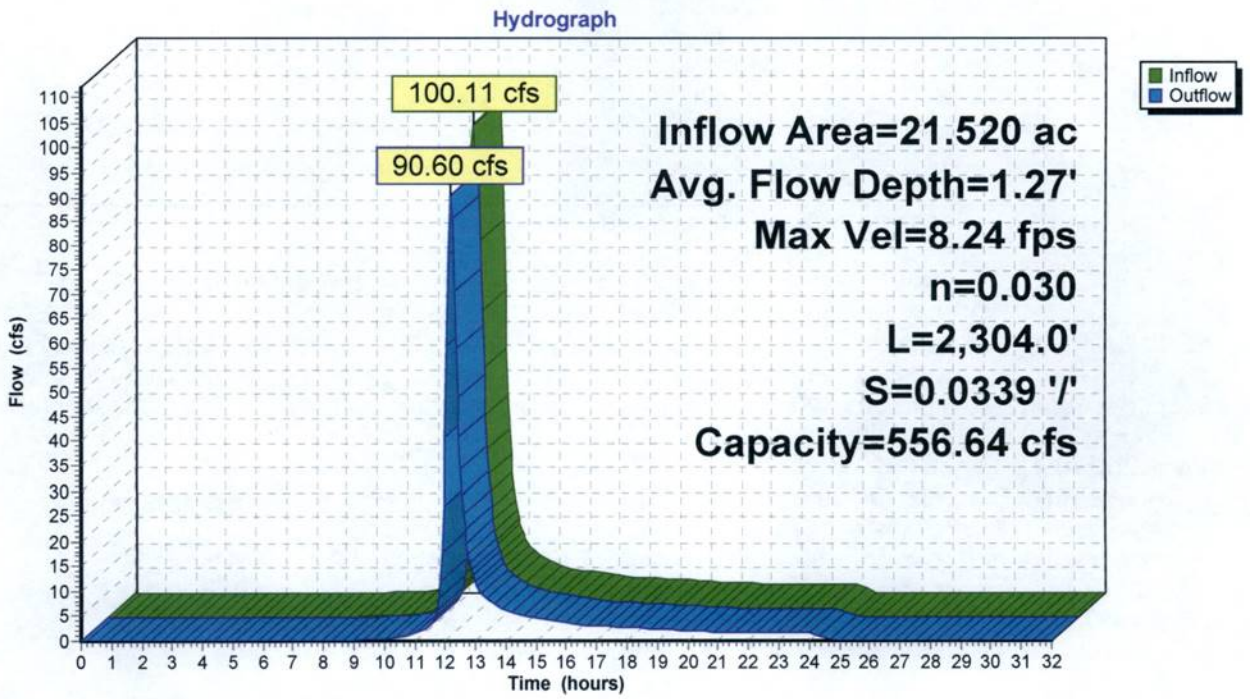
Routing by Stor-Ind+Trans method, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.24 fps, Min. Travel Time= 4.7 min
Avg. Velocity = 2.21 fps, Avg. Travel Time= 17.3 min

Peak Storage= 25,774 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.27' , Surface Width= 12.62'
Bank-Full Depth= 3.00' Flow Area= 42.0 sf, Capacity= 556.64 cfs

5.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 3.0 '/' Top Width= 23.00'
Length= 2,304.0' Slope= 0.0339 '/'
Inlet Invert= 194.10', Outlet Invert= 116.00'

‡

Reach SCC-2: SCC-2



Summary for Pond SB-1: SB-1

Inflow Area = 63.830 ac, 0.00% Impervious, Inflow Depth = 4.44" for 25Yr event
Inflow = 238.63 cfs @ 12.22 hrs, Volume= 23.606 af
Outflow = 123.97 cfs @ 12.56 hrs, Volume= 22.199 af, Atten= 48%, Lag= 20.2 min
Primary = 102.01 cfs @ 12.56 hrs, Volume= 21.654 af
Secondary = 21.96 cfs @ 12.56 hrs, Volume= 0.545 af

Routing by Stor-Ind method, Time Span= 0.00-32.00 hrs, dt= 0.05 hrs
Starting Elev= 103.00' Surf.Area= 2,334 sf Storage= 1,943 cf
Peak Elev= 112.48' @ 12.56 hrs Surf.Area= 71,991 sf Storage= 303,808 cf (301,865 cf above start)

Plug-Flow detention time= 120.0 min calculated for 22.154 af (94% of inflow)
Center-of-Mass det. time= 83.8 min (934.7 - 850.9)

Volume	Invert	Avail.Storage	Storage Description
#1	102.00'	417,249 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

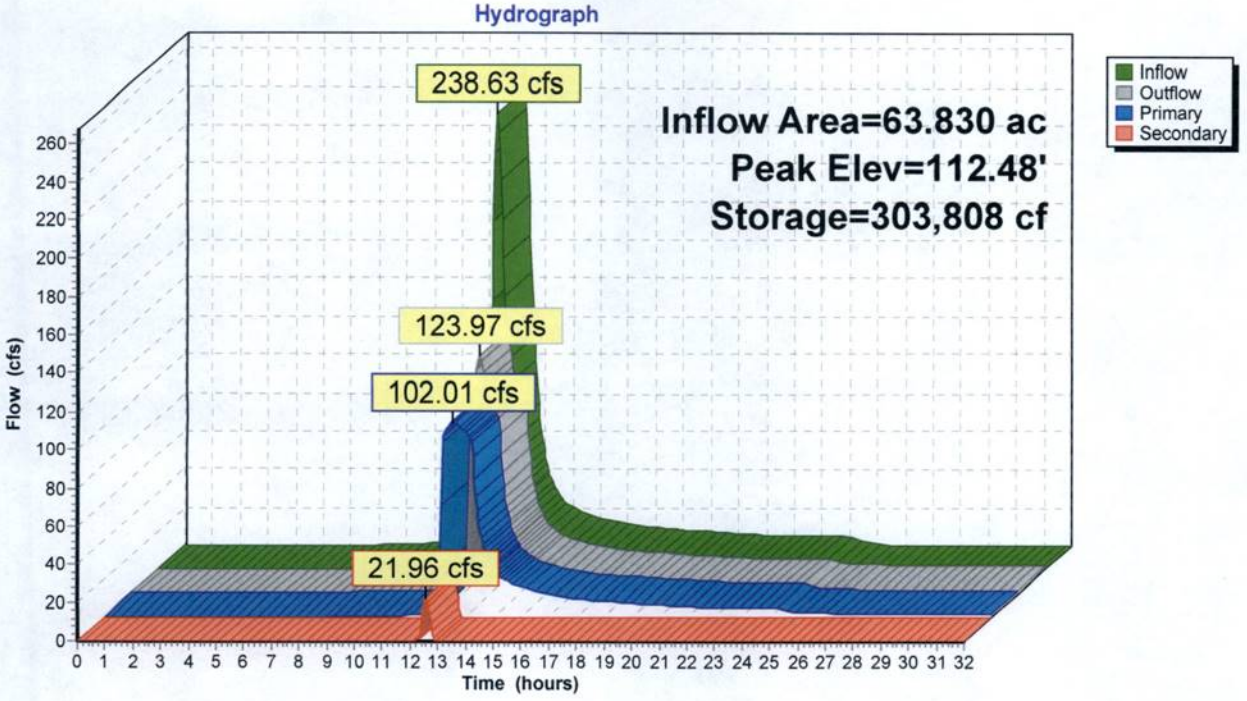
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.00	1,552	0	0
103.00	2,334	1,943	1,943
104.00	7,844	5,089	7,032
105.00	9,865	8,855	15,887
106.00	18,422	14,144	30,030
107.00	22,508	20,465	50,495
108.00	32,166	27,337	77,832
109.00	38,109	35,138	112,970
110.00	48,673	43,391	156,361
111.00	53,636	51,155	207,515
112.00	70,248	61,942	269,457
113.00	73,857	72,053	341,510
114.00	77,621	75,739	417,249

Device	Routing	Invert	Outlet Devices
#1	Primary	102.00'	**36.0" Round Culvert** L= 118.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 102.00' / 82.00' S= 0.1695 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf
#2	Device 1	103.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	109.00'	**12.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Secondary	112.00'	**20.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=101.99 cfs @ 12.56 hrs HW=112.48' (Free Discharge)
└**1=Culvert** (Inlet Controls 101.99 cfs @ 14.43 fps)
  └**2=Orifice/Grate** (Passes < 2.87 cfs potential flow)
  └**3=Sharp-Crested Rectangular Weir** (Passes < 239.98 cfs potential flow)

Secondary OutFlow Max=21.66 cfs @ 12.56 hrs HW=112.48' (Free Discharge)
└**4=Sharp-Crested Rectangular Weir** (Weir Controls 21.66 cfs @ 2.27 fps)

Pond SB-1: SB-1


Hydrograph
238.63 cfs
123.97 cfs
102.01 cfs
21.96 cfs
Inflow Area=63.830 ac
Peak Elev=112.48'
Storage=303,808 cf
Inflow
Outflow
Primary
Secondary
Flow (cfs)
0 20 40 60 80 100 120 140 160 180 200 220 240 260
Time (hours)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

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List of Variances for Jackson Landfill (Permit #13-07)

Pursuant to the requirements of Chapter 8, of ADEM Admin. Code Division 335-13, Section VIII of Solid Waste Disposal Facility Permit #13-07, as issued on October 11, 2017, and modified on April 8, 2019, includes the following variances:

1. The Permittee is granted a variance from Rule 335-13-4-.20(2)(b). The permittee is approved to use alternative final cover material in addition or in lieu of soil. The material approved is recycle mill sludge, a byproduct of Boise White Paper, LLC's or its successor, paper mill. The permittee should mix at 50:50 proportions of the recycle mill sludge with topsoil for application as final cover (see Section VII.A.).
2. A variance is granted for Jackson Landfill to operate in two working faces - one for scrap tire disposal and one for all other approved wastes, including construction/demolition waste and inert debris (see Section III.D.).
3. Permission is granted for Jackson Landfill to use a mixture of boiler ash (excluding coal ash) and indigenous soil mixed at 50:50 proportions as an alternate cover material to be applied on a weekly basis (see Section III.D.).
4. Permission is granted to use a mixture of waste lime and boiler ash (excluding coal ash) to construct a 100-foot wide berm as a buffer between the active disposal areas of the landfill and facility property that is not approved for waste disposal.
5. The Permittee is granted a variance from Rule 335-13-4-.23(l)(a)l. The permittee is approved to use alternative cover material in addition or in lieu of soil. The material approved is compost mill sludge, a byproduct of Boise White Paper, LLC's or its successor, paper mill. The alternate cover material should be mixed with sand or other soils in the ratio of 50% soil: 50% compost mill sludge (see Section III.D.).

Additionally, in accordance with ADEM Admin. Code r. 335-13-8-.02(2)(a), the precise extent of the relief being sought, including the specific provisions of the regulations addressed under this new variance request are as follows:

- Specific authorization for allowable landfill operating slopes to not exceed 3 to 1 (33%). Such authorization would reflect a variance from the requirements of ADEM Admin. Code r. 335-13-4-.23(1)(c), which states: *"All waste shall be...placed onto an appropriate slope not to exceed 4 to 1 (25%) or as approved by the Department."*
- Specific authorization for allowable landfill closure slopes to not exceed 3 to 1 (33%). Such authorization would reflect a variance from the requirements of ADEM Admin. Code r. 335-13-4-.20(2)(c)2, which states: *"The maximum final grade of the final cover system shall not exceed 25 percent or as specified by the Department to minimize erosion."*
- The Permittee is requesting a variance from Rule 335-13-4-.12(2)(f) requiring a 100 foot buffer around the perimeter of the disposal area. Specifically, the Permittee is requesting a buffer of less than 100 feet in the northwestern portion and along the northeastern side of the landfill as shown in Figure 8 of the Permit Application. The Permittee is notifying the

Department that the disposal cells are being reconfigured, as shown in Figure 8 of the Permit Application.

- The Permittee is requesting a variance from Rule 335-13-4-.12(2)(f) requiring a 100 foot buffer around the perimeter of the disposal area. Specifically, the Permittee is requesting a buffer of less than 100 feet in the northwestern portion and along the northeastern side of the landfill as shown in Figure 8 of the Permit Application. The Permittee is notifying the Department that the disposal cells are being reconfigured, as shown in Figure 8 of the Permit Application.

As required by ADEM Admin. Code r. 335-13-8-.02(b), Gainestown Road Landfill, LLC presents the following assessment of the impacts the requested variances would impose on public health and the environment:

- The area immediately surrounding the Jackson Landfill is undeveloped, wooded property. No residences, schools, or commercial properties are located adjacent to the Landfill. Further, disposal volumes at the facility are at decreased levels, with the primary waste volume being inert sludge and ash from the nearby papermill. Gainestown Road Landfill, LLC believes the requested variances authorizing monthly cover and 3 to 1 slopes would be appropriate for the type and volume of waste it is receiving for disposal and that, consistent with other similar landfills that have been granted these variances, the operation of the landfill will remain protective of public health and the environment.

In accordance with ADEM Admin. Code r. 335-13-8-.02(d), Gainestown Road Landfill, LLC asserts that the granting of the requested variances from the particular provisions of Division 13 would not threaten the public health or unreasonably create environmental pollution.

JACKSON LANDFILL

DAILY INSPECTION LOG

TIME/DATE OF INSPECTION	ORIGIN OF WASTE	TRANSPORTER	DRIVER NAME	GENERATOR'S CERTIFICATION (Y/N)	COMMENTS

JACKSON LANDFILL
DAILY LOG

DATE: _____

TIME	ORIGIN	WEIGHT	WASTE TYPE	INSPECTION Y/N	TRANSPORTER	COMMENTS

APPENDIX K

Adjacent Landowners Names and Addresses

Steven D. Lumpkin, Carmen Wade Lumpkin, Steven W Lumpkin & Victoria Wade
5130 William Carey Drive
Eight Mile, AL 36613

Nancy Carol Clolinger Richardson, Rebecca Lynn Anderson & Edward Clolinger
100 Kimball Avenue
Jackson, AL 36545

Gainestown Road Landfill, LLC
2908 West Main Street
Whistler, AL 36612

J.L. Bedsole Foundation
c/o Michael G. Andrew
Larson & McGowan
Forest Managers & Consultants, Inc.
P.O. Box 482
Jackson, AL 36545

David Henley Chastain
1031 Cherry Avenue
Jackson, AL 36545

Lewis Wayne Walker & Trust for CJ and Emma Walker
12129 Dogwood Circle
Mobile, AL 36695

PHILLIP D. DAVIS

Senior Engineer

Phil serves the needs of industrial and governmental clients in order to achieve and maintain compliance with state and federal environmental requirements through identifying the most appropriate and cost-effective means.

PE
Professional Engineer
Alabama

EDUCATION
Auburn University: B.S. Civil Engineering

CERTIFICATIONS
Certified Public Manager

OSAH HAZWOPER Certification

ORGANIZATIONS
Solid Waste Association of North America – Alabama Chapter

Air & Waste Management Association – Alabama Chapter/ Southern Section

Manufacture Alabama – Environmental Committee

National Waste & Recycling Association – Alabama Chapter

North Alabama Environmental Professionals Association

Birmingham Environmental Professionals Association

Greater Mobile Partners for Environmental Progress

LaBella
Powered by partnership.

Leadership Experience

Phil has over four years experience as Chief of the Land Division, supervising technical and administrative staff responsible for the regulation of all solid waste, scrap tire, RCRA hazardous waste, CERCLA, DSMOA/FUDS/BRAC, aboveground/underground storage tank (AST/UST) and brownfield redevelopment sites, including their remediation, compliance, enforcement and permitting activities within the State of Alabama.

As Chief of Waste Programs Branch with the Solid Waste Branch for 10 years, he supervised multiple Section Chiefs and the indirect supervision of a technical staff of more than 25 Environmental Engineers and Scientists responsible for the regulation of solid waste disposal, recycling, and scrap tire management as well as the permitting, enforcement, and remediation activities related to hazardous waste management at industrial facilities within the State

Phil was responsible for the oversight of the regulation of air emissions from various types of industrial facilities, including electric power generation, oil & gas exploration, lime & cement manufacturing and iron & steel manufacturing.

Project Experience

American Cast Iron Pipe Company (ACIPCO)—Birmingham, AL

RCRA compliance audit; Solid Waste permit renewal applications; ADEM regulatory liaison.

LG Electronics USA—Huntsville, AL

Provided assistance to LG's local and corporate attorneys in developing a self-disclosure notification to ADEM for RCRA violations and assisted in the development of the responses to the subsequent enforcement actions.

SSAB Alabama—Axis, AL

Assisted the steel mill with the development of a NPDES permit renewal application, including revisions to the effluent limitations; provided general regulatory consulting on hazardous waste management issues.

Alabama State Port Authority—Mobile, AL

RCRA assessment and Voluntary Cleanup Program for former industrial site in anticipation of redevelopment.

Baldwin County Commission—Baldwin, AL

Developed responses to ADEM enforcement action; advise on various regulatory issues.

Etowah County Commission—Etowah, AL

Provided regulatory consulting to the Commission in its role as local host government for a new landfill owner seeking the County's approval of a permit modification.

Huntsville Solid Waste Disposal Authority—Huntsville, AL

Assisted the Authority and its outside counsel with the development of a response to an ADEM enforcement action.

Sanders Lead—Troy, AL

Developed the SID Permit renewal application and assisted with review of proposed pretreatment local limits for the City of Troy; prepared NPDES permit modification application; provided general regulatory consulting on several hazardous waste related issues.

Various Expert Witness Projects

Served as an expert witness in state and federal litigation on a variety of environmental regulatory issues including RCRA solid and hazardous waste management and NPDES permitting and compliance.

Gainestown Road Landfill, LLC

Jackson Landfill * 1312 Gainestown Road * Jackson, Alabama 36545
Mailing: 2908 W. Main Street * Whistler, Alabama 36612
251-246-2333

April 5, 2006

Mr. Larry Bryant
Land Division
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463

RE: Request for Approval of Alternate Cover Material
Gainestown Road Landfill – Permit No. 13-07

Dear Mr. Bryant:

Gainestown Road Landfill, LLC owns and operates the Jackson Landfill in Jackson, Alabama. The facility's permit requires that Gainestown Road Landfill, LLC request approval to use alternate cover materials in addition to or in lieu of soil. The purpose of this letter is to request the Department's permission to use Recycle Mill sludge, a byproduct of Boise White Paper, LLC's office paper recycle mill, as a supplement to soil for cover material at the Jackson Landfill. The Jackson Landfill plans to mix the Recycle Mill sludge with sand and topsoil for application as cover over waste materials received by the landfill for disposal. The Recycle Mill sludge exhibits properties beneficial to indigenous Alabama soils and will add nutrient value to the landfill cover material.

The Recycle Mill sludge has previously been registered and labeled for distribution and sale as an agricultural product in the state of Alabama. The Recycle Mill byproduct label and the byproduct fertilizer analysis have been included as an attachment to this request. Boise White Paper, LLC has sampled the Recycle Mill sludge and submitted samples to a contract laboratory for analysis. The analysis indicates that all regulated metals were below U.S. Environmental Protection Agency (EPA) regulatory concentration limits. All of the metals were below method detection limits of the Toxicity Characteristic Leaching Procedure (TCLP) analysis. The results of the TCLP analysis of the Recycle Mill sludge material are also enclosed with this request.

The Gainestown Road Landfill, LLC appreciates you just and favorable consideration of this request for approval of an alternate cover material. If you have questions regarding this request, please do not hesitate to contact me at (251) 246-2333.

Gainestown Road Landfill, LLC

Brian Walker, President

Enclosures

cc: Trey Wilson/Boise White Paper, LLC

License #346

Recycle Paper Sludge
Soil Amendment Material

Bulk

Contents: Short Wood Fiber (Organic Material) and
Calcium Carbonate Lime

Application: Mix or blend as necessary
to achieve desired results

Moisture, Not more than 35%

Guaranteed by:
George B. Wittmer Associates, Inc.
625 Oak Street
Green Cove Springs, FL 32043

[Processed at and shipped from stockpile located at 307 W. Industrial Rd., Jackson, AL]
David M. Perdick, Distribution Manager (334) 575-5470

FERTILIZER ANALYSIS REPORT

WITTMER ASSOCIATES
938 HALL PARK ROAD
GREEN COVE SPRINGS, FL 32043

Waters Agricultural Laboratories, Inc.
Newton Highway
P.O. Box 382
Camilla, Georgia 31730-0382
(912) 336-7216
Fax (912) 336-7967

DATE SUBMITTED: 02-04-00
DATE OF REPORT: 02-09-00

SAMPLE NUMBER	BC-RPS				
LAB NUMBER	1036				
CLAIMED CONTENT					

RESULTS IN % UNLESS OTHERWISE STATED

1	TOTAL NITROGEN	0.19				
2	NITRATE NITROGEN					
3	AMMONIA NITROGEN					
4	UREA NITROGEN					
5	WATER INSOLUBLE NITROGEN					
6	AVAILABLE P205					
7	TOTAL P205	0.03				
8	INSOLUBLE P205					
9	PH					
10	MOISTURE					
11	B.P.L.					
12	TOTAL K20	0.02				
13	SULFUR	0.043				
14	BORON	0.001				
15	ZINC	0.004				
16	MANGANESE	0.004				
17	IRON	0.03				
18	COPPER	0.009				
19	CALCIUM	9.5				
20	MAGNESIUM (TOTAL)	0.085				
21	ALUMINUM	0.28				
22	SODIUM	0.049				
23	MOISTURE	27.6				
24	CCE	24.1				
25						
26						
27						
28						
29						
30	RESULTS REPORTED ON:	W				

W=WET(AS RECEIVED)BASIS
D=DRY BASIS
L=LIQUID BASIS

REMARKS:

RF

RECEIVED FEB 15 2000

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 05, 2005

Client: Boise
Address: 4585 Industrial Road
Jackson, AL 36545

Date Collected: 7/17/2005
Date Received: 7/22/2005
Project #: Full TCLP Analysis
Client ID #: Recycle Sludge
Laboratory ID #: 0506448-04
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/2/2005

TCLP Metals

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
Arsenic	0.50	<0.5	5.0
Barium	5.0	<5.0	100.0
Cadmium	0.10	<0.1	1.0
Chromium	0.20	<0.2	5.0
Lead	0.50	<0.5	5.0
Mercury	0.0020	<0.002	0.20
Selenium	0.50	<0.5	1.0
Silver	0.50	<0.5	5.0

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 05, 2005

Client: Boise
Address: 4585 Industrial Road
Jackson, AL 36545

Date Collected: 7/17/2005
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Project #: Full TCLP Analysis
Client ID #: Recycle Sludge
Laboratory ID #: 0506448-04
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/2/2005

TCLP Volatiles

Parameter	Reporting Limit (mg/L)	Results (mg/L)	Regulatory Level (mg/L)
1,1-Dichloroethene	0.10	<0.1	0.70
1,2-Dichloroethane	0.10	<0.1	0.50
2-Butanone (MEK)	2.0	<2.0	200.0
Benzene	0.10	<0.1	0.50
Carbon Tetrachloride	0.10	<0.1	0.50
Chlorobenzene	0.10	<0.1	100.0
Chloroform	0.10	<0.1	6.0
Tetrachloroethene	0.10	<0.1	0.70
Trichloroethene	0.10	<0.1	0.50
Vinyl Chloride	0.20	<0.2	0.20

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 05, 2005

Client: Boise
Address: 4585 Industrial Road
Jackson, AL 36545

Date Collected: 7/17/2005
Date Received: 7/22/2005
Project #: Full TCLP Analysis
Client ID #: Recycle Sludge
Laboratory ID #: 0506448-04
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/3/2005

TCLP BNA

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
1,4-Dichlorobenzene	0.10	<0.1	7.5
2,4,5-Trichlorophenol	0.25	<0.25	400.0
2,4,6--Trichlorophenol	0.25	<0.25	2.0
2,4-Dinitrotoluene	0.10	<0.1	0.13
Cresols	5.0	<5.0	200.0
Hexachloro-1,3-butadiene	0.10	<0.1	0.50
Hexachlorobenzene	0.10	<0.1	0.13
Hexachloroethane	0.10	<0.1	3.0
Nitrobenzene	0.10	<0.1	2.0
Pentachlorophenol	0.25	<0.25	100.0
Pyridine	0.25	<0.25	5.0

Gainestown Road Landfill, LLC

Jackson Landfill * 1312 Gainestown Road * Jackson, Alabama 36545
Mailing: 2908 W. Main Street * Whistler, Alabama 36612
251-246-2333

October 10, 2008

Mr. Rao Malladi
Solid Waste Branch – Land Division
Alabama Department of Environmental Management
P. O. Box 301463
Montgomery, Alabama 36130-1463

Subject: Request for Variances from Solid Waste Disposal Permit No. 13-07
Gainestown Road Landfill, LLC – Jackson, Alabama

Dear Mr. Malladi:

Gainestown Road Landfill, LLC owns a construction and demolition landfill in Jackson, Alabama, subject to the provisions of Solid Waste Disposal Permit No. 13-07. The facility operates three active disposal cells. One cell is dedicated to the disposal of scrap tires only. Two additional cells are dedicated to the disposal of construction and demolition waste, inert debris, and other non-regulated industrial waste materials (e.g., ash resulting exclusively from the combustion of fossil fuels or wood, which is specifically excluded from the definition of "solid waste" in ADEM Administrative Code R. 335-13-1-.03(132)). The purpose of this letter is to request the following variances from the requirements of ADEM Administrative Code R. 335-13-4 and Solid Waste Disposal Permit No. 13-07:

1. Permission to use a mixture of boiler ash (resulting exclusively from the combustion of fossil fuels or wood) and indigenous soil as an alternate cover material to be applied on a weekly basis.
2. Permission to use a mixture of waste lime and boiler ash (resulting exclusively from the combustion of fossil fuels or wood) to construct a 100-foot wide berm as a buffer between the active disposal areas of the landfill and facility property that is not approved for waste disposal.
3. Permission to use a mixture of paper recycling by-product with indigenous soil as final cover material for the landfill.
4. Permission for the Gainestown Road Landfill to have two operating faces – one for scrap tire disposal and one for all other approved wastes, including construction/demolition waste and inert debris.

The requested variances will have no negative impact on the public health or the environment to the City of Jackson and surrounding areas. Pursuant to the requirements of Administrative Code R. 335-13-8-.02(2), the Gainestown Road Landfill, LLC is providing the following information in support of the variances.

- The material requested for weekly cover as part of Variance Request No. 1 is specifically excluded from the Department's definition of "solid waste." Furthermore, boiler ash is conducive to thorough mixing with indigenous soils and absorbs soil moisture to provide a sturdy, more reliable cover layer than the use of indigenous soil alone.
- The materials requested for use to construct the buffer area as part of Variance Request No. 2 are paper mill by-products that have been approved by the state's Department of Agriculture for beneficial reuse. The waste lime serves as a dependable stabilization agent and, when mixed properly with boiler ash, will provide a defined, immovable buffer zone between the active landfill areas approved for waste disposal and the surrounding facility property for which waste disposal has not been approved under Permit No. 13-07.
- The paper recycling by-product requested as part of Variance Request No. 3 has been approved by the state's Department of Agriculture for beneficial reuse and has been used successfully as a soil amendment in various cases within the area of the City of Jackson to promote the growth of permanent vegetation. The by-product material consists primarily of clays removed from post-consumer waste paper so that the waste paper can be recycled for reuse with virgin paper products. Attached with this letter please find the 2008 Solid Waste Profile Sheet for the paper recycling by-product produced by Boise White Paper, LLC's Jackson Mill.
- All of the activities related to the four variances requested above will be confined to the property owned by the Gainestown Road Landfill, LLC and permitted by the Department, such that residents of the surrounding areas will not come into contact with any of the proposed alternate materials.

The Gainestown Road Landfill, LLC appreciates your just consideration of the proposed variances to Permit No. 13-07. Please find enclosed with this request the referenced solid waste profile sheet and a check payable to the Department in the amount of $680.00 for processing the variance request. If you have any questions or concerns regarding the proposed variances to Permit No. 13-07, please contact me at (251) 402-6612.

Sincerely,

Gainestown Road Landfill, LLC

Brian Walker
Managing Member

Recycle By-Product

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 003

Lab Sample ID: 700-33096-3
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

8260B Volatile Organic Compounds (GC/MS)-TCLP

Method: 8260B
Preparation: 5030B
Dilution: 100
Date Analyzed: 09/30/2008 0532
Date Prepared: 09/30/2008 0532
Date Leached: 09/02/2008 1530

Analysis Batch: 700-57878
Leachate Batch: 700-57732

Instrument ID: VMF5973
Lab File ID: F092945.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Benzene		0.034	J	0.023	0.50
2-Butanone (MEK)		0.43	J	0.11	2.5
Carbon tetrachloride		<0.50		0.023	0.50
Chlorobenzene		<0.50		0.022	0.50
Chloroform		<0.50		0.043	0.50
1,2-Dichloroethane		<0.50		0.081	0.50
1,1-Dichloroethene		<0.50		0.042	0.50
Tetrachloroethene		<0.50		0.069	0.50
Trichloroethene		<0.50		0.040	0.50
Vinyl chloride		<0.20		0.052	0.20

Surrogate	%Rec	Acceptance Limits
Dibromofluoromethane	93	66 - 125
4-Bromofluorobenzene	103	70 - 130
Toluene-d8 (Surr)	113	77 - 116

Recycle By-Product

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 003

Lab Sample ID: 700-33096-3
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

6010B Metals (ICP)-TCLP

Method: 6010B
Preparation: 3010A
Dilution: 1.0
Date Analyzed: 09/29/2008 1324
Date Prepared: 09/26/2008 1520
Date Leached: 09/25/2008 1640

Analysis Batch: 700-57850
Prep Batch: 700-57788
Leachate Batch: 700-57731

Instrument ID: TJA ICP TRACE
Lab File ID: SEP2908
Initial Weight/Volume: 5 mL
Final Weight/Volume: 25 mL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.028	J B	0.010	0.20
Barium		0.87	J B	0.050	1.0
Cadmium		<0.10		0.0050	0.10
Chromium		<0.20		0.010	0.20
Lead		<0.20		0.0050	0.20
Selenium		0.027	J B	0.010	0.50
Silver		<0.10		0.010	0.10

7470A Mercury (CVAA)-TCLP

Method: 7470A
Preparation: 7470A
Dilution: 1.0
Date Analyzed: 09/29/2008 1146
Date Prepared: 09/26/2008 1400
Date Leached: 09/25/2008 1640

Analysis Batch: 700-57915
Prep Batch: 700-57804
Leachate Batch: 700-57731

Instrument ID: LEEMAN HYDRA AA
Lab File ID: N/A
Initial Weight/Volume: 5 mL
Final Weight/Volume: 40 mL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		<0.020		0.0013	0.020

Recycle By-Product

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 003

Lab Sample ID: 700-33096-3
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)-TCLP

Method: 8270C
Preparation: 3520C
Dilution: 5.0
Date Analyzed: 09/30/2008 1412
Date Prepared: 09/29/2008 0840
Date Leached: 09/25/2008 1640

Analysis Batch: 700-57939
Prep Batch: 700-57826
Leachate Batch: 700-57731

Instrument ID: SMC5973
Lab File ID: C093010.D
Initial Weight/Volume: 200 mL
Final Weight/Volume: 1.0 mL
Injection Volume: 1 uL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		<0.050		0.0055	0.050
2,4-Dinitrotoluene		<0.050		0.011	0.050
Hexachlorobenzene		<0.050		0.0085	0.050
Hexachlorobutadiene		<0.050		0.0070	0.050
Hexachloroethane		<0.050		0.0065	0.050
m & p - Cresol		<0.050		0.0065	0.050
Nitrobenzene		<0.050		0.0070	0.050
o-Cresol		<0.050		0.019	0.050
Pentachlorophenol		<0.25		0.010	0.25
Pyridine		<0.25		0.024	0.25
2,4,5-Trichlorophenol		<0.050		0.0085	0.050
2,4,6-Trichlorophenol		<0.050		0.012	0.050

Surrogate	%Rec		Acceptance Limits
2,4,6-Tribromophenol	28		5.0 - 130
2-Fluorophenol	28		10 - 128
Phenol-d5	17	X	29 - 130
Nitrobenzene-d5	54		35 - 130
2-Fluorobiphenyl	54		31 - 130
Terphenyl-d14	31	X	37 - 149

Compost

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 009

Lab Sample ID: 700-33096-9
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)-TCLP

Method: 8270C
Preparation: 3520C
Dilution: 5.0
Date Analyzed: 09/30/2008 1730
Date Prepared: 09/29/2008 0840
Date Leached: 09/25/2008 1640

Analysis Batch: 700-57939
Prep Batch: 700-57826
Leachate Batch: 700-57731

Instrument ID: SMC5973
Lab File ID: C093017.D
Initial Weight/Volume: 200 mL
Final Weight/Volume: 1.0 mL
Injection Volume: 1 uL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		<0.050		0.0055	0.050
2,4-Dinitrotoluene		<0.050		0.011	0.050
Hexachlorobenzene		<0.050		0.0085	0.050
Hexachlorobutadiene		<0.050		0.0070	0.050
Hexachloroethane		<0.050		0.0065	0.050
m & p - Cresol		<0.050		0.0065	0.050
Nitrobenzene		<0.050		0.0070	0.050
o-Cresol		<0.050		0.019	0.050
Pentachlorophenol		<0.25		0.010	0.25
Pyridine		<0.25		0.024	0.25
2,4,5-Trichlorophenol		<0.050		0.0085	0.050
2,4,6-Trichlorophenol		<0.050		0.012	0.050

Surrogate	%Rec		Acceptance Limits
2,4,6-Tribromophenol	40		5.0 - 130
2-Fluorophenol	39		10 - 128
Phenol-d5	30		29 - 130
Nitrobenzene-d5	63		35 - 130
2-Fluorobiphenyl	60		31 - 130
Terphenyl-d14	35	X	37 - 149

Compost

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 009

Lab Sample ID: 700-33096-9
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

6010B Metals (ICP)-TCLP

Method:	6010B	Analysis Batch: 700-57850		Instrument ID:	TJA ICP TRACE
Preparation:	3010A	Prep Batch: 700-57788		Lab File ID:	SEP2908
Dilution:	1.0	Leachate Batch: 700-57731		Initial Weight/Volume:	5 mL
Date Analyzed:	09/29/2008 1428			Final Weight/Volume:	25 mL
Date Prepared:	09/26/2008 1520				
Date Leached:	09/25/2008 1640				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.020	J B	0.010	0.20
Barium		0.75	J B	0.050	1.0
Cadmium		<0.10		0.0050	0.10
Chromium		<0.20		0.010	0.20
Lead		<0.20		0.0050	0.20
Selenium		0.020	J B	0.010	0.50
Silver		<0.10		0.010	0.10

7470A Mercury (CVAA)-TCLP

Method:	7470A	Analysis Batch: 700-57915		Instrument ID:	LEEMAN HYDRA AA
Preparation:	7470A	Prep Batch: 700-57804		Lab File ID:	N/A
Dilution:	1.0	Leachate Batch: 700-57731		Initial Weight/Volume:	5 mL
Date Analyzed:	09/29/2008 1155			Final Weight/Volume:	40 mL
Date Prepared:	09/26/2008 1400				
Date Leached:	09/25/2008 1640				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		<0.020		0.0013	0.020

Compost

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 009

Lab Sample ID: 700-33096-9
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

8260B Volatile Organic Compounds (GC/MS)-TCLP

Method: 8260B
Preparation: 5030B
Dilution: 100
Date Analyzed: 09/30/2008 0825
Date Prepared: 09/30/2008 0825
Date Leached: 09/26/2008 1612

Analysis Batch: 700-57878
Leachate Batch: 700-57806

Instrument ID: VMF5973
Lab File ID: F092951.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Benzene		<0.50		0.023	0.50
2-Butanone (MEK)		0.44	J	0.11	2.5
Carbon tetrachloride		<0.50		0.023	0.50
Chlorobenzene		<0.50		0.022	0.50
Chloroform		<0.50		0.043	0.50
1,2-Dichloroethane		<0.50		0.081	0.50
1,1-Dichloroethene		<0.50		0.042	0.50
Tetrachloroethene		<0.50		0.069	0.50
Trichloroethene		<0.50		0.040	0.50
Vinyl chloride		<0.20		0.052	0.20

Surrogate	%Rec	Acceptance Limits
Dibromofluoromethane	93	66 - 125
4-Bromofluorobenzene	101	70 - 130
Toluene-d8 (Surr)	112	77 - 116

DEPARTMENT OF AGRICULTURE AND INDUSTRIES

213718

3

STATE OF ALABAMA

$ 850.00

AGRICULTURAL LIMING MATERIALS PERMIT

THIS IS TO CERTIFY THAT

BOISE WHITE PAPER LLC
HUGH E WILSON
4585 INDUSTRIAL ROAD
JACKSON AL 36545

IS IN FULL COMPLIANCE WITH ALL APPLICABLE ALABAMA STATUTES AND IS AUTHORIZED TO ENGAGE IN THE ACTIVITIES AND PRACTICES PROVIDED FOR THEREIN.

Issued at Montgomery, Alabama OCTOBER 1, 2007

THIS CERTIFICATE EXPIRES SEPTEMBER 30, 2008 UNLESS PREVIOUSLY REVOKED

DONNIE WALKER, MANAGER
AUDITS AND REPORTS

RON SPARKS
Commissioner of Agriculture and Industries

liner Mud

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 005

Lab Sample ID: 700-33096-5
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

6010B Metals (ICP)-TCLP

Method:	6010B	Analysis Batch: 700-57850		Instrument ID:	TJA ICP TRACE
Preparation:	3010A	Prep Batch: 700-57788		Lab File ID:	SEP2908
Dilution:	1.0	Leachate Batch: 700-57731		Initial Weight/Volume:	5 mL
Date Analyzed:	09/29/2008 1338			Final Weight/Volume:	25 mL
Date Prepared:	09/26/2008 1520				
Date Leached:	09/25/2008 1640				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.021	J B	0.010	0.20
Barium		1.5	B	0.050	1.0
Cadmium		<0.10		0.0050	0.10
Chromium		<0.20		0.010	0.20
Lead		<0.20		0.0050	0.20
Selenium		0.024	J B	0.010	0.50
Silver		<0.10		0.010	0.10

7470A Mercury (CVAA)-TCLP

Method:	7470A	Analysis Batch: 700-57915		Instrument ID:	LEEMAN HYDRA AA
Preparation:	7470A	Prep Batch: 700-57804		Lab File ID:	N/A
Dilution:	1.0	Leachate Batch: 700-57731		Initial Weight/Volume:	5 mL
Date Analyzed:	09/29/2008 1150			Final Weight/Volume:	40 mL
Date Prepared:	09/26/2008 1400				
Date Leached:	09/25/2008 1640				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.020		0.0013	0.020

Line Mud

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 005

Lab Sample ID: 700-33096-5
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)-TCLP

Method: 8270C
Preparation: 3520C
Dilution: 5.0
Date Analyzed: 09/30/2008 1539
Date Prepared: 09/29/2008 0840
Date Leached: 09/25/2008 1640

Analysis Batch: 700-57939
Prep Batch: 700-57826
Leachate Batch: 700-57731

Instrument ID: SMC5973
Lab File ID: C093013.D
Initial Weight/Volume: 200 mL
Final Weight/Volume: 1.0 mL
Injection Volume: 1 uL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		<0.050		0.0055	0.050
2,4-Dinitrotoluene		<0.050		0.011	0.050
Hexachlorobenzene		<0.050		0.0085	0.050
Hexachlorobutadiene		<0.050		0.0070	0.050
Hexachloroethane		<0.050		0.0065	0.050
m & p - Cresol		<0.050		0.0065	0.050
Nitrobenzene		<0.050		0.0070	0.050
o-Cresol		<0.050		0.019	0.050
Pentachlorophenol		<0.25		0.010	0.25
Pyridine		<0.25		0.024	0.25
2,4,5-Trichlorophenol		<0.050		0.0085	0.050
2,4,6-Trichlorophenol		<0.050		0.012	0.050

Surrogate	%Rec	Acceptance Limits
2,4,6-Tribromophenol	60	5.0 - 130
2-Fluorophenol	51	10 - 128
Phenol-d5	39	29 - 130
Nitrobenzene-d5	66	35 - 130
2-Fluorobiphenyl	64	31 - 130
Terphenyl-d14	42	37 - 149

Line Mud

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 005

Lab Sample ID: 700-33096-5
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

8260B Volatile Organic Compounds (GC/MS)-TCLP

Method: 8260B
Preparation: 5030B
Dilution: 100
Date Analyzed: 09/30/2008 0629
Date Prepared: 09/30/2008 0629
Date Leached: 09/26/2008 1612

Analysis Batch: 700-57878
Leachate Batch: 700-57806

Instrument ID: VMF5973
Lab File ID: F092947.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Benzene		<0.50		0.023	0.50
2-Butanone (MEK)		0.75	J	0.11	2.5
Carbon tetrachloride		<0.50		0.023	0.50
Chlorobenzene		<0.50		0.022	0.50
Chloroform		<0.50		0.043	0.50
1,2-Dichloroethane		<0.50		0.081	0.50
1,1-Dichloroethene		<0.50		0.042	0.50
Tetrachloroethene		<0.50		0.069	0.50
Trichloroethene		<0.50		0.040	0.50
Vinyl chloride		<0.20		0.052	0.20

Surrogate	%Rec	Acceptance Limits
Dibromofluoromethane	93	66 - 125
4-Bromofluorobenzene	101	70 - 130
Toluene-d8 (Surr)	115	77 - 116

Bottom Ash

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 001

Lab Sample ID: 700-33096-1
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

6010B Metals (ICP)-TCLP

Method:	6010B	Analysis Batch: 700-57850		Instrument ID:	TJA ICP TRACE
Preparation:	3010A	Prep Batch: 700-57788		Lab File ID:	SEP2908
Dilution:	1.0	Leachate Batch: 700-57731		Initial Weight/Volume:	5 mL
Date Analyzed:	09/29/2008 1310			Final Weight/Volume:	25 mL
Date Prepared:	09/26/2008 1520				
Date Leached:	09/25/2008 1640				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.018	J B	0.010	0.20
Barium		2.5	B	0.050	1.0
Cadmium		<0.10		0.0050	0.10
Chromium		0.013	J	0.010	0.20
Lead		<0.20		0.0050	0.20
Selenium		0.030	J B	0.010	0.50
Silver		<0.10		0.010	0.10

7470A Mercury (CVAA)-TCLP

Method:	7470A	Analysis Batch: 700-57915		Instrument ID:	LEEMAN HYDRA AA
Preparation:	7470A	Prep Batch: 700-57804		Lab File ID:	N/A
Dilution:	1.0	Leachate Batch: 700-57731		Initial Weight/Volume:	5 mL
Date Analyzed:	09/29/2008 1207			Final Weight/Volume:	40 mL
Date Prepared:	09/26/2008 1400				
Date Leached:	09/25/2008 1640				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		<0.020		0.0013	0.020

Bottom Ash

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 001

Lab Sample ID: 700-33096-1
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)-TCLP

Method: 8270C
Preparation: 3520C
Dilution: 5.0
Date Analyzed: 09/30/2008 1316
Date Prepared: 09/29/2008 0840
Date Leached: 09/25/2008 1640

Analysis Batch: 700-57939
Prep Batch: 700-57826
Leachate Batch: 700-57731

Instrument ID: SMC5973
Lab File ID: C093008.D
Initial Weight/Volume: 200 mL
Final Weight/Volume: 1.0 mL
Injection Volume: 1 uL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
1,4-Dichlorobenzene		<0.050		0.0055	0.050
2,4-Dinitrotoluene		<0.050		0.011	0.050
Hexachlorobenzene		<0.050		0.0085	0.050
Hexachlorobutadiene		<0.050		0.0070	0.050
Hexachloroethane		<0.050		0.0065	0.050
m & p - Cresol		<0.050		0.0065	0.050
Nitrobenzene		<0.050		0.0070	0.050
o-Cresol		<0.050		0.019	0.050
Pentachlorophenol		<0.25		0.010	0.25
Pyridine		<0.25		0.024	0.25
2,4,5-Trichlorophenol		<0.050		0.0085	0.050
2,4,6-Trichlorophenol		<0.050		0.012	0.050

Surrogate	%Rec		Acceptance Limits
2,4,6-Tribromophenol	51		5.0 - 130
2-Fluorophenol	36		10 - 128
Phenol-d5	23	X	29 - 130
Nitrobenzene-d5	58		35 - 130
2-Fluorobiphenyl	61		31 - 130
Terphenyl-d14	53		37 - 149

Bottom Ash

Analytical Data

Client: Boise Cascade

Job Number: 700-33096-1

Client Sample ID: 001

Lab Sample ID: 700-33096-1
Client Matrix: Solid

Date Sampled: 09/24/2008 0000
Date Received: 09/25/2008 1100

8260B Volatile Organic Compounds (GC/MS)-TCLP

Method: 8260B
Preparation: 5030B
Dilution: 100
Date Analyzed: 09/30/2008 0434
Date Prepared: 09/30/2008 0434
Date Leached: 09/02/2008 1530

Analysis Batch: 700-57878
Leachate Batch: 700-57732

Instrument ID: VMF5973
Lab File ID: F092943.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Benzene		0.027	J	0.023	0.50
2-Butanone (MEK)		0.15	J	0.11	2.5
Carbon tetrachloride		<0.50		0.023	0.50
Chlorobenzene		<0.50		0.022	0.50
Chloroform		<0.50		0.043	0.50
1,2-Dichloroethane		<0.50		0.081	0.50
1,1-Dichloroethene		<0.50		0.042	0.50
Tetrachloroethene		<0.50		0.069	0.50
Trichloroethene		<0.50		0.040	0.50
Vinyl chloride		<0.20		0.052	0.20

Surrogate	%Rec	Acceptance Limits
Dibromofluoromethane	96	66 - 125
4-Bromofluorobenzene	103	70 - 130
Toluene-d8 (Surr)	111	77 - 116

TOM JOINER & ASSOCIATES, Inc.

Consulting Geologists & Engineers

Thomas J. Joiner
Chairman

Robert T. Wood
Chief Executive Officer

Ken P. Hanby
President

Joseph E. Patrick
Vice President

July 20, 2018

VIA FEDERAL EXPRESS:

Blake Holden
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36110-2400

Re: Permit Modification Application - ADEM Permit No.: 13-07
Gainestown Road Landfill, LLC (Jackson Landfill)
Clarke County, Jackson, AL

Dear Blake:

Enclosed, please find a check for $1,460 and an application to modify the ADEM Solid Waste permit no. 13-07 for the Gainestown Road Landfill (Jackson Landfill). As discussed during our phone conversation on July 20, 2018, this modification has been submitted to include composted sludge (to be mixed with indigenous soils for weekly cover). The analytical data for this material is also enclosed.

If you have any questions, please contact me at your first opportunity.

Sincerely,

Kelly Rainwater Johns

enclosures: ADEM Form 305 with attachments
Analytical Data
Check for $1,460

87E-BH-PermitModiciation-072018.KRJ

TTL
geotechnical • analytical • materials • environmental

3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

May 07, 2018

Mr. Randy Abston
Boise Paper
4585 Industrial Road
Jackson, AL 36545

RE: Sludge Samples
Work Order Number: **180411045**

Dear Client:

TTL, Inc. received sample(s) and/or data on Wednesday, April 11, 2018 for the information presented in the attached report.

If you should have any questions regarding this information, please feel free to call. The work order number shown above will assist us in accessing your data more efficiently.

Thank you for the opportunity to provide these services.

Sincerely,
TTL, Inc.

Steve Martin
Senior Vice President

Attachments

TTL
geotechnical • analytical • materials • environmental

3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 07-May-18

CLIENT: Boise Paper
Project: Sludge Samples
Lab Order: 180411045

CASE NARRATIVE

The samples were analyzed in general accordance with methods outlined in "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", EPA, SW-846.

Results for Metals and Fecal Coliform are reported on the "dry weight" basis. All other results are reported "as received".

TTL
geotechnical • analytical • materials • environmental

3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 07-May-18

CLIENT: Boise Paper
Project: Sludge Samples
Lab Order: 180411045

Lab ID: 180411045-001
Collection Date: 04/11/2018 8:30
Client Sample ID: WC Sludge Composted
Matrix: Sludge

Analyses	Result	Limit	Units	DF	Date Analyzed
FECAL COLIFORM, DRY		**SM9222D**	Prep:		Analyst: **TLM**
Fecal Coliform	<10	10.0	CFU/dry-gram	10	04/11/2018 16:35
NITRATE BY ION CHROMATOGRAPHY		**E300**	Prep:		Analyst: **CGR**
Nitrogen, Nitrate, as NO3-N	1.82	1.00	mg/Kg	10	04/12/2018 14:37
MERCURY IN SOILS AND SLUDGES		**SW7471A**	Prep:(SW7471A)	04/27/2018 9:00	Analyst: **TBC**
Mercury as Hg	< 0.113	0.113	mg/Kg-dry	47.0588	04/27/2018 13:59
ICP METALS IN SOILS AND SLUDGES		**SW6010B**	Prep:(SW3050A)	04/27/2018 9:00	Analyst: **SFC**
Arsenic	< 1.18	1.18	mg/Kg-dry	49.373	05/04/2018 13:00
Cadmium	0.49	0.12	mg/Kg-dry	49.373	05/04/2018 13:00
Chromium	2.11	1.18	mg/Kg-dry	49.373	05/04/2018 13:00
Copper	41.0	1.18	mg/Kg-dry	49.373	05/04/2018 13:00
Lead	< 0.59	0.59	mg/Kg-dry	49.373	05/04/2018 13:00
Molybdenum	15.1	5.92	mg/Kg-dry	49.373	05/04/2018 13:00
Nickel	< 5.92	5.92	mg/Kg-dry	49.373	05/04/2018 13:00
Selenium	< 1.18	1.18	mg/Kg-dry	49.373	05/04/2018 13:00
Zinc	129	5.92	mg/Kg-dry	49.373	05/04/2018 13:00
AMMONIA AS N		**M4500-NH3 BG 1997**	Prep:		Analyst: **KMC**
Nitrogen, Ammonia as N	10.2	2.00	mg/Kg	25	04/24/2018 17:00
TOTAL PHOSPHORUS AS P		**M4500-P B5 H**	Prep:		Analyst: **KMC**
Phosphorus as P	208	125	mg/Kg	2500	04/18/2018 11:39
TOTAL KJELDAHL NITROGEN		**M4500-N B**	Prep:		Analyst: **KMC**
Nitrogen, Kjeldahl, Total as N	111	2.50	mg/Kg	50	04/24/2018 17:00
TOTAL SOLIDS		**M2540 B**	Prep:		Analyst: **KJG**
Total solids	41.7	0.1	wt%	1	04/12/2018 15:45

Lab ID: 180411045-002
Collection Date: 04/11/2018 6:45
Client Sample ID: WC Sludge Fresh
Matrix: Sludge

Analyses	Result	Limit	Units	DF	Date Analyzed
FECAL COLIFORM, DRY		**SM9222D**	Prep:		Analyst: **TLM**
Fecal Coliform	116	10.0	CFU/dry-gram	10	04/11/2018 16:35
TOTAL SOLIDS		**M2540 B**	Prep:		Analyst: **KJG**
Total solids	39.2	0.1	wt%	1	04/12/2018 15:45

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3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 07-May-18

CLIENT: Boise Paper
Project: Sludge Samples
Lab Order: 180411045

Lab ID: 180411045-003
Collection Date: 04/11/2018 7:37
Client Sample ID: WC Sludge Fresh/Heat
Matrix: Sludge

Analyses	Result	Limit	Units	DF	Date Analyzed
FECAL COLIFORM, DRY		**SM9222D**	Prep:		Analyst: **TLM**
Fecal Coliform	12	10.0	CFU/dry-gram	10	04/11/2018 16:35
TOTAL SOLIDS		**M2540 B**	Prep:		Analyst: **KJG**
Total solids	41.6	0.1	wt%	1	04/12/2018 15:45

Chain of Custody / Request for Services

Environmental Analysis

5H

PCA - Boise White Paper, LLC
4585 Industrial Road
Jackson, Alabama 36545
(251)246-4461

TTL WORK ORDER NUMBER
180411 045

Submitted by: Randy Abston Location: Jackson, Alabama Ship Date: 4/11/18

Purpose for Sampling: Waste Clarifier Sludge Analysis Laboratory: Tuscaloosa Testing laboratory (Charge to existing Potable Water PO#)

#	Description	# Cont.	Analysis	Preservation	Date	Time	Relinquished By: Sampler	Time	Received By: Env. Crew Leader	Time
1	WC Sludge Composted	1	EPA 503 (incl. Fecal Coliform)	Refrigerated	4/11/18	8:30 AM	Randy Abston	8:40 AM	Joey Stringer	8:45 am
2	WC Sludge Fresh	1	Fecal Coliform		4/11/18	6:45 AM	Angelica Maiers	8:40 AM	Joey Stringer	8:45 am
3	WC Sludge Fresh/Heat	1	Fecal Coliform		4/11/18	7:37 AM	Angelica Maiers	8:40 AM	Joey Stringer	8:45 am
4										
5										
6										

Lab Use Only

Relinquished by: _____ Date/Time: _____

Received by: Gavin Smith 4-11-18 Date/Time: 10:00

Relinquished by: Gavin Smith 4-11-18 Date/Time: 3:20

Received by: Suzy Hare 4-11-18 Date/Time: 15:20

Relinquished by: _____ Date/Time: _____

Rec'd for Lab by: _____ Date/Time: _____

Analytical Contact: _____

Phone Number: _____

Date Received: _____

Expected Comp. Date: _____

Gainestown Road Landfill, LLC

Jackson Landfill * 1312 Gainestown Road * Jackson, Alabama 36545
Mailing: 2908 W. Main Street * Whistler, Alabama 36612
251-246-2333

April 5, 2006

Mr. Larry Bryant
Land Division
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463

RE: Request for Approval of Alternate Cover Material
Gainestown Road Landfill – Permit No. 13-07

Dear Mr. Bryant:

Gainestown Road Landfill, LLC owns and operates the Jackson Landfill in Jackson, Alabama. The facility's permit requires that Gainestown Road Landfill, LLC request approval to use alternate cover materials in addition to or in lieu of soil. The purpose of this letter is to request the Department's permission to use Recycle Mill sludge, a byproduct of Boise White Paper, LLC's office paper recycle mill, as a supplement to soil for cover material at the Jackson Landfill. The Jackson Landfill plans to mix the Recycle Mill sludge with sand and topsoil for application as cover over waste materials received by the landfill for disposal. The Recycle Mill sludge exhibits properties beneficial to indigenous Alabama soils and will add nutrient value to the landfill cover material.

The Recycle Mill sludge has previously been registered and labeled for distribution and sale as an agricultural product in the state of Alabama. The Recycle Mill byproduct label and the byproduct fertilizer analysis have been included as an attachment to this request. Boise White Paper, LLC has sampled the Recycle Mill sludge and submitted samples to a contract laboratory for analysis. The analysis indicates that all regulated metals were below U.S. Environmental Protection Agency (EPA) regulatory concentration limits. All of the metals were below method detection limits of the Toxicity Characteristic Leaching Procedure (TCLP) analysis. The results of the TCLP analysis of the Recycle Mill sludge material are also enclosed with this request.

The Gainestown Road Landfill, LLC appreciates you just and favorable consideration of this request for approval of an alternate cover material. If you have questions regarding this request, please do not hesitate to contact me at (251) 246-2333.

Gainestown Road Landfill, LLC

Brian Walker, President

Enclosures

cc: Trey Wilson/Boise White Paper, LLC

License #346

Recycle Paper Sludge
Soil Amendment Material

Bulk

Contents: Short Wood Fiber (Organic Material) and
Calcium Carbonate Lime

Application: Mix or blend as necessary
to achieve desired results

Moisture, Not more than 35%

Guaranteed by:
George B. Wittmer Associates, Inc.
625 Oak Street
Green Cove Springs, FL 32043

[Processed at and shipped from stockpile located at 307 W. Industrial Rd., Jackson, AL]
David M. Perdick, Distribution Manager (334) 575-5470

FERTILIZER ANALYSIS REPORT

WITTMER ASSOCIATES
938 HALL PARK ROAD
GREEN COVE SPRINGS, FL 32043

Waters Agricultural Laboratories, Inc.
Newton Highway
P.O. Box 382
Camilla, Georgia 31730-0382
(912) 336-7216
Fax (912) 336-7967

DATE SUBMITTED: 02-04-00
DATE OF REPORT: 02-09-00

	SAMPLE NUMBER	BC-RPS				
	LAB NUMBER	1036				
	CLAIMED CONTENT					

RESULTS IN % UNLESS OTHERWISE STATED

1	TOTAL NITROGEN	0.19				
2	NITRATE NITROGEN					
3	AMMONIA NITROGEN					
4	UREA NITROGEN					
5	WATER INSOLUBLE NITROGEN					
6	AVAILABLE P205					
7	TOTAL P205	0.03				
8	INSOLUBLE P205					
9	PH					
10	MOISTURE					
11	B.P.L.					
12	TOTAL K20	0.02				
13	SULFUR	0.043				
14	BORON	0.001				
15	ZINC	0.004				
16	MANGANESE	0.004				
17	IRON	0.03				
18	COPPER	0.009				
19	CALCIUM	9.5				
20	MAGNESIUM (TOTAL)	0.085				
21	ALUMINUM	0.28				
22	SODIUM	0.049				
23	MOISTURE	27.6				
24	CCE	24.1				
25						
26						
27						
28						
29						
30	RESULTS REPORTED ON:	W				

W=WET(AS RECEIVED)BASIS
D=DRY BASIS
L=LIQUID BASIS

REMARKS:

RF

RECEIVED FEB

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 05, 2005

Client: Boise
Address: 4585 Industrial Road
Jackson, AL 36545

Date Collected: 7/17/2005
Date Received: 7/22/2005
Project #: Full TCLP Analysis
Client ID #: Recycle Sludge
Laboratory ID #: 0506448-04
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/2/2005

TCLP Metals

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
Arsenic	0.50	<0.5	5.0
Barium	5.0	<5.0	100.0
Cadmium	0.10	<0.1	1.0
Chromium	0.20	<0.2	5.0
Lead	0.50	<0.5	5.0
Mercury	0.0020	<0.002	0.20
Selenium	0.50	<0.5	1.0
Silver	0.50	<0.5	5.0

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 05, 2005

Client: Boise
Address: 4585 Industrial Road
Jackson, AL 36545

Date Collected: 7/17/2005
Date Received: 7/22/2005
Project #: Full TCLP Analysis
Client ID #: Recycle Sludge
Laboratory ID #: 0506448-04
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/2/2005

TCLP Volatiles

Parameter	Reporting Limit (mg/L)	Results (mg/L)	Regulatory Level (mg/L)
1,1-Dichloroethene	0.10	<0.1	0.70
1,2-Dichloroethane	0.10	<0.1	0.50
2-Butanone (MEK)	2.0	<2.0	200.0
Benzene	0.10	<0.1	0.50
Carbon Tetrachloride	0.10	<0.1	0.50
Chlorobenzene	0.10	<0.1	100.0
Chloroform	0.10	<0.1	6.0
Tetrachloroethene	0.10	<0.1	0.70
Trichloroethene	0.10	<0.1	0.50
Vinyl Chloride	0.20	<0.2	0.20

SUMMIT
ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

August 05, 2005

Client: Boise
Address: 4585 Industrial Road
Jackson, AL 36545

Date Collected: 7/17/2005
Date Received: 7/22/2005
Project #: Full TCLP Analysis
Client ID #: Recycle Sludge
Laboratory ID #: 0506448-04
Matrix: Solid
Extraction Method: 1311
Date of Analysis: 8/3/2005

TCLP BNA

Parameter	Reporting Limit (mg/l)	Results (mg/l)	Regulatory Level (mg/l)
1,4-Dichlorobenzene	0.10	<0.1	7.5
2,4,5-Trichlorophenol	0.25	<0.25	400.0
2,4,6--Trichlorophenol	0.25	<0.25	2.0
2,4-Dinitrotoluene	0.10	<0.1	0.13
Cresols	5.0	<5.0	200.0
Hexachloro-1,3-butadiene	0.10	<0.1	0.50
Hexachlorobenzene	0.10	<0.1	0.13
Hexachloroethane	0.10	<0.1	3.0
Nitrobenzene	0.10	<0.1	2.0
Pentachlorophenol	0.25	<0.25	100.0
Pyridine	0.25	<0.25	5.0

SOLID WASTE DISPOSAL FACILITY

CONSTRUCTION/DEMOLITION LANDFILL
PERMIT APPLICATION PACKAGE

July 10, 2002

MEMORANDUM

TO: Applicants Seeking a Permit for Solid Waste Facilities

FROM: Wm. Gerald Hardy, Chief
Land Division
Alabama Department of Environmental Management

RE: Processing Solid Waste Permits by ADEM

Any permit issued by ADEM must be in accordance with §22-27-48 Code of Alabama. This section indicates that ADEM may not consider an application for a new or modified permit unless such application has received approval by the affected unit of local government having an approved plan. ADEM, therefore, will require the following before it can process a new or modified permit application:

1. The local government having jurisdiction must approve the permit application in accordance with §22-27-48 Code of Alabama.

2. The applicant shall obtain a statement of consistency from the regional planning and development commission. The commission shall evaluate the proposal using the provisions of the current regional solid waste management needs assessment.

3. Local governments and the regional planning and development commissions should follow the procedures outlined in §22-27-48 Code of Alabama and the siting standards included in the local approved plan in considering approval of a facility.

This procedure applies to applications for new or modified permits. ADEM cannot review an application unless it includes approval from the affected local government and a statement of consistency from the regional planning and development commission. This procedure shall not apply to exempted industrial landfills receiving waste generated on site only by the permittee.

Please contact the Solid Waste Branch of ADEM at (334) 271-7988 if there are any questions.

WGH/

CONSTRUCTION AND DEMOLITION LANDFILL
SITING AND HYDROGEOLOGICAL EVALUATION SHEET
(SUPPLEMENT TO C/D APPLICATION)

All of the following items should be included with a construction and demolition landfill permit application:

1. •Local Approval
   •Statement of Consistency
   •Fees

2. •Map showing flood prone areas.

3. Evaluation of land use:
   - •Wetlands determination by U.S.A. Corps of Engineers
   - •Endangered species determination by U.S. Fish and Wildlife Service
   - •Habitat
   - •Archaeologically sensitive areas determined by Alabama Historical Commission.

4. Site geology using borings, exploration pits, or hydrogeologic mapping for the purposes of determining the minimum 5-foot separation between groundwater and the cell bottom.

5. Location of borings, pits, and sections on a map.

6. Log of pits and borings.

7. A map showing geology and structural features such as sink holes and faults.

8. •Engineer's stamp on plans.

9. A Certification Letter, signed by an registered professional engineer, verifying the accuracy of the submitted permit application.

PERMIT APPLICATION
SOLID WASTE DISPOSAL FACILITY
CONSTRUCTION/DEMOLITION LANDFILL
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
(Submit in Triplicate)

The following application, with all required attachments, must be submitted before the Department will begin its review.

SECTION I:

LANDFILL ACTION:
_____ New Application
_____ Renewal Application, Permit Number _____
X Modification Application, Permit Number 13-07

LANDFILL NAME: Jackson Landfill

LANDFILL ADDRESS (MAILING): c/o Wendy Walker
2908 West Main Street
Whistler, AL 36612

LANDFILL ADDRESS (PHYSICAL): Section 15, Township 6 North, Range 2 East
Clarke County, Alabama

SECTION II:

APPLICANT/PERMITTEE:
NAME: Gainestown Road Landfill, LLC
ADDRESS: 2908 West Main Street
Whistler, AL 36612
TELEPHONE: 251-246-2333

If applicant/permittee is a Corporation, please list officers:

SECTION III:

LANDFILL OPERATOR:

Name: (1) Gainestown Road Landfill, LLC (2) _____

Address: c/o Wendy Walker

2908 West Main Street

Whistler, AL 36612

Telephone: 251-246-2333

SECTION IV:

CONTACT PERSON(S):

Name: (1) Wendy Walker (2) _____

Address: Gainestown Road Landfill, LLC

2908 West Main Street

Whistler, AL 36612

Telephone: 251-246-2333

SECTION V:

LANDOWNER(S):

Name: (1) Wendy Walker (2) _____

Address: Gainestown Road Landfill, LLC

2908 West Main Street

Whistler, AL 36612

Telephone: 251-246-2333

Attach copy of agreement from landowner giving permission to use site for disposal if landowner is different from applicant.

SECTION VI:

ADJACENT LANDOWNER(S):

a. Submit a list of all adjacent landowners including name and current mailing address

b. Submit a drawing/map identifying the proposed disposal site and the properties of all adjacent landowners listed in "a" above.

SECTION VII:

LOCAL APPROVAL: No Required (Yes or No)

_____ Date Received if needed (attach copy of resolution and proof of publishing public notice)

SECTION VIII:

WASTE DESCRIPTION:

a. Describe and list all waste streams/types to be accepted at landfill:

Non processed wood debris, scrap tires, general construction/demolition waste, paving and packing materials.
Additionally, boiler ash, waste lime, paper recycling by-product and composted
by-product to be mixed with indigenous soil as alternate cover material.

b. List proposed service area (geographic area or location(s)):

Choctaw, Clarke, Marengo, Mobile, Monroe, Washington and Wilcox counties of Alabama.

c. What is the maximum daily volume of waste to be received at the landfill? (Select One)

_____ tons per day 400 cubic yards per day

SECTION IX:

SITE DESCRIPTION:

a. Attach location map with the site clearly identified. Acceptable maps include a USGS 7.5 or 15 minute series, a county highway map published by the Alabama Department of Transportation.

b. Location:

County: Clarke

Part: NW/4 of Section(s): 15

Township(s): 6 North Range(s): 2 East

c. Attach legal property description and boundary plat of the permitted area and disposal area prepared and signed by a licensed land surveyor.

d. Size of permitted area: 81.91 acres

e. Size of disposal area: 58.12 acres

SECTION X:

This Section is to be completed by the applicants/permittees. A copy of all concurrence letters must be attached to this application upon submittal to the Department.

Location Standards: (Rule 335-13-4-.01(1)

a. Is the landfill located in the 100-year flood plain? (need to have flood plain map)

NO: ✓ YES: ____

b. Does the proposed landfill disposal area:

(1.) Jeopardize the continued existence of endangered or threatened species protected under the Endangered Species Act of 1973?

NO: ✓ YES: ___(Attach letter from U.S. Dept. of Interior or Alabama Fish and Wildlife)

(2.) Result in the destruction or adverse modification of critical habitats protected under the Endangered Species Act of 1973?

NO: ✓ YES: ___ (Attach letter from U.S. Dept. of Interior or Alabama Fish and Wildlife)

c. Is the proposed landfill located in a zone of active faults, seismic impact zones and unstable areas?

NO: ✓ YES: ____

(If YES then all required seismic studies should be submitted to the Department.)

d. Is the proposed landfill located in an area that is archaeologically sensitive?

NO: ✓ YES: ____ (Attach letter from State Historic Preservation Officer)

Water Quality Standards (Rule 335-13-4-.01(2):
(ADEM Water Division should be contacted to determine if permit is required)

a. Will the proposed landfill discharge pollutants to waters of the State in violation of requirements of the National Pollutant Discharge Elimination System (NPDES) Permit?

NO: ✓ YES: ____

b. Will the proposed landfill violate any requirement of an area wide or Statewide water quality plan that has been approved under the Alabama Water Pollution Control Act?

NO: ✓ YES: ____

c. Will any part of the landfill, including buffer zone, be located in wetlands, beaches, dunes?

NO: ✓ YES: ____

d. Will solid waste be disposed in any location which will significantly degrade wetlands, beaches, or dunes?

NO: ✓ YES: ____

e. Will the proposed landfill be located outside the boundaries of the coastal area? (If not, then all demonstrations should be submitted to the Department for review.)

NO: ____ YES: ✓

Groundwater Elevations:

Has a minimum five-foot separation between the floor of the disposal cell and the groundwater been established? NO: ____ YES: ✓

SECTION XI:

GENERAL COMMENTS:

All materials listed in Rules 335-13-4-.12 to 335-13-4-.17, Rules 335-13-4-.19 to 335-13-4-.20, and Rule 335-13-4-.23 shall be kept at the landfill office along with a copy of the engineering drawings which must be submitted to the Department for review.

The applicant/permittee is responsible for obtaining a copy of the Division 13 regulations and complying with all Rules related to construction/demolition landfill units.

SECTION XII:

CERTIFICATION OF LOCAL GOVERNMENT APPROVAL:

Upon submittal of this application, we the undersigned certify that local approval has been obtained from Clarke County (city/county). Evidence of this local approval is contained in documents which are on file at the permit applicant's business address.

CERTIFICATION OF COMPLIANCE:

Upon submittal of this application, we the undersigned certify that this document and all attachments submitted are to the best of our knowledge and belief, true, accurate, and complete. We also understand that if any of the material certified to above has not been received, or is not complete or is not accurate, that shall be grounds for the Department to revoke the landfill permit if issued.

SIGNATURE (Responsible official of permit applicant): _____ TITLE: Owner - Managing Member

Lewis Walker DATE: 7/20/18

(please print or type name)

SIGNATURE (Certifying Engineer): _____ TITLE: Engineer

Kelly Rainwater Johns DATE: 7-20-2018

(please print or type name)

FIRM: Tom Joiner & Associates, Inc. STAMP OR SEAL

ALABAMA LICENSED No. 32763 PROFESSIONAL ENGINEER KELLY RAINWATER JOHNS

Jackson Landfill
2018 Permit Modification
ADEM Permit 13-07

ATTACHMENT VI

Adjacent Landowners Names and Addresses

Jackson Landfill
2018 Permit Modification
ADEM Permit 13-07

Adjacent Landowners Names and Addresses

Mr. Derrell Jones
207 Fairview Circle
Jackson, AL 36545

Mrs. Janie Belle Clolinger
100 Kimball Avenue
Jackson, AL 36545

Gainstown Road Landfill, LLC
2908 West Main Street
Whistler, AL 36612

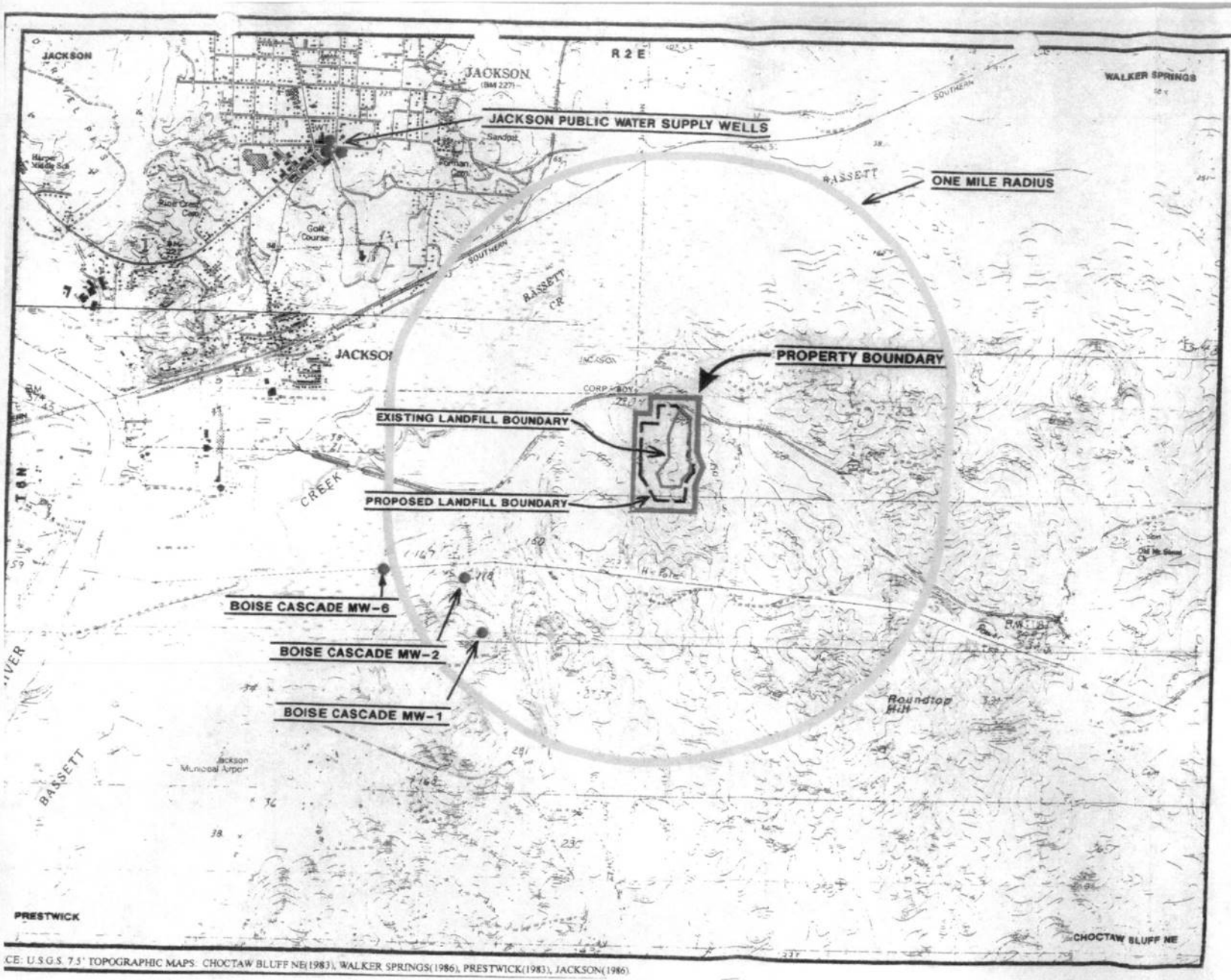
J.L. Bedsole Foundation
c/o Michael G. Andrew
Larson & McGowan
Forest Managers & Consultants, Inc.
P.O. Box 482
Jackson, AL 36545

Delmar Chastain
158 East Cedar
Jackson, AL 36545

Jackson Landfill
2018 Permit Modification
ADEM Permit 13-07

ATTACHMENT IX.b

Figure 1



CE: U.S.G.S. 7.5' TOPOGRAPHIC MAPS: CHOCTAW BLUFF NE(1983), WALKER SPRINGS(1986), PRESTWICK(1983), JACKSON(1986).

FIGURE 1

SITE LOCATION MAP

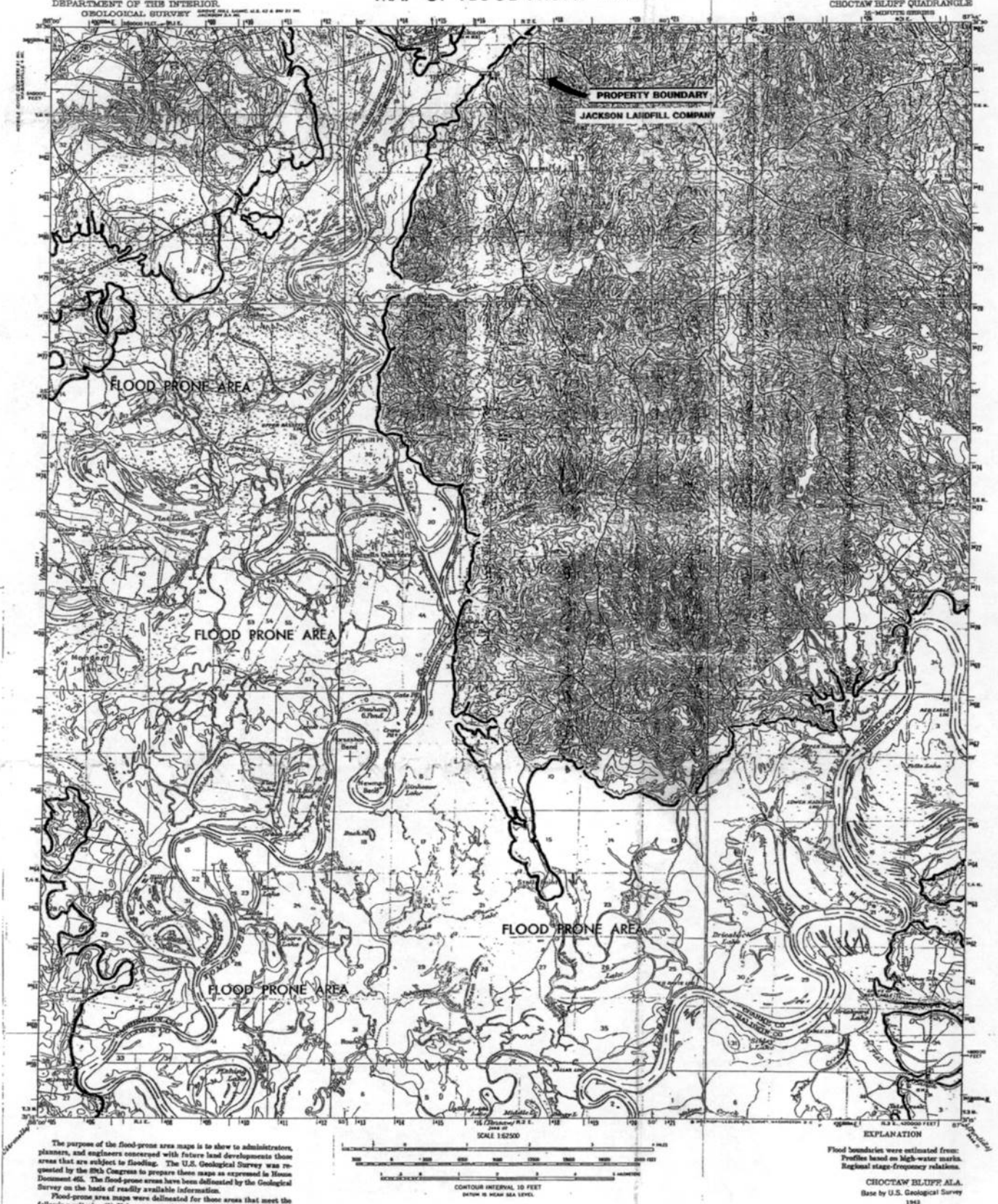
JACKSON LANDFILL COMPANY
JACKSON, ALABAMA

CONTOUR INTERVAL
VARIES BETWEEN 5' & 10'

N

0 2000'
SCALE IN FEET

MAP OF FLOOD-PRONE AREAS



The purpose of the flood-prone area maps is to show to administrators, planners, and engineers concerned with future land developments those areas that are subject to flooding. The U.S. Geological Survey was requested by the 89th Congress to prepare these maps as expressed in House Document 465. The flood-prone areas have been delineated by the Geological Survey on the basis of readily available information.

Flood-prone area maps were delineated for those areas that meet the following criteria: (1) Urban areas where the upstream drainage area exceeds 25 square miles, (2) rural areas in humid regions where the upstream drainage area exceeds 100 square miles, and (3) rural areas in semiarid regions where the upstream drainage area exceeds 750 square miles.

The flood-prone areas shown on this map have a 1 in 100 chance on the average of being inundated during any year. Flood areas have been delineated without consideration of present or future flood-control storage that may reduce flood levels.

Flood-hazard reports provide the detailed flood information that is needed for economic studies, for formulating zoning regulations, and for setting design criteria to minimize future flood losses. When detailed information, such as that contained in the flood-hazard reports, is required, contact the U.S. Army, Corps of Engineers; the U.S. Geological Survey; or the Tennessee Valley Authority in the areas of their jurisdiction.

1970

FIGURE 2

USGS FLOOD PRONE MAP
CHOCTAW BLUFF, AL. QUADRANGLE

Jackson Landfill
2018 Permit Modification
ADEM Permit 13-07

ATTACHMENT IX.c

Legal Property Description and Boundary Plat

McVay Surveying
SURVEYORS SINCE 1905

203 E. SPRUCE STREET
JACKSON, AL 36545
Telephone (334) 246-9739

334

2 July, 1998

JACKSON LANDFILL COMPANY
Description of Enlarged Landfill

Beginning at a point located 100.00 feet due North of the SE corner of the W½ of the NW¼, Section 15, T. 6 N., R. 2 E.; thence due North 992.15 feet; thence N. 35°39'00" E. 104.28 feet; thence N. 14°03'00" W. 74.03 feet; thence N. 06°05'00" W. 107.60 feet; thence N. 06°01'58" W. 99.87 feet; thence N. 31°57'00" W. 228.47 feet; thence due North 648.32 feet; thence N. 59°42'33" W. 634.04 feet; thence due West 280.49 feet; thence S. 00°12'17" E. 292.30 feet; thence S. 89°24'48" W. 293.84 feet; thence S. 00°00'11" W. 1277.33 feet; thence S. 26°26'23" E. 976.65 feet; thence N. 89°59'28" E. 785.95 feet to the point of beginning, containing 58.12 acres, more or less, and being a part of the W½ of the NW¼, Section 15, Township 6 North, Range 2 East, Clarke County, Alabama.

McVay Surveying
SURVEYORS SINCE 1905

203 E. SPRUCE STREET
JACKSON, AL 36545
Telephone (205) 246-9739

25 November, 1994

78 ACRES

FIRST PURCHASE FROM CLOLINGER

Description of James O. Griffin Property

PARCEL 1 The W½ of the NW¼ of Section 15, Township 6 North, Range 2 East, except 2 acres located in the NW corner thereof, said 2 acres being described in that certain deed recorded in Deed Record 272 at Page 401 in the Office of the Judge of Probate, Clarke County, Alabama.
(Ref.: Bk. 934, Pg. 254)

PARCEL 2 Beginning at a found iron pipe marking the SW corner of the SE¼ of the NW¼ of Sec. 15, T. 6 N., R. 2 E., run North 390' to the point of beginning; thence continue North 600'; thence East 100'; thence South 600'; thence West 100' back to the point of beginning. Containing 1.38 acres, more or less and being a part of the SE¼ of the NW¼ of Sec. 15, T. 6 N., R. 2 E., Clarke County, Alabama.
(REF.: that survey and plat by L. Junior McMillan RLS No. 13657, dated: 7/25/94)

Note: the above descriptions are taken from deed and survey plat and do not reflect a field survey or certification by me.

R. A. McVay, II, Al. Reg. No. 12695

ATTACHMENT X.a

Figure 2

ATTACHMENT X.b (1&2)

Letter from U.S. Department of Interior

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. Drawer 1190
Daphne, AL 36526

IN REPLY REFER TO:
4-3-94-118S.2/98-0420

October 1, 1998

Mr. Joseph Patrick
Tom Joiner and Associates
P.O. Box 1490
Tuscaloosa, Alabama 35403

Dear Mr. Patrick:

As part of the permit requirements for the Jackson Landfill, Clarke County, you requested that we update our March 29, 1994 letter to your office concerning federally listed species and wetland habitats. We have reviewed the information you enclosed and have the following comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.):

A. Fish and Wildlife Coordination Act:

As described in our previous letter, an unnamed tributary of Bassett Creek runs through the southwest portion of the project site. This tributary and its riparian zone provides important fish and wildlife habitat, serve as a storm water storage basin and filters upland runoff. In order to minimize impacts to this wetland habitat, we recommend avoiding drainage into or filling this tributary.

B. Endangered Species Act

According to our records, there are no federally listed species or critical habitat located on the project site. Therefore, no further endangered species consultation is required for this project unless (1) new information on federally listed or proposed species becomes available, (2) new species are proposed or listed or critical habitat is designated or (3) the proposed action is modified.

If you need further information regarding our concerns, please contact Sharon Delchamps of our office at 334/441-5181 ext. 31.

Sincerely yours,

Larry E. Goldman
Field Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE

[redacted]
P. O. Drawer 1190
Daphne, Alabama 36526

IN REPLY REFER TO:

98-0904.a

August 24, 1998

Mr. Joseph Patrick
Tom Joiner and Associates, Inc.
P.O. Box 1490
Tuscaloosa, Al 35403

Dear Mr. Patrick:

Per your telephone request on August 20, 1998, we have added our comments regarding the Endangered Species Act for the proposed expansion of the Jackson Landfill, Clarke County from 17 acres to 50 acres. We hope this information is sufficient for your review.

Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.)

As described in your letter, you plan to meet the requirements set forth in our March 29, 1994 comments to the construction of this landfill for preventing drainage into Bassett Creek using sediment ponds, silt fences and vegetation practices. We concur with these practices. However, we recommend contacting the Army Corps of Engineers for further information on the presence of jurisdictional wetlands on the project site and required permits, if needed.

Endangered Species Act (87 State. 884, as amended; 16 U.S.C. 1531 et seq.).

According to our records, there are no federally listed species located in the project area. Therefore, no further endangered species consultation is required for this project unless (1) new information on federally listed or proposed species becomes available, (2) new species are proposed or listed, or critical habitat is designated or (3) the proposed action is modified.

Should you have further questions regarding our concerns, please contact Sharon Delchamps of my staff at 334/441-5181 ext. 31.

Sincerely,

Larry Goldman
Field Supervisor

ATTACHMENT X.d

Letter from Alabama Historical Commission

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 South Perry Street
MONTGOMERY, ALABAMA 36130-0900

F. LAWERENCE OAKS
EXECUTIVE DIRECTOR

TELEPHONE NUMBER
334-242-3184

February 24, 1998

Mr. Joseph E. Patrick
Tom Joiner & Assoc.
P. O.Box 1490
Tuscaloosa, AL 35403

Re: 98-0414
Jackson Landfill Expansion
Clarke County, AL

Dear Mr. Patrick:

Based upon the additional information forwarded by your office the Alabama Historical Commission has determined that the proposed activities will not have an effect on any known cultural resources listed on or eligible for the National Register of Historic Places. Therefore, our office concurs with the proposed activities.

However, should cultural resources be encountered during project activities, work shall cease and our office shall be consulted immediately.

We appreciate your efforts on this issue. If we may be of further service or if you have any questions or comments, please contact Greg Rhinehart of our office.

Sincerely,

for: Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/GCR/gtj

TTL
geotechnical • analytical • materials • environmental

3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

August 24, 2018

Mr. Randy Abston
Boise Paper
4585 Industrial Road
Jackson, AL 36545

RE: Compost Sludge Sample
Work Order Number: **180808037**

Dear Client:

TTL, Inc. received sample(s) and/or data on Wednesday, August 08, 2018 for the information presented in the attached report.

If you should have any questions regarding this information, please feel free to call. The work order number shown above will assist us in accessing your data more efficiently.

Thank you for the opportunity to provide these services.

Sincerely,
TTL, Inc.

Steve Martin
Senior Vice President

Attachments

LAND DIVISION
AUG 28 2018
RECEIVED

TTL
geotechnical . analytical . materials . environmental

3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 24-Aug-18

CLIENT: Boise Paper
Project: Compost Sludge Sample
Lab Order: 180808037

CASE NARRATIVE

The sample was analyzed in general accordance with 40 CFR, Part 261.

TTL
geotechnical • analytical • materials • environmental
3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401
205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 24-Aug-18

CLIENT: Boise Paper
Project: Compost Sludge Sample
Lab Order: 180808037

Lab ID: 180808037-001
Collection Date: 08/08/2018 8:10
Client Sample ID: Compost Sludge Sample
Matrix: Solid

Analyses	Result	PQL	MCL	Units	DF	Date Analyzed
MERCURY, TCLP LEACHED	SW7470		Prep:(SW7470A) 08/14/2018 9:30			Analyst: TBC
Mercury, as Hg	< 0.100	0.100	0.2	mg/L	1	08/14/2018 14:51
TCLP METALS	SW1311/6010A		Prep:(SW3010A) 08/15/2018 10:30			Analyst: SFC
Arsenic	< 0.50	0.50	5	mg/L	1	08/23/2018 12:09
Barium	1.0	1.0	100	mg/L	1	08/23/2018 12:09
Cadmium	< 0.10	0.10	1	mg/L	1	08/23/2018 12:09
Chromium	< 0.50	0.50	5	mg/L	1	08/23/2018 12:09
Lead	< 0.50	0.50	5	mg/L	1	08/23/2018 12:09
Selenium	< 0.10	0.10	1	mg/L	1	08/23/2018 12:09
Silver	< 0.50	0.50	5	mg/L	1	08/23/2018 12:09

Boise White Paper, LLC
4585 Industrial Road
Jackson, Alabama 36545
(334)246-8282

TTL WORK ORDER NUMBER
180808 037

Chain of Custody / Request for Services
Environmental Analysis

OTI.

Submitted by: Trent Singley - PCA Location: Jackson, Alabama Date: 08/08/18

Purpose for Sampling: TCLP Testing Lab: TTL

#	Description	Date	Time	# Containers	Required Analysis	Preservation	Other
1	Compost Sludge Sample	08/08/18	8:10AM	1	TCLP (Metals)	None	
2							
3							
4							
5							
6							
7							
8							
9							
10							

Relinquished by: _____ Date/Time: 10:03AM 8/8/18

Received by: Gevin Smith Date/Time: 8-8-18 10:08

Relinquished by: Gevin Smith Date/Time: 8-8-18 3:30

Rec'd for Lab by: Alexandria Date/Time: 8/8/18 3:30

Lab Use Only
Analytical Contact: _____
Phone Number: _____
Date Received: _____
Expected Comp. Date: _____

Good - Ice
08 °C at Tuscaloosa Lab

Holden, Charles B

From: Singley, Trent <TrentSingley@boisepaper.com>
Sent: Thursday, February 07, 2019 12:58 PM
To: Holden, Charles B; Wendy Walker; Kelly Rainwater Johns
Cc: Abston, Randy
Subject: Boise White Paper Sludge Information
Attachments: Compost Sludge TCLP 5-7-18 (With Fecal Coliform).pdf; Compost Sludge Fertilizer Analysis Report 5-23-18.pdf; Compost Sludge TCLP 8-8-18.pdf; Fertilizer Manufacturers and Sellers License 2018.pdf

All,

I'm not sure what happened on the previous attempt, but my email was unable to reach everyone. In an effort to ensure that everyone remains in the same email thread, I have copied the content of the original message into this email. Please ignore the previous email and direct any responses to this thread.

Following the conference call yesterday, Randy asked that I provide the various documentation related to Boise White Paper's compost sludge.

Attached you will find the following items:

1) A copy of the results from a TCLP analysis with fecal coliform performed on the sludge in May of 2018.
2) A copy of the results from a fertilizer analysis performed on the sludge in May of 2018.
3) A copy of the results from a TCLP metals analysis performed on the sludge in August 2018.
4) A copy of our fertilizer manufacturer and sellers license that we received when we registered this material the Alabama Department of Agriculture and Industries.

If you have any questions or need any additional information, please let us know.

Thanks,

Trent Singley
Environmental/Energy Engineer
Jackson, Alabama
(251)246-8277 (o)
(251)589-2611 (c)

TTL
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3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

May 07, 2018

Mr. Randy Abston
Boise Paper
4585 Industrial Road
Jackson, AL 36545

RE: Sludge Samples
Work Order Number: **180411045**

Dear Client:

TTL, Inc. received sample(s) and/or data on Wednesday, April 11, 2018 for the information presented in the attached report.

If you should have any questions regarding this information, please feel free to call. The work order number shown above will assist us in accessing your data more efficiently.

Thank you for the opportunity to provide these services.

Sincerely,
TTL, Inc.

Steve Martin
Senior Vice President

Attachments

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3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 07-May-18

CLIENT: Boise Paper
Project: Sludge Samples
Lab Order: 180411045

CASE NARRATIVE

The samples were analyzed in general accordance with methods outlined in "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", EPA, SW-846.

Results for Metals and Fecal Coliform are reported on the "dry weight" basis. All other results are reported "as received".

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Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 07-May-18

CLIENT: Boise Paper
Project: Sludge Samples
Lab Order: 180411045

Lab ID: 180411045-001
Collection Date: 04/11/2018 8:30
Client Sample ID: WC Sludge Composted
Matrix: Sludge

Analyses	Result	Limit	Units	DF	Date Analyzed
FECAL COLIFORM, DRY		**SM9222D**	Prep:		Analyst: **TLM**
Fecal Coliform	<10	10.0	CFU/dry-gram	10	04/11/2018 16:35
NITRATE BY ION CHROMATOGRAPHY		**E300**	Prep:		Analyst: **CGR**
Nitrogen, Nitrate, as NO3-N	1.82	1.00	mg/Kg	10	04/12/2018 14:37
MERCURY IN SOILS AND SLUDGES		**SW7471A**	Prep:(SW7471A)	04/27/2018 9:00	Analyst: **TBC**
Mercury as Hg	< 0.113	0.113	mg/Kg-dry	47.0588	04/27/2018 13:59
ICP METALS IN SOILS AND SLUDGES		**SW6010B**	Prep:(SW3050A)	04/27/2018 9:00	Analyst: **SFC**
Arsenic	< 1.18	1.18	mg/Kg-dry	49.373	05/04/2018 13:00
Cadmium	0.49	0.12	mg/Kg-dry	49.373	05/04/2018 13:00
Chromium	2.11	1.18	mg/Kg-dry	49.373	05/04/2018 13:00
Copper	41.0	1.18	mg/Kg-dry	49.373	05/04/2018 13:00
Lead	< 0.59	0.59	mg/Kg-dry	49.373	05/04/2018 13:00
Molybdenum	15.1	5.92	mg/Kg-dry	49.373	05/04/2018 13:00
Nickel	< 5.92	5.92	mg/Kg-dry	49.373	05/04/2018 13:00
Selenium	< 1.18	1.18	mg/Kg-dry	49.373	05/04/2018 13:00
Zinc	129	5.92	mg/Kg-dry	49.373	05/04/2018 13:00
AMMONIA AS N		**M4500-NH3 BG 1997**	Prep:		Analyst: **KMC**
Nitrogen, Ammonia as N	10.2	2.00	mg/Kg	25	04/24/2018 17:00
TOTAL PHOSPHORUS AS P		**M4500-P B5 H**	Prep:		Analyst: **KMC**
Phosphorus as P	208	125	mg/Kg	2500	04/18/2018 11:39
TOTAL KJELDAHL NITROGEN		**M4500-N B**	Prep:		Analyst: **KMC**
Nitrogen, Kjeldahl, Total as N	111	2.50	mg/Kg	50	04/24/2018 17:00
TOTAL SOLIDS		**M2540 B**	Prep:		Analyst: **KJG**
Total solids	41.7	0.1	wt%	1	04/12/2018 15:45

Lab ID: 180411045-002
Collection Date: 04/11/2018 6:45
Client Sample ID: WC Sludge Fresh
Matrix: Sludge

Analyses	Result	Limit	Units	DF	Date Analyzed
FECAL COLIFORM, DRY		**SM9222D**	Prep:		Analyst: **TLM**
Fecal Coliform	116	10.0	CFU/dry-gram	10	04/11/2018 16:35
TOTAL SOLIDS		**M2540 B**	Prep:		Analyst: **KJG**
Total solids	39.2	0.1	wt%	1	04/12/2018 15:45

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Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 07-May-18

CLIENT: Boise Paper
Project: Sludge Samples
Lab Order: 180411045

Lab ID: 180411045-003
Collection Date: 04/11/2018 7:37
Client Sample ID: WC Sludge Fresh/Heat
Matrix: Sludge

Analyses	Result	Limit	Units	DF	Date Analyzed
FECAL COLIFORM, DRY		**SM9222D**	Prep:		Analyst: **TLM**
Fecal Coliform	12	10.0	CFU/dry-gram	10	04/11/2018 16:35
TOTAL SOLIDS		**M2540 B**	Prep:		Analyst: **KJG**
Total solids	41.6	0.1	wt%	1	04/12/2018 15:45

Chain of Custody / Request for Services
Environmental Analysis

5H

PCA - Boise White Paper, LLC
4585 Industrial Road
Jackson, Alabama 36545
(251)246-4461

TTL WORK ORDER NUMBER
180411 045

Submitted by: Randy Abston **Location:** Jackson, Alabama **Ship Date:** 4/11/18

Purpose for Sampling: Waste Clarifier Sludge Analysis **Laboratory:** Tuscaloosa Testing laboratory (Charge to existing Potable Water PO#)

#	Description	# Cont.	Analysis	Preservation	Date	Time	Relinquished By: Sampler	Time	Received By: Env. Crew Leader	Time
1	WC Sludge Composted	1	EPA 503 (incl. Fecal Coliform)	Refrigerated	4/11/18	8:30 AM	Randy Abston	8:40 AM	Joey Stringer	8:45 am
2	WC Sludge Fresh	1	Fecal Coliform		4/11/18	6:45 AM	Angelica Maiers	8:40 AM	Joey Stringer	8:45 am
3	WC Sludge Fresh/Heat	1	Fecal Coliform		4/11/18	7:37 AM	Angelica Maiers	8:40 AM	Joey Stringer	8:45 am
4										
5										
6										

Lab Use Only

Relinquished by: _____ **Date/Time:** _____

Received by: Davin Smith 4-11-18 **Date/Time:** 10:00

Relinquished by: Davin Smith 4-11-18 **Date/Time:** 3:20

Received by: Suzy Hotel 4-11-18 **Date/Time:** 15:20

Relinquished by: _____ **Date/Time:** _____

Rec'd for Lab by: _____ **Date/Time:** _____

Analytical Contact: _____

Phone Number: _____

Date Received: _____

Expected Comp. Date: _____

Waters Agricultural Laboratories, Inc.

Manure/Sludge

Analysis and Application Report

P.O. Box 382 257 Newton Highway Camilla, Georgia 31730-0382 Phone: (229) 336-7216

Ship To:
BOISE WHITE PAPER
4585 INDUSTRIAL RD
JACKSON, AL 36545

Grower: BOISE WHITE PAPER

SampleNumber: 1
Lab Number: 82012MS

Date Submitted: 05/17/2018
Report Date: 05/23/2018

Type: CLARIFIER COMPOST
Application Method:

	Percent (%)	Pounds per Ton	Estimate of Nutrients Available For First Crop- lbs/ton
Nitrogen - Total	0.26	5.2	
P2O5 - Total	0.07	1.4	
K2O - Total	0.07	1.4	
Sulfur	0.09	1.8	
Boron	0.001	0.02	
Zinc	0.001	0.02	
Manganese	0.02	0.4	
Iron	0.06	1.2	
Copper	0.001	0.02	
Calcium	5.93	118.6	
Magnesium	0.09	1.8	
Sodium	0.02	0.4	
Aluminum	0.11	2.2	

Moisture	61.05 %	
Total Neutralizing Value	20.88 %	

Results Reported On: W=WET(AS RECEIVED)BASIS

Remarks: LANDFILL COVER MATERIAL - PRIMARY CLARIFIER COMPOST SLUDGE

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3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

August 24, 2018

Mr. Randy Abston
Boise Paper
4585 Industrial Road
Jackson, AL 36545

RE: Compost Sludge Sample
Work Order Number: **180808037**

Dear Client:

TTL, Inc. received sample(s) and/or data on Wednesday, August 08, 2018 for the information presented in the attached report.

If you should have any questions regarding this information, please feel free to call. The work order number shown above will assist us in accessing your data more efficiently.

Thank you for the opportunity to provide these services.

Sincerely,
TTL, Inc.

Steve Martin
Senior Vice President

Attachments

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3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 24-Aug-18

CLIENT: Boise Paper
Project: Compost Sludge Sample
Lab Order: 180808037

CASE NARRATIVE

The sample was analyzed in general accordance with 40 CFR, Part 261.

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3516 Greensboro Avenue
P O Drawer 1128 (35403)
Tuscaloosa, AL 35401

205.345.0816 tel
205.343.0635 fax
www.TTLINC.com

Date: 24-Aug-18

CLIENT: Boise Paper
Project: Compost Sludge Sample

Lab Order: 180808037

Lab ID: 180808037-001
Collection Date: 08/08/2018 8:10
Client Sample ID: Compost Sludge Sample
Matrix: Solid

Analyses	Result	PQL	MCL	Units	DF	Date Analyzed
MERCURY, TCLP LEACHED	**SW7470**		Prep:(SW7470A) 08/14/2018 9:30			Analyst: TBC
Mercury, as Hg	< 0.100	0.100	0.2	mg/L	1	08/14/2018 14:51
TCLP METALS	**SW1311/6010A**		Prep:(SW3010A) 08/15/2018 10:30			Analyst: SFC
Arsenic	< 0.50	0.50	5	mg/L	1	08/23/2018 12:09
Barium	1.0	1.0	100	mg/L	1	08/23/2018 12:09
Cadmium	< 0.10	0.10	1	mg/L	1	08/23/2018 12:09
Chromium	< 0.50	0.50	5	mg/L	1	08/23/2018 12:09
Lead	< 0.50	0.50	5	mg/L	1	08/23/2018 12:09
Selenium	< 0.10	0.10	1	mg/L	1	08/23/2018 12:09
Silver	< 0.50	0.50	5	mg/L	1	08/23/2018 12:09

Chain of Custody / Request for Services — Environmental Analysis

OTI.

Boise White Paper, LLC
4585 Industrial Road
Jackson, Alabama 36545
(334)246-8282

TTL WORK ORDER NUMBER
180808 037

Submitted by: Trent Singley - PCA **Location:** Jackson, Alabama **Date:** 08/08/18

Purpose for Sampling: TCLP Testing **Lab:** TTL

#	Description	Date	Time	# Containers	Required Analysis	Preservation	Other
1	Compost Sludge Sample	08/08/18	8:10AM	1	TCLP (Metals)	None	
2							
3							
4							
5							
6							
7							
8							
9							
10							

Relinquished by: _____ Date/Time: 10:03AM 8/8/18

Received by: Devin Smith Date/Time: 8-8-18 10:08

Relinquished by: Devin Smith Date/Time: 8-8-18 3:30

Rec'd for Lab by: Alexandria Date/Time: 8/8/18 3:30

Good - Ice
08 °C at Tuscaloosa Lab

Lab Use Only
Analytical Contact: _____
Phone Number: _____
Date Received: _____
Expected Comp. Date: _____

DEPARTMENT OF AGRICULTURE AND INDUSTRIES

Company ID: 111680 STATE OF ALABAMA $37.50

FERTILIZER MANUFACTURERS AND SELLERS LICENSE

THIS IS TO CERTIFY THAT Boise White Paper, LLC - Jackson Mill

Physical Address	Mailing Address
4585 Industrial Road	4585 Industrial Road
Jackson, AL 36545	Jackson, AL 36545

IS IN FULL COMPLIANCE WITH ALL APPLICABLE ALABAMA STATUTES AND IS AUTHORIZED TO ENGAGE IN THE ACTIVITIES AND PRACTICES PROVIDED FOR THEREIN.

ISSUED AT MONTGOMERY ALABAMA ON SEPTEMBER 07, 2018

THIS CERTIFICATE EXPIRES SEPTEMBER 30, 2019 UNLESS PREVIOUSLY REVOKED.

Plants registered:

Donnie Walker
Supervisor, Audits & Reports

This Certificate Must Be Posted at Location of Device

John McMillan
Commissioner of Agriculture and Industries

LANDFILL OPERATIONS PLAN

JACKSON LANDFILL
PERMIT NO.:13-07

November 2024

PREPARED FOR:

GAINESTOWN ROAD LANDFILL, LLC
2908 WEST MAIN STREET
WHISTLER, ALABAMA 36612

PREPARED BY:

LABELLA ASSOCIATES, D.P.C.
528 MINERAL TRACE
HOOVER, ALABAMA 35244

TABLE OF CONTENTS

APPENDICES

I. PURPOSE

This Operations Manual has been prepared to fulfill the requirements of ADEM Admin. Code 335-13-4-.12 and to provide operational guidance for site personnel as to how the landfill will be operated and managed.

This manual, together with the accompanying ADEM Form 439, Design Plans, Design Report, and Landfill Gas Monitoring Plan will constitute the permit application package for the Jackson Landfill.

II. GENERAL

The Jackson Landfill is located 1.0 miles southeast of Jackson, Alabama along Clarke County Route 2 (Gainestown Road) in Clarke County. From 1975 to 1994, this site was operated by Jackson Sand & Gravel Company as a producer of construction sand and gravel for southwest Alabama. Currently, the landfill is being operated by Gainestown Road Landfill, LLC. It was permitted in 1994 to manage the Construction & Demolition waste generated by Clarke, Choctaw, Marengo, Mobile, Monroe, Washington, and Wilcox Counties in the State of Alabama. Jackson Sand & Gravel Company has applied for an ADEM Solid Waste Disposal Facility permit to construct and operate Jackson Landfill, and construction demolition landfill located in Clarke County, Alabama.

The Jackson Landfill property consists of 81.91 acres, with 58.12 acres permitted for waste disposal.

III. SERVICE INFORMATION

The landfill is permitted as a construction demolition landfill by the Alabama Department of Environmental Management (ADEM) in 1994 (ADEM Solid Waste Disposal Facility Permit No. 13-07). The permitted maximum allowable disposal volume at the landfill is 400 cubic yards per day.

The landfill is located 1.0 miles southeast of Jackson, Alabama along Clarke County Route 2 (1312 Gainestown Road) in Clarke County. The primary waste received by Jackson Landfill is non-processed wood debris with intermixed sand and gravel. Wastes may also consist of processed wood debris, waste building materials, packaging, and rubble such as masonry materials, sheet rock, roofing wastes, insulation (excluding asbestos), rebar, scrap metal, tires, paving material, and concrete. Jackson Landfill has also received variances to use Non-coal boiler ash, Waste Lime, Compost Mill sludge and recycle Mill Sludge generated at the nearby Boise White Paper, LLC Mill or its successor.

IV. PERSONNEL

Jackson Landfill will employ a number of full-time staff who are responsible for the day-to-day operation of the landfill. The primary staff roles at the landfill and some of their major responsibilities are described below:

Landfill Manager

- Implementation of the Operations Manual;
- Ensuring compliance with facility permits and applicable local, state, and federal regulations;
- Ensuring that all reporting and recordkeeping requirements are met;
- Direction, training, and supervision of landfill staff; and
- Ensuring the completion of repairs and corrective actions.

Landfill Office Attendant

- Monitoring of visitors to the site;
- Managing Landfill Office transactions and payments;
- Recordkeeping of incoming waste; and
- Directing incoming traffic to the disposal area.

Landfill Operator

- Monitoring loads during tipping for unauthorized wastes;
- Spreading and compacting of wastes;
- Covering of wastes;
- Maintenance of side slopes;
- Maintenance of erosion and sedimentation control facilities; and
- Performing general facility maintenance and site inspections.

Volume fluctuations in the waste stream will likely impact the number and type of personnel needed to perform daily activities and operations. Appendix II provides a Table of the recommended number of personnel and equipment at various disposal rates.

V. OPERATIONAL CONDITIONS

A. SITE ACCESS

1. Hours of Operation

The landfill is open from 8:00 AM to 3:00 PM Monday through Friday and closed on Saturday and Sunday. Hours may be extended from Monday through Friday due to

heavy traffic. The landfill operator will remain approximately 30 minutes after the last load of waste is deposited in order to complete site cleanup and the placement of cover, as necessary.

2. Site Access Control

Access to the site will be controlled by a lockable gate at the landfill entrance. Access will be restricted to the posted operating hours when a Landfill Office attendant is on duty. The attendant will screen incoming traffic to restrict access by unauthorized haulers.

Roads will be maintained to ensure access to the site by hauling vehicles during windy, wet, or cold weather conditions. Snow removal will occur, as needed, such that daily operations are not hampered. Anti-skid materials, as appropriate, will be applied to road surfaces.

3. Traffic Routing

All vehicle traffic will enter the landfill from Gainestown Road. The traffic will stop at the Landfill Office for monitoring and recording. Visitor and employee parking is provided adjacent to the Landfill Office building.

Traffic will be routed from the Landfill Office, along the access road, to the appropriate waste disposal area. The access road will be constructed and maintained in its original condition to provide access during inclement weather. Access to the active waste cells will be from the main access road, and temporary roads will be constructed to allow for safe access to the active filling areas. Under no circumstances should traffic be allowed to drive on the side or back slopes of the landfill.

Traffic entering the landfill must be controlled and cannot be allowed to roam freely around the site. Any landfill is a construction site with heavy equipment and truck traffic. Several techniques can be used to control the flow of traffic.

a. **Eliminate traffic** that does not need to go to the working face of the landfill.

b. **Screen incoming traffic.** The Landfill Office attendant is responsible for this task. Incoming vehicles should stop at the Landfill Office. The attendant can screen out unauthorized vehicles and vehicles with unauthorized cargo. Those not permitted into the landfill should be turned away at that point. If the attendant cannot determine that a load is acceptable, the vehicle will be directed to a parking area, out of traffic, until the lead operator or landfill manager can check and approve the load. Whatever the method, any enclosed load where the Gate Attendant does not recognize the hauler, or cannot determine the source of the waste, will be visually inspected before the vehicle

is allowed onto the landfill.

c. **Directional signs** should be posted to control the flow of traffic. Signs should be large enough and brightly marked to attract the driver's attention. Signs should be regularly maintained so they can be read. Commercially manufactured reflectorized signs are recommended because they are conspicuous and durable. Spare signs should be maintained to replace any signs that are damaged.

d. **Waste Spotters** may be used at the landfill working face during peak periods to direct traffic to the proper unloading area. In addition, the spotter can observe the waste being dumped for unauthorized items and direct it be removed by the hauler that unloaded it. Also, the spotter can monitor for "pickers" and scavengers and direct them away from the landfill.

The Jackson landfill will not need a full-time spotter. However, in some situations, such as during and after heavy rains, it can be beneficial to have an employee act as a spotter to keep the traffic moving while the equipment operator concentrates on waste handling.

When unloading waste at the working face of the landfill there are a few simple "rules of thumb" to remember.

a. Unload as close to the working face as possible while still leaving room for landfill equipment to operate. During periods of heavy traffic, unloading may be done adjacent to the working face by slow vehicles such as pick-up trucks with trailers. When the flow of traffic eases, the waste dumped by the slower vehicles can be pushed by landfill equipment to the working face.

b. Keep pickup trucks and other small vehicles separated from the larger compactor trucks. A compactor truck will spread its load up to 5 or 6 feet on each side of the truck when it unloads.

c. Have drivers pull away from the working face if they are going to do a truck cleanup or secure covers or doors so as to avoid blocking a space needed by another truck.

d. The area designated for unloading should be prepared and maintained. The area should be dragged with landfill equipment periodically to remove debris and reduce tire punctures. By keeping the unloading area clean the drivers can maneuver more confidently and faster. During wet weather special attention should be given to maintaining the unloading area and providing a gravel turn around area when necessary.

4. Road Design

A good, all-weather road system is a vital part of the smooth operation of a landfill. The goal is to get vehicles to the working face as quickly and safely as possible. The roads should be wide enough to handle two-way traffic and sturdy enough to carry heavy trucks in all weather. The recommended minimum width for roads is 24 feet.

As with other components of a landfill, proper advanced planning, and construction and maintenance are imperative to a good operation. Permanent roads should be located and constructed to last as long as possible yet minimize the need for temporary roads. Roads will be constructed in accordance with the permit plans, construction specifications, and the facility Quality Control Manual.

Landfill equipment can quickly destroy the best of roads. Travel on the roads with this equipment should be kept to a minimum and totally avoided during wet weather.

5. Inclement Weather

During inclement weather conditions, landfill personnel will maintain all facility roads to be sure they are passable. The disposal area will be maintained so operations can continue during inclement weather conditions.

B. WASTE HANDLING

1. Types of Wastes

The Jackson landfill is a Construction Demolition landfill permitted to receive Construction Demolition waste generated by Clarke, Choctaw, Marengo, Mobile, Monroe, Washington, and Wilcox Counties in the State of Alabama. These wastes include non-putrescible and non-hazardous construction and demolition wastes including but not limited to non-processed wood debris, scrap tires, paving and packaging materials, waste lime, non-coal boiler, ash, recycle mill sludge and compost mill sludge generated at Boise White Paper LLC's office paper mill. Waste generated at the Boise White Paper LLC's is inspected by designated Plant personnel to verify that it is suitable for disposal at the landfill, prior to being transported to the landfill.

If landfill personnel are not sure if waste can be accepted at this site, the landfill should refuse disposal until the waste in question is approved by ADEM.

The Jackson Landfill is not authorized to accept or dispose of hazardous wastes as defined by ADEM.

2. Litter Control

Maintaining proper litter control is essential to the operation of a landfill. When working in areas below natural grade, litter is less likely to escape than when working above natural grade. Litter control procedures for the landfill are discussed below:

a. Whenever possible, unload vehicles at the base of the working slopes to use the working face itself as a wind screen.

b. **If possible, back vehicles into the wind** when unloading. Unloading against the wind can help to keep the load compacted until the loader can push the waste onto the working face.

c. Place cover soil material over light wastes to minimize mobilization on windy days. Larger and heavier waste types can also be placed on top of smaller and lighter waste, until cover soil can be applied.

d. **Litter fences** can be used to catch some blowing litter. Short fencing such as snow fence is easily erected and moved. If fencing is used for litter control, it should be cleaned regularly.

At the end of each week, the access road, and the site entrance should be policed of any fugitive waste, debris or litter that may have fallen from vehicles transporting wastes to the landfill.

3. Dust Control

Excessive dust can be a nuisance and a hazard. Dust on the access roads can impair or obstruct the vision of drivers, potentially leading to accidents. Dust can irritate the eyes and lungs. Water can be used to control dust but only to the extent that no saturation or ponding occurs. Maintaining areas for use in wet weather and removing mud deposited on roads will also minimize dust generated.

4. Placement of Wastes in State Waters

Placement of solid waste in State waters is prohibited. Facility operations will prevent waste from being deposited in or being allowed to enter into State waters.

5. Filling Operations

In general, filling will advance from the high side of the disposal area to the low side: in other words, in a downgradient direction. This eliminates the possibility of trapping water behind the waste deposit in the initial operation of the disposal area.

Waste is compacted in lifts approximately 2 feet thick. Waste is dumped at the base of the working face and the material is then spread and compacted. The working face is built out, and six inches of cover material is spread and compacted on top of the fill weekly. The landfill is permitted to operate with 2 working faces: a scrap tire disposal area, and one for all other approved waste streams. The size of the working faces should be only as large as needed for efficient operation and to minimize the volume of soil needed for cover.

As the fill approaches final grade, the slopes shall be constructed to a grade of 3 to 1 to prepare for application of intermediate cover. A variance requesting 3 to 1 slopes was included in the Permit Application to Renew and Modify Existing Permit 13-07 dated December 23, 2024.

C. EQUIPMENT

Volume fluctuations in the waste stream will likely impact the number and type of equipment needed to perform daily operations. The table in Appendix II provides a list of the equipment that are recommended to be utilized at various disposal volume rates. As the waste disposal rate increases, additional equipment may be necessary. As the site expands, the access road and haul roads may be shifted to accommodate efficient equipment movement around the site.

D. COMPACTION AND COVER

1. Compaction

The landfill operator should always strive to achieve the best compaction possible. The objective is not to just push waste into a pile and cover it with dirt. It is to pack the waste as tightly as possible. To do this, the equipment used to compact the waste must be used properly. The slope on the working face should be 3:1. When a crawler tractor is used, the greatest compaction occurs when the machine can climb the slope, shredding the waste as it climbs.

When pushing the trash, the operator should not attempt to push such a large amount that the machine bogs down. Full truck loads should be broken down into two-foot-thick loose lifts before compacting. The equipment should make four to six passes on each layer to achieve proper compaction. Beyond this number, the additional

compaction benefit is usually outweighed by the operating expenses. Large bulky items should be crushed before being worked into the base of the working face. In addition, empty containers larger than 10 gallons in size must be rendered unsuitable for holding liquids prior to disposal.

2. Lifts

Waste fill shall be spread in layers not exceeding 2-feet thick, before being compacted by landfill equipment. A minimum of two to five passes will be made immediately with landfill equipment upon placement of each layer of waste. Waste will be built up in lifts not exceeding 8-feet in thickness during each working day in order to minimize the use of cover material.

3. Operational Cover

The Jackson Landfill has been granted a variance which allows for the use of certain alternative cover. Specifically, the facility may use a mixture of boiler ash (excluding coal ash) and indigenous soil mixed at 50:50 proportions or a mixture of compost mill sludge and soil or sand mixed at 50:50 proportions as alternate cover materials to be applied on a weekly basis. The Jackson Landfill may also use compacted earth as waste cover.

4. Intermediate Cover

Intermediate cover is applied to any part of the fill surface that will not receive additional fill for more than 90 days or has reached final elevations. Intermediate cover consists of an additional six inches of soil applied over the six inches of weekly cover. Since the intermediate cover will usually be the filling surface for later lifts, it should be a material that will not limit the movement of vehicles in inclement weather. Intermediate cover may be placed with the weekly cover or later depending on the operating circumstances. Intermediate cover should be inspected on a weekly basis and any eroded or cracked areas should be repaired. Temporary seeding is recommended if filling will not occur in the intermediate cover area in 90 days or more, or as required by the site erosion and sediment control plan.

5. Final Cover

Final cover is placed over cells that have been filled to final grades and will receive no additional waste. Final cover consists of an infiltration layer composed of eighteen inches of earthen material and an erosion layer consisting of a minimum of six inches of earthen material capable of sustaining vegetation. Placement of final cover will be in accordance with the approved closure plan that has been developed as a separate document.

6. Vegetative Cover

Vegetative cover will be applied to areas that have received final soil cover, or to long-term intermediate cover, as appropriate. The vegetative cover will be grasses that are locally available and common. No special landscaping for buffer, screening, or aesthetics is planned. Planting schedules will be in accordance with common practice in the area. The seed mixture will be in accordance with recommended mixes included in the Alabama Handbook for Erosion Control, Sediment Control and Stormwater on Construction Sites and Urban Areas and recommendations by the local agricultural extension office. Within 90 days of placement of the final cover, a vegetative cover will be established.

7. Stockpiles

It is recommended that a sufficient supply of cover material be maintained in stockpiles adjacent to the working face. Since the borrow source for this landfill is near the landfill cells, and there is a significant surplus of cover material on site, maintaining cover soil near the working face should not pose operational issues at the facility. Ideally, these stockpiles should be within 100 feet of the working face and whenever possible, they should be on top of the currently active lift, requiring either a short hauling distance or just pushing the cover down the working face.

Stockpiles should be surrounded by appropriate erosion control measures (silt fence) if located off the landfill. Stockpiles of any waste products approved to be used as alternative cover should be stored within the permitted area of the landfill.

It should be noted that the current borrow source for weekly cover is located in the southern portion of the landfill in the area of future Cell 6. If the removal of soil from this area results in lowering the surface elevation such that the separation from the base of the excavation to groundwater is less than ten feet, fill material will be added to the cell base to increase the separation to groundwater, if the cell is to be certified for disposal.

E. SAFETY

Proper equipment operating instructions and techniques will be provided by the equipment manufacturer upon purchase of equipment. The following measures will be followed at the landfill to minimize the occurrence of injuries to personnel and damage to equipment.

a. The site will be accessible to Jackson Landfill personnel, authorized consultants, contractors, customers, and State inspectors. The site will only be operational when a certified operator is on duty. At all other times, the entrance to the site will remain secured with a locked gate across the access road to

preclude unauthorized vehicles from entering the site. All visitors to the site are required to check in at the Landfill Office.

b. Personnel authorized to operate the site will be provided training regarding the characteristics of the waste, the requirements of the permit, applicable sections of the Operations Manual, and the proper operation of equipment used at the site.

c. The site will be operated Monday through Friday during daylight hours only.

d. Equipment on site will be maintained and serviced on a routine basis.

e. A copy of this Operations Plan will be maintained at the site.

f. Drivers of incoming loads of waste will coordinate with site operators for the disposal of each load.

g. The route from the entrance of the site to the working face of the fill areas will be clearly marked.

h. Roads crucial to landfill operations will be maintained and passable in all weather conditions.

i. A first-aid kit will be located on each piece of equipment use in landfill operations and in the Landfill Office.

j. Fire extinguishers will be located on each piece of equipment use in landfill operations and in the Landfill Office. More information on site health and safety operations, and emergency response procedures can be found in the Emergency Response Plan.

VI. INSPECTION PLAN

Maintenance inspections will be performed by the landfill personnel to ensure proper operation and compliance with regulations. Daily inspections will be performed for road conditions, cover conditions, operating equipment, and blowing litter. Weekly and monthly inspections will be performed as described in Appendix I of this plan. Any deficient item found during the inspection will be repaired to working condition or replaced in a timely manner.

VII. CONTROL AND MONITORING OF LANDFILL GAS AND EROSION

A. LANDFILL GAS

The Jackson landfill is required to maintain explosive gas monitoring points along the landfill boundaries spaced no more than 300 feet apart, and in areas where the landfill boundary is within 1,000 feet of a structure the monitoring points shall be no more than 100 feet apart. Explosive gas is required to be monitored by the Jackson Landfill at least once in each calendar year. The results of the annual monitoring events shall be submitted to ADEM within thirty (30) days after each monitoring event documenting the levels of explosive gases measured at the facility.

B. EROSION CONTROL SYSTEMS

Facility personnel will maintain all erosion and sediment control structures including, but not limited to, stormwater conveyance channels, pipes, drainage berms, slope drains, and the sediment basins. These structures should be inspected monthly and after severe storm events for signs of erosion, washouts, excessive sediment accumulation, or other damage. Heavily eroded areas will be repaired. Excessive silt deposits will be removed as necessary to maintain stormwater conveyances and sedimentation control structures.

VIII. RECORDS

Records of the loads of solid waste brought to the facility for disposal will be kept at the landfill office.

IX. CLOSURE AND POST-CLOSURE

For complete details regarding closure and post-closure activities, refer to the Closure Plan and Post-Closure Plan.

Appendix I

Maintenance Inspection Form

MAINTENANCE INSPECTION FORM

SYSTEM	COMPONENTS	FREQUENCY	TYPE OF INSPECTION
Operating Equipment	Loaders	Daily/Weekly/Monthly	Visual/Mechanical
	Dozers	Daily/Weekly/Monthly	Visual/Mechanical
	Compactors	Daily/Weekly/Monthly	Visual/Mechanical
	Scrapers	Daily/Weekly/Monthly	Visual/Mechanical
	Portable Pumps	Monthly	Visual/Mechanical
Erosion and Sedimentation Control Facilities	Rock Lined Channels	Monthly/Storm Event	Visual
	Ditches	Monthly/Storm Event	Visual
	Culverts	Monthly/Storm Event	Visual
	Sedimentation Basins	Monthly	Visual
	Overflow Spillways	Monthly	Visual
	Discharge/Outlets	Monthly	Visual
	Terraces/Slopes	Monthly/Storm Event	Visual
Safety/Security Devices	Gate (Access)	Daily	Visual
	Fire Extinguisher	Monthly	Visual
	First Aid Kits	Monthly	Visual
	Communications	Daily	Mechanical

SOLID WASTE DISPOSAL FACILITY

PERMIT APPLICATION PACKAGE

January 16, 2018

MEMORANDUM

TO: Applicants Seeking a Permit for Solid Waste Facilities

FROM: Stephen A. Cobb, Chief
Land Division
Alabama Department of Environmental Management

RE: Processing Solid Waste Permits by ADEM

Any permit issued by ADEM must be in accordance with §22-27-48 and §22-27-48.1 Code of Alabama. This section indicates that ADEM may not consider an application for a new or modified permit unless such application has received approval by the affected unit of local government having an approved plan. ADEM, therefore, will require the following before it can process a new or modified permit application:

1. The local government having jurisdiction must approve the permit application in accordance with §22-27-48 and §22-27-48.1 Code of Alabama.

2. Local governments should follow the procedures outlined in §22-27-48 and §22-27-48.1 Code of Alabama and the siting standards included in the local approved plan in considering approval of a facility.

This procedure applies to applications for new or modified permits. ADEM cannot review an application unless it includes approval from the affected local government. This procedure shall not apply to exempted industrial landfills receiving waste generated on site only by the permittee.

Please contact the Solid Waste Branch of ADEM at (334) 274-4201 if there are any questions.

SAC/sss/abj

PERMIT APPLICATION
SOLID WASTE DISPOSAL FACILITY
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
(Submit in Triplicate)

1. **Facility type:**

_____ **Municipal Solid Waste Landfill (MSWLF)**
_____ **Industrial Landfill (ILF)**
X **Construction and Demolition Landfill (C/DLF)**
_____ **CCR Landfill (CCRLF)**
_____ **CCR Surface Impoundment (CCRSI)**
_____ **Other (explain)**_____

2. **Facility Name** Jackson Landfill

3. **Applicant/Permittee:**

Name: Gainestown Road Landfill, LLC

Address: 2908 West Main Street
Whistler, AL 36612

Telephone: 251-246-2333

If applicant/permittee is a Corporation, please list officers:

4. **Location: (include county highway map or USGS map)**

Township 6 North **Range** 2 East
Section 15 **County** Clarke

5. **Land Owner:**

Name: Gainestown Road Landfill, LLC

Address: 2908 West Main Street
Whistler, AL 36612

Telephone: 251-246-2333

(Attach copy of agreement from landowner if applicable.)

6. **Contact Person:**

Name Lewis Walker

Position or Affiliation Managing Member

Address: 2908 West Main Street
Whistler, AL 36612

Telephone: 251-246-2333

7. **Size of Facility:** 81.91 **Acres**

Size of Disposal Area(s): 58.12 **Acres**

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

Choctaw, Clarke, Marengo, Mobile, Washington and Wilcox Counties

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

_____ **Tons/Day** 400 **Cubic Yards/Day**

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

Non-putrescible and Non-hazardous construction & demolition wastes including but not limited to non-processed wood debris, scrap tires, paving and packaging materials, waste lime, non-coal boiler ash. Recycle mill sludge and compost mill sludge generated at Boise White Paper, LLC's Office paper mill.

SIGNATURE (Responsible official of permit applicant):

_____ **TITLE:** Managing Member

Lewis Walker **DATE:** 11/07/2024
(please print or type name)

ADDITIONAL REQUIRED INFORMATION

Applicants seeking to obtain a permit to construct and/or continue to operate a municipal solid waste (MSW) landfill, industrial landfill, construction and demolition (C/D) landfill, coal combustion residuals (CCR) landfill, or CCR surface impoundment are required to submit additional information as part of the Solid Waste Disposal Facility Permit Application. These additional information requirements vary depending on the facility type.

For new and existing landfill units, refer to ADEM Admin Code 335-13-5-.02 for a list of additional information to be submitted in the permit application. Some requirements apply only to MSW landfills and CCR landfills, while other requirements apply to industrial landfills and C/D landfills. You need only to address the requirements that pertain to your type landfill. For new and existing CCR surface impoundments, refer to ADEM Admin Code 335-13-15-.09 for additional information to be submitted in the permit application.

Each rule that is applicable to your type landfill or surface impoundment must be addressed in detail in the operational narrative and/or engineering drawings before the review process can be completed. All operational narratives, engineering drawings, survey maps and legal descriptions are to be prepared by licensed engineers or surveyors registered in the State of Alabama and with their stamp or seal on each drawing/map and cover of the narrative.

Act No. 89-824 Section 9(a) states "The department may not consider an application for a new or modified permit for a facility unless such application has received approval by the affected unit of local government having an approved plan." This document must be received by the Department prior to processing the application.

The referenced rules are covered in greater detail in ADEM's Administrative Code, Division 13. Clarification can be obtained by reviewing the regulations. Copies of the ADEM Administrative Code, Division 13 regulations, can be obtained for a fee by contacting ADEM's Permits and Services Division. If the Department can answer any questions, please contact the Solid Waste Branch at (334) 274-4201.

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CLOSURE AND POST CLOSURE CARE PLAN

JACKSON LANDFILL
1312 GAINESTOWN ROAD
JACKSON, CLARK COUNTY, ALABAMA
PERMIT NO.: 13-07
LABELLA PROJECT NO.: 2241604

PREPARED FOR:

GAINESTOWN ROAD LANDFILL LLC
POST OFFICE BOX 850415
MOBILE, ALABAMA 36685

DECEMBER 23, 2024

PREPARED BY:

LABELLA ASSOCIATES, D.P.C..
528 MINERAL TRACE
BIRMINGHAM, ALABAMA 35244
PHONE (205) 985-4874

Phillip D. Davis, P.E.
Senior Regulatory Engineer

William W. Cooch, P.G.
Principal Geologist

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CLOSURE AND POST CLOSURE CARE PLAN

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PHONE (205) 985-4874

Phillip D. Davis, P.E.
Senior Regulatory Engineer

William W. Cooch, P.G.
Principal Geologist

ENGINEER CERTIFICATION

I certify under penalty of law that I am a Registered Professional Engineer, licensed to practice in the State of Alabama. The information submitted herein, to the best of my knowledge and belief is true, accurate and complete.

Phillip D. Davis, P.E.#19547
Senior Regulatory Engineer
LaBella Associates, DPC

December 23, 2024
Date

TABLE OF CONTENTS

FIGURES

ATTACHMENTS

1.0 CLOSURE – POST CLOSURE PLAN

1.1 SUBMITTAL

The closure/post-closure plan for this facility is discussed in this Section. Upon issuance of the ADEM permit, these provisions will become part of the operating record.

1.2 FINAL SOIL COVER

The landfill is situated on an approximately 81.91 acre parcel of property with approximately 58.12 acres permitted for disposal. The final cover, to be installed over the permitted disposal area, shall consist of two distinct soil layers: 1) infiltration layer and 2) erosion layer. Each layer is described separately in the following paragraphs:

Infiltration Layer: The infiltration layer will be constructed in approximately 6 inch lifts using native soils meeting specified criteria for infiltration layer soil cover materials. Each lift will be constructed to achieve a permeability of less than or equal to 1×10^{-5} cm/sec. Lifts will be constructed as needed to obtain a total compacted thickness of a minimum of 18 inches.

Erosion Layer: The erosion layer will be a minimum of 6 inches thick and will be constructed using on-site soil materials capable of sustaining a suitable vegetative cover. The type of vegetative cover established will be dependent upon the time of year the erosion layer is constructed. Therefore, Jackson Landfill will determine the appropriate species and mixture of grass seeds that will be used to establish the vegetative cover at the time of closure.

The final cap will be graded in a manner to prevent surface water from ponding on the landfill. The minimum and maximum final grades will be 5% and 33%, respectively. On slopes longer than 25 feet, a 20-foot wide horizontal terrace will be constructed for every 20 feet rise in elevation. The final contours for the landfill are shown on the final grading plan included as Figure 1.

2.0 LANDFILL CLOSURE ACTIVITIES

2.1 NOTICE OF INTENT TO CLOSE

Within thirty (30) days of the final receipt of waste to the Jackson Landfill , will submit to Alabama Department of Environmental Management a notice of the intent to close the landfill unit accompanied by a landfill closure workplan. A copy of this notice will be placed in the operating record of the landfill. The landfill closure workplan will describe in detail all aspects of the landfill closure including cover description, grading, compaction, infiltration layer, liner, vegetative cover, et al. Also a timetable of all closure activities will be included, however, complete closure of all landfill units will be completed within one hundred eighty (180) days of final receipt of waste.

2.2 FINAL GRADING

As different areas of the landfill are completed, grading will be developed according to the final grading plan (Figure 1). The final grading plan is intended as a general guide and the final contours shown are approximations. If significant changes to the final grading plan are needed Jackson Landfill will request a modification to the permit to accommodate those changes.

- The final soil cover will be graded so that water does not pond over the landfill unit.
- The maximum grade of the final cover will range from 5% to 33%.
- Final grading of the cover will be completed within 90 days after the landfill has reached its final elevation or landfilling has permanently ceased.
- Slopes longer than 25 feet will require horizontal terraces, of sufficient width to allow for equipment operation, for every 20 feet of elevation change (rise) or other methods as approved by ADEM. These slopes are incorporated into the final grading plan (Figure 1).

2.3 VEGETATIVE COVER WITHIN 90 DAYS AFTER FINAL GRADING

Within 90 days of the completion of final grading, the cover surface shall be prepared for the establishment of vegetative cover. As a minimum, preparation shall include fertilizing, liming, seeding, and mulching. Watering and maintenance will continue until the vegetation has been established. Maintenance will involve routine inspections (for rills, gullies, or ponding of water). Eroded areas will be inspected, reworked and revegetated as needed. Ponded areas will be filled in, graded, and vegetated. Appropriate types and amount of grass seed, fertilizer and lime will be applied consistent with the recommendations of the Soil Conservation Service. Deep-rooted vegetation (that would extend below the 6-inch erosion layer) will not be used.

2.4 CLOSURE CERTIFICATION

Following closure of a landfill unit, the Permittee will submit to ADEM a certification signed by an independent registered professional engineer verifying that closure has been completed in accordance with the ADEM approved closure plan. A copy of this certification shall be placed in the landfill operating record.

Upon completion of the closure of the landfill a closure certification prepared by a registered professional engineer will be submitted to ADEM. The certification will verify that closure has been completed in accordance to the closure plan and ADEM regulations. A copy of the certification will be placed in the Jackson Landfill operating record and will be retained as required.

A Quality Assurance/Quality Control (QA/QC) program will be implemented to ensure the proper construction of the final cap. A standard QA/QC program that may be used is included as Attachment A.

2.5 LAND DEED NOTATION

Within 90 days after the landfill has been closed in accordance with the closure requirements, Jackson Landfill will record all the necessary information on the land deed for its on- site landfill. The notation on the land deed will, in perpetuity, notify any potential purchaser of the property that the land has been used as an industrial landfill. The notation on the land deed will include the following information:

Use of the land is restricted to activities that will not disturb the integrity of the final cap or any other component of the containment system, or function of the monitoring systems. The location and dimensions of the disposal facility with respect to permanently surveyed benchmarks and section corners will be on a plat prepared and sealed by a Land Surveyor registered in the State of Alabama.

A prominently displayed note which states:

Name of Permittee:	Jackson Landfill
Facility Type:	Construction and Demolition Debris Landfill
Beginning Date of Operation:	
Closure Date of Landfill:	

A certification by an Engineer or Land Surveyor, registered in the State of Alabama, that all closure requirements required by the Alabama Department of Environmental (ADEM) Administrative Code, Division 13 Solid Waste Program, Chapter 4, Rule .20 (335-13-4.20) have been completed as determined necessary by ADEM. Within 120 days after closure activities have been completed, a certified copy of the land deed will be submitted to ADEM.

3.0 POST CLOSURE

3.1 POST CLOSURE USE OF THE PROPERTY

Use of the land is restricted by items contained in Section 335-13-4.20(3)(c) and 335-13-4-.20(3)(d) of the ADEM Administrative Code. The post closure activities and/or operations at the landfill will be limited to activities and/or operations that will not disturb or compromise the integrity of the final cap or surface water control structures.

3.2 POST CLOSURE CARE ACTIVITIES

Jackson Landfill will conduct post-closure care of the on-site industrial landfill for 30 years after the final closure date. Jackson Landfill personnel will conduct a site inspection of the landfill on a quarterly basis and/or after heavy periods of rainfall for the first five years and annually thereafter. During each site inspection, the inspector will:

- Evaluate the integrity of the final cap and the general condition of the landfill. Areas where erosion, ponding and surface cracks have occurred will be identified and denoted on a site plan.
- Identify areas where leachate outbreaks if any, are present.
- Identify any additional waste that has been deposited since the landfill has been closed. If additional waste has been deposited, it will be removed and disposed of in a permitted landfill.

After each site inspection, the inspector will prepare an inspection report summarizing the results of the inspection. The inspection report will contain the following information:

- Inspector's name.
- Date of the inspection.
- A description of any deficiencies and/or defects identified in the final cap.
- A description and/or recommendation of the corrective measures needed to reestablish the integrity of the final cap.
- The location of leachate seeps to be repaired, if any.

A copy of the inspection report will be kept on file at the facility in the environmental department. After each inspection, Jackson Landfill will initiate the work required to correct any deficiencies in the final cap that were identified during the site inspection.

Jackson Landfill will maintain the integrity of the final cap by making repairs as necessary to correct any defects caused by settling, subsidence, erosion, etc. The defects in the final cap will be corrected as follows:

- All eroded areas and surface cracks in the infiltration layer will be filled in 4 to 6 inch lifts with a suitable soil material placed and compacted to achieve a permeability of less than or equal permeability of the surrounding cap material.
- All eroded areas and surface cracks in the erosion layer will be filled with a suitable soil material and the vegetative cover will be re-established.
- All areas which allow for ponding of surface water will be filled with a suitable soil material, graded in order to tie in with existing contours, and the vegetative cover will be re-established.
- Areas where the vegetative cover is insufficient will be reseeded. Fertilizer, mulch and water will be provided as necessary to insure vigorous plant growth.

Access control structures will be erected along the access road to the landfill and signs placed indicating that the landfill is closed.

During the post-closure period the following office can be contacted about the facility:

Gainestown Road Landfill, LLC
Post Office Box 850415
Mobile, Alabama 36685
(251) 656-1786

3.3 LENGTH OF POST-CLOSURE CARE

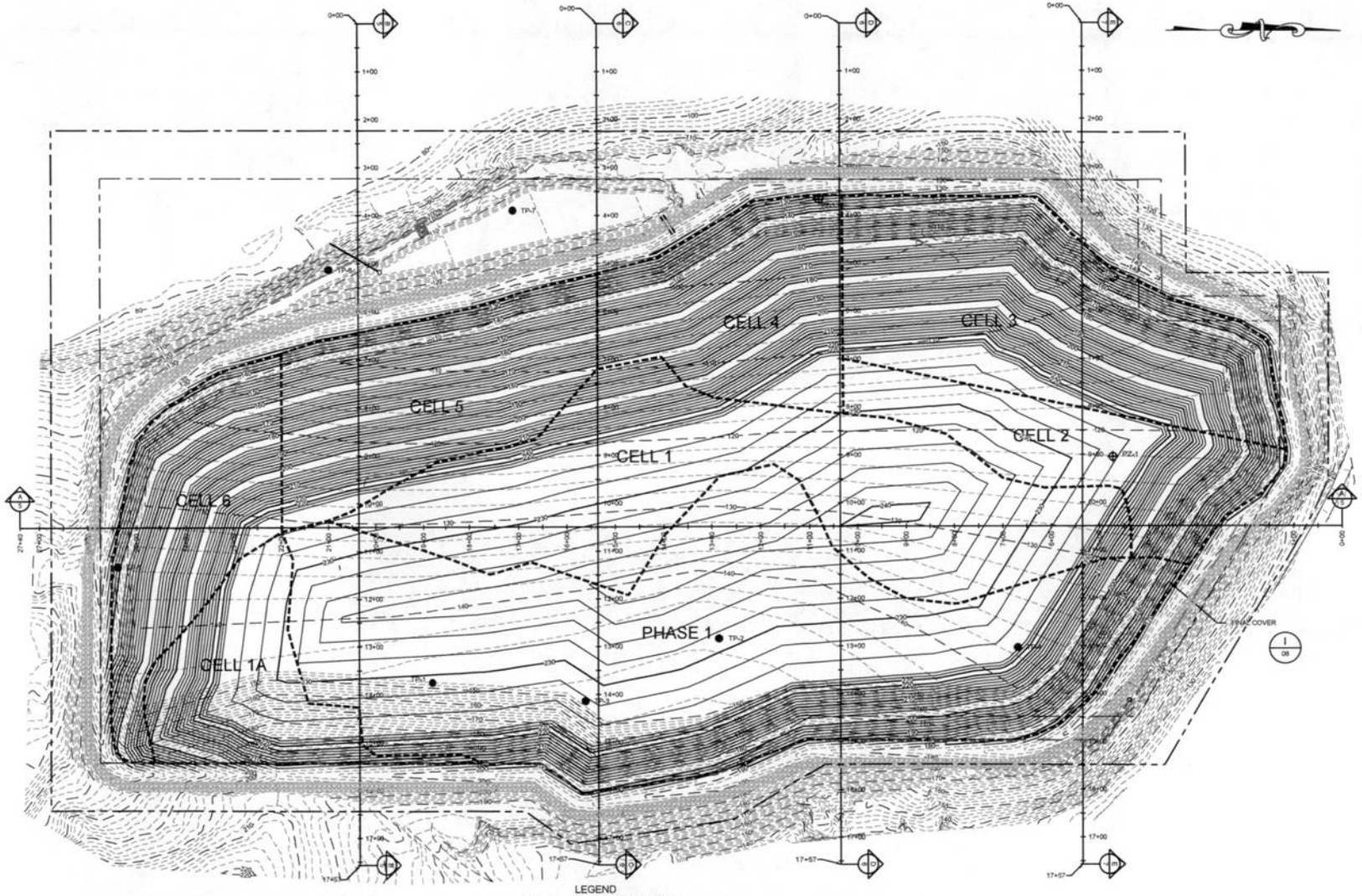
The length of the post-closure care period may be decreased by the Department if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the

environment and this demonstration is approved by the Department; The Department may also lengthen the post-closure monitoring period if necessary to protect human health and the environment.

3.4 POST-CLOSURE CERTIFICATION

Following completion of the post-closure care period, the owner will submit to ADEM a certification by an independent registered professional engineer verifying that post-closure care has been completed in accordance with the post-closure plan. A copy of the certification will be placed in the landfill operating record.

FIGURES



NOTE

1. EXISTING TOPOGRAPHY WAS BASED ON MARCH 14, 2023 AERIAL PHOTOGRAPH AND COMPILED BY SOUTHERN RESOURCES MAPPING CORPORATION, 2805-4 MCFARLAND BOULEVARD, NORTHPORT, ALABAMA 35476.

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528 MINERAL TRACE
HOOVER, AL 35244
(205) 985-4874
labellapc.com

GAINESTOWN ROAD LANDFILL, LLC
PO BOX 850415
MOBILE, ALABAMA 36685

JACKSON LANDFILL
1312 GAINESTOWN ROAD
JACKSON, AL 36545

NO.	DATE	DESCRIPTION
Revisions		

PROJECT NUMBER: 2242248.03
DRAWN BY: MW
REVIEWED BY: DWT
ISSUED FOR: PERMIT MODIFICATION
DATE: 5/14/2024
DRAWING NAME:

FINAL GRADING PLAN

DRAWING NUMBER:

1

L:\Alabama\Jackson\dwg\2024 Major Permit\03 FINAL GRADING PLAN.dwg LayoutLayout1

ATTACHMENT A

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FINAL COVER INSTALLATION QUALITY ASSURANCE PLAN

1. GENERAL

1.1. General: This Appendix describes tasks to be performed by an independent quality assurance (QA) contractor to provide assurance that the final cover for the WestRock Industrial Landfill will meet regulatory requirements. The QA contractor will perform testing of the existing cover soils, borrow pit testing, field-testing of soils after placement, and inspection of final contour. Cover material selection, testing, placement, and construction quality control shall be performed by the Contractor.

1.1.1. Cover Requirements: The final cover system shall be comprised of an erosion layer underlain by an infiltration layer as follows:

1.1.1.1. Infiltration layer shall be comprised of a minimum of 18 inches of earthen material designed to minimize infiltration. The infiltration layer shall be comprised of suitable soils placed in a manner to achieve a permeability of less than or equal to 1×10^{-5} cm/sec.

1.1.1.2. Erosion layer shall consist of a minimum of 6 inches of earthen material that is capable of sustaining native plant growth.

1.1.2. Scope of Work: The QA organization shall be responsible for ensuring the final cover was installed to meet regulatory requirements. The QA contractor shall perform the following:

1.1.2.1. Evaluate areas where an existing cover exists and determine the suitability of the cover.

1.1.2.2. Perform borrow pit soil testing to evaluate suitability of soils to be used for final cover infiltration layer construction.

1.1.2.3. Perform field testing to evaluate proper placement of borrow pit soils used for final cover infiltration layer construction.

1.1.2.4. Verify requirements for thickness of final cover (infiltration layer and erosion layer soils) are met.

1.1.2.5. Verify that final cover slope and bench requirements are met.

1.1.2.6. Make recommendations for correction of deficiencies noted.

1.2 APPLICABLE PUBLICATION: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

1.2.1 American Society for Testing and Materials (ASTM) Publications:

D422 Particle-Size Analysis of Soils.

D698 Moisture-Density Relations of Soils Using 5.5-lb Rammer and 12-in Drop.

D1556 Standard Test Method for Density of Soil in Place by the Sand-Cone Method

D1557 Moisture-Density Relations of Soils and Soil Aggregate Mixtures Using 10-lb Rammer and 18-in Drop.

D1587 Practice for Thin-walled Sampling of Soils.

D2216 Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures.

D2922 Density of Soil using Nuclear Methods (Shallow Depth). D4318

Liquid and Plastic Limit of Soils.

D4220 Practices for Preserving and Transporting Soil Samples.

1.3 QUALITY ASSURANCE:

1.3.1 The Contractor responsible for final cover construction shall retain the services of a commercial geotechnical inspection and testing company (Soil Engineer) to perform required soil tests and construction monitoring. The Soil Engineer will function as the independent QA organization for issues involving final cover construction.

1.3.2 The Soil Engineer will specify the type and use of equipment as required to achieve the final placement soil properties specified.

1.3.3 Any work that fails to meet specified test requirements shall be repaired, or removed and replaced, and retested as necessary to meet requirements.

1.4 SUBMITTALS: The Soil Engineer shall provide certification that the landfill cap was constructed in accordance with the Closure Plan.

2. PRODUCTS

2.1. COMPACTION EQUIPMENT: Equipment used shall maximize compactive energy and remolding capability of the soil. Select compaction equipment will be used having footed rollers capable of penetrating the entire lift thickness. Weight per linear foot along the drum surface, or the compact stress on the tip of the roller foot, shall be as recommended by the Soil Engineer.

3. EXECUTION

3.1. GENERAL: Soil placement shall be required to achieve final grade. Soils used for contouring shall meet the requirements for suitable infiltration layer soils as outlined in Table 3.1. The upper 18 inches of the infiltration layer soils shall be placed and tested as described in this Section. Topsoil shall be placed over the infiltration layer, and all disturbed soil areas shall be grassed.

3.2. INFILTRATION LAYER MATERIAL INSTALLATION: Soil placement shall be performed as specified by the Soil Engineer. Unless otherwise specified, the following guidelines shall be used for placement of infiltration layer soils.

3.2.1. Moisture Content: Soil moisture shall be adjusted to within plus or minus 2 percent of target moisture content prior to being placed. Final moisture content adjustment can be made after the soil is put in place and before it is compacted.

3.2.2. Lift Thickness: Lift thickness shall not exceed six inches (compacted thickness).

3.2.3. Bonding Between Lifts: Successive lifts shall be blended with the previous lifts. Prior to placement of new lift materials, the surface of the previous lift will be scarified using a disc. Soil shall be broken up sufficiently to assure complete blending.

3.2.4. Protection of Completed Lift: All holes made in the soil liner, including holes made for QA/QC, shall be sealed.

3.3. INFILTRATION LAYER CONSTRUCTION INSPECTION: Construction inspection shall be performed by the Soil Engineer who will provide full-time inspection of soil excavation in the borrow area, and inspection of soil placement in the fill areas.

3.3.1. Borrow Area Observation: Provide continuous classification of excavated soil in the borrow area. Unsuitable materials shall not be moved to the fill area. Borrow source testing will be provided as specified, or more often if required by a change in soil type.

3.3.2. Fill Area Observation: The Soil Engineer will (1) provide continuous inspection of soil placement activities, (2) monitor fill soil for deleterious or other unsuitable material, and (3) observe lift thickness, and ensure that the required number of passes are made over each lift with the specified compaction equipment. Once the soil cover is in place, measures will be taken to protect each lift of soil from desiccation, freezing, or other damaging forces. The Soil Engineer shall reject any work or materials that will compromise the integrity of the final cover.

3.4. INFILTRATION LAYER TESTING REQUIREMENTS: Testing required by this Section shall be performed by the Soil Engineer. Testing shall be performed on the materials used in

construction of the infiltration layer, and on each completed lift of the final cover. Testing shall be completed prior to placement of erosion layer topsoil.

3.4.1 Material Testing: Tests will be performed as specified for materials to be used in construction of the infiltration layer of the final cover. Refer to Table 3.2 for summary of specified testing frequencies.

3.4.2 Selection of Random Sample Test Location: Grid area will be tested with 10 times as many grids as samples to be taken. A random number generator will be used to select grid locations for sampling.

3.4.3 Testing Conditions: Ensure that conditions of the tested samples match the field conditions as closely as possible.

3.4.4 Borrow Pit Testing: Perform tests as specified on soils selected for final cover infiltration layer materials.

3.4.4.1 Grain Size Distribution: Determine the percentage of fine-grained, sand, gravel, and cobbles present in the borrow pit materials. Determine the grain size distribution using ASTM Method D422. Perform one test per 5,000 cubic yards of borrow materials.

3.4.4.2 Moisture Content: Moisture content shall be determined using ASTM D2216 or other method calibrated against ASTM D2216. Perform one test per 5,000 cubic yards of borrow materials. In addition, perform a minimum of two tests per day on the type of material or source of material being placed during stable weather conditions. During unstable weather, tests shall be made as dictated by local conditions and approved by the Soil Engineer.

3.4.4.3 Atterberg Limits: Determine the liquid and plastic limits of a soil with ASTM Method D4318. Perform one test per 10,000 cubic yards of borrow materials.

3.4.4.4 Moisture-Density Compaction Curve: Determine the moisture content versus density relationship using the ASTM Method 698 or ASTM Method 1557, depending on the recommendations of the Soil Engineer. Perform one test per 10,000 cubic yards of borrow material. In addition, perform one test per type of material or source of material being placed.

3.4.4.5 Hydraulic Conductivity of Lab-Compacted Soil: Using the specimens remolded during the moisture-density compaction curve determination, perform a laboratory permeability test. Perform one test per 10,000 cubic yards of borrow material. In addition, perform one test per type of material or source of material being placed.

3.4.5 Final Cover Infiltration Layer Field Test Requirements: Perform tests as specified on completed lift soils. Refer to Table 3.1 for required soil properties and Table 3.2 for summary of specified testing frequencies.

3.4.5.1 Dry Density: Determine in-place dry density using ASTM Method D3017 (nuclear method), or ASTM Method D4643 (drive ring method). These methods, if used, should be calibrated against the ASTM Method D1556 (sand cone method). Alternatively, the sand cone method can be used directly. Perform

five tests per acre per lift for in-place final cover infiltration layer material. At least one test should be performed each day soil is placed and compacted.

3.4.5.2 Moisture Content: Determine the soil moisture content of in-place soils using ASTM Method D2216, as noted in this Section. Perform five tests per acre per lift for in-place final cover infiltration layer material being placed during stable weather conditions. During unstable weather, tests shall be made as dictated by local conditions and approved by the Soil Engineer. At least one test should be performed each day soil is compacted.

3.5 EROSION LAYER: An erosion layer shall be placed to cover all final cover soil area. The erosion layer shall consist of topsoil and a vegetative cover, placed to match the grade of the subbase infiltration layer. Erosion layer placement shall be performed as specified by the Soil Engineer. Unless otherwise specified, the following guidelines shall be used for placement of the erosion layer.

3.5.1 Topsoil: Place a 6-inch layer of soils suitable to support vegetation. Prior to placement pulverize subgrade to a depth of 2 inches by discing or plowing for the bonding of topsoil with the subsoil. Topsoil shall then be uniformly spread, graded, and compacted to the thickness, elevations, and slopes shown. The surface shall be left free of irregularities.

3.5.2. Seeding: Sow and establish an acceptable growth of grasses from seeds of the specified seed mixes designated for use. Seeding shall include ground preparation, sowing seed, application of fertilizers, application of mulch, watering, and installation of erosion controls necessary to establish a vegetative cover. Select, provide, and install seeding in accordance with the construction details as outlined in the State of Alabama Highway Department manual of Standard Specifications for Highway Construction.

4.1. DOCUMENTATION

An effective QA plan depends largely on recognition of construction activities that should be monitored and assigning responsibilities for the monitoring of each activity. This is most effectively accomplished and verified by the documentation of quality assurance activities. The QA Engineer will document that quality assurance requirements have been addressed and satisfied.

The QA Engineer will provide the construction engineer with his reports including data sheets and logs to verify that required QA activities have been carried out. These reports shall also identify quality assurance problems. The QA Engineer will also maintain a complete file of plans, reports, project specifications, a QA Manual, checklists, test procedures, and other pertinent documents.

4.2.1 RECORDKEEPING

The QA Engineer's reporting procedures will include preparation of: (a) field notes, (b) observation logs, and (c) construction problems and solution data sheets.

4.2.1 QA Observation Logs: The QA Engineer will prepare the observation logs. At a minimum, these logs and data sheets will include the following information:

- Date, project name, location, QA Engineer's signature.

- Data on weather conditions.
- Description and locations of ongoing construction.
- Description and specific locations of areas, or units of work being observed and documented.
- Decisions made regarding acceptance of units of work, and/or corrective actions to be taken in instances of substandard work quality.

TABLE 3.1
RECOMMENDED SOIL PROPERTIES

SOIL MATERIAL PROPERTY	CRITERIA
Fines Content	Greater than 30% (passing 200 sieve)
Plasticity Index	PE= between ≥ 10% and ≤ 40%
Gravel Content	Less than 30% (by weight)
Particle Size	Almost no particles ≥ 1 to 2 inches
Moisture Content	Target moisture is 2% wet of optimum
Dry Density	≥ 95% of Max Standard Proctor or ≥ 90% of Modified Proctor

TABLE 3.2 FREQUENCY OF TESTING

ITEM	TESTING	FREQUENCY
Clay Borrow Source Testing	Grain Size	5,000 cubic yards
	Moisture	5,000 cubic yards
	Atterberg limits	10,000 cubic yards
	Moisture-Density curve	10,000 cubic yards
	Lab permeability(remolded)	10,000 cubic yards
Clay Cover Testing During Construction	Density	5 tests/acre/lift
	Permeability	1 test/acre/lift
Notes: Due to variability of soil fill materials, a small percentage of tests that fail to meet specifications (outliners) may be permitted at the discretion of the Soil Engineer.		