PRELIMINARY DETERMINATION

Permit Renewal
Walker County Commission
1801 3rd Avenue South
Jasper, Alabama 35501

Walker County Gamble Inert Landfill
Permit No. 64-09

May 19, 2025

McGehee Engineering Corp., on behalf of the Walker County Commission has submitted to the Alabama Department of Environmental Management (ADEM) an application to renew the Solid Waste Disposal Facility Permit for the Walker County Gamble Inert Landfill (Permit No. 64-09). The waste stream for the Walker County Gamble Inert Landfill would remain non-putrescible and non-hazardous construction and demolition waste and rubbish as defined by Rule 335-13-1-.03, tires, and street and highway cleanings. The service area for the Walker County Gamble Inert Landfill would remain the Walker County, Alabama. The maximum average daily volume of waste disposed at the Walker County Gamble Inert Landfill would remain 75 tons per day. All other permit conditions would remain the same.

The Walker County Gamble Inert Landfill is described as being located in Section 33, Township 13 South and Section 4, Township 14 South, Range 8 West in Walker County, Alabama. The Walker County Gamble Inert Landfill consists of approximately 57 acres with approximately 25 acres approved for disposal.

The Land Division has determined that the permit application meets the requirements of ADEM's Administrative Code Division 13 regulations.

Technical Contact:

Mr. Hunter Baker
Solid Waste Engineering Section
Land Division

SOLID WASTE DISPOSAL FACILITY PERMIT

PERMITTEE:	**Walker County Commission**
FACILITY NAME:	**Walker County Gamble Inert Landfill**
FACILITY LOCATION:	**Section 33, Township 13 South and Section 4, Township 14 South, Range 8 West in Walker County, Alabama. The total permitted area is approximately 57 acres with 25 acres approved for disposal.**
PERMIT NUMBER:	**64-09**
PERMIT TYPE:	**Construction/Demolition Landfill**
WASTE APPROVED FOR DISPOSAL:	**Non-putrescible and non-hazardous construction and demolition waste and rubbish as defined by Rule 335-13-1-.03, tires, and street and highway cleanings.**
APPROVED WASTE VOLUME:	**Average Daily Volume of 75 tons per day**
APPROVED SERVICE AREA:	**Walker County, Alabama**

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

ISSUANCE DATE:	**?????**
EFFECTIVE DATE:	**?????**
EXPIRATION DATE:	**?????**

Alabama Department of Environmental Management

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
SOLID WASTE PERMIT

Permittee:	Walker County Commission 1801 3rd Avenue South Jasper, Alabama 35501
Landfill Name:	Walker County Gamble Inert Landfill
Landfill Location:	Section 33, Township 13 South and Section 4, Township 14 South, Range 8 West in Walker County
Permit Number:	64-09
Landfill Type:	Construction and Demolition

Pursuant to the Solid Wastes & Recyclable Materials Management Act, Code of Alabama 1975, §§22-27-1, *et seq*., as amended (the "Act"), and attendant regulations promulgated thereunder by the Alabama Department of Environmental Management (ADEM or Department), this permit is issued to the Walker County Commission (hereafter called the Permittee), to operate a solid waste disposal facility, known as the Walker County Gamble Inert 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 335-13-1 through 335-13-16 of the ADEM Administrative Code (hereinafter referred to as the "ADEM Admin. Code" or as "335-13"). 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 Admin. 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 ADEM on June 14, 2023, and as amended, for permit renewal and is known as the Permit Application (hereby incorporated by reference and hereinafter referred to as the Application). Any inaccuracies found in this information could lead to the termination or modification of this permit and potential enforcement action. The Permittee must inform ADEM of any deviation from or changes in the information in the Application that would affect the Permittee's ability to comply with the applicable ADEM Admin. Code or permit conditions.

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

_____ _____

Alabama Department of Environmental Management Date Signed

SECTION I. STANDARD CONDITIONS.

A. Effect of Permit. The Permittee is allowed to dispose of nonhazardous solid waste in accordance with the conditions of this permit and 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 Act, compliance with the conditions of this permit shall be deemed to be compliance with applicable requirements in effect as of the date of issuance of this permit and any future revisions.

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

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

D. Definitions. For the purpose of this permit, terms used herein shall have the same meaning as those in 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 ADEM 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 ADEM. Any permit noncompliance, other than noncompliance authorized by a variance, constitutes a violation of the Act and is grounds for enforcement action, permit suspension, revocation, modification, and/or denial of a permit renewal application.

2. Duty to Reapply. If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The renewal application must be submitted to ADEM 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, ADEM has not made a final decision regarding the renewal application.

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

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

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

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

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

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

   b. Have access to and copy, at reasonable times, 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 ADEM 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 ADEM, 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 ADEM. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of this permit.

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 this 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 ADEM, the Permittee shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to ADEM, within a reasonable time, information related to compliance with the permit.

F. Design and Operation of Facility. The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of contaminants (including leachate and explosive gases) to air, soil, groundwater, or surface water, which could threaten human health or the environment.

G. Inspection Requirements.

1. The Permittee shall comply with all requirements of ADEM Admin. Code 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 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. Surface water and leachate monitoring records if required.

h. Copies of this Permit and the Application.

i. Copies of all variances granted by ADEM, including copies of all approvals of special operating conditions.

2. Quarterly Volume Report. Beginning with the effective date of this permit, the Permittee shall submit, within thirty (30) days after the end of each calendar quarter, a report summarizing the daily waste receipts for the previous (just ended) quarter. Copies of the quarterly reports shall be maintained in the operating record.

3. Monitoring and Corrective Action Reports. The Permittee shall submit reports on all monitoring and corrective activities conducted pursuant to the requirements of this permit, including, but not limited to, groundwater, surface water, explosive gas and leachate monitoring. The groundwater monitoring shall be conducted in March and September of each year, or as directed by ADEM, and the reports shall be submitted at least semi-annually, or as directed by ADEM. The reports should contain all monitoring results and conclusions from samples and measurements conducted during the sampling period. Explosive gas monitoring must be submitted once each year, and the reports should be submitted to ADEM 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 ADEM.

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 ADEM.

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

I. Documents to be Maintained by the Permittee. The Permittee shall maintain, at the Walker County Gamble Inert Landfill office, the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure of the permitted landfill.

1. Operating record.

2. Closure Plan.

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

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 ADEM, 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 ADEM and other appropriate agencies. A burn request should be submitted in writing to ADEM outlining why that burn request should be granted. This request should include, but not be limited to, specifically what areas will be utilized, types of waste to be burned, the projected starting and completion dates for the project, and the projected days and hours of operation. The approval, if granted, shall be included in the operating record.

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 waste.

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 WASTE LANDFILLS.

A. Waste Identification and Management.

1. Subject to the terms of this permit, the Permittee may dispose of the nonhazardous solid wastes listed in III.B. Disposal of any other wastes is prohibited, except waste granted a temporary or one time waiver by the Director.

2. The total permitted area for the Walker County Gamble Inert Landfill is approximately 57 acres with 25 acres approved for disposal.

3. The maximum average daily volume of waste disposed at the facility shall not exceed 75 tons/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 335-13-5-.06(2)(b)2. The average daily volume shall be computed as specified by ADEM Admin. Code 335-13-4-.23(2)(f).

B. Waste Streams. The Permittee may accept for disposal non-putrescible and non-hazardous construction and demolition waste and rubbish as defined by ADEM Admin. Code 335-13-1-.03, tires, and street and highway cleanings.

C. Service Area. The service area for this landfill shall be the Walker County, 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 placed onto an appropriate slope not to exceed 4 to 1 (25%). All waste shall be spread in layers two feet or less in thickness and thoroughly 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 ADEM and listed in Section VIII shall be added at the conclusion of each week's operation.

E. Liner Requirements. At this time, the Permittee shall not be required to install a liner system. The base of the landfill shall be a minimum of five (5) feet above the highest measured groundwater level as determined by ADEM Admin. Code 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 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 ADEM.

N. Other Requirements. ADEM 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 ADEM.

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 335-13-4-.23(1)(f).

R. Litter Control. The Permittee shall control litter.

S. Fire Control. The Permittee shall provide fire control measures.

SECTION IV. GROUNDWATER MONITORING REQUIREMENTS.

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

SECTION V. GAS MONITORING REQUIREMENTS.

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

SECTION VI. SURFACE WATER MANAGEMENT REQUIREMENTS.

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 be constructed as specified in the application.

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 ADEM 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 ADEM 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. ADEM 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 ADEM. Monitoring requirements shall continue throughout the post closure period as determined by ADEM unless all waste is removed and no unpermitted discharge to waters of the State have occurred.

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 ADEM 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 within 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 ADEM within 120 days after permit expiration, revocation, or as directed by ADEM as described in the application.

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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 ADEM.

SECTION VIII. VARIANCES.

There are no approved variances for the Walker County Gamble Inert Landfill.

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

Permit Application

mcgehee engineering corp

May 26th, 2023

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

RE: **Walker County Gamble Inert Landfill**
Permit No. 64-09 Renewal

In regards to the above referenced project, please find the enclosed Solid Waste Disposal Facility Permit Renewal Application along with a $5,400.00 check for the application fee.

If you should have any questions or need additional information, please do not hesitate to contact me at our office at 205-221-0686 or via email at tanner.johnson@mcgehee.org.

Sincerely,

McGehee Engineering Corp.

Tanner Johnson

Tanner Johnson
Engineering Manager,

Enclosure:
(A) *Solid Waste Disposal Renewal Application*
(B) *Check for Application Fee*

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • tanner.johnson@mcgehee.org

SOLID WASTE DISPOSAL FACILITY

PERMIT APPLICATION PACKAGE

January 16, 2018

M E M O R A N D U M

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 WALKER COUNTY GAMBLE INERT LANDFILL

3. Applicant/Permittee:

Name: WALKER COUNTY COMMISSION

Address: 1801 3RD AVE SOUTH
JASPER, ALABAMA 35501

Telephone: 205-384-7203

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

4. Location: (include county highway map or USGS map)

Township 13 & 14 SOUTH **Range** 8 WEST
Section 33; 4 **County** WALKER

5. Land Owner:

Name: WALKER COUNTY COMMISSION

Address: 1801 3RD AVE SOUTH
JASPER, ALABAMA 35501

Telephone: 205-384-7203

(Attach copy of agreement from landowner if applicable.)

6. Contact Person:

Name RODNEY CAIN

Position or Affiliation DIRECTOR

Address: 1801 3RD AVE SOUTH
JASPER, ALABAMA 35501

Telephone: 205-878-0034

7. Size of Facility: 57 Acres

Size of Disposal Area(s): 25 Acres

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

EXISTING SEVICE AREA -- WALKER COUNTY ALABAMA

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

75 Tons/Day _____ Cubic Yards/Day

10. List all waste streams to be accepted at the facility (i.e., household solid waste, wood boiler ash, tires, trees, limbs, stumps, etc.):

DISCARDED TIRES; TREES; STUMPS; LEAVES; CONSTRUCTION MATERIALS SUCH AS WOOD, CONCRETE, STEEL, ASHES (FROM CLEARING & GRUBBING ACTIVITY ONLY); STREET & HIGHWAY CLEANINGS & OTHER SIMILAR INERT MATERIALS GENERATED IN WALKER COUNTY.

SIGNATURE (Responsible official of permit applicant):

TITLE: DIRECTOR

Rodney Cain
(please print or type name)

DATE: 4-4-2025

ADDITIONAL REQUIRED INFORMATION

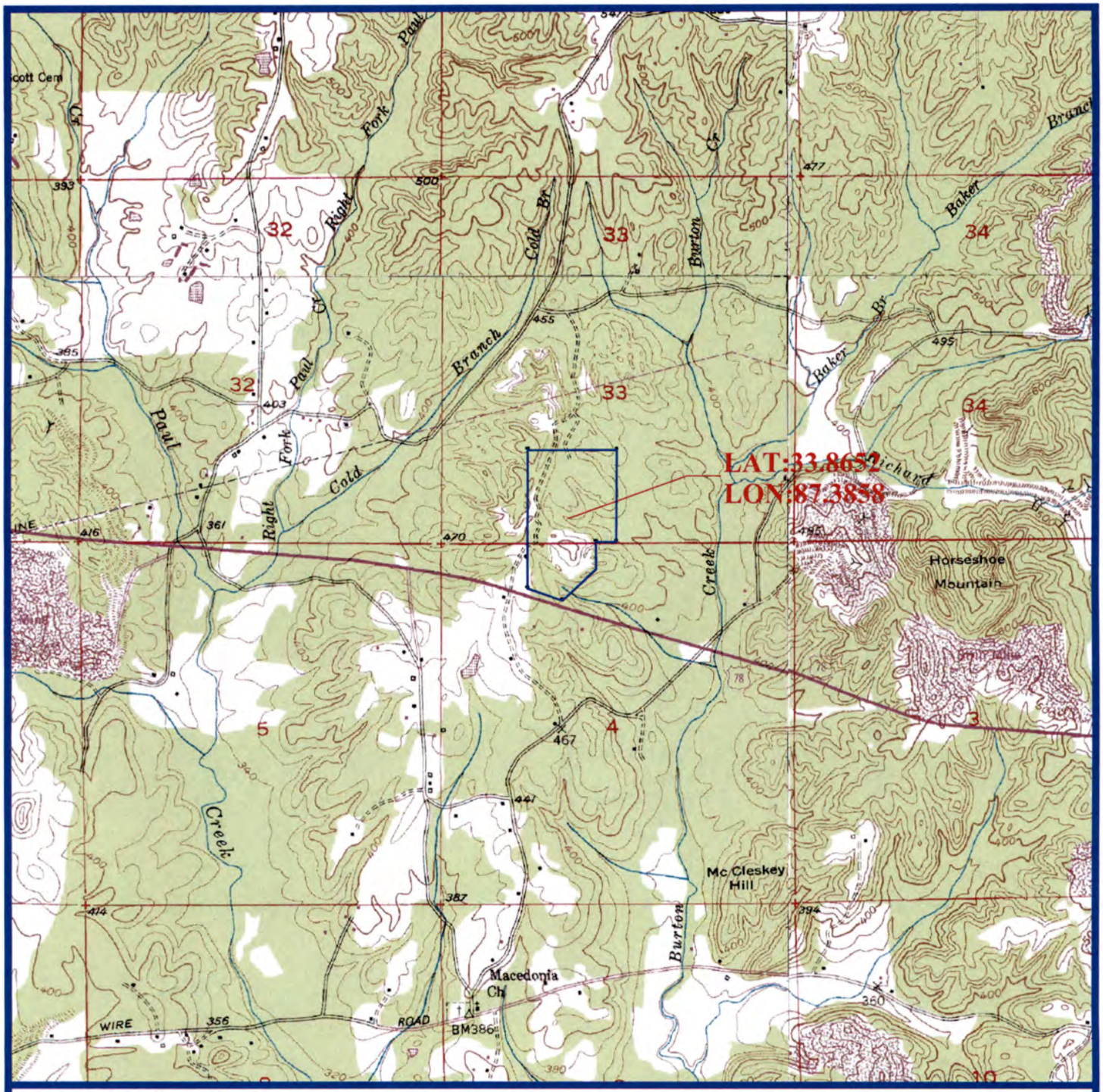
Applicants seeking to obtain a permit to construct and/or continue to operate a municipal solid waste (MSW) landfill, industrial landfill, construction and demolition (C/D) landfill, coal combustion residuals (CCR) landfill, or CCR surface impoundment are required to submit additional information as 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.



SCALE: 1" = 2000'
May 2nd, 2023
at 8 1/2" x 11"

WALKER COUNTY COMMISSION
GAMBLE INERT LANDFILL

(APPROXIMATELY 57 ACRES TOTAL)

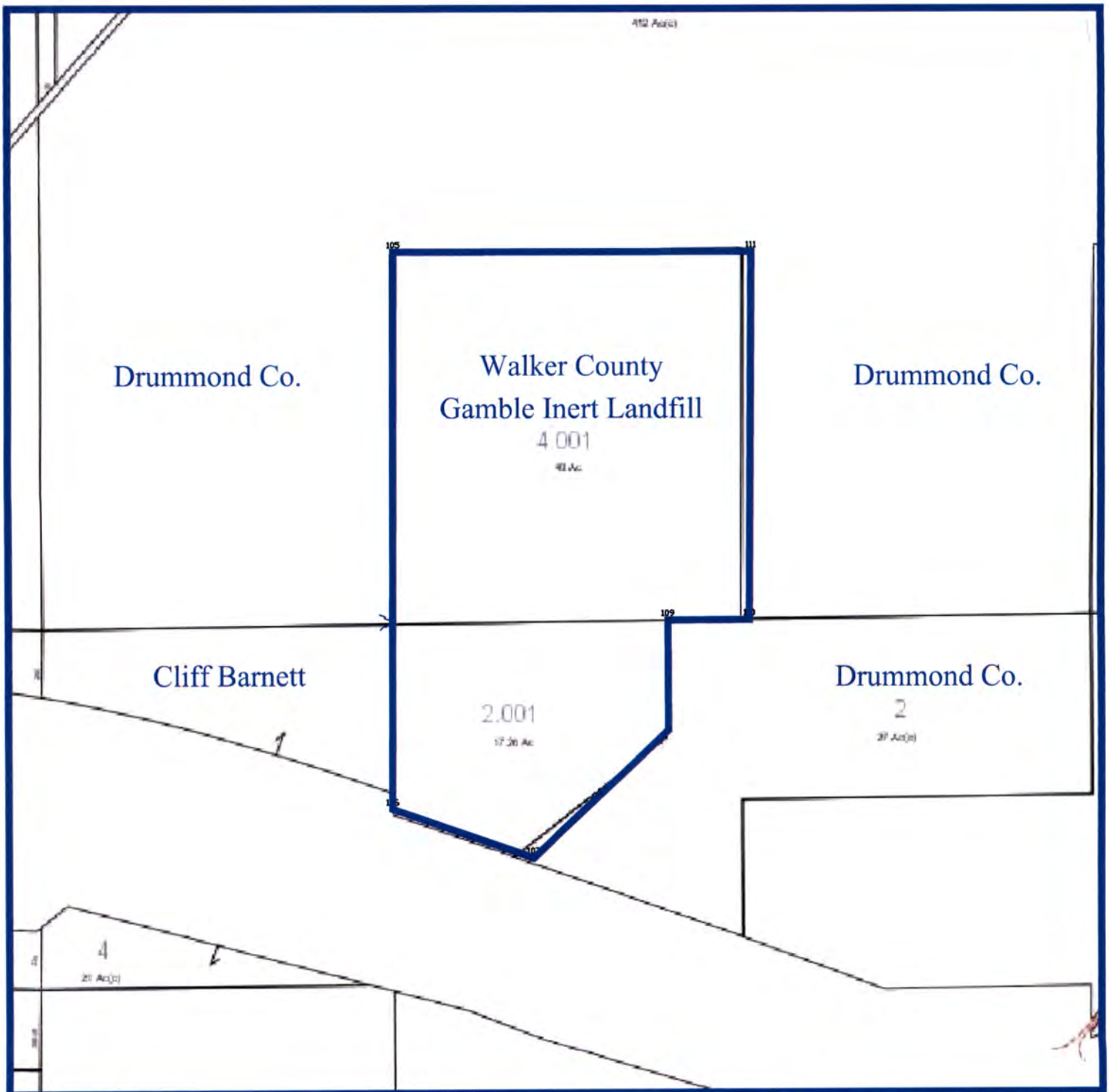
PROJECT AREA MAP
PERMIT NO. 64-09

SECTIONS 4, TOWNSHIP 14 SOUTH, RANGE 8 WEST
SECTIONS 33, TOWNSHIP 13 SOUTH, RANGE 8 WEST
ALL IN WALKER COUNTY, ALABAMA
AS FOUND ON THE JASPER, ALABAMA USGS QUAD (1981)

GAMBLE LANDFILL BOUNDARY

Latitude: 33.8652 N
Longitude: 87.3858 W

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org



SCALE: 1" = 500'
May 2nd, 2023
at 8 1/2" x 11"

WALKER COUNTY COMMISSION
GAMBLE INERT LANDFILL

(APPROXIMATELY 57 ACRES TOTAL)

N
W E
S

OWNERSHIP MAP
PERMIT NO. 64-09

SECTIONS 4, TOWNSHIP 14 SOUTH, RANGE 8 WEST
SECTIONS 33, TOWNSHIP 13 SOUTH, RANGE 8 WEST
ALL IN WALKER COUNTY, ALABAMA
AS FOUND ON THE JASPER, ALABAMA USGS QUAD (1981)

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

GAMBLE LANDFILL BOUNDARY

Latitude: 33.8652 N
Longitude: 87.3858 W

Walker County Gamble Inert Landfill
Attachment to Section VI.
Adjacent Landowners

LANDOWNER NAME	***ADDRESS***
Cliff Barnett	1760 Arkadelphia Road, Jasper, AL 35504
Drummond Company	Post Office Box 1549, Jasper, AL 35502

SCALE: 1" = 100'
May 2nd, 2023
AT 24 X 36

WALKER COUNTY COMMISSION
GAMBLE INERT LANDFILL

(APPROXIMATELY 57 ACRES TOTAL)

FACILITY PERMIT RENEWAL MAP
PERMIT NO. 64-09

SECTIONS 4, TOWNSHIP 14 SOUTH, RANGE 8 WEST
SECTIONS 33, TOWNSHIP 13 SOUTH, RANGE 8 WEST
ALL IN WALKER COUNTY, ALABAMA
AS FOUND ON THE JASPER, ALABAMA USGS QUAD (1981)

MAP LEGEND

- FACILITY BOUNDARY
- 100' BUFFER ZONE
- PERMITTED WASTE BOUNDARY
- ACTIVE DISPOSAL AREA

N
W E
S

mcgehee engineering corp
post office box 3431 - 450 19th street
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: stephenb@mcgehee.org

N 89°55'58"E 1320.19' MEAS.
N 89°55'58"E 1320.03' DEED

3 1/2" CAPPED PIPE
N 1,407,047.015
E 534,086.362

3 1/2" CAPPED PIPE
N 1,407,048.564
E 535,406.551

SW 1/4 – SW 1/4
SEC. 33 – T13S – R8W

SE 1/4 – SW 1/4
SEC. 33 – T13S – R8W

57.26 ACRES± DEED & MEAS.

SW 1/4 – SE 1/4
SEC. 33 – T13S – R8W

N 0°14'50"E 1349.20' DEED
N 0°14'11"E 1349.48' MEAS.

S 0°17'47"W 1345.14' DEED
S 0°18'20"W 1345.14' MEAS.

FIREING RANGE
SHED
CONCRETE PAD
GRAVEL DRIVE
DRIVE
GRAVEL

BM #72992-1
RAIL ROAD SPIKE IN
POWER POLE ELEV. 495.11

MOBILE HOME
PORCH
STEPS
GRAVEL DRIVE
PAVED ROAD
CONCRETE PAD
GARBAGE TRUCK SHED
CONCRETE PAD
OFFICE
TRANSFER STATION
12" CMP
12" CMP
INLET
GAS PUMP
GAS TANK
GRAVEL DRIVE
GRAVEL DRIVE

P.O.B.
3" CAPPED PIPE
N 1,405,697.543
E 534,080.793

3" CAPPED PIPE
N 1,405,702.299
E 535,099.318

S 89°45'22"W 300.00' DEED
S 89°46'55"W 300.06' MEAS.

3" CAPPED PIPE
N 1,405,703.441
E 535,399.376

S 0°09'E 400.00' DEED
S 0°11'11"E 400.48' MEAS.

NW 1/4 – NW 1/4
SEC. 4 – T14S – R8W

NE 1/4 – NW 1/4
SEC. 4 – T14S – R8W

NW 1/4 – NE 1/4
SEC. 4 – T4S – R8W

N 0°06'35"W 681.51' DEED
N 0°06'26"W 681.51' MEAS.

3" CAPPED PIPE
N 1,405,301.818
E 535,100.620

S 47°00'W 681.79' DEED
S 46°59'46"W 681.60' MEAS.

2" CAPPED PIPE
N 1,405,016.031
E 534,082.067

R/W

N 70°59'32"W 550.00' DEED
N 70°59'54"W 550.06' MEAS.

3" CAPPED PIPE
N 1,404,836.932
E 534,602.158

U.S. HWY. 78

R/W

R/W

R/W

SCALE: 1"= 100'

BENCH MARKS

ELEVATION	DESCRIPTION
483.39	TOP 2" CAPPED PIPE @ SOUTHWEST CORNER PROPERTY
464.01	TOP 2" CAPPED PIPE @ SOUTHWEST CORNER PROPERTY

REFERENCE

DEED VOLUME	DEED PAGE	PLAT
1261	247	UNRECORDED
971	535	SURVEY BY R.C. SHACKLEFORD MAY, 1986

NOTES:

1.) NORTH ARROW AS SHOWN HEREON IS BASED ON AN ASSUMED BEARING FROM A WELL DEFINED LINE.

2.) THERE WAS NO FIELD LOCATION ATTEMPTED TO DETERMINE EXTENT OF SUB-SURFACE STRUCTURES OR EAVE OVERHANGS EXCEPT AS SHOWN.

3.) ONLY SURFACE UTILITY, STORM AND SANITARY SEWER STRUCTURES WHICH ARE LOCATED WITHIN THE BOUNDARY AND OUTSIDE OF DEDICATED EASEMENTS ARE SHOWN. NO EFFORT HAS BEEN MADE TO LOCATE ANY SUB-SURFACE UTILITY, STORM OR SANITARY LINES, EXCEPT AS SHOWN.

4.) THE SURVEYOR WAS NOT PROVIDED A TITLE COMMITMENT AND NEITHER OFFERS OPINION NOR TAKES RESPONSIBILITY FOR SAME.

5.) COORDINATES SHOWN ARE BASED ON ABC SECTION CLOSURE DATUM.

6.) ELEVATIONS SHOWN ARE BASED ON USGS DATUM.

LEGEND

- PROPERTY CORNER FOUND
- OVERHEAD UTILITY LINES
- UTILITY POLE
- WATER METER
- FENCE
- P.O.B. POINT OF BEGINNING

STATE OF ALABAMA
WALKER COUNTY

I, Lynell Early, a Professional Land Surveyor in the State of Alabama hereby certify that the foregoing is a true and correct map or plat of the following described property:

The SE 1/4 of the SW 1/4 of Section 33, Township 13 South, Range 8 West, and part of the NE 1/4 of the NW 1/4 of Section 4, Township 14 South, Range 8 West, Walker County, Alabama, described as follows: Begin at the SW corner of said SE 1/4 of SW 1/4; thence run N 0° 14' 50" E, 1349.20 feet to the NW corner of said SE 1/4 of SW 1/4; thence N 89° 55' 58" E, 1320.03 feet to the NE corner of said SE 1/4 of the SW 1/4; thence S 0° 17' 47" W 1345.14 feet to the NE corner of said NE 1/4 of the NW 1/4; thence S 89° 45' 22" W, 300.0 feet; thence S 0° 09' E, 400.0 feet; thence S 47° 00' W, 681.79 feet to the north right of way of U. S. Highway #78; thence N 70° 59' 32" W along said right of way, 550.0 feet to the west line of said NE 1/4 of the NW 1/4; thence N 0° 06' 35" W along said line, 681.51 feet to the point of beginning. Containing 57.26 acres. Surface Only.

I further certify that the survey represented hereon meets the minimum technical standard requirements for land surveying in the State of Alabama as adopted by the Alabama Society of Professional Land Surveyors. According to a survey done under my supervision on this the 18th day of December, 1992.

Lynell Early
LYNELL EARLY, P.L.S.
AL. REG. NO. 16689

MAP 1 OF 8

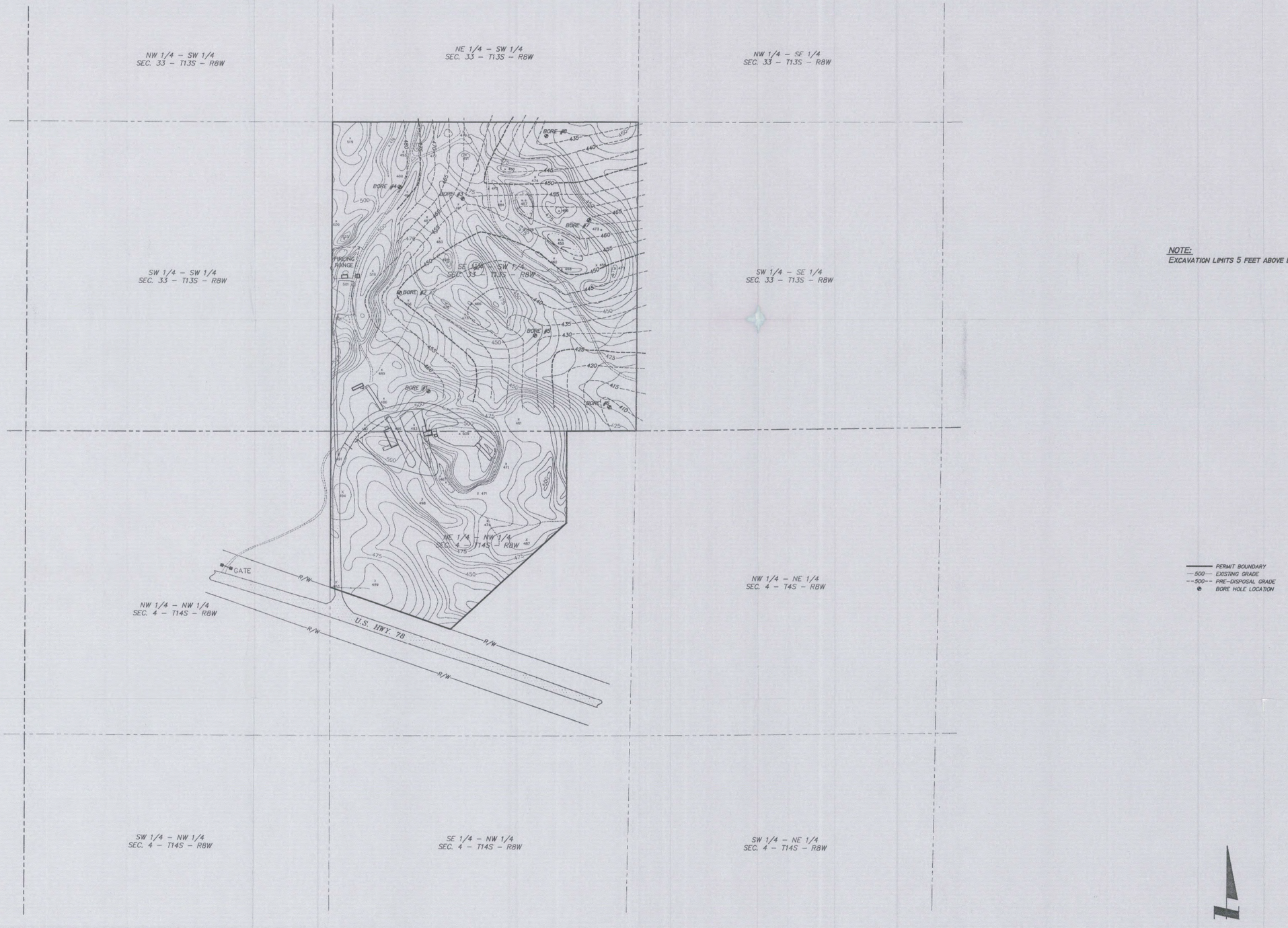
PERC ENGINEERING CO., INC.
CIVIL ENGINEERS & LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

drawn by: M.R.B.
dwg name: WCLF
scale: 1" = 100'
mathematical closure: 1:8992
field survey: AUGUST 01, 1992

ALABAMA REGISTERED No. 16689 PROFESSIONAL LAND SURVEYOR LYNELL EARLY

Walker County
Gamble Inert Landfill
Boundary Survey

SE 1/4 – SW 1/4 of Sec. 33, T13S, R8W
and part of the
NE 1/4 -- NW 1/4 of Sec. 4, T14S, R8W
Walker County, Alabama



NOTE:
EXCAVATION LIMITS 5 FEET ABOVE BEDROCK.

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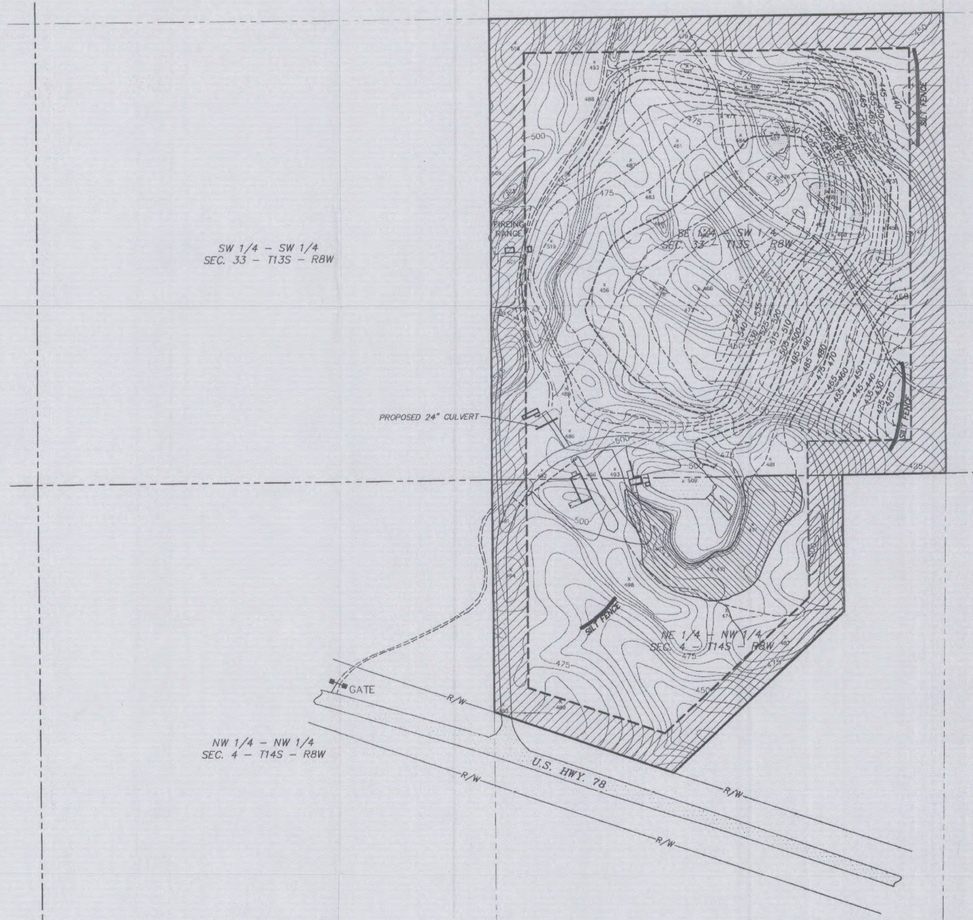
PERC ENGINEERING CO., INC.
CIVIL ENGINEERS & LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

drawn by:	G.B.C.	job number:	
checked by:		initial date:	1-12-93
scale:	1"= 200'	f.b./page:	
diskette no:		dwg name:	WCINRTPD
rev no./date:		rev no./date:	

ALABAMA REGISTERED PROFESSIONAL ENGINEER REX A. WINGO

Walker County
Gamble Inert Landfill
Pre-Disposal Grade
SE 1/4 – SW 1/4 of Sec. 33, T13S, R8W
and part of the
NE 1/4 – NW 1/4 of Sec. 4, T14S, R8W
Walker County, Alabama



PERMIT BOUNDARY
500 EXISTING GRADE
500 PRE-DISPOSAL GRADE
PROPOSED DITCH
100' BUFFER ZONE
SURFACE WATER DEPRESSION
EXISTING DISPOSAL AREA
PERMIT NO. 64-09

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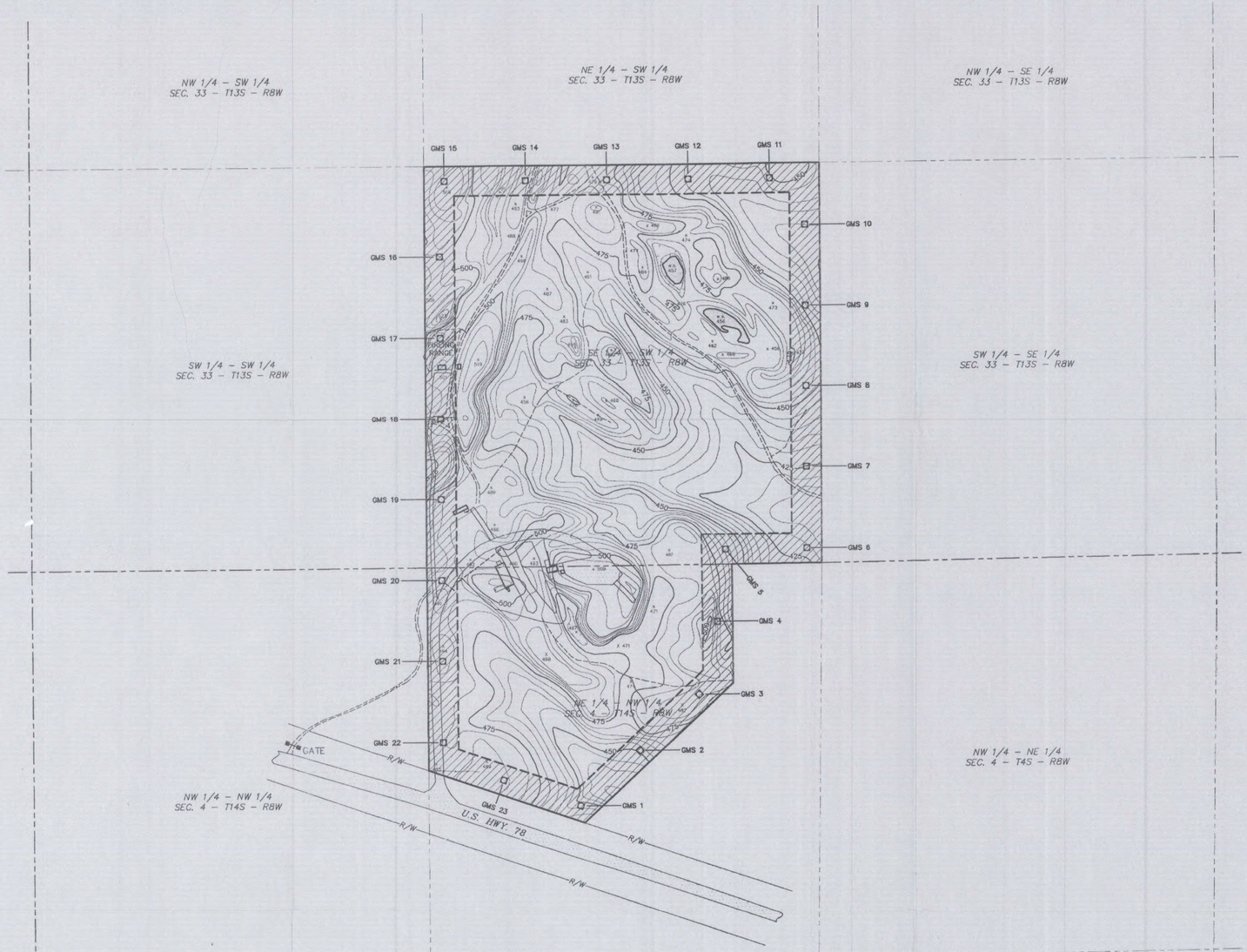
PERC ENGINEERING CO., INC.
CIVIL ENGINEERS & LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502–1712/(205)384–5553

drawn by:	G.B.C.	job number:	
checked by:		initial date:	1-12-93
scale:	1" = 200'	f.b./page:	
diskette no:		dwg name:	WCINRTFG
rev no./date:		rev no./date:	

ALABAMA REGISTERED 12971 PROFESSIONAL ENGINEER REX A. WINGO

Walker County
Gamble Inert Landfill
Final Grading Plan
SE 1/4 – SW 1/4 of Sec. 33, T13S, R8W
and part of the
NE 1/4 – NW 1/4 of Sec. 4, T14S, R8W
Walker County, Alabama



NOTE:
METHANE GAS MONITORING WILL BE PERFORMED ON EXISTING STRUCTURES.

PERMIT BOUNDARY
500 EXISTING GRADE
GAS MONITORING SITES
100' BUFFER ZONE
SURFACE WATER DEPRESSION

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PERC ENGINEERING CO., INC.
CIVIL ENGINEERS & LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

drawn by:	G.B.C.	job number:	
checked by:		initial date:	1-12-93
scale:	1"= 200'	f.b./page:	
diskette no:		dwg name:	WCINRTEG
rev no./date:		rev no./date:	

ALABAMA 13911 PROFESSIONAL ENGINEER REX A. WINGO

Walker County
Gamble Inert Landfill
Explosive Gas Monitoring Sites

SE 1/4 – SW 1/4 of Sec. 33, T13S, R8W
and part of the
NE 1/4 – NW 1/4 of Sec. 4, T14S, R8W
Walker County, Alabama

NW 1/4 – SW 1/4
SEC. 33 – T13S – R8W

NE 1/4 – SW 1/4
SEC. 33 – T13S – R8W

NW 1/4 – SE 1/4
SEC. 33 – T13S – R8W

SW 1/4 – SW 1/4
SEC. 33 – T13S – R8W

SE 1/4 – SW 1/4
SEC. 33 – T13S – R8W

SW 1/4 – SE 1/4
SEC. 33 – T13S – R8W

PHOENIX RANGE

GATE

R/W

U.S. HWY. 78

NW 1/4 – NW 1/4
SEC. 4 – T14S – R8W

SE 1/4 – NW 1/4
SEC. 4 – T14S – R8W

NW 1/4 – NE 1/4
SEC. 4 – T4S – R8W

SW 1/4 – NW 1/4
SEC. 4 – T14S – R8W

SE 1/4 – NW 1/4
SEC. 4 – T14S – R8W

SW 1/4 – NE 1/4
SEC. 4 – T14S – R8W

PERMIT BOUNDARY
500 EXISTING GRADE
100' BUFFER ZONE
BORROW PIT
TOPSOIL STOCKPILE

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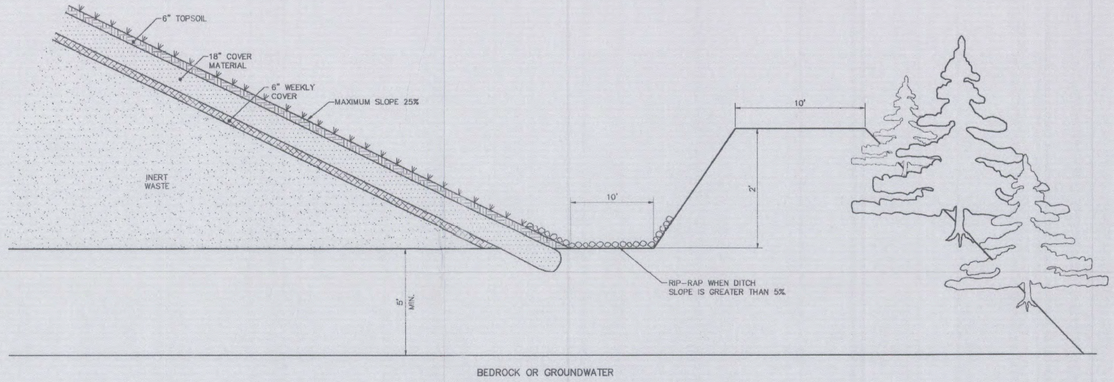
PERC ENGINEERING CO., INC.
CIVIL ENGINEERS & LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502–1712/(205)384–5553

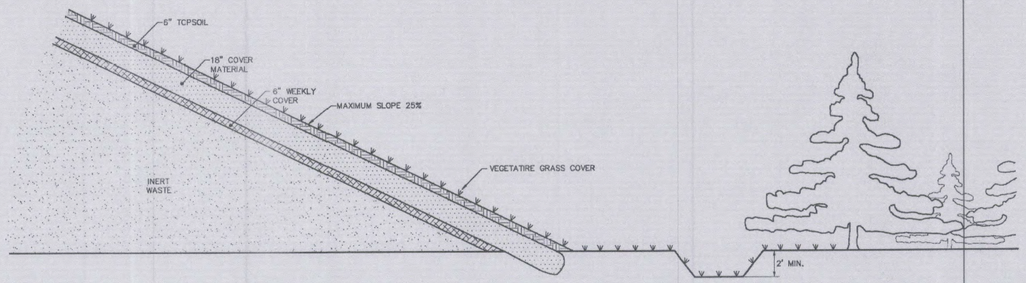
drawn by:	G.B.C.	job number:	
checked by:		initial date:	1–12–93
scale:	1"= 200'	f.b./page:	
diskette no:		dwg name:	WCINRTSB
rev no./date:		rev no./date:	

ALABAMA REGISTERED 12971 PROFESSIONAL ENGINEER ALEX A. WINGO

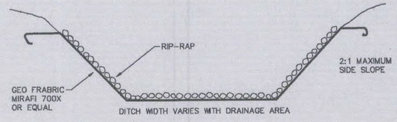
Walker County
Gamble Inert Landfill
Soil Borrow Area
SE 1/4 – SW 1/4 of Sec. 33, T13S, R8W
and part of the
NE 1/4 – NW 1/4 of Sec. 4, T14S, R8W
Walker County, Alabama



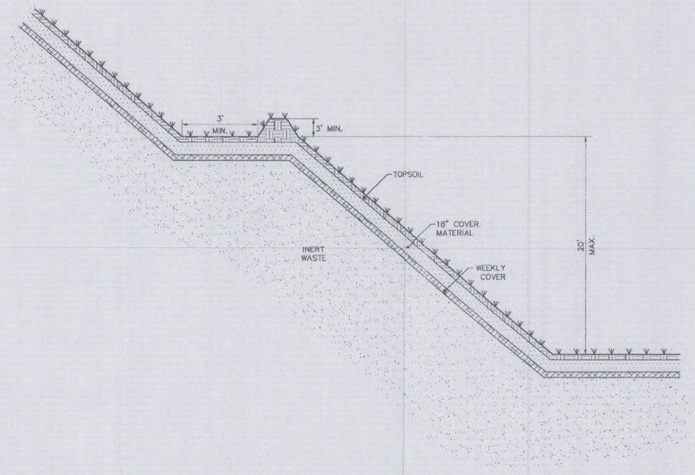
COVER-DITCH-BERM
TYPICAL



COVER-DITCH
TYPICAL



DOWN DRAIN CROSS - SECTION
TYPICAL



DIVERSION DITCH
TYPICAL

NOTES:

1.) INERT WASTE TO BE COVERED WITH 6" WEEKLY COVER.

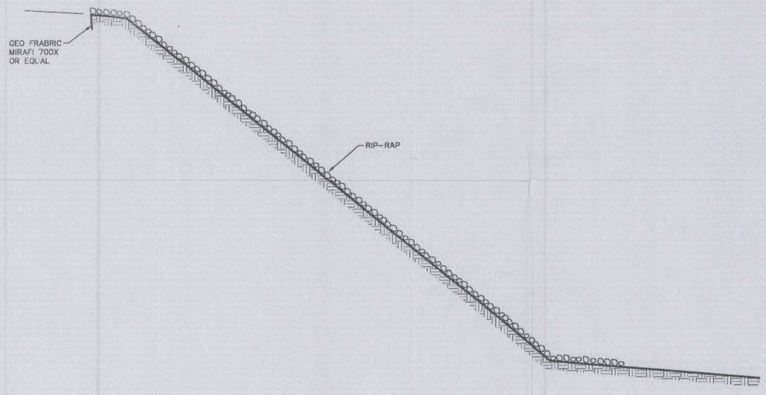
2.) TEMPORARLY CLOSED AREA SHALL HAVE 12" COVER.

3.) CLOSURE AREAS SHALL HAVE 18" OF COVER MATERIAL WITH SUFFICIENT CLAY CONTENT.

4.) 6" OF TOPSOIL MATERIAL SHALL BE PLACED OVER THE ENTIRE AREA.

5.) TIMELY REVEGETATION OF THE AREA SHALL BE NECESSARY TO MINIMIZE EROSION.

6.) RIP-RAP WILL BE REQUIRED IN MAIN DRAIN AREAS WHERE SLOPES ARE GREATER THAN 5%.



DOWN DRAINS - ON WASTE
TYPICAL

C:\INERT\WCINRTCC 02/09/93 07:29

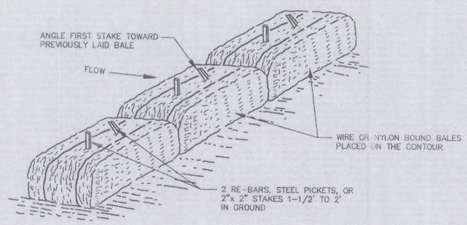
PERC ENGINEERING CO., INC.
CIVIL ENGINEERS & LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

drawn by:	G.B.C.	job number:	
checked by:		initial date:	1-12-93
scale:	NONE	f.b./page:	
diskette no:		dwg name:	WCINRTCC
rev no./date:		rev no./date:	

ALABAMA REGISTERED PROFESSIONAL ENGINEER
TREA A. WINGO

Walker County
Gamble Inert Landfill
Closure Cap Details
SE 1/4 - SW 1/4 of Sec. 33, T13S, R8W
and part of the
NE 1/4 - NW 1/4 of Sec. 4, T14S, R8W
Walker County, Alabama

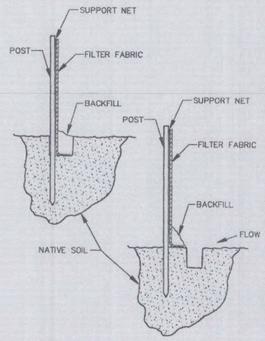
EMBEDDING DETAIL



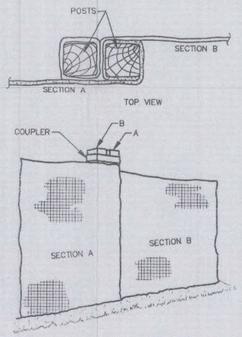
CONSTRUCTION SPECIFICATIONS

1.) BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2.) EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4".
3.) BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
4.) INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

HAY BALE TYPICAL



TOE-IN METHOD



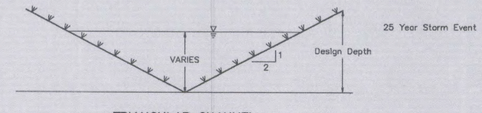
JOINING SECTIONS OF SILT FENCE

CONSTRUCTION SPECIFICATIONS

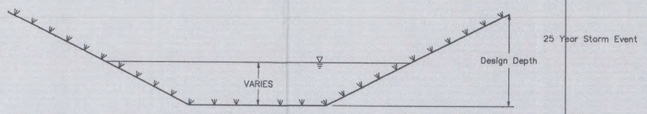
1.) SILT FENCING SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY FITTING THE ADJACENT FENCE SECTION.
2.) EACH SECTION OF FENCING SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 6".
3.) FENCING SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS AT A SPACING NOT TO EXCEED 6'.
4.) INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

SILT SCREEN TYPICAL

SITE RUN-ON
DIVERSION DITCH TYPICAL



TRIANGULAR CHANNEL



TRAPEZOIDAL CHANNEL

Notes:

1. Outer slopes of embankment shall be grassed.
2. Fill material shall be placed in 12" lifts and compacted to 95% of standard proctor.
3. The surface beneath the embankment shall be stripped of undesirable material.
4. See the attached drawings and specifications for diversions.
5. Elevations are based on assumed datum.

C:\INERT\WCINRTSC 01/13/93 09:04

PERC ENGINEERING CO., INC.
CIVIL ENGINEERS & LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

drawn by: G.B.C.
checked by:
scale: NONE
diskette no:
rev no./date:

job number:
initial date: 1-12-93
f.b./page:
dwg name: WCINRTSC
rev no./date:

ALABAMA REGISTERED PROFESSIONAL ENGINEER REX A. WINGO

Walker County
Gamble Inert Landfill
Sediment Control & BMP'S
SE 1/4 - SW 1/4 of Sec. 33, T13S, R8W
and part of the
NE 1/4 - NW 1/4 of Sec. 4, T14S, R8W
Walker County, Alabama

December 18th, 2024

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

RE: **Walker County Gamble Inert Landfill**
Permit No. 64-09 Renewal Application Review Comments

The Walker County Inert Gamble Landfill has received The Departments comments and requests regarding the review of the Solid Waste Disposal Facility Permit Renewal Application for the referenced facility. The comments mentioned in The Departments letter are addressed in the following:

1) A copy of the boundary plat and legal description, which was recorded and signed in May of 1986, is provided.

2) A sediment pond has never been constructed on the property. Therefore, Section 3.0 of the Ops Plan was revised to only include a description of the stormwater system features for which the design calculations are provided in the attached plans.

3) A revision of section 5.0 of the Ops Plan which reflects that no industrial waste will be accepted at this facility is provided.

4) A revision of section 7.0 of the Ops Plan which describes the closure cap to consist of an infiltration layer comprised of 18 inches of compacted earthen material, excluding sands, and an erosion layer comprised of 6 inches of earthen material capable of supporting native plant growth is provided.

An updated ADEM Form 305 is also included to reflect the current person of contact for this site.

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • tanner.johnson@mcgehee.org

Please find these documents attached to this letter. If you should have any questions or need additional information, please do not hesitate to contact me at our office at 205-221-0686 or via email at tanner.johnson@mcgehee.org.

Sincerely,

McGehee Engineering Corp.

Tanner Johnson

Tanner Johnson
Engineering Manager,

Enclosure:

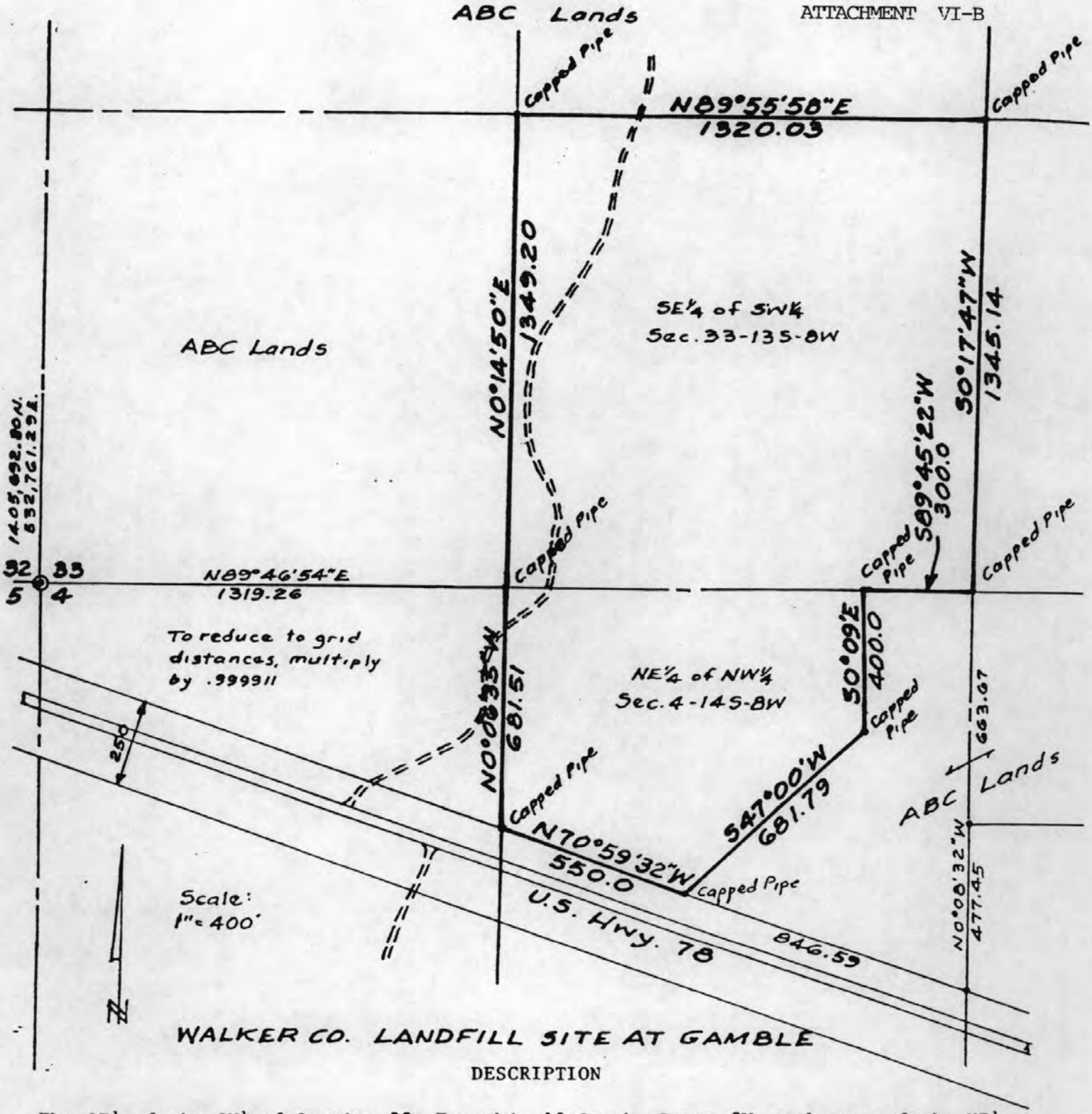
(A) Boundary Plat & Legal Description
(B) Revised Design and Operation Plan
(C) Updated ADEM Form 305

Attachment “A”

Boundary Plat & Legal Description

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • StephenB@mcgehee.org

ATTACHMENT VI-B



WALKER CO. LANDFILL SITE AT GAMBLE

DESCRIPTION

The SE¼ of the SW¼ of Section 33, Township 13 South, Range 8W, and part of the NE¼ of the NW¼ of Section 4, Township 14 South, Range 8 West, Walker County, Alabama, described as follows: Begin at the SW corner of said SE¼ of the SW¼; thence run N 0° 14'50" E, 1349.20 feet to the NW corner of said SE¼ of the SW¼; thence N 89° 55'58" E, 1320.03 feet to the NE corner of said SE¼ of the SW¼; thence S 0° 17'47" W, 1345.14 feet to the NE corner of said NE¼ of the NW¼; thence S 89° 45'22" W, 300.0 feet; thence S 0° 09' E, 400.0 feet; thence S 47° 00' W, 681.79 feet to the north right-of-way of U. S. Highway 78; thence N 70° 59'32" W along said right-of-way, 550.0 feet to the west line of said NE¼ of the NW¼; thence N 0° 06'35" W along said line, 681.51 feet to the point of beginning. Containing 57.26 acres.

May, 1986
R.C. Shackleford

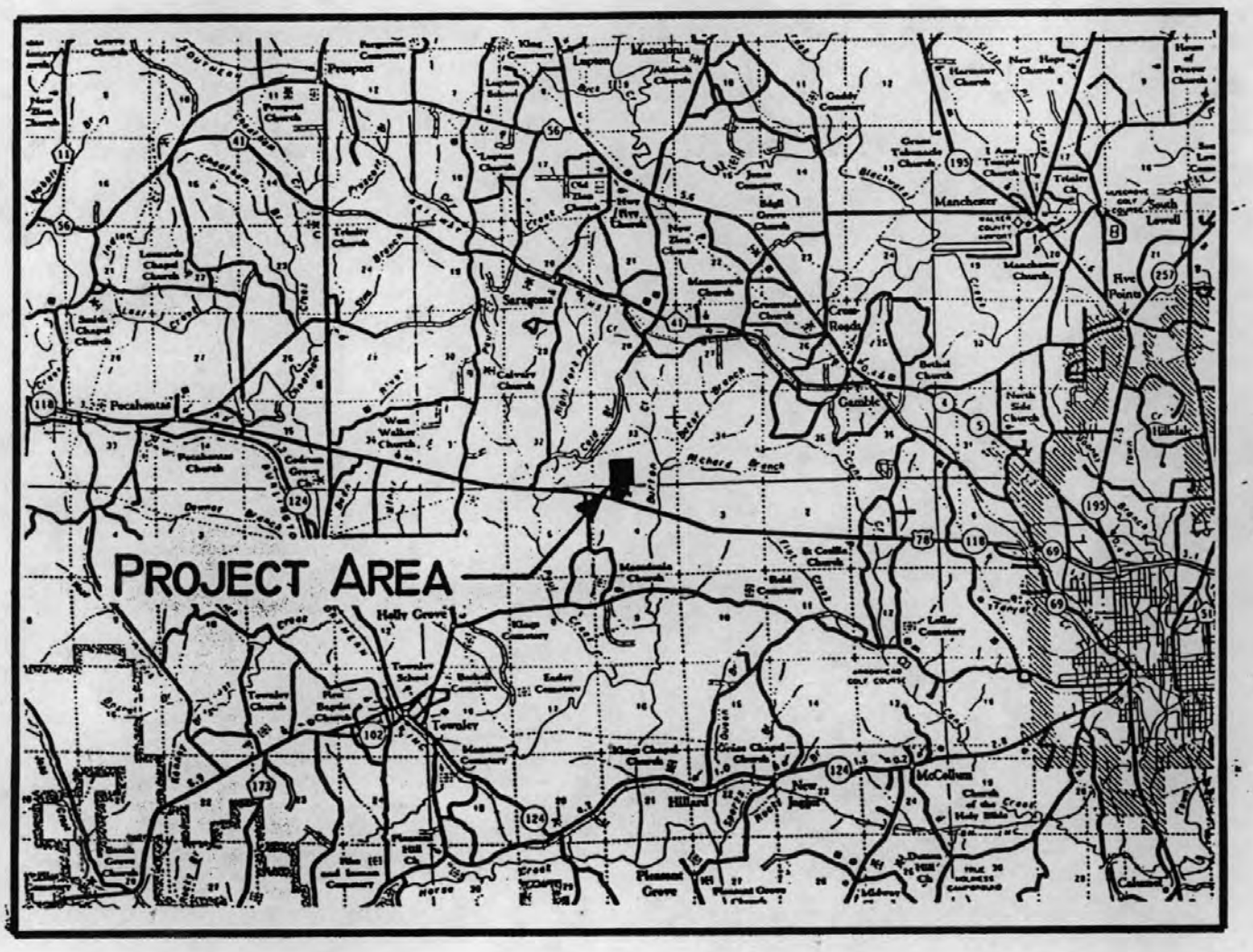
Attachment “B”

Revised Design and Operation Plan

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • StephenB@mcgehee.org

6409

WALKER COUNTY LANDFILL
TRANSFER STATION INERT PERMIT RENEWAL



SCALE: not to scale

PERC ENGINEERING CO., Inc.
CIVIL ENGINEERING & LAND SURVEYING

TELEPHONE (205) 384–5553

P. O. BOX 1712
JASPER, ALABAMA

INERT PERMIT RENEWAL
Walker County Inert Landfill Transfer Station – Gamble
Walker County Commission
Walker County, Alabama

DESIGN AND OPERATION PLAN

Revised: December, 2024

Prepared by:

McGehee Engineering Corp.
P.O. Box 3431
450 19th Street West
Jasper, Alabama 35501-3431
Telephone: (205)221-0686
Fax: (205)221-7721

TABLE OF CONTENTS

1.0 INTRODUCTION

1.0 Introduction

The purpose of this report is to supply the Engineering Services Branch of the Alabama Department of Environmental Management (ADEM) with the engineering design information necessary to evaluate the application by the Walker County Commission to renew the existing inert landfill.

The existing ADEM Permit No. is 64-09, located in SE 1/4 - SW 1/4 of Section 33, Township 13 South, Range 8 West, and NE 1/4 - NW 1/4 of Section 4, Township 14 South, Range 8 West in Walker County, Alabama.

There are no zoning requirements within Walker County.

2.0 PERMIT APPLICATION

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

1. **Facility type:**
   - ____ Sanitary Landfill (SLF)
   - X Inert Landfill (LF)
   - ____ Industrial Landfill (LF)
   - ____ Other (explain) ____

2. **Facility Name:** Gamble Inert Landfill

3. **Applicant:**

   Name: Walker County Commission

   Address: Post Office Box 1447
   Jasper, AL 35502

   Telephone: 384-4930

4. **Location:** (include county highway map or USGS map)

   Township 13 South / 14 South Range 8 West / 8 West Section 33 / 4
   County Walker

5. **Land Owner:**

   Name: Walker County Commission

   Address: Post Office Box 1447
   Jasper AL 35502

   Telephone: 382-4930

(Attach copy of agreement from landowner if applicable.)

6. **Contact Person:**

Name: David C. Edgil and Ronald R. Gilbert

Position or Affiliation: Walker County Engineer-Permit Consultant (PERC Engineering)

Address: Post Office Box 1447 Jasper AL 35502
Post Office Box 1712 Jasper AL 35502-1712

Telephone: 384-7249 or 384-5553

7. **Size of Disposal Facility:**

57 Acres

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

Residents of Walker County

9. **Proposed average daily volume to be received at landfill:**

75 Tons/Day

10. **List all waste streams to be accepted at the facility (i.e., household solid waste, wood boiler ash, foundry sand, tires, trees, limbs, stumps, construction and demolition debris, etc.):**

Discarded tires; trees; stumps; limbs; leaves; construction materials such as wood, concrete, steel, ashes (from clearing and grubbing activity only); street and highway cleanings and other similar inert materials generated in Walker County.

SIGNATURE

DATE

3.0 DESIGN REQUIREMENTS

3.0 Design Requirements

3.0 Design Requirements

In order to comply with Alabama State Solid Waste Regulation, this report presents information outlined in Division 13 of the ADEM Solid Waste Program. The Walker County Commission is requesting a permit extension for the existing inert landfill site and is presenting data and information for the construction and operation of the above mentioned facility. This report is divided into the following sections:

1) Site Overview and Criteria
2) Groundwater Consideration
3) Landfill Design Concept
4) Cover Material
5) Slope and Grading Requirements
6) Sediment, Stormwater and Best Management Practices
7) Explosive Gas Monitoring Plan
8) Site Access Roads
9) Site Security
10) Buffer Zones
11) Final Cover/Closure

3.1 Site Overview and Criteria

The proposed Walker County Inert Landfill Transfer Station-Gamble permit renewal for the Walker County Commission is located in Township 13 South, Range 8 West, Section 33, Southeast 1/4 of the Southwest 1/4 and Township 14 South, Range 8 West, Section 4, Northeast 1/4 of the Northwest 1/4.

The landfill site size is approximately 57 acres, including the existing inert landfill. The landfill disposal area is designed to encompass approximately 25 acres of this site. The remaining portion of the site will be used for sediment and drainage control, buffer zone, berms, and operation facilities. The county presently operates a sanitary waste transfer station on this site.

3.2 Geology

The Walker County Inert Transfer Station - Gamble lies in the center of the Warrior Coal basin, the most productive coal-bearing area in the state, which is located within the Appalachian Plateau Physiographic Province. A portion of the landfill permit extension has been surface mined.

The main coal-bearing formation is the Pottsville Formation of the early Pennsylvanian Age. The Pottsville is characterized by clastic sedimentary rock sequence of sandstone, siltstone and shale, along with coal beds and associated underclays. Materials weathered from these sandstones, siltstones and shales make up most of the soils in this county, being that of sands, silts and silty clays. The strata in the Pottsville Formation generally strikes to the northeast and dips slightly to the southeast.

The structural geology of the Warrior Coal basin is a homocline which plunges gently to the southwest. The rate of plunge averages fifty (50) feet per mile. The area around Jasper is relatively unaffected by large scale topographic features.

The rolling terrain varies in elevation from about 300 to 650 msl, with on-site elevation variances from 410 to 515 msl.

The most common geologic structural features of Walker County are faults and joints. The faults are predominately normal faults which are normally in a northwest to southeast orientation. The fault displacement rarely exceeds 200 feet. The geologic features within 2 miles of the landfill permit extension boundary are shown on Map No. 1. No faults or joints appear inside the permit boundary.

The stratigraphy of the Pottsville Formation is made up of 2 sub-divisions, the Lower Pottsville and the Upper Pottsville. The area around Jasper lies in the Upper Pottsville, which contains the major coal groups of the Warrior Basin.

The landfill extension area is located in the Mary Lee coal group which contains five coal beds, in descending order, New Castle, Mary Lee, Black Creek, Jagger and Ream beds. (See Map No. 2). The Mary Lee coal group occupies a stratigraphic interval that is from 120 feet thick to 220 feet thick, however, the outcrop areas are less.

3.3 Groundwater and Soil Consideration

Groundwater in the Pottsville Formation exists in the sandstones and in openings along joints, faults and bedding planes, the latter being the most productive. Except where fractured, the coal, shale and siltstones are relatively impermeable and usually do not yield significant quantities of water. The water table ranges from 10 to 50 feet below the surface, with yields of water

from most wells at less than 10 gpm.

Drainage areas in the Pottsville are generally by surface runoff. The sands, silts and silty clays will absorb small quantities of water, but the steep slopes underlain by shale and sandstone facilitate rapid runoff. In some valleys, standing water is common during extended periods of rainfall.

The initial site drilling was performed on June 29 and 30, 1992. The site was drilled (8 borings) using an auger drill and soil samples were collected and classified by general procedures recommended by the Burmeister Method of Soil Classification. The initial drilling proved the site bedrock was deeper than the minimum five (5) feet requirement in Section 335-13-4-.01 of the Administrative Code. Groundwater was not encountered during the drilling operation.

Borings where terminated when the auger experienced appreciable resistance to advance; i.e. "auger refusal". The soil overburden generally consisted of a very low moisture content silt with some and/or little clay and traces of fine to very fine sand. (See drillhole locations on page 3 of 10 of the plans). Due to the absence of moisture in the soil samples, there was no evidence of a saturation zone.

Auger Boring Results

Boring #	Depth (Ft.)
B-1	33.0
B-2	14.0

B-3	14.0
B-4	14.0
B-5	12.0
B-6	12.0
B-7	7.0
B-8	14.0

Heavy rains occurred at the site during the drilling program on June 29 and June 30, 1992. After the rainfall event, (twenty-four hours), the bore-holes were observed to determine the presence of groundwater. Some of the bore-holes had water present. It is believed that the water was from surface runoff. A permanent and natural groundwater table is not evident at the site within the zone drilled. There is also no evident of any localized springs at or near the site. Small depressions are present at the site (See page 3 of 10 in the attached plans). The small depressions are result of a previously mined area. A small amount of surface water is retained in these depressions. The depressions will be drained prior to disposal of any inert waste in these areas.

Test pits were excavated using a back-hoe to obtain proctor and permeability samples from the site September 29, 1992. These samples were obtained at Boring B-5 and B-8 locations and terminated at 5.0 and 5.5 feet, respectively. The test pit at B-8 location had water percolating into the excavation zone from a clay seam at an approximate depth of 2.5 feet.

3.4 Surface Water

As stated above, the site consists of small depressions. It

is our opinion that any water found just beneath the surface (down slope from the depressions) is from the depressions and these perched water zones will be eliminated when these depressions are drained. The existing depressions will be backfilled to a minimum of five (5) feet above the bedrock on seasonal high water table, whichever is less.

3.5 Landfill Design Concept

The basic conceptual design of the Inert Landfill Transfer Station - Gamble is of the natural attenuation type. The landfill will use as much on-site borrow material as possible while remaining 5 feet from site bedrock or groundwater. See sheet 10 of 10 in plans.

The landfill is designed for the disposal of inert waste. These wastes are non-hazardous, non-toxic and chemically stable. For this reason, the landfill is not lined. No burning, salvaging, or scavenging is allowed at the site and cover material is placed on a daily basis. Users of the site consist primarily of residents, businesses, and municipalities of Walker County. Other users are allowed dependent upon the material for disposal and fees charged appropriately.

The landfill facility is designed to accept approximately 90 cubic yards of inert waste per day. At the estimated disposal rate of 45 tons per day, the landfill should have an operational life of 35 years.

Details, calculations, and excavation limits can be found in

Appendix B of this report.

The surface water controls on site will consist of berms, diversion ditches, and silt screens. During the landfill operation Best Management Practices will be used to minimize site erosion. Off-site water will be diverted around the landfill area. See Sheet 9 of 9 in the attached plans for details.

Intermediate berms will be used to divert on-site surface waters on undisturbed areas away from the landfill disposal face.

3.6 Cover Material

The weekly cover material is a minimum 6 inch soil layer or approved alternative material. The weekly cover material will be excavated on-site or from acceptable off-site soil sources as approved by ADEM. Waste will be covered at the end of each working week.

Cover material will be a minimum of 12 inches thick in areas inactive for a period of 120 days or more.

3.7 Slope and Grading Requirements

The grading requirements for the landfill site will range between maximum of 25% and minimum of 5%. The grading slope ranges allow surface water to run-off of the disposal area (to minimize infiltration) but limit the surface water speed to reduce erosion.

In addition to grading slope requirements, the disposal area will have diversion ditches every 20 feet vertical rise or less in order to control erosion and provide stability. See sheet 5 of 10 and 8 of 10 of the attached plans for details.

3.8 Sediment and Stormwater Management

The on-site stormwater system shall consist of several diversion ditches. The diversion structure, berms, and closed out areas of the landfill will be seeded with grasses to reduce erosion. Silt fencing and hay bales will also be used in disturbed areas where needed. See sheet 9 of 10 in the attached plans for details.

The Walker County Commission has filed under the NPDES General Permit for Landfills ALG1600000.

3.9 Explosive Gas Monitoring Plan

In order to meet the requirements of Division 335-13 of the ADEM Administrative Code, Section 355-13-4-.16(6), this plan has been developed and submitted for approval. This plan, furthermore, has been implemented for the protection of the workers and environment.

The Walker County Inert Landfill Transfer Station – Gamble will only accept non putrescible, non-hazardous inert waste as described in the solid waste permit. Inspection plans have been developed and implemented to intercept non-approved waste from disposal at this facility. However, due to waste decomposition,

there exists the possibility of the production of explosive gas (methane).

Site conditions including soil conditions, site drainage, and hydraulic conditions in the vicinity present no appreciable problems to monitoring of methane gas. Monitoring of gas shall be performed by utilizing hand held methane detection devices. Devices similar to that manufactured by Bascom-Turner Instruments Model CGC-300 (Gas-Sentry). Detector devices shall be capable of reading % methane ranging from 0-100% with a scale graduated in 0.1% increments and LEL will readings to 1% increments.

Methane (gas) testing shall be performed a minimum of once per year at designated Gas Monitoring Sites (GMS) as shown on the attached map. In addition to monitoring of these boundary points, gas monitoring shall be conducted in structure, culverts, under bridges, drop inlets, and other locations where methane gas may accumulate.

If at any time gas levels exceed 25% of the lower explosive limit (LEL) in facility structures, the structures will be vented immediately and structure changes made to reduce gas levels to below the 25% LEL. Any structure located on the landfill where explosive gas readings have exceeded the LEL will have an adequate gas alarm system installed to warn when gas levels are above the 25% LEL.

If at any time gas levels in the boundary monitoring points exceed the lower explosive limit (5% methane), all operations in areas which exceed the LEL will be temporarily suspended and posted

"Danger - Explosive Gases" and access to these areas will be restricted to the owner, engineer, state officials, and necessary personnel.

On-site facility structures shall be constructed not to allow explosive gases to collect in, under, or around structures in concentrative to exceed the requirements of Section 335-13-4-.16 of the Administrative Rule.

EXPLOSIVE GAS MONITORING PLAN
WALKER COUNTY INERT LANDFILL TRANSFER STATION - GAMBLE

If explosive gas levels exceed the limits allowable in either monitoring points or structures the following actions will be taken:

1.) County Engineer or Landfill Supervisor will be notified of gas levels in excess of limits and the areas where danger exists.

2.) Landfill supervisor will immediately notify employees (or other persons in the area) of the dangerous area and take all steps necessary to protect the human health and property.

3.) The Department (ADEM) will be notified of the excessive gas levels detected and of steps taken to protect human health and property.

4.) The landfill supervisor will notify all residents within 1000 feet of the excessive boundary readings, and upon approval from the property owner will check (basements, under houses, or other places where gas may accumulate) for explosive gases.

5.) Within fourteen (14) days and after evaluation of the nature and extent of the problem, a remedial plan will be submitted to the Department (ADEM) for approval. The plan shall be implemented upon approval by the Department (ADEM).

NOTE: If the landfill supervisor is not available the person conducting explosive gas testing will clear the danger area and notify the superintendent of the Street Department and the Emergency Management Agency of the high explosive gas readings.

Gas Monitoring Well locations on Sheet 6 of 10.

3.10 Site Access Roads

The site access roads will be constructed and maintained to allow safe passage of disposal equipment. The all-weather roads will be constructed 25 feet wide or greater and properly drained. The wear surface will be covered with a crushed aggregate to chert material and maintained as needed. This road will be maintained to the operating face.

Typical roadway sections are shown in Figure No. 1 and Figure No. 2.

3.11 Site Security

Site access will be controlled through on lockable gate with a facility identification sign. The remainder of the landfill area will control access using berms, fences, ditches or natural barriers.

During operating hours, a minimum of one County employee will be on site to inspect and direct incoming inert waste.

3.12. Buffer Zones

The inert landfill area will have a minimum of 100 feet of buffer zone between the permit boundary and the disposal area, however, roads, berms, erosion control devices and buildings may be placed in this zone. See attached Sheet 5 of 10 for details.

Fast growing trees or shrubs will be placed in appropriate

areas in order to minimize the sites visibility to the public. Existing trees will be left undisturbed as much as possible in this buffer zone.

3.13 Final Cover

The landfill closure cap/cover will consist of an 18" layer of soil with sufficient clay content to minimize surface water infiltration (with a target permeability of 1×10^{-5} or less) and 6" topsoil material.

The 18" soil layer is designed to minimize surface water infiltration and promote site runoff. The 6" soil layer is to promote vegetative growth thus minimizing soil erosion and cover degradation. See attached Sheet 8 of 10 for details.

4.0 PLANS

4.0 Plans Required

The following plans are enclosed on 24 x 36 sheets.

1 of 10	Boundary Survey
2 of 10	Initial Topographic Map
3 of 10	Pre-Disposal Grading Plan
4 of 10	Proposed Cell Layout
5 of 10	Final Grading Plan
6 of 10	Explosive Gas Monitoring Plan
7 of 10	Soil Borrow Area
8 of 10	Closure Cap Details
9 of 10	Sediment Control & BMP's
10 of 10	Ground Water & Bedrock Contour Map

5.0 OPERATIONS PLAN

5.0 Operations Plan

The inert landfill site will be operated under the control of the Walker County Commission. The operation requirements as defined in Section 335-13-4-.21 and 335-13-4-.23 will be incorporated into the operation plans for this facility as follows:

General Operations Standards

The general operations standards of the Inert Landfill Transfer Station - Gamble site will consist of the following general categories:

1) Open Burning
2) Operation and use of site
3) Wastes accepted at facility
4) Water pollution prevention
5) Facility Boundary

Open burning at the landfill will be prohibited unless approved by ADEM.

The Walker County Commission may consider burning at the site in event of:

1) Burning of clearing debris during construction.
2) Emergency clean-up debris resulting from a catastrophic incident (tornado, hurricane, severe winds, etc.).

If the Walker County Commission Landfill Manager felt burning was necessary, a written request would be made for approval by ADEM, Alabama Forestry commission, and the Walker County Health Department before burning could be done. Burning would not be permitted until written approval from ADEM was given.

The operation and use of the Inert Landfill Transfer Station - Gamble for the disposal of inert waste such as tires, trees, stumps, limbs; construction materials such as wood, concrete, steel, ashes, (from cleaning and grubbing activity only), and street and highway cleanings.

The Solid Waste Disposal Facility Permit listing will stipulate waste and will override this section if they differ.

The waste accepted at this site will be non-hazardous inert waste as defined in Section 335-13-1-.03 of ADEM Administrative Code and the Solid Waste Disposal Facility Permit. The control of waste stream incoming to the site will be accomplished in two ways:

1) Geographically
2) Inspection of Waste

The geographic service area of the landfill is defined in the permit application. The waste producers in this service area will be allowed to dispose of approved waste.

The inspection of incoming waste will be done by on-site

personnel to insure that only permitted waste will be accepted at the inert landfill. No free-liquids, hazardous waste, medical waste, or waste of unknown origins will be accepted.

Containers larger than 10 gallons shall not be accepted unless they are rendered unsuitable for holding liquids prior to delivery to the inert landfill.

Random inspections of incoming loads will be performed and recorded to prevent the disposal of unacceptable solid waste materials at this inert landfill. The Walker County Commission will also inspect any suspicious loads which may arrive at the landfill site. Industrial waste will not be disposed of at this site as that this is not an industrial disposal facility.

Records

Daily records of all incoming waste will be kept and will identify the quantity and origin of waste. Records of all random inspections will be maintained at the facility for ADEM review.

The Walker County Commission Sanitation Department and its employees will be responsible for properly managing and inspecting the incoming inert waste. Any questionable waste, free-liquids, regulated hazardous waste, medical waste, or any other non-approval waste will not be disposed of at this site. The County employees responsible for record keeping and inspection will be trained and certified. The county will notify ADEM immediately if free-liquids, regulated hazardous waste, or untreated medical waste is discovered, other types of non-approval waste will be directed to the nearest approved facility

to the nearest approved facility and a record kept of the nature, origin and transporter of the unacceptable waste. If the action repeats, ADEM shall be notified.

The inert landfill will be constructed in a manner to protect the surface and groundwater resources. An NPDES permit will be obtained as required under the Alabama Water Pollution Control Act for any discharge into waters of the state.

The disposal facility will be clearly marked with permanent markers which are at least visible from one marker to the next.

Specific Requirements for Landfills

The specific requirements for inert landfills are defined in Section 335-13-4-.23. This inert landfill shall be operated and maintained in accordance with this section.

All waste shall be covered with 6 inches of compacted earth or other alternatives for cover as approved by ADEM, at the end of each weeks operation.

All waste shall be thoroughly spread in layers 2 feet or less in thickness and thoroughly compacted daily with adequate landfill equipment prior to placing additional layers of wste or placing the weekly cover as specified in 335-13-4-.23(1), unless otherwise approved by ADEM. Waste such as construction/demolition waste and other types of waste which cannot be managed by landfill equipment in this manner shall be managed in a manner approved by the Department.

The landfill area which will not have additional waste placed on them in three months or more shall be covered within 30 days with a minimum of 12 inches of intermediate soil cover, graded to prevent ponding of surface water, and proposed for the establishment of a temporary vegetative cover.

The areas where the landfill has reached the approximate final elevation, final grading will begin within 60 days for each fill area of 2 acres or more. Areas which have not reached final grade elevations will be temporarily closed and the intermediate cover will provide adequate cover until a larger area can be closed with the final closure cap.

The final closure cap will consist of 18" inches of protective soil cover and 6 inches of topsoil. The closure cap material should be taken from the Borrow Area (see page 5 of 10 in the plans) or approved off-site source (See soil sample results No. 299 & No. 300

in Section 7, Figure E.4b and E.4c).

Within 30 days of the final closure of a particular area of the inert landfill, the area will be scarified, limed, fertilized, seeded, and mulched with hay as soon as possible. The soil amendment will be determined by a combination of laboratory tests, experts experience, and the local agriculture extension service recommendation.

The daily operation of the inert landfill will manage the working face size, depth, angle and thickness. The working face size will be limited to approximately 200 feet by 100 feet. Each lift shall be compacted for each 2 feet of depth, the disposal waste thickness will not exceed 8 feet with a 6" compacted soil cover. All waste on the working face will be composed as described above and the working face slope shall not exceed 4 to 1 (25% or 23 degrees).

Should there be a problem with vectors at the site, the Solid Waste Branch should be notified immediately. Scavenging and salvaging shall not be permitted at this facility.

Litter will be controlled at the facility and along access roads and over the adjoining properties. Litter clean-up will be performed as necessary.

Fire protection for the site will be supplied by the Townley Volunteer Fire Department and/or the City of Jasper Fire Department. Fire extinguishers will be located on each piece of equipment and in all facility buildings. The extinguishers will be

maintained and periodically inspected by a company specializing in this service.

The inert landfill will be operated in accordance with approved plans and permit as issued by ADEM and other regulatory agencies.

An experienced landfill supervisor will be responsible for operation of the Inert Landfill Transfer Station - Gamble. The landfill supervisor will direct the equipment operators and operations personnel on a daily basis. An attendant will inspect all waste and record the necessary information. The equipment operator will be responsible for inert waste placement, cover material placement, site drainage, and diversion and sediment control structures. The equipment operator will also be responsible for access road maintenance at the working face.

The Walker County Commission has an existing metal building on-site that serves as an administrative office, shelter, communications and toilet.

Equipment on-site will consist of a minimum of 1 John Deere 544D loader, 1 Caterpillar D7G bulldozer for leveling, compaction and cover material placement. 1 International truck tractor and 1 Pac-More transfer trailer are on-site for use at the transfer station. All equipment will be kept in good working order, safe, and operational to make sure the site is managed efficiently.

The landfill site will be adequately secured and access controlled by the use of fences, berms, and gates.

The site will have a sign posted with the following information:

Name of Permittee
Owner of Facility
Name of Landfill
Days and Hours Operated
Waste Types Accepted
Disposal Fees
ADEM as Regulatory Agency
Solid Waste Branch (205) 271-7761

An all weather access road will be constructed 25 feet wide.

In providing all weather access roads, the Walker County Commission will be able to operate the inert landfill the entire year.

Cover material will be excavated from on-site borrow areas (primarily from Borrow Area noted on page 5 of 10 in the plans) which will be a part of the storm water management system. In time of high seasonal rainfall, the weekly cover will be excavated on dry days and stockpiled for weekly cover. If the quality or quantity of on-site cover material become a problem, off-site approval materials will be used.

The areas of the landfill which have been filled to the closure elevation on the drawings will be closed as per the approved closure plans and in accordance with ADEM Administrative Code. Special soil provisions should be noted in the closure

areas. The closure cap material should be excavated from the Borrow Area or an approved off-site source. Testing as indicated in the QA/QC plan should be done to insure that sufficient clay content of the closure cap material will prevent surface water infiltration.

Environmental monitoring and structures will be maintained during the landfill operation, closure and post closures period.

Records shall be maintained on the daily volume of waste received at the landfill. A quarterly report utilizing a format approved by ADEM which summarizes the daily volumes shall be submitted to ADEM and maintained on file in the operating record of the facility.

WALKER COUNTY COMMISSION
SOLID WASTE
RANDOM INSPECTION FORMS

DATE: ___/___/___ TIME:_____:_____ AM/PM

INSPECTOR'S NAME:_____

DELIVERY MODE:

MUNICIPAL TRUCKS _____
PICK-UP (PRIVATE) _____
AUTOMOBILE (PRIVATE) _____
COMMERCIAL TRUCK/TRAILER _____

NAME OF DELIVERY MODE: _____

ADDRESS OF DELIVERY OPERATOR: _____

_____

_____

INDUSTRIAL WASTE CERTIFICATION _____YES _____NO

DETERMINATION OF CONTENTS: _____

_____

_____

WASTE ORIGIN _____

ACCEPTABLE _____YES _____NO

IF NO, STATE: DATE, TIME, & INDIVIDUAL CONTACTED:

TIME_____:_____ AM/PM

WALKER COUNTY COMMISSION
LANDFILL MANAGER

TIME:_____:_____AM/PM

ADEM
SOLID WASTE BRANCH

_____

_____
(205) 271-7726

6.0 QUALITY CONTROL AND QUALITY ASSURANCE

6.0 Quality Assurance and Quality Control Plan (QA/QC Plan)

The QA/QC Plan was developed for the closure of the Inert Landfill Transfer Station - Gamble which will address the site work, earthwork, and final cover materials. The plans major objective is to test the construction requirements according to design and performance standards for the closure.

The final cover for the facility will have to meet the requirements of Rule 335-13-4-.23(1)(c)(1) and 335-13-4-.23(1)(d). The final cover will have to be a minimum of two feet thick after compaction and shall be of a quality to be easily managed and with a sufficient clay content to provide an adequate seal on the landfill waste. This quality control and assurance should be used as a guide line for achieving these goals.

The Walker County Commission (or assigned representative) will be in control of the site work.

Quality Control work shall be performed by a QA/QC engineering firm.

6.1 Objectives

Quality assurance (QA) for the landfill construction is planned with the systematic actions necessary to provide adequate confidence that the permit requirements have been achieved.

The inert landfill QA/QC Plan will focus on mainly soil work. Some important terms to discuss which will be an important part of the plan are:

1) Unified Soil Classification System ASTM
2) Standard Proctor ASTM
3) Permeability
4) Density
5) Moisture Content
3) Atterberg Limits
7) Plasticity
8) Grain Size Distribution

6.2 QA/QC Engineer

The inspection and test requirements of the project will be directed by the engineer.

The following records will be maintained by the engineer and will be supplied to the owner upon request or at project completion.

These records are:

1) Technical Specifications
2) Certified plans and construction drawings
3) Field and laboratory test results
4) Inspection reports (daily)
5) As-built drawings
3) Notification to contractor/owner of test failures and date of rework/retest.

6.3 Landfill Soil Test (Subgrade, Berms, Closure Cap, Other Fill)

The following test shall be performed on soil subgrade, berms, and other fill areas at the inert landfill site.

1) Unified Soil Classification

a) ASTM 0422 Particle Site Analysis of Soils

i) Minimum number of test is one test per material change or one per 3,000 cubic yards of material fill.

b) ASTM D4318 Atterberg Limits

i) Minimum number of test is one per material change or one per 3,000 cubic yards of material fill.

2) Visual Soil Identification
ASTM D2488

a) One test per day or material change to be recorded on the inspection report.

3) Standard Proctor Test
ASTM 0398

a) Minimum of one test per 5,000 yards of material fill or at a soil material change.

4) Moisture Content
ASTM D2213

a) Minimum of 2 test per 800 cubic yards or more often in areas of material changes.

5) Density of Soil Tests
ASTM D2922 - Nuclear Method
ASTM D1533 - Sand Cone
ASTM D2937 - Drive Cylinder

a) Minimum of 1 test per 800 cubic yards of fill material or more often in areas of material changes.

3) Permeability test

a) Minimum of 1 test per 2 acres or more often in areas of material change.

7) Fill areas for landfill construction and berms shall be free from stumps, trees, roots, sod, muck, debris, or frost. Only approved materials shall be used.

8) Compacted fill shall be constructed by depositing fill materials in successive uniform layers of not more than eight (8) inches in depth, loose measurements over the entire area, and the surface of each layer shall be kept parallel to the elevation of the finished compacted fill.

9) Each layer shall be compacted by use of a sheeps foot roller, or other suitable roller depending upon character of material.

10) The density of each layer shall not be less than ninety-five (95) percent of the maximum density as determined by SPT(ASTM D398) (For site construction of berms, pond, and roads).

Closure material shall be monitored by the QA/QC engineer to insure proper density to retard surface water infiltration.

11) Rocks greater than two (2) inches shall not be placed in compacted fills. Rocks may be used in berms provided that all voids are filled with fine materials and the hole is compacted to a dense mass. Rocks greater than 1 cubic foot in volume or larger then one foot in any dimension shall not be placed in fill areas. Rock shall not be placed in fill less than 2 feet.

12) Bare areas shall be proof-rolled with a large rubber tired vehicle of sufficient weight to reveal unstable areas as determined by the engineer. Unstable areas shall be undercut and stabilized as approved by the engineer.

INSPECTOR'S DAILY REPORT

Project Description: Walker County Commission Inert Landfill Transfer Station- Gamble

Project No. 921470-7 Day & Date _____

Weather: _____ Temperature: High _____ Low _____

Work Day: ____ Time Work Started: _____ Stopped: _____ Hours Worked: __

Contractor's Forces: Supt. _____ Foreman _____

Operators _____ Laborers: Skilled _____ Unskilled _____ Others ____

Contractor's Name: _____

Engineering Personnel: _____

_____

CONTRACTOR'S EQUIPMENT ON PROJECT

Number & Type	Operating	Not Oper.	Reason Not Operating

DETAILS OF DAILY OPERATIONS

_____

_____

_____

_____

TESTS (TYPE & LOCATION)

_____

_____

_____

_____

_____

Inspector

Visitors: _____

_____

7.0 CLOSURE AND POST CLOSURE PLAN

7.0 Closure and Post Closure Plan

7.1 Introduction

The purpose of this plan is to summarize the steps the Walker County Commission plans to take when the Inert Landfill Transfer Station - Gamble is closed. A portion of the landfill site will be used as a buffer zone and facilities area.

This plan includes design criteria to comply with the ADEM Administrative Code, Division 13, Solid Waste Program, 335-13-4-.20 Closure. The major design concepts includes minimization of rainfall infiltration by use of a selected cover material and specific allowable grades, minimization of erosion by use of diversion ditches, and a permanent vegetative cover. Also included in this plan are maintenance specification that will assure long term stability of the landfill site.

7.2 Waste Projection

A.) Volume

Walker County produces approximately 495 cubic yards of inert waste per week, including daily cover material. This equates to 25,740 cubic yards of landfill space used per year.

B.) Area Affected

The area of land affected during the inert landfill operation is approximately 25 acres. This area will require approximately 63,888 cubic yards of closure cap material and 21,296 cubic yards of topsoil material (i.e. soil material adequate to maintain vegetative cover).

7.3 Closure

A.)Grading Requirements

The following grading requirements are incorporated as a part of this closure plan and are illustrated on the attached Closure Plans-Initial and Final Topo. The surface grading will be done in a manner to prevent ponding of water on the disposal facility. Minimum and maximum allowable finished grades will range between 5 and 25 percent. These grades are established to allow for proper drainage but prevent erosion. Diversion ditches will be used in areas where the possibility of erosion exists (i.e. slope of 20 feet elevation change and greater).

B.) Closure Material

1.) Material Type

The closure material required to prevent surface water infiltration on the inert landfill site is required to be a minimum of two feet thick after compaction and shall be of a quality to be easily managed and with a sufficient clay content to provide an adequate seal on the landfill waste, a target permeability of 1.0×10^{-5} cm/s or less is suggested. This is the major criteria used in selecting a soil along with soil availability, haul distance, ownership and accessibility.

The selected soil cover material is on-site material or approved off-site materials as indicated on the Closure Plans. The unconsolidated material ranges from 1 to 35 feet in thickness, of this material designated areas are acceptable as cover material. The topsoil material in these areas will be stockpiled and placed over the closure area as an

earthen layer for vegetative growth.

The following soil tests were performed on the cover material:

1. Unified Soil Classification
2. Standard Proctor
3. Constant Head Permeability

The results of the tests are enclosed.

2.) Quality Control and Quality Assurance

Quality Control and assurance will be achieved by use of soil testing or random samples, field testing in-place compaction of the cover material, field inspection during construction and field measurement of soil layer thickness.

The cover layer will be comprised of a minimum of 18” of compacted earthen material, excluding sands. The soil material selected for the cover layer to reduce infiltration was tested to have a permeability of $1.25x10^{-6}$ cm/sec at 95% compaction +2% optimum moisture. During closure construction, additional samples should be taken and tested to assure the material will have sufficient clay content to retard infiltration.

3.) Construction and Cover Material Compaction

The cover material will be placed using conventional excavation equipment such as dozers, loaders and trucks. Material should be placed in 4 to 3 inch lifts and compacted using sheeps foot rollers, rubber-tired rollers, or vibrator rollers to achieve desired compaction. Compaction testing should be done on each compacted lift and recorded. Any areas failing to achieve the desired compaction will be re-rolled and retested before any additional cover material is filled on the area.

The closure cap moisture should be maintained at 2% above optimum during construction.

After the 18” cover layer is constructed, 6” of topsoil material, capable of supporting native plant growth, will be placed over the entire area. This material will not be compacted, but will be leveled and shaped for drainage, then planted within thirty days. The major purpose of this soil layer will be to establish vegetation to prevent erosion.

Cover Material Sample Results

1. Soil Boring (E.1)
2. Standard Proctor (E.2)
3. Unified Soil Classification (E.3)
4. Constant Head Permeability (E.4)

FERN ENGINEERING CO., INC.
CIVIL ENGINEERS and LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: WALKER Co. Indl Land BORING NO.: B-1

LOCATION: WALKER Co. DATE: 6/29/92 PAGE: ___ OF ___

DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV. 492.7±	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
5							
		Brown Silt, Little Clay, Trace f Sand, occasional Sandstone fragments.					
10							
15				Auger Cuttings	0-15		
		Brown Silt, Little Clay, Trace f Sand, occasional shale fragments.					
20				Auger Cuttings	15-20		
		"		Auger Cuttings	20-21		
		Brown-Tan Silt, Some Clay, Trace f sand					
25				Auger Cuttings	21-25		
		Brown-Tan Silt, Some Clay, Trace f sand, occasional weathered sandstone					
30				Auger Cuttings	25-30		

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E. 1A

PERC ENGINEERING CO., INC.
CIVIL ENGINEERS and LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: Walker Co. Justice Center BORING NO.: B-1

LOCATION: Walker Co. DATE: 6/29/92 PAGE: ___ OF ___

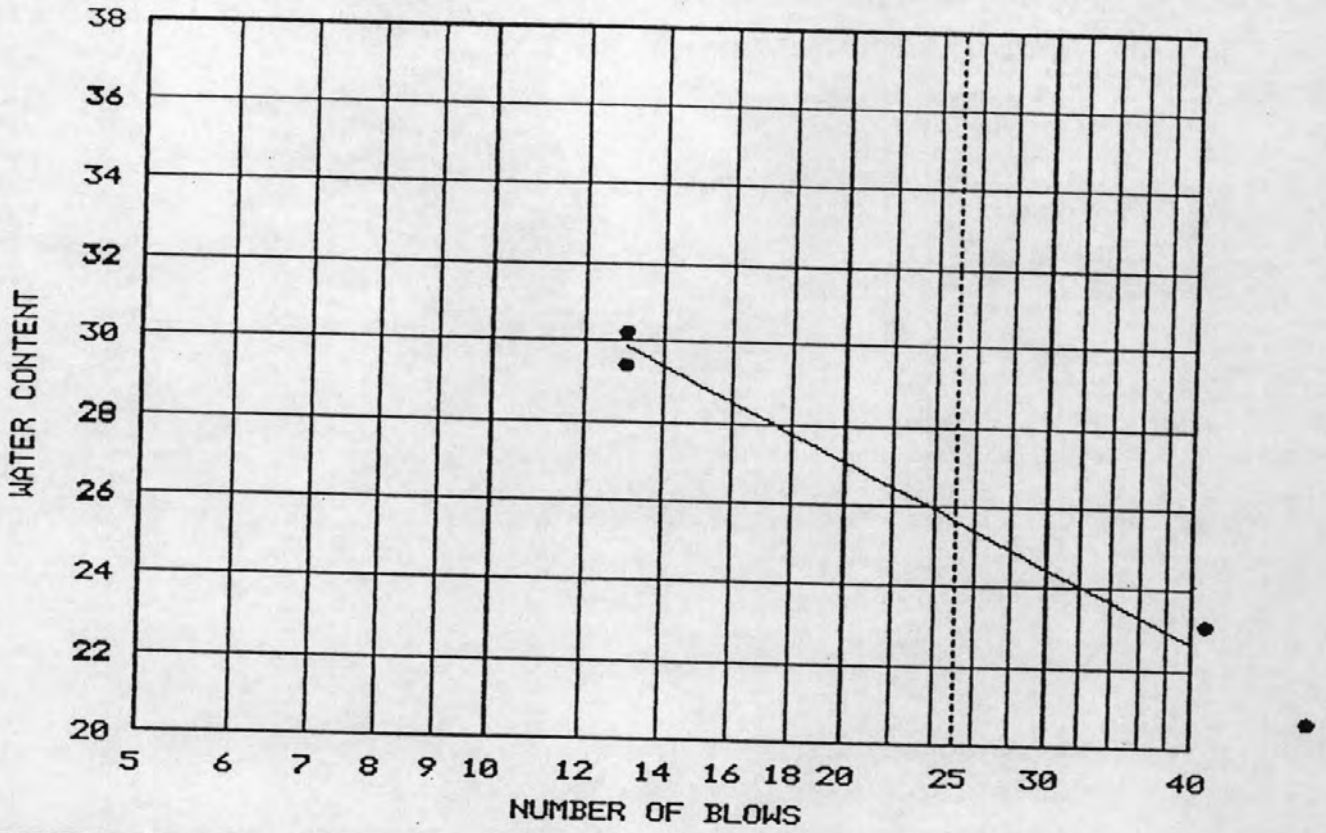
DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV.	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
		Brown S.H, Some Clay, Trace of Sand, Trace of Siderite nodules					
				Auger Cutting	30-33'		
		AUGER REFUSAL @ 33'					
35							
40							
45							
~~50~~ 20							
~~55~~ 25							
~~60~~ 30				–			

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E.1A(1)

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 130 BORING #2, 0.0 - 5.0 FT.	25.7	19.3	6.4	66.8	CL-ML, Sandy silty clay

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

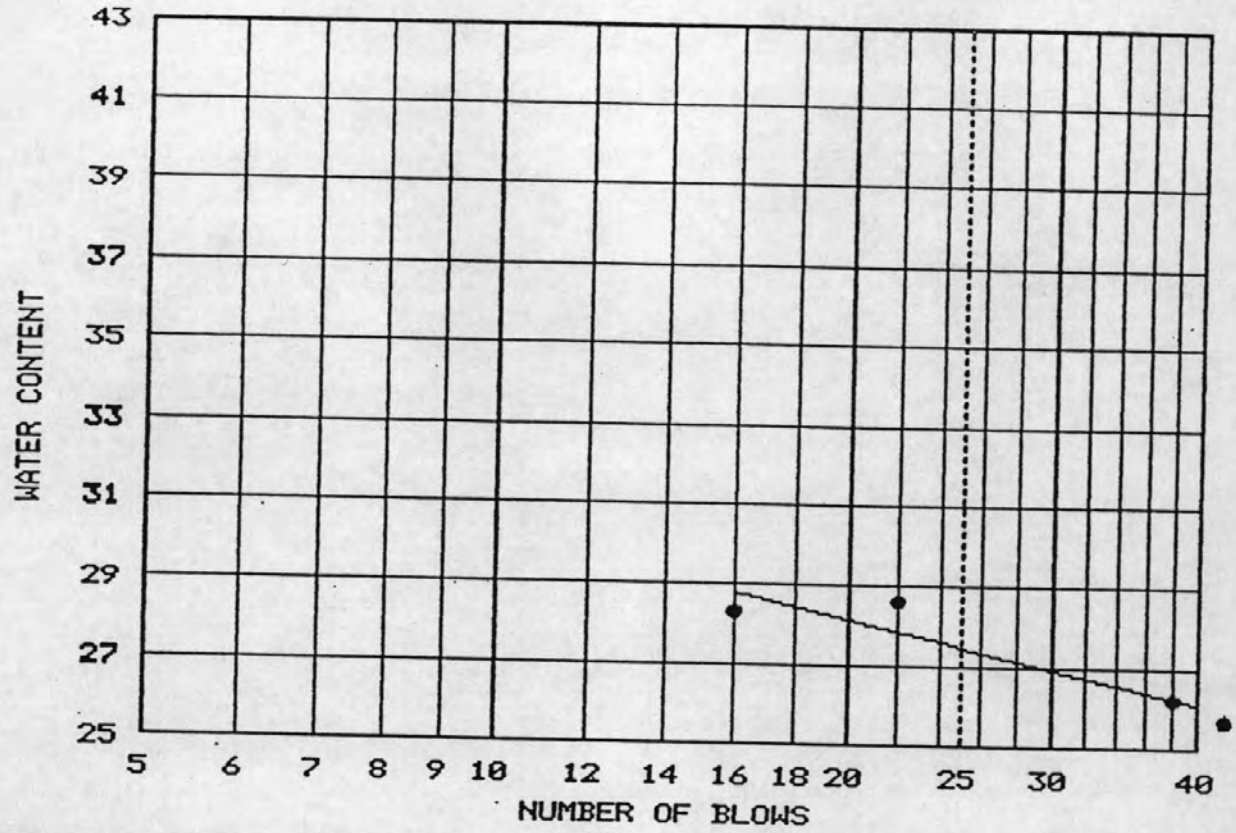
Date: 9/3/92

LIQUID AND PLASTIC LIMITS TEST REPORT
PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3A

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 131 BORING #2, 5.0 - 10.0 FT.	27.5	21.2	6.3	75	CL-ML, Silty clay with sand

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

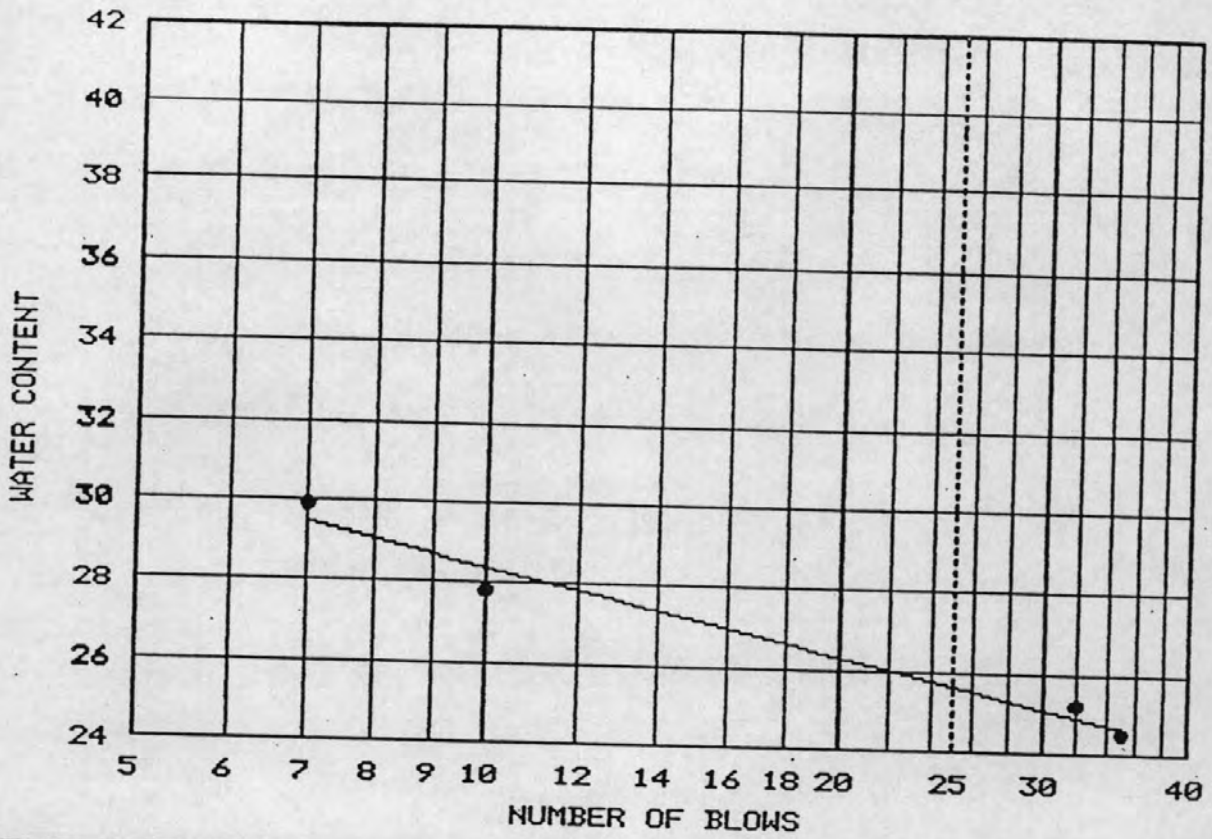
Date: 9/3/92

LIQUID AND PLASTIC LIMITS TEST REPORT
PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3B

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 132 BORING #2, 10.0 - 14.0 FT	25.6	19.6	6	61.2	CL-ML, Sandy silty clay

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 9/3/92

LIQUID AND PLASTIC LIMITS TEST REPORT
PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3C

PERC ENGINEERING CO., INC.

CIVIL ENGINEERS and LAND SURVEYORS

1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: Walker Co. Inert Landfill BORING NO.: B-2

LOCATION: Walker Co. DATE: 6/29/92 PAGE: ___ OF ___

DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV. 457.73	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
		Brown Clay, Some Silt, Trace f					
		Sand, occasional siderite nodules		Auger Cuttings	0-5'		
5							
		Brown Silt, Little Clay, Trace f					
		Sand, occasional siderite nodules		Auger Cuttings	5-10'		
10							
		Grey Silt, Little Clay, Trace f					
		Sand, occasional shale fragments		Auger Cuttings	10-14'		
		AUGER REFUSAL @ 14'					
15							
20							
25							
30							

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E.1B

PERC ENGINEERING CO., INC.

CIVIL ENGINEERS and LAND SURVEYORS

1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: WALKER CO. INERT LANDFILL BORING NO.: B-3

LOCATION: WALKER CO. DATE: 6/29/92 PAGE: ___ OF ___

DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV. 465.03	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
		Surface Material: Brown Silt, Little Clay, occasional organics and siderite nodules.		Auger Cuttings	0-3'		
		Brown-Tan Silt, Little Clay, Trace f sand, occasional siderite nodules		Auger Cuttings	3-5'		
5							
		Brown-Tan Silt, Little Clay, Trace f sand, occasional siderite nodules					
10				Auger cuttings	5-10'		
		Brown-Tan Silt, Little Clay, Trace f Sand, occasional weathered Shale fragments.					
		Auger Refusal @ 14'		Auger cuttings	10-14'		
15							
20							
25							
30							

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E.1C

PERC ENGINEERING CO., INC.
CIVIL ENGINEERS and LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: Walker Co. Inert Landfill BORING NO.: B-4

LOCATION: Walker Co. DATE: 6/29/92 PAGE: ___ OF ___

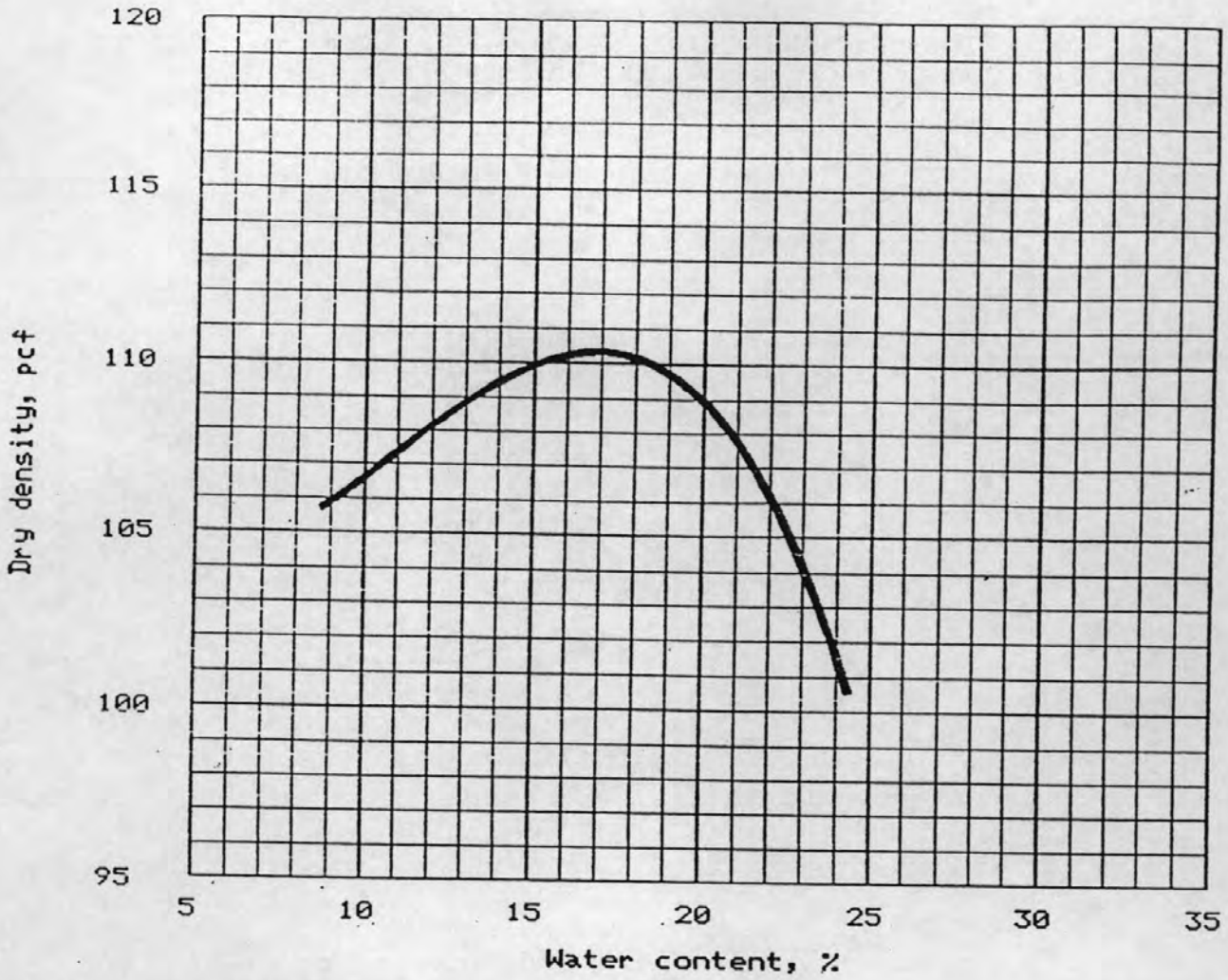
DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV. 490.17	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
		Brown S.H, Some Slickensided Clay, Trace f Sand, occasional shale fragments					
5				Auger Cuttings	0-5'		
		Tan-Brown S:H, Little Clay, Trace f sand					
10				Auger Cutting	5-10'		
		Brown-Tan S:H, Little Clay, Trace f Sand, occasional Sandstone and shale fragments					
15		Auger Refusal @ 14'		Auger Cutting	10-14'		
20							
25							
30							

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E-1D

PROCTOR TEST REPORT



"Standard" Proctor, ASTM D 698, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
0-5'			%				%	%

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 16.9 % Maximum dry density = 110.3 pcf	TAN SILT, LITTLE CLAY

Project No.: 9211470-7
Project: WALKER COUNTY TRANSFER STATION
Location: HWY. 78 WEST

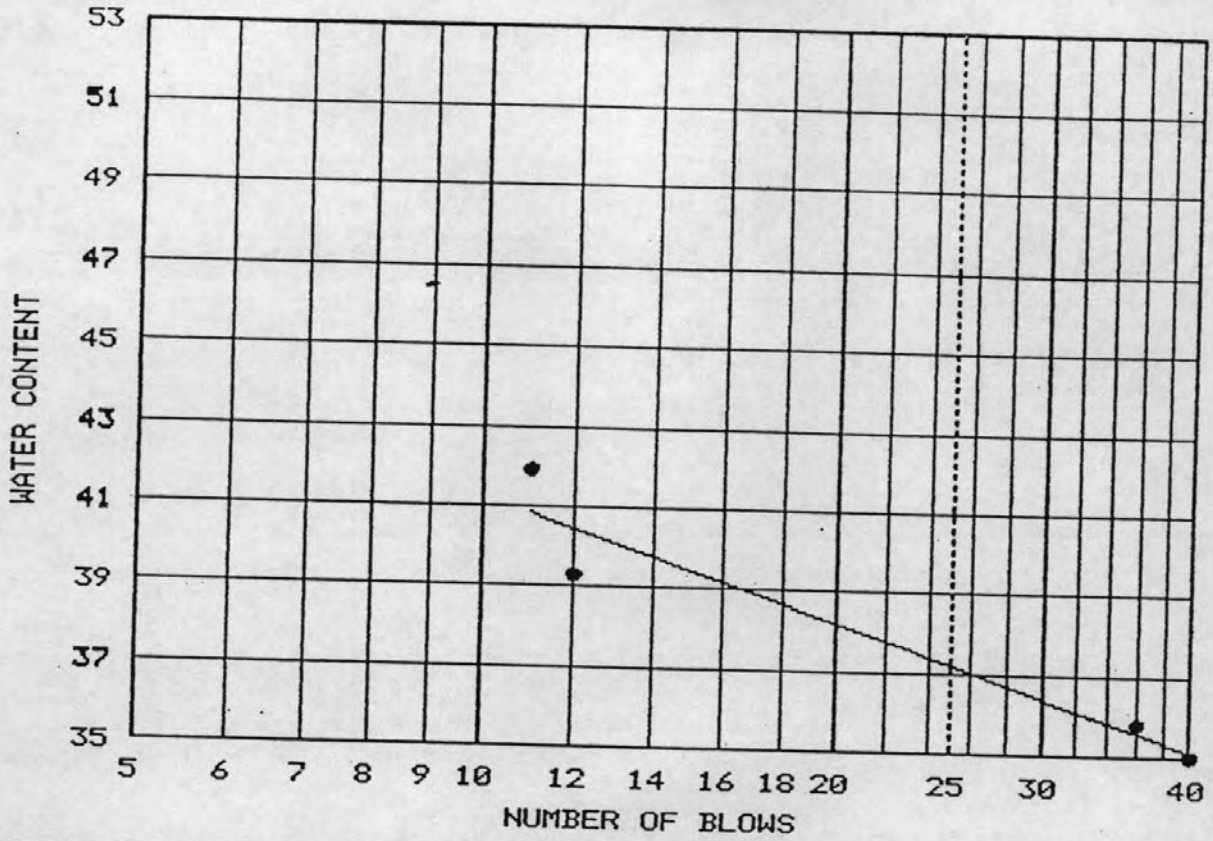
Date: 10-02-92

Remarks:
#299
BORING B-5
TEST PIT

PROCTOR TEST REPORT
PERC ENGINEERING CO., INC.

Fig. No. E.2A

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 299	37.2	28.7	8.5	77.3	ML, Silt with gravel

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 10/1/92

LIQUID AND PLASTIC LIMITS TEST REPORT

PERC ENGINEERING CO., INC.

Remarks:

TEST PIT FROM BORING # 5

LOCATION

Fig. No. E.3D

PERC ENGINEERING CO., INC.

CIVIL ENGINEERS & LAND SURVEYORS

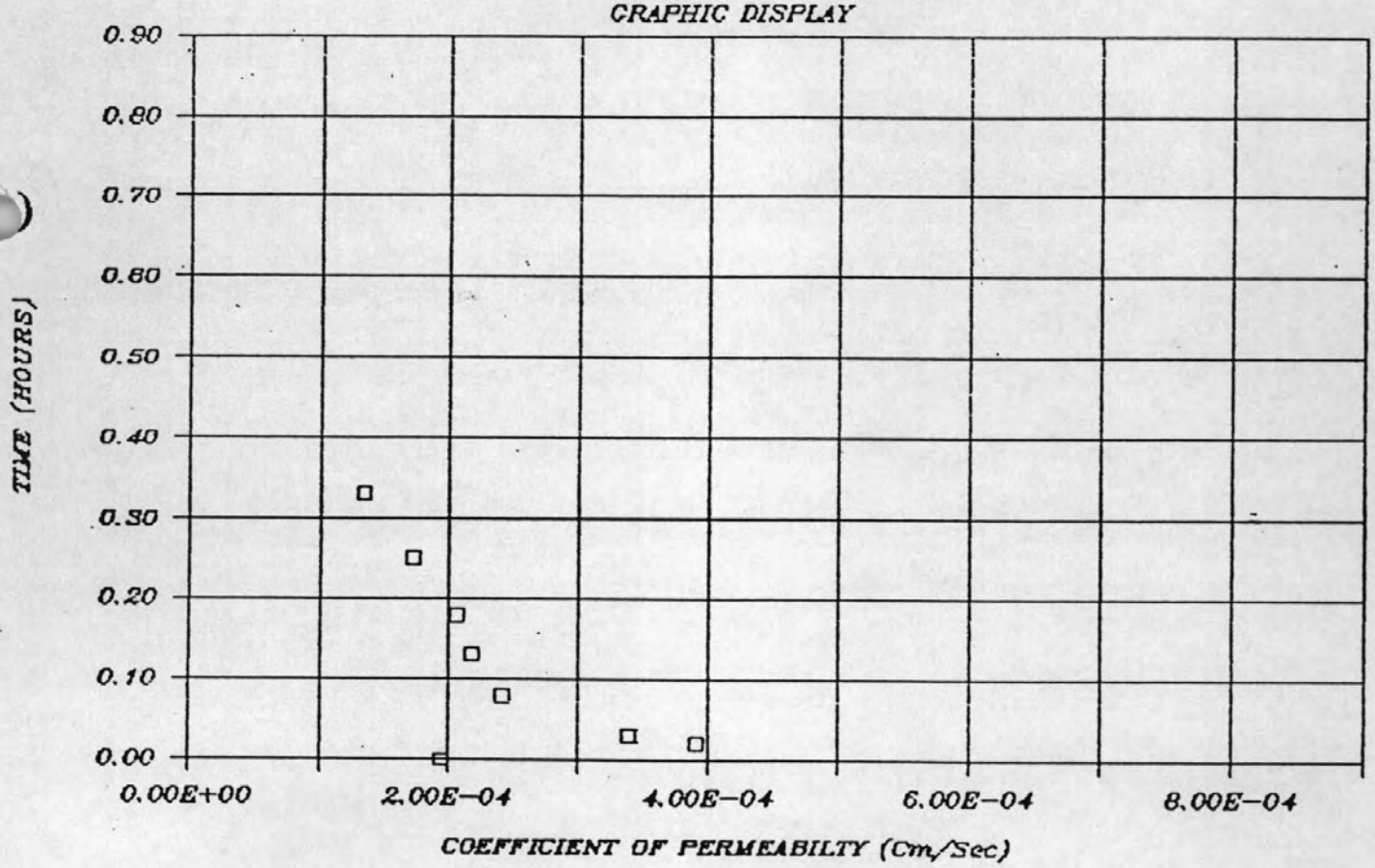
TELEPHONE (205) 384-5553
FACSIMILE (205) 384-9491

P.O. BOX 1712
JASPER, ALABAMA 35502

PROJECT NAME: WALKER CO. TRANSFER STA. TESTING DATE: 12-7-92
SAMPLE ID: 299 MOISTURE CONTENT: 16.9%
DRY DENSITY: 110.3 pcf
SAMPLE SPECS. 90% COMPACTION +2% OPTIMUM MOISTURE

CONSTANT HEAD PERMEABILITY

CRAPHIC DISPLAY



COEFFICIENT OF PERMEABILITY (Cm/Sec) 2.06E-04

TEST PROCEDURE: CORPS ENGINEERS EM 1110-2-1906 APPENDIX VII OR
ASTM D5084 WITH FLEXABLE MEMBRANE & BACK PRESSURE SATURATION

E.4A

PERC ENGINEERING CO., INC.
CIVIL ENGINEERS & LAND SURVEYORS

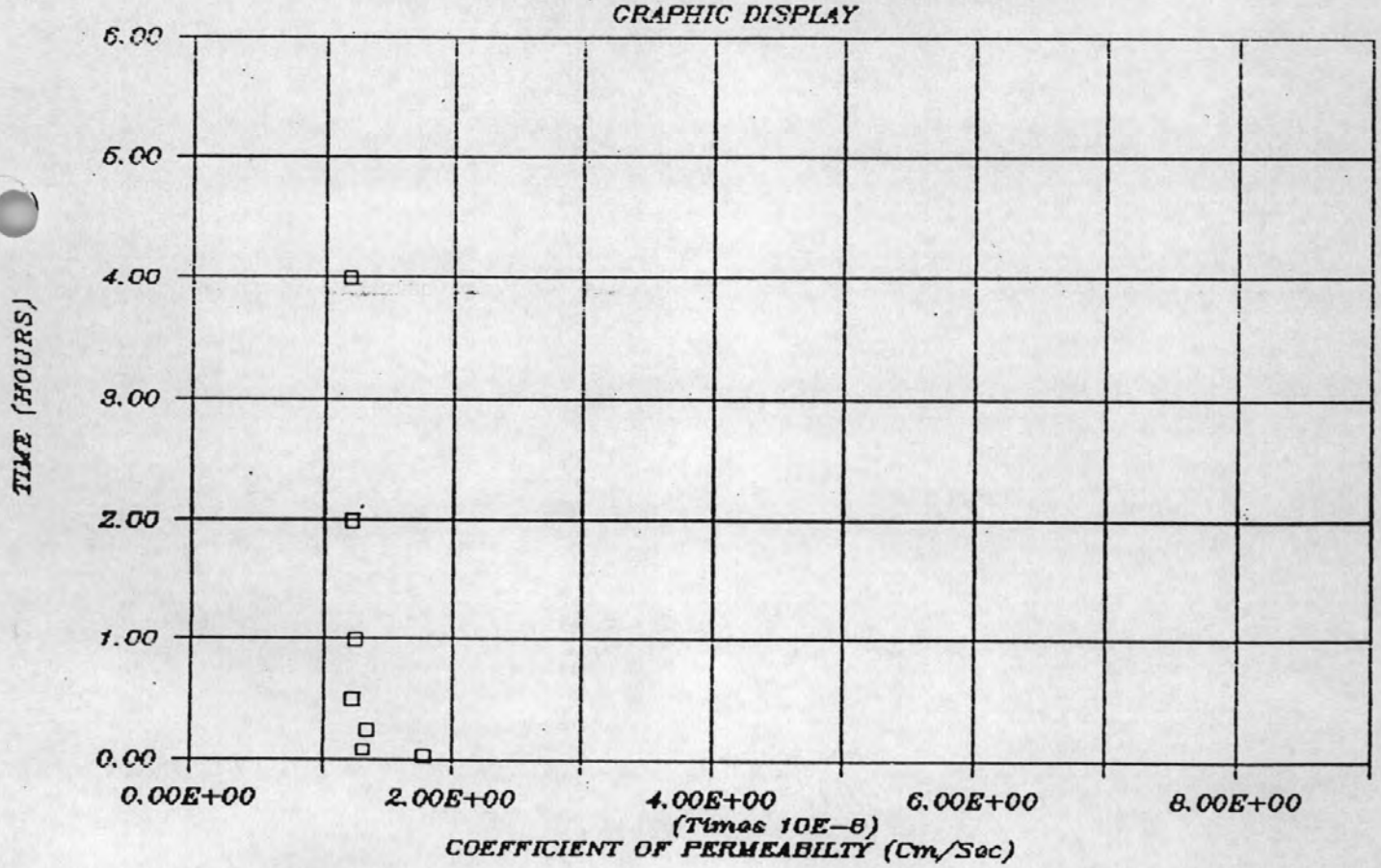
TELEPHONE (205) 384-5553
FACSIMILE (205) 384-9491

P.O. BOX 1712
JASPER, ALABAMA 35502

PROJECT NAME: WALKER CO. TRANSFER STA. TESTING DATE: 11-16-92
SAMPLE ID: 299 MOISTURE CONTENT: 16.9 %
DRY DENSITY: 110.3 pcf
SAMPLE SPECS. 95% COMPACTION +2% OPTIMUM MOISTURE

CONSTANT HEAD PERMEABILITY

CRAPHIC DISPLAY

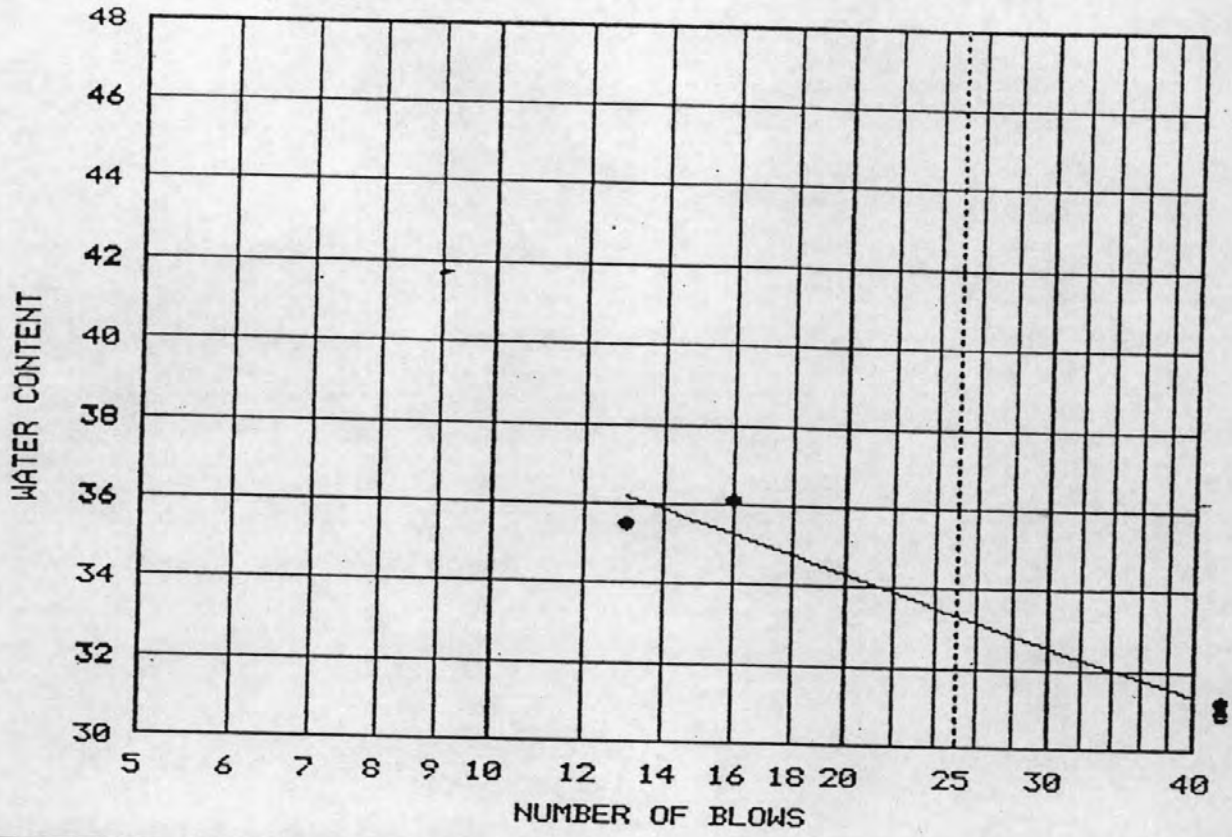


COEFFICIENT OF PERMEABILITY (Cm/Sec) 1.25E-06

TEST PROCEDURE: CORPS ENGINEERS EM 1110-2-1906 APPENDIX VI, USING DATA WITH FLEXIBLE WALL PERMEAMETER & BACK PRESSURE SATURATION

E.4B

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 121 BORING #5, 0.0 - 5.0 FT.	33.4	21.4	12	90.9	CL, Lean clay

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 8-31-92

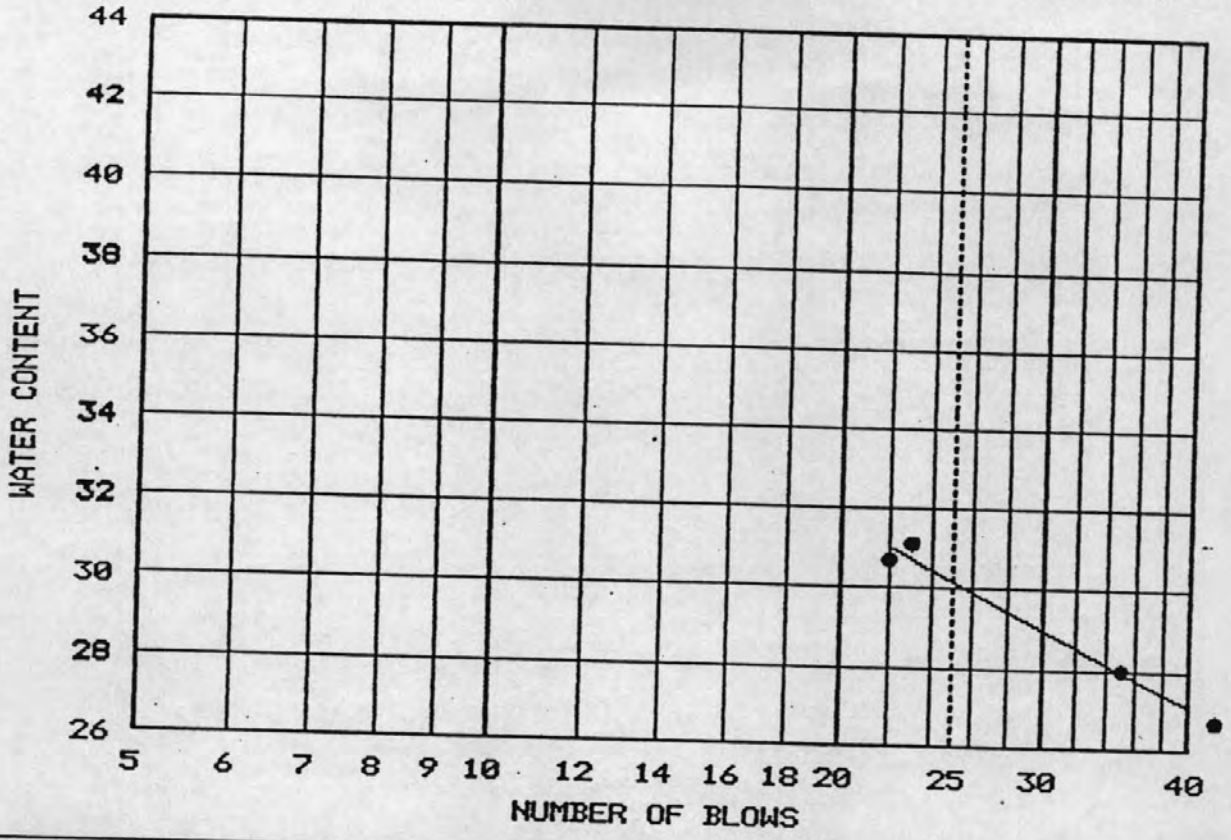
LIQUID AND PLASTIC LIMITS TEST REPORT

PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3E

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 123 BORING #5, 10.0 - 12.0 FT	30.2	27.4	2.8	88.9	ML, Silt

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISION
Location: WALKER COUNTY, HIGHWAY 78 WEST

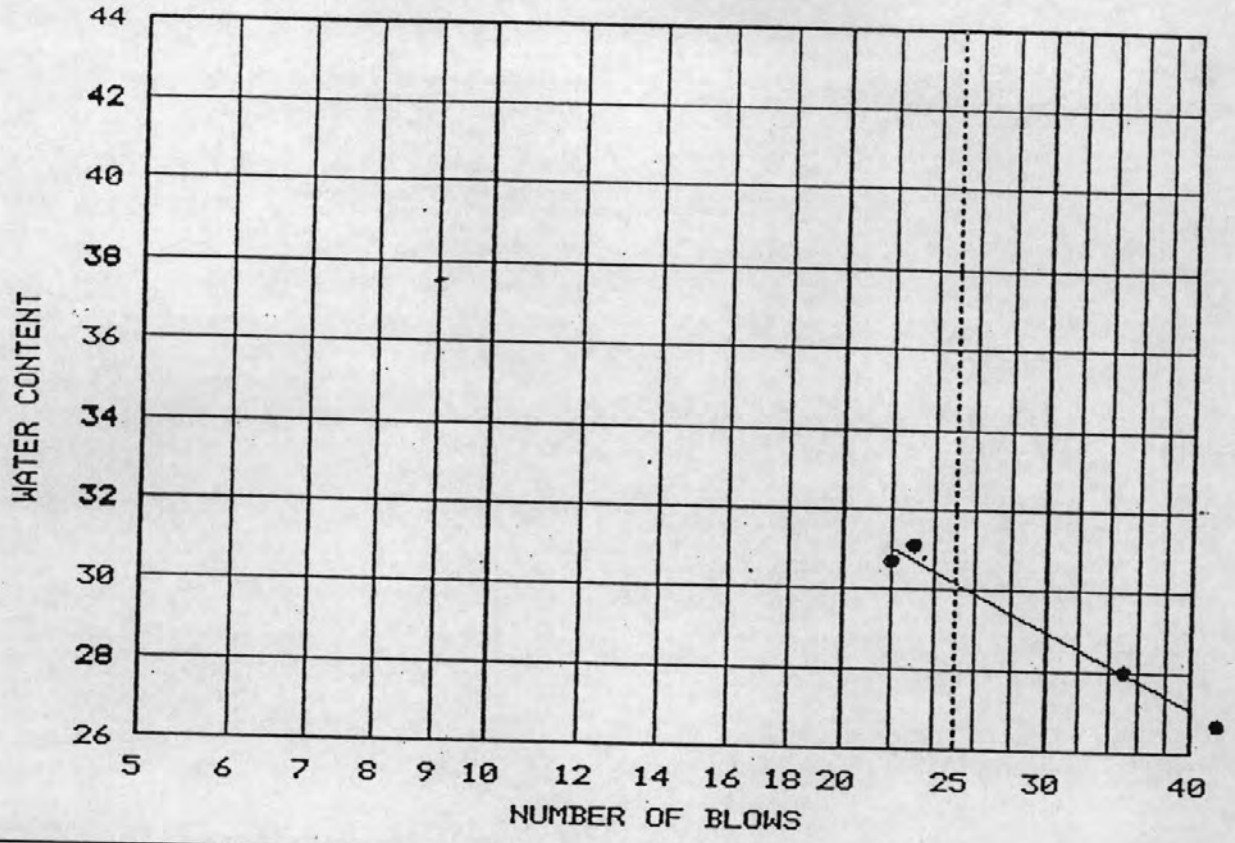
Date: 9/3/92

Remarks:

LIQUID AND PLASTIC LIMITS TEST REPORT
PERC ENGINEERING CO., INC.

Fig. No. E.3F

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 123 BORING #5, 10.0 - 12.0 FT	30.2	27.4	2.8	88.9	ML, Silt

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 9/3/92

LIQUID AND PLASTIC LIMITS TEST REPORT

PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3G

PERC ENGINEERING CO., INC.

CIVIL ENGINEERS and LAND SURVEYORS

1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: Walker Co. Inst. Landfill BORING NO.: B-6

LOCATION: Walker Co. DATE: 6/30/92 PAGE: ___ OF ___

DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV. 438.56	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
		Brown-Tan Silt, Little Grvl. Clay					
5				Auger Cuttings	0-5'		
		Tan-Brown Silt, Little Brown Clay					
10				Auger Cuttings	5-10'		
		Tan-Brown Silt, Little Brown Clay, occasional shale fragments, Auger Refusal @ 12'		Auger Cuttings	10-12		
15							
20							
25							
30							

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E.1E

PERC ENGINEERING CO., INC.

CIVIL ENGINEERS and LAND SURVEYORS

1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: WALKER Co Interm Loan BORING NO.: B-6

LOCATION: WALKER Co. DATE: 6/30/92 PAGE: ___ OF ___

DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV. 414.29	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
		Brown Silt, Little Clay, Trace f Sand, occasional Siderite Nodules.					
				Auger Cuttings	0-4'		
5		Brown-Tan Silt, Little Clay, trace f sand, occasional Sandstone fragments					
				Auger Cuttings	4-8'		
		Brown-Tan Silt, Some Gray to Grey-Red Clay, trace f sand, occasional siderite nodules					
10		" , little grey clay		Auger Cuttings	8-10.5		
		Brown-Tan Silt, Little Clay, trace f Sand		Auger Cuttings	11-12.0		
		Auger Refusal @ 12'					
15							
20							
25							
30							

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E.1F

PERC ENGINEERING CO., INC.
CIVIL ENGINEERS and LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: Walker Co. Inc. Landfill BORING NO.: B-7

LOCATION: Walker Co. DATE: 6/30/92 PAGE: ___ OF ___

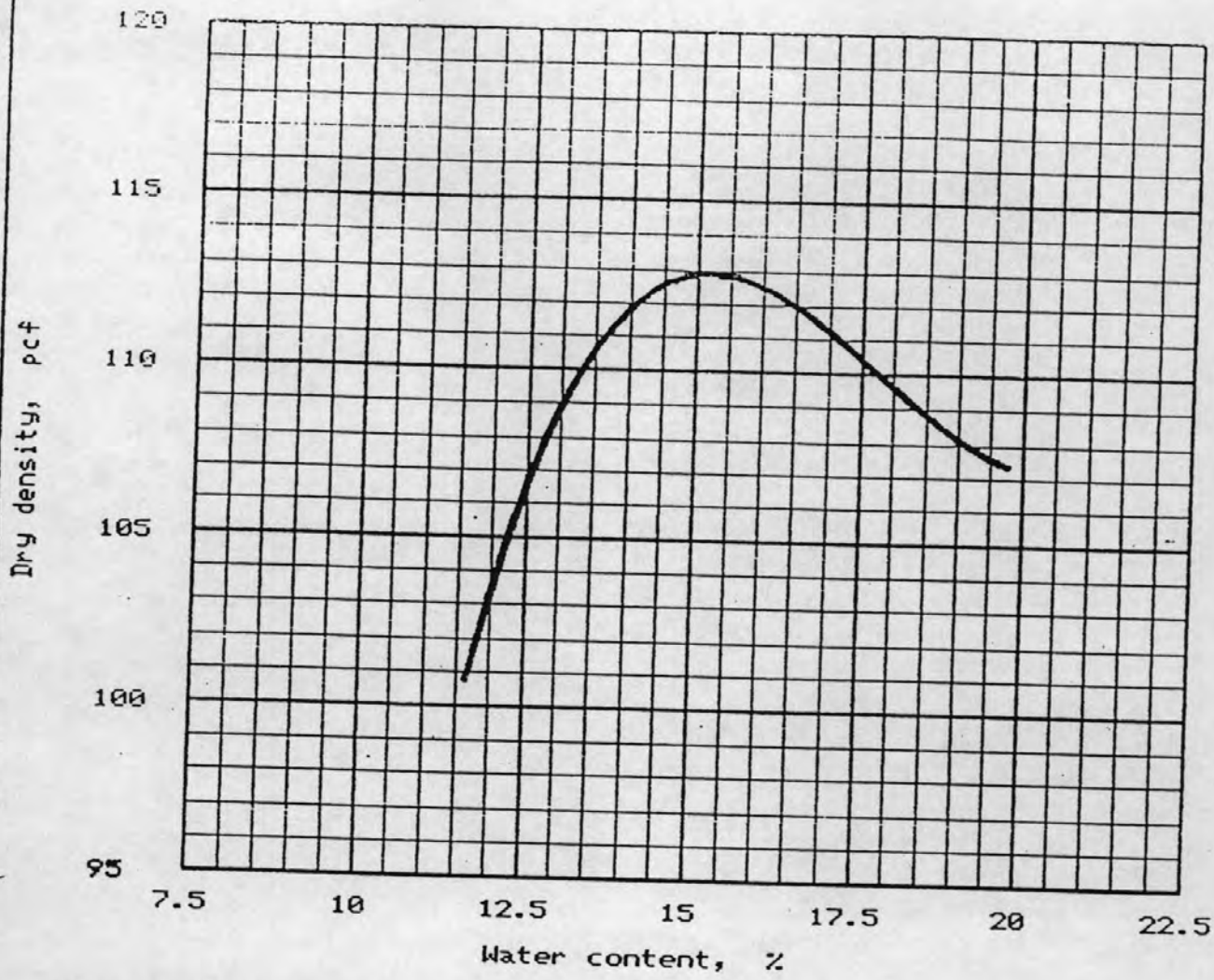
DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV. 467.19	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
		Surface Material - Coal Ash		Auger Cuttings	0-1'		
		Dark Brown Silt, Little Clay, Trace f					
5		Sand, occasional siderite nodules		Auger Cuttings	1-5'		
		Dark Brown Silt, Little Clay, Trace f					
		Sand, occasional Shale fragments		Auger Cuttings	5-7'		
		Auger Refusal @ 7'					
10							
15							
20							
25							
30				-			

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E.1G

PROCTOR TEST REPORT



"Standard" Proctor, ASTM D 698, Method C

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in	% < No. 20
	USCS	AASHTO						
0-5.5								

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 15.2 % Maximum dry density = 112.9 pcf	TAN SILT, LITTLE CLAY

Project No.: 921470-7
Project: WALKER COUNTY TRANSFER STATION
Location: HWY 78 WEST

Date: 10-2-92

Remarks:
SAMPLE #300
BORING B-8 TEST PIT

PROCTOR TEST REPORT
PERC ENGINEERING CO., INC.

Figure No. E-2B

PERC ENGINEERING CO., INC.

CIVIL ENGINEERS & LAND SURVEYORS

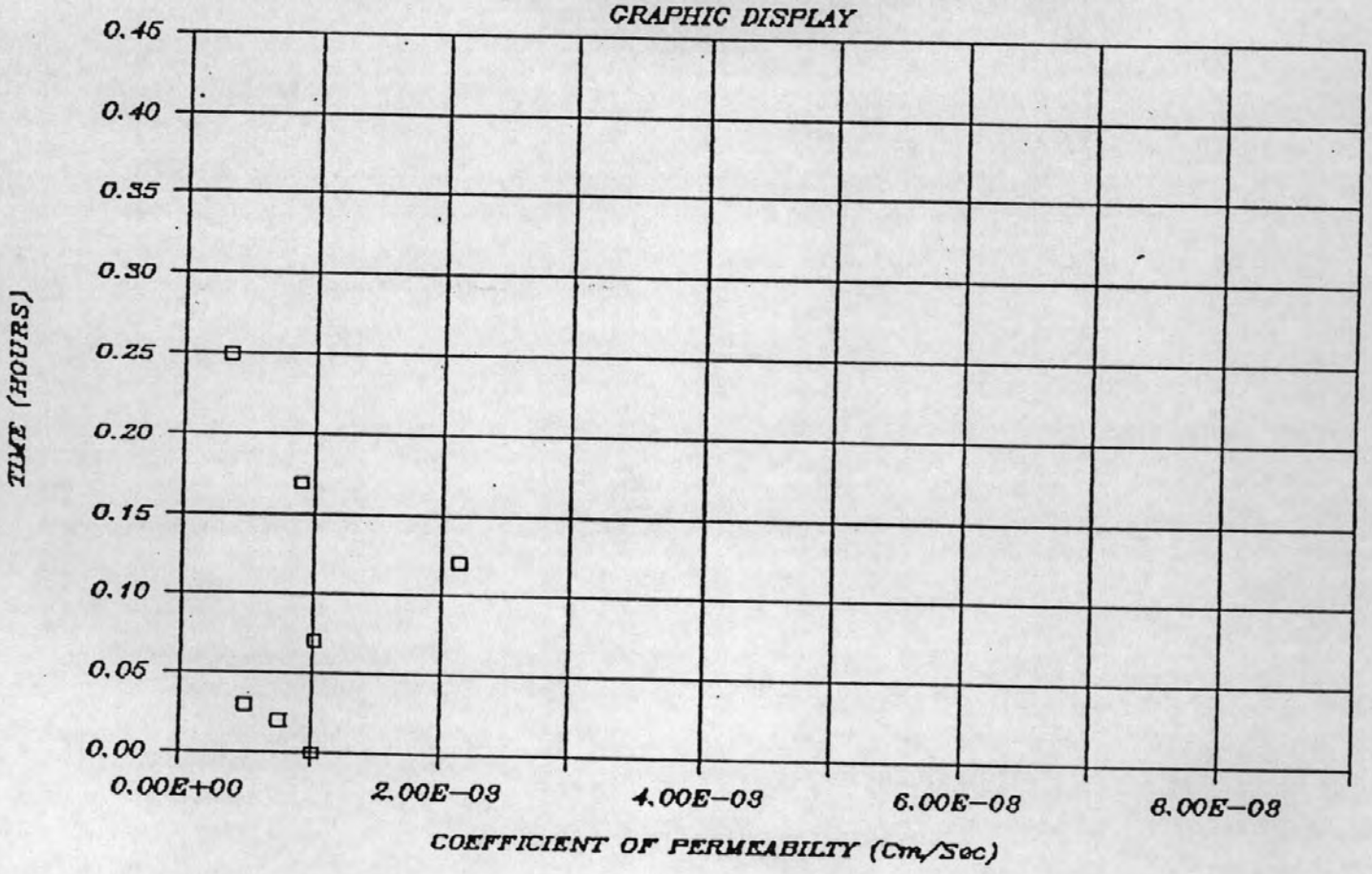
TELEPHONE (205) 384-5553
FACSIMILE (205) 384-9491

P.O. BOX 1712
JASPER, ALABAMA 35502

PROJECT NAME: WALKER CO. TRANSFER STA. TESTING DATE: 12-11-92
SAMPLE ID: 300 MOISTURE CONTENT: 15.2%
DRY DENSITY: 112.9 pcf
SAMPLE SPECS. 95% COMPACTION +2% OPTIMUM MOISTURE

CONSTANT HEAD PERMEABILITY

GRAPHIC DISPLAY



COEFFICIENT OF PERMEABILITY (Cm/Sec) 0.71E-03

TEST PROCEDURE: CORPS ENGINEERS EM 1110-2-1906 APPENDIX VII OR
ASTM D5084 WITH FLEXABLE MEMBRANE & BACK PRESSURE SATURATION E.4C

PERC ENGINEERING CO., INC.

CIVIL ENGINEERS & LAND SURVEYORS

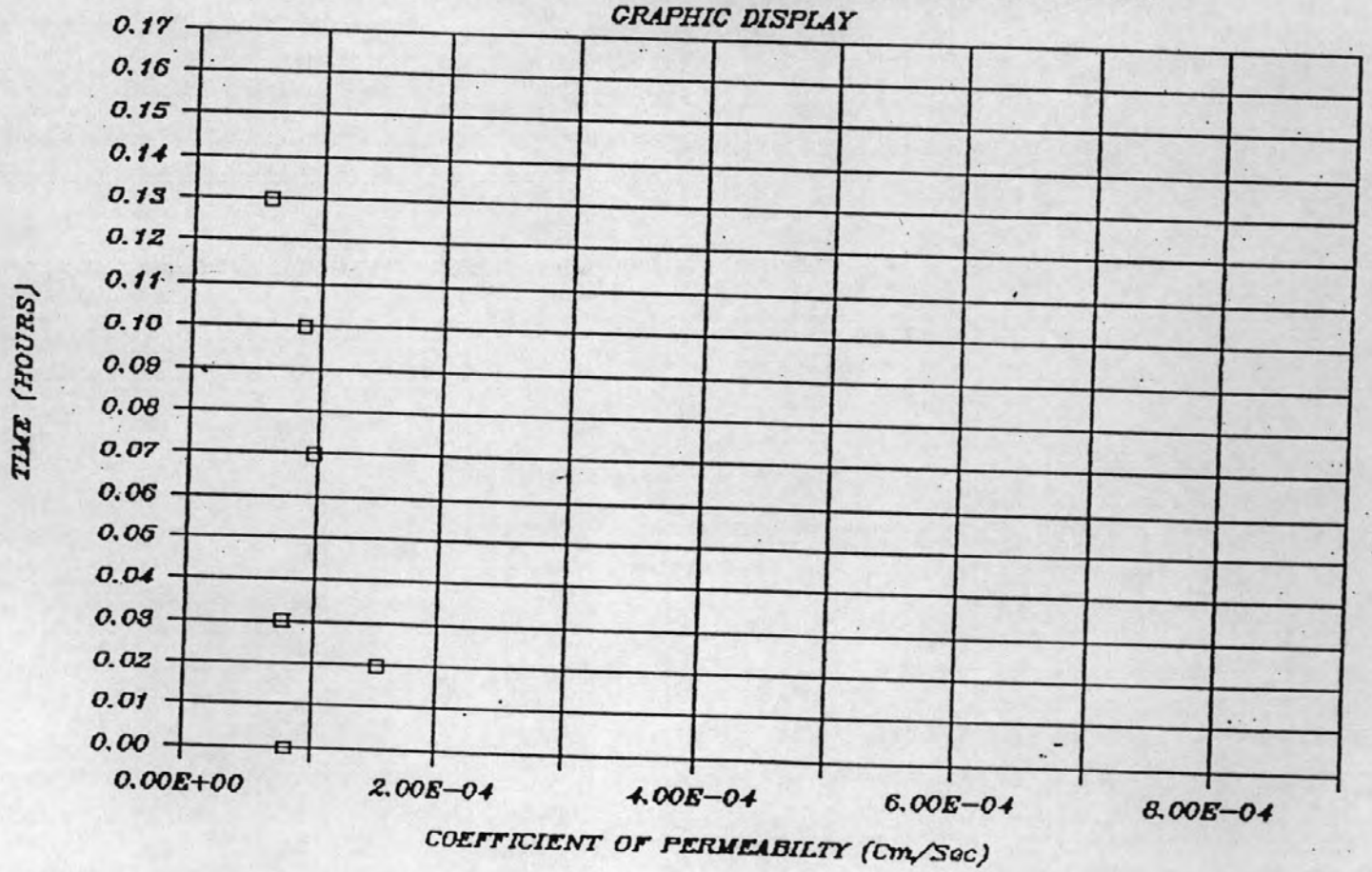
TELEPHONE (205) 384-5553
FACSIMILE (205) 384-9491

P.O. BOX 1712
JASPER, ALABAMA 35502

PROJECT NAME: WALKER CO. TRANSFER STA. TESTING DATE: 12-18-92
SAMPLE ID: 300 MOISTURE CONTENT: 15.2%
DRY DENSITY: 112.9 pcf
SAMPLE SPECS. 100% COMPACTION +2% OPTIMUM MOISTURE

CONSTANT HEAD PERMEABILITY

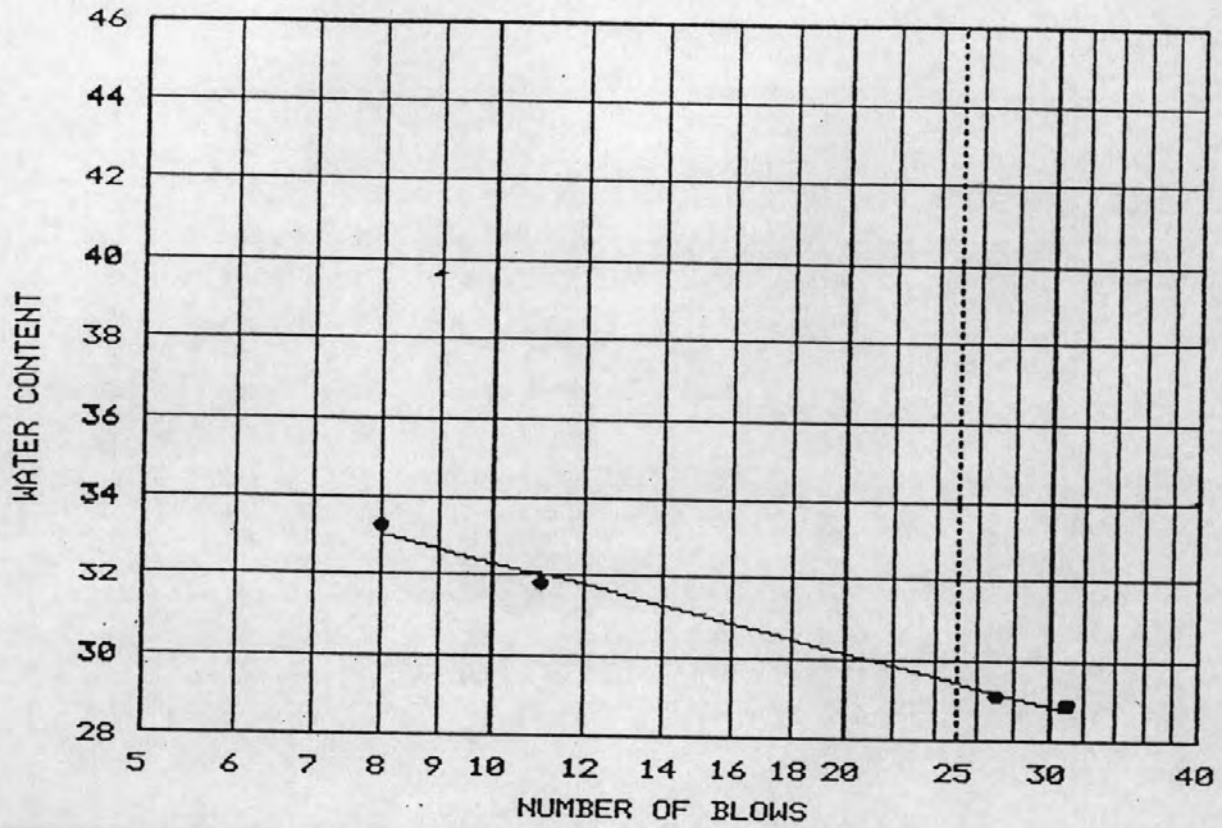
GRAPHIC DISPLAY



COEFFICIENT OF PERMEABILITY (Cm/Sec) 0.85E-04

TEST PROCEDURE: CORPS ENGINEERS EM 1110-2-1906 APPENDIX VII OR
ASTM D5084 WITH FLEXABLE MEMBRANE & BACK PRESSURE SATURATION E-4D

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 300	29.4	25.4	4	65.3	ML, Gravelly silt with sand

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 10/1/92

LIQUID AND PLASTIC LIMITS TEST REPORT

PERC ENGINEERING CO., INC.

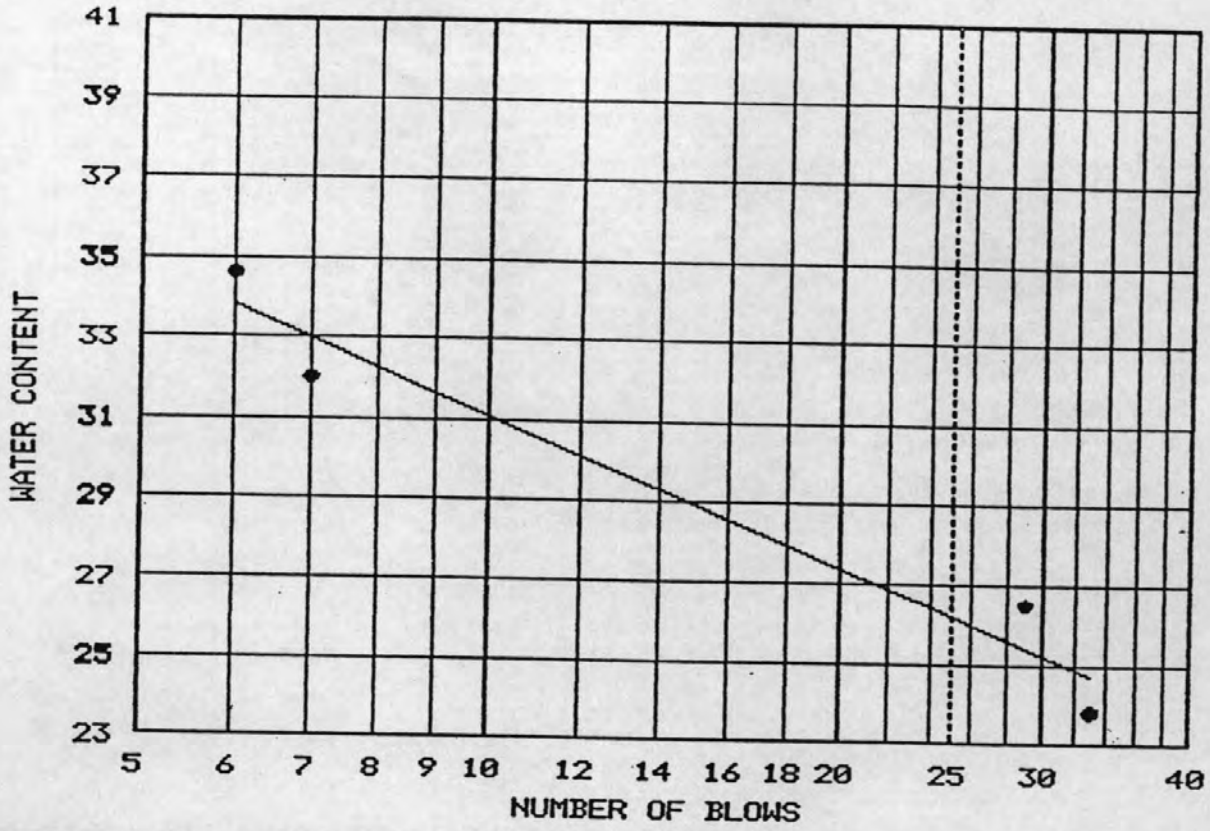
Remarks:

TEST PIT FROM BORING # 8

LOCATION

Fig. No. E.3H

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 108 BORING #8, 0.0 - 5.0 FT.	26.2	17.9	8.3	76.7	CL, Lean clay with sand

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 9/10/92

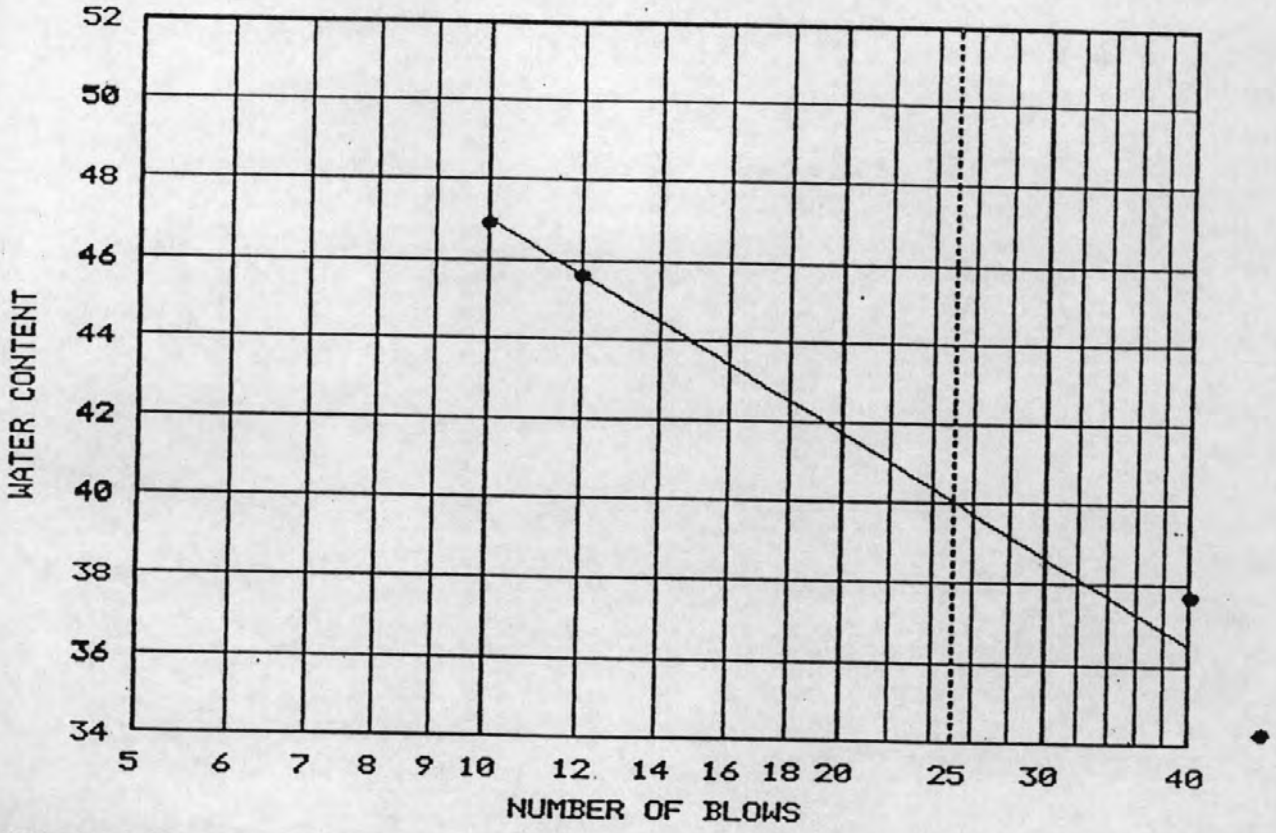
LIQUID AND PLASTIC LIMITS TEST REPORT

PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3I

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 109 BORING #8, 5.0 - 10.0 FT,	40.0	28.3	11.7	75.2	ML, Silt with sand

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 9/10/92

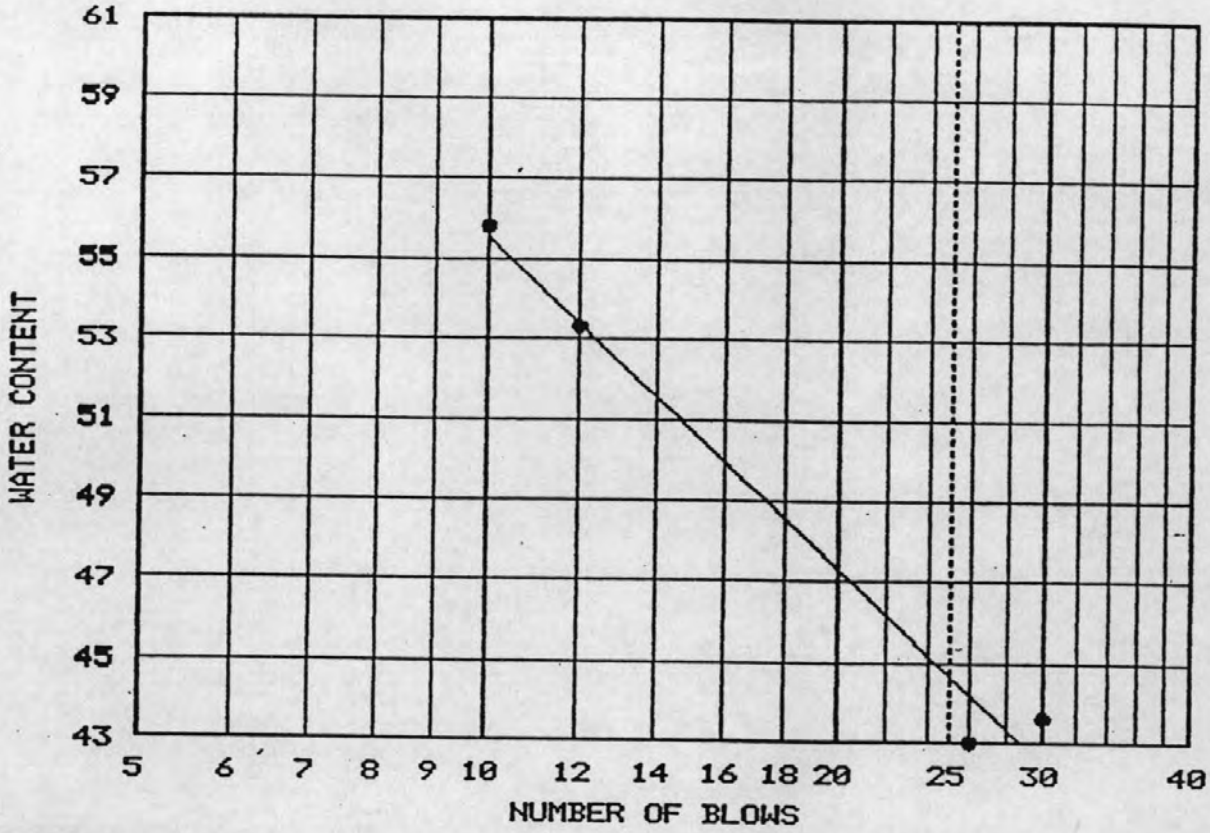
LIQUID AND PLASTIC LIMITS TEST REPORT

PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3J

LIQUID AND PLASTIC LIMITS TEST REPORT



	Location + Description	LL	PL	PI	-200	ASTM D 2487-90
●	SAMPLE # 110 BORING #8, 10.0 - 13.0 FT	44.7	30.6	14.1	82.4	ML, Silt with sand

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 9/10/92

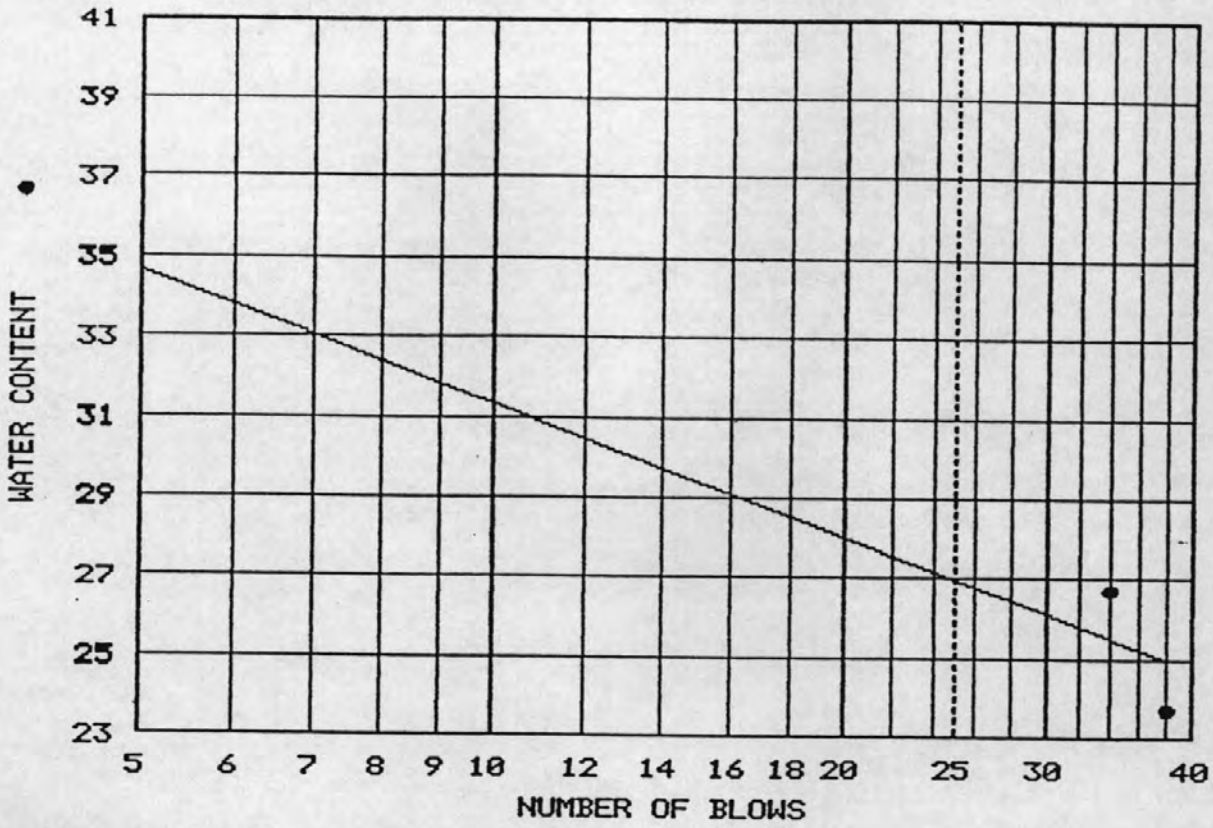
LIQUID AND PLASTIC LIMITS TEST REPORT

PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3K

LIQUID AND PLASTIC LIMITS TEST REPORT



Location + Description	LL	PL	PI	-200	ASTM D 2487-90
● SAMPLE # 108 BORING #8, 13.5 - 14.0 FT	27.0	21.1	5.9	87.1	CL-ML, Silty clay

Project No.: 921470-7
Project: TRANSFER STATION INERT PERMIT RENEWAL

Client: WALKER COUNTY COMMISSION
Location: WALKER COUNTY, HIGHWAY 78 WEST

Date: 9/10/92

LIQUID AND PLASTIC LIMITS TEST REPORT

PERC ENGINEERING CO., INC.

Remarks:

Fig. No. E.3L

PERC ENGINEERING CO., INC.
CIVIL ENGINEERS and LAND SURVEYORS
1606 Hwy 78 West/P. O. BOX 1712/Jasper, Alabama 35502-1712/(205)384-5553

JOB NAME: WALKER C. INDUST LANDFILL BORING NO.: BE

LOCATION: Walker Co. DATE: 6/26/02 PAGE: ___ OF ___

DEPTH PER FT.	SYM.	SOIL – ROCK DESCRIPTION	ELEV. 441.36	SAMPLE TYPE	SAMPLE DEPTH FT.	SAMPLE REC. IN.	STANDARD PENETRATION BLOWS/6 IN.
		Brown S.H, Some Clay, Trace f sand					
5				Auger Cuttings	0-5		
		Brown-Tan S:H, Little Clay, Trace f Sand, occasional sandstone fragments					
10				Auger Cuttings	5-10		
		Brown-Tan S:H, Some Blue-Grey Clay, Trace f sand					
				Auger Cuttings	10-13		
		(Rash) Coal fartings with some Blue-Grey Clay		Auger Cuttings	13-13.5		
		Brown-Grey Silt, Little clay, trace f sandstone			13.5-14		
15		Auger Refusal @ 14'					
20							
25							
30							

SEE LEGEND SHEET FOR SYMBOLS & NOTES

SOIL BORING RECORD

E. 1H

C.) Erosion Control and Drainage

The major erosion control device used will be soil stabilization through timely soil revegetation. Additional erosion control measures will include construction of diversion ditches in areas where slopes exceed 20 feet elevation change, or in areas where erosion may be a problem.

Construction of silt fences and hay dams may be used in areas where water concentrates or diversion ditches end, so erosion during the construction phase can be minimized.

7.4 Revegetation

Revegetation of the closure area will be performed after proper grading and seed bed preparation has been completed. Soil amendment rates will have already been determined from samples of the soil material and analyzed at Auburn University Soil Testing Laboratory where the following tests will be conducted: percent sand, silt and clay; texture classification, pH, acid base account, fertility ratings for phosphorus, potassium, and magnesium. Results of this analysis will be used to apply the optimum amount of soil amendments, (i.e., ag. lime, nitrogen, P_2O_5, and K_2O) to assure proper plant growth.

The type of grasses to be planted are shown on the below listed chart.

Permanent Vegetation

Species	Planting Rate	Season
Bermuda	10 lbs/acre	Spring

Fescue	50 lbs/acre	Spring and Fall
Kobe or Common Lespedeza	30 lbs/acre	Spring and Fall
Vetch	20 lbs/acre	Fall
White or Crimson Clover	10 lbs/acre	Spring and Fall

After the site has been sowed a hay mulch cover will be distributed over the site at a rate of 2,500 pounds per acre. This mulch cover will protect the soil from erosion and protect the seed from severe condition during vegetation establishment.

7.5 Site Maintenance and Monitoring

Post Closure maintenance of the facility will include quarterly inspection by the sanitation department to identify and correct any problem areas. The focus of the inspection will include:

1. Identification of eroded areas. This shall result in repair of erosion with suitable material and proper revegetation.

2. Identification of any areas of sink holes or ponding water will be filled with proper cover material and vegetated.

3. Areas where cracks are identified will be filled with cover material to prevent surface water infiltration.

4. Vegetative cover will be maintained and inspected to assure against erosion and degradation of the protective soil cap.

5. Access to the site will be controlled and maintained by the Walker County Commission. A sign will be erected stating that this inert landfill has been closed and will state the closest facility that will accept inert waste.

6. The site will be inspected for illegal dumping and waste will be removed and placed at a permitted disposal facility.

7. Monitoring devices and pollution control equipment (i.e. erosion and surface water control structures) shall be maintained. Monitoring requirements shall be continued for the post closure care period as determined by the regulatory agency (ADEM).

8. Vector Control will be evaluated during quarterly inspections.

9. Any deficiencies noted during the quarterly post-closure inspections will need to be immediately reported to ADEM.

7.6 Time Table of Closure

1) Landfill closure.
2) Grading begins within 30 days.
3) Grading in timely manner.
4) Revegetation within 30 days of final grading.
5) Landfill maintenance.
3) Disposal boundary recorded on the property deed within 90 day closure requirements.
7) Submit certified of recording instrument to ADEM.

7.7. Other Requirements

Within 120 days after closure of the inert landfill, the county will record a notation into the land deed that the property has been used as a disposal facility.

The deed will contain the following notifications to a potential purchaser:

a. The land has been used as an inert solid waste disposal facility for the Walker County Commission.

b. The land use is restricted as follows:

The land must never be used in a manner as to disturb the integrity of the final cover or other components of the containment, or monitoring systems, unless approved by ADEM.

c. The locations and dimensions of the disposal facility with respect to permanently surveyed benchmarks and section corners will be on plat prepared and sealed by a land surveyor.

d. Contain a note, permanently displayed which states the Walker County Commission used the property as an inert solid waste disposal facility during the permit period.

e. A certification by an independent registered professional engineer that all closure requirements have been completed on the above mentioned area.

Summary of Appendix A

Gamble Inert Landfill
13-Jan-93
Available Fill Area

ELEVATION	SQUARE FEET	AVERAGE AREA	INTERVAL	STORAGE CUBIC FEET	ACC. STORAGE CUBIC FEET	ACC. STORAGE CUBIC YDS
0.0	0.00					
		15915.00	50.00	795750.00	795750.00	29472.22
50.0	31830.00					
		45500.00	150.00	6825000.00	7620750.00	282250.00
200.0	59170.00					
		70865.00	150.00	10629750.00	18250500.00	675944.44
350.0	82560.00					
		67160.00	150.00	10074000.00	28324500.00	1049055.56
500.0	51760.00					
		49905.00	125.00	6238125.00	34562625.00	1280097.22
625.0	48050.00					
		42900.00	100.00	4290000.00	38852625.00	1438986.11
725.0	37750.00					
		18875.00	100.00	1887500.00	40740125.00	1508893.52
825.0	0.00					

Gamble Inert Landfill
13-Jan-93
Cover Material

ELEVATION	SQUARE FEET	AVERAGE AREA	INTERVAL	STORAGE CUBIC FEET	ACC. STORAGE CUBIC FEET	ACC. STORAGE CUBIC YDS
0.0	0.00					
		10435.00	50.00	521750.00	521750.00	19324.07
50.0	20870.00					
		11405.00	150.00	1710750.00	2232500.00	82685.19
200.0	1940.00					
		12775.00	150.00	1916250.00	4148750.00	153657.41
350.0	23610.00					
		20205.00	150.00	3030750.00	7179500.00	265907.41
500.0	16800.00					
		14700.00	125.00	1837500.00	9017000.00	333962.96
625.0	12600.00					
		12265.00	100.00	1226500.00	10243500.00	379388.89
725.0	11930.00					
		5965.00	100.00	596500.00	10840000.00	401481.48
825.0	0.00					

Design Calculations

PERC Engineering Co., Inc.
Jasper, Alabama

Project: GAMBLE INERT LANDFILL	Designed By: MIKE SHORT	Date:
Location: WALKER COUNTY	Reviewed By:	Date:
Subject/Title: REQUIRED CLOSURE MATERIAL	Remarks:	Sheet No.: of

AREA TO CLOSE = 26.40 ACRES

REQUIRED 18" COVER MATERIAL & 6" TOPSOIL.

1) 18" COVER MATERIAL OVER 26.40 ACRES

$26.40\ (43{,}560)\ (18/12) = 1{,}724{,}976\ ft^3$

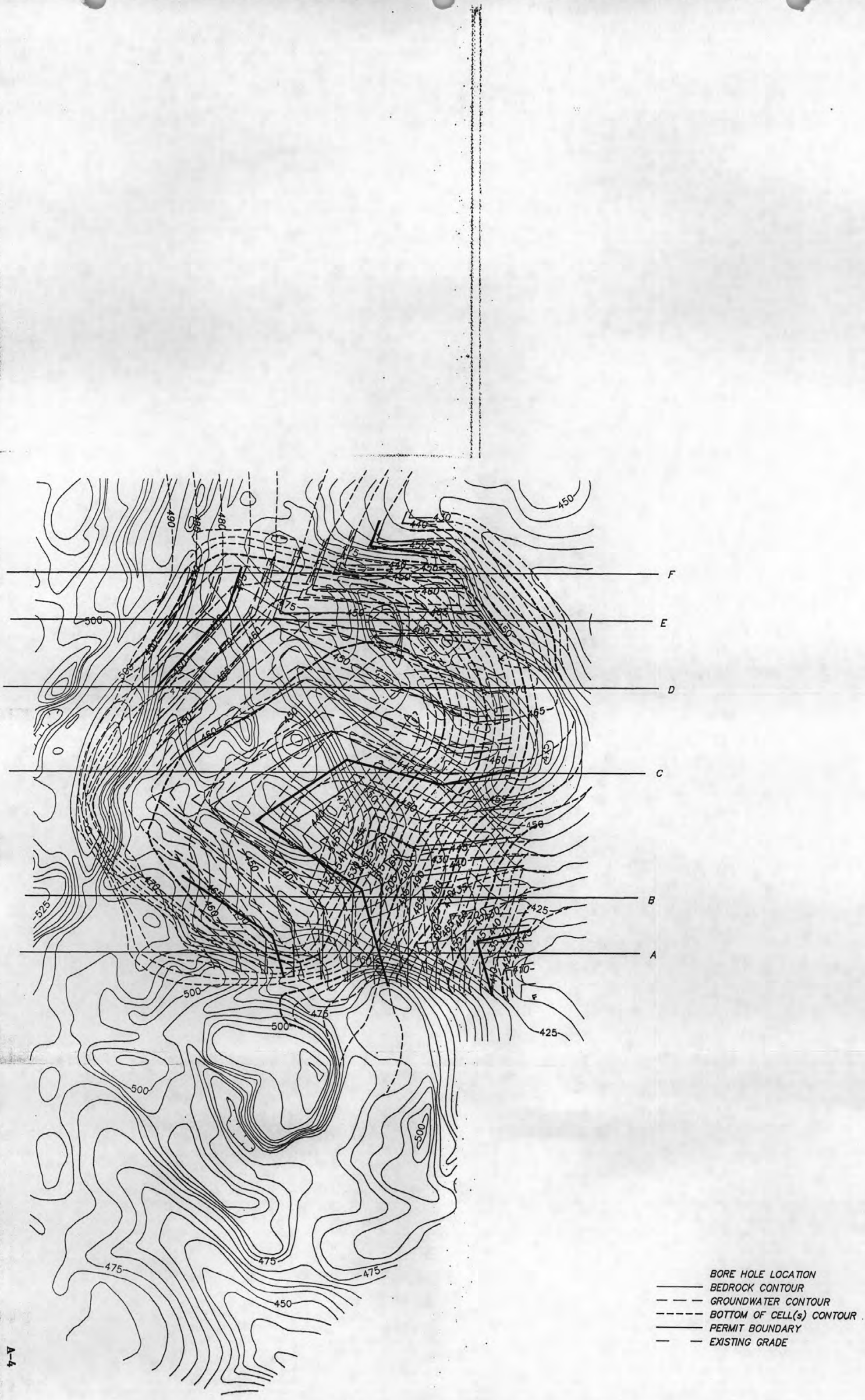
OR $63{,}888\ Yd^3$

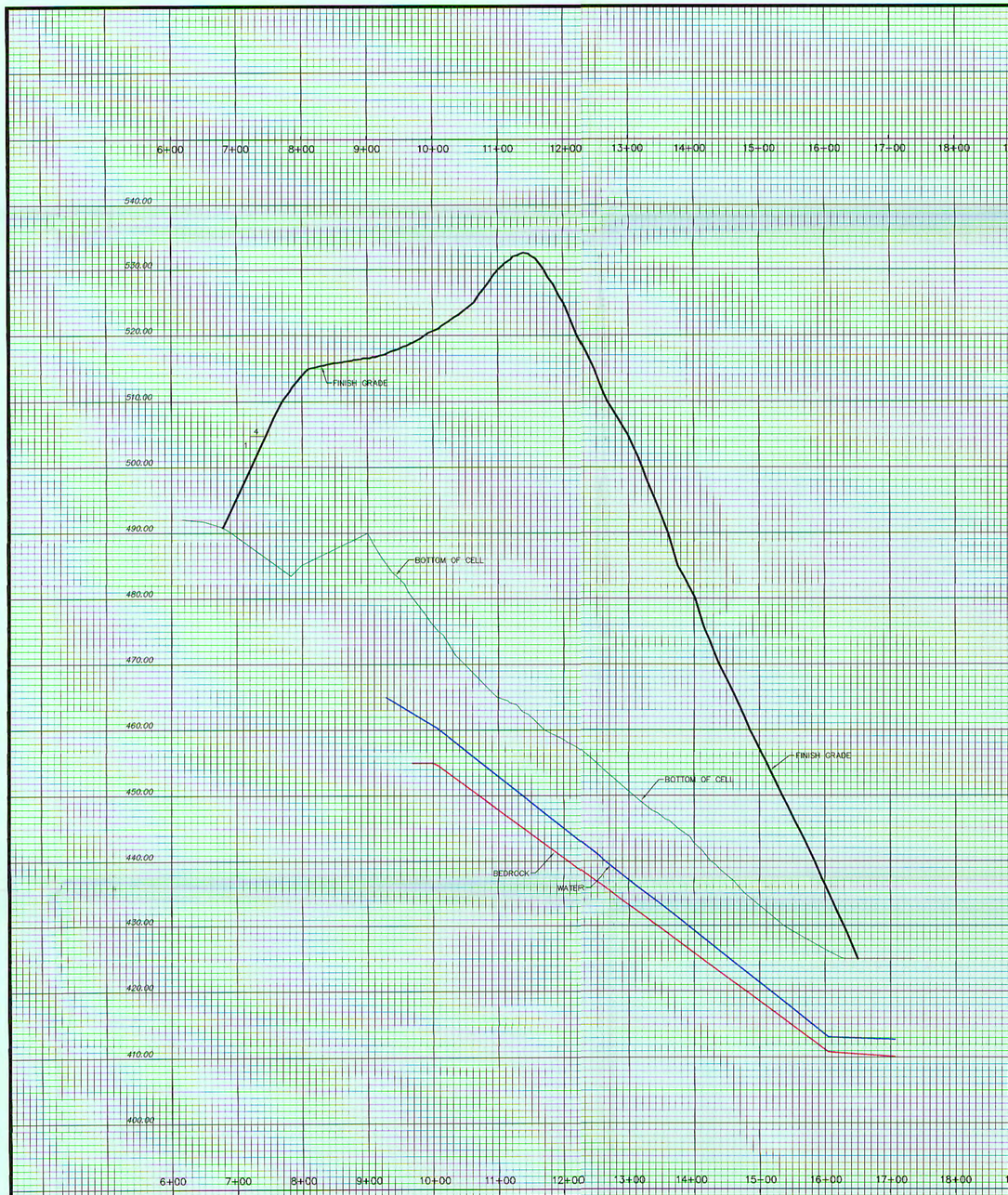
2) 6" TOPSOIL OVER 26.40 ACRES

$26.40\ (43{,}560)\ (6/12) = 574{,}992\ ft^3$

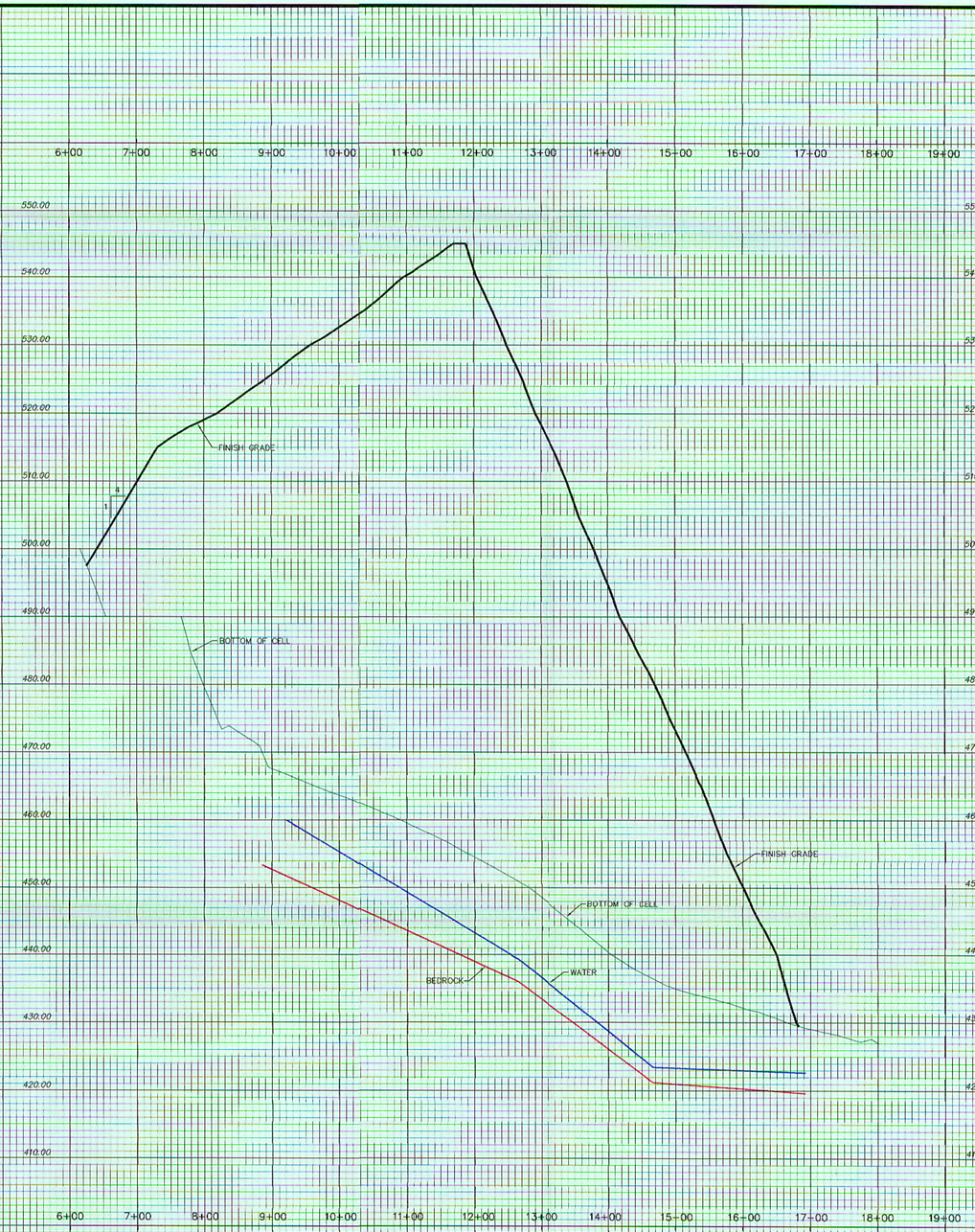
OR $21{,}296\ Yd^3$

IF OPERATED EFFICIENTLY, THERE SHOULD BE ADEQUATE MATERIAL ON SITE TO CLOSE THE GAMBLE INERT LANDFILL.


F
E
D
C
B
A
BORE HOLE LOCATION
BEDROCK CONTOUR
GROUNDWATER CONTOUR
BOTTOM OF CELL(s) CONTOUR
PERMIT BOUNDARY
EXISTING GRADE



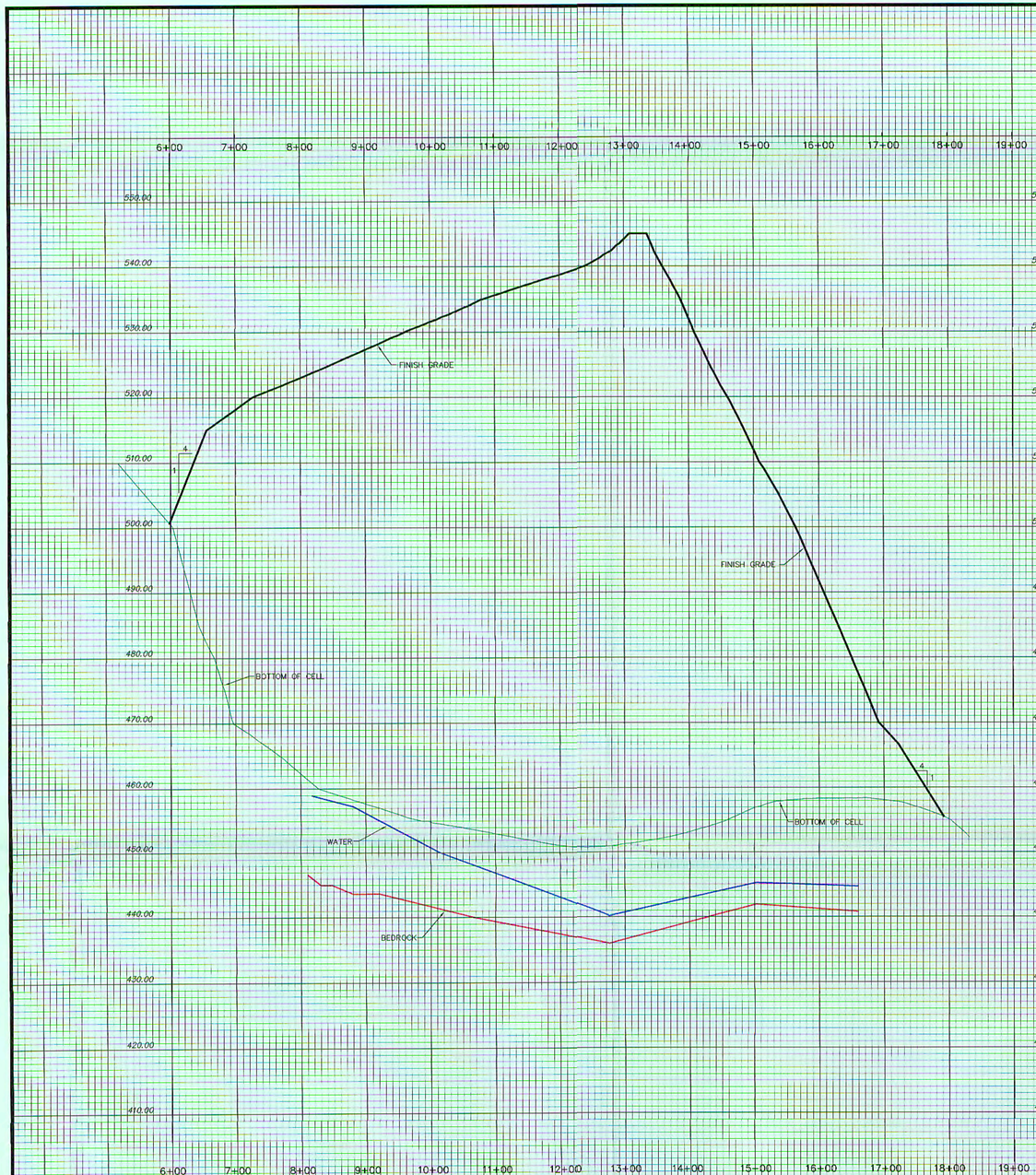
CROSS SECTION "A"



CROSS SECTION "B"

FINISH GRADE
BOTTOM OF CELL
WATER
ROCK

CROSS SECTIONS A & B
WALKER COUNTY GAMBLE INERT LANDFILL



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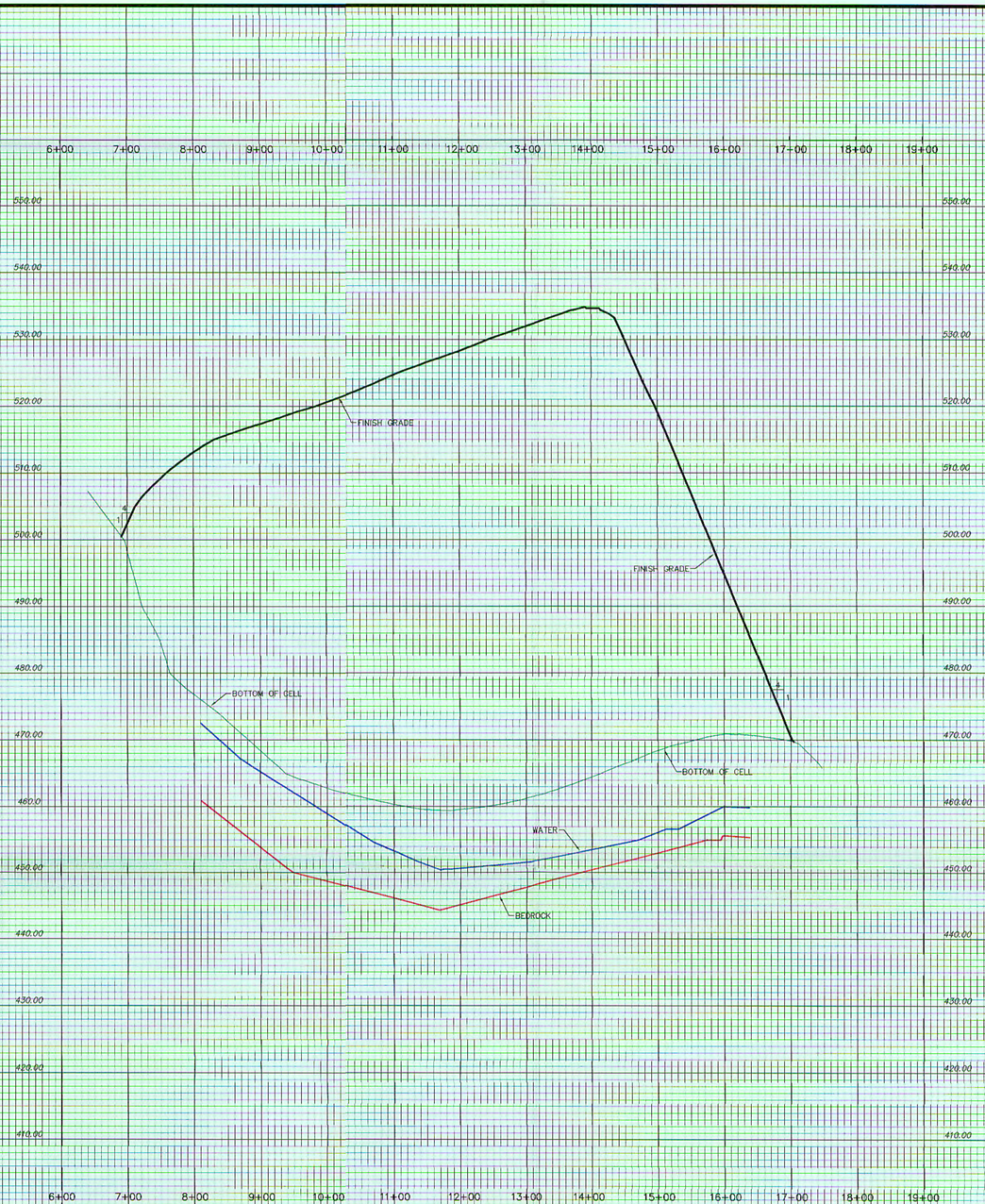
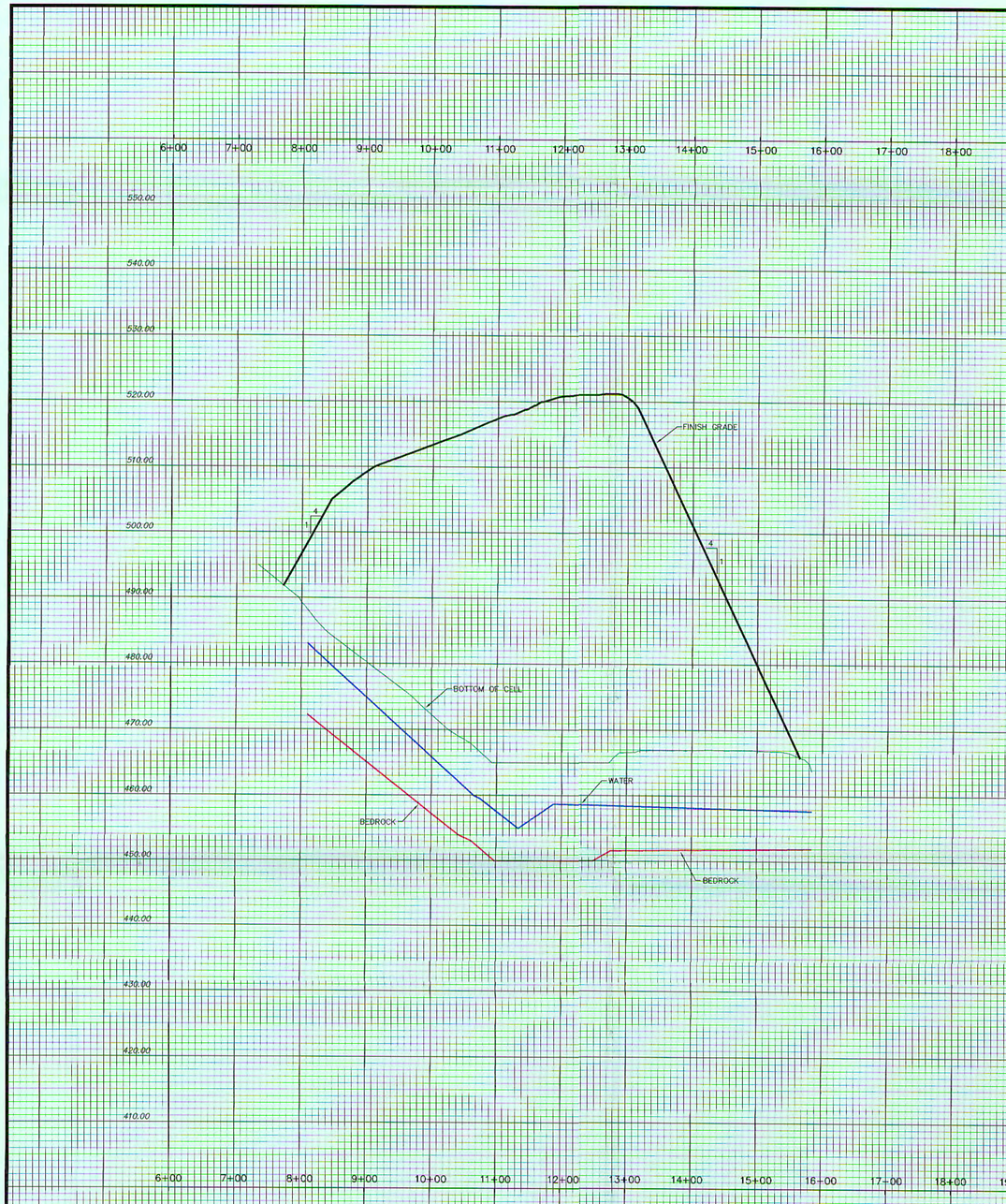


CROSS SECTION "D"

FINISH GRADE
BOTTOM OF CELL
WATER
ROCK

CROSS SECTIONS C & D
WALKER COUNTY GAMBLE INERT LANDFILL



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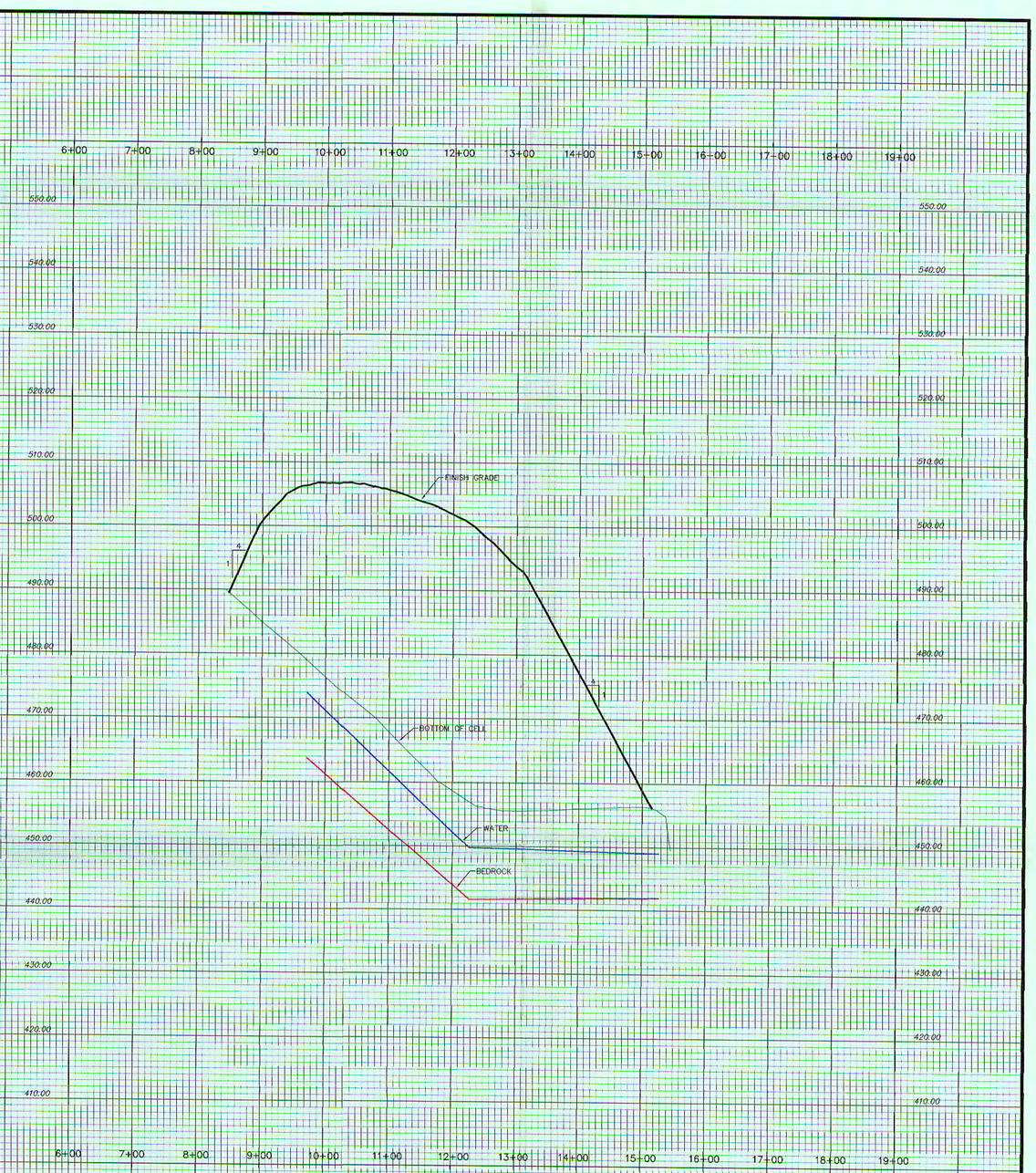


CROSS SECTION "F"

FINISH GRADE
BOTTOM OF CELL
WATER
ROCK

CROSS SECTIONS E & F
WALKER COUNTY GAMBLE INERT LANDFILL

Summary of Appendix B

Design Calculations

PERC Engineering Co., Inc.
Jasper, Alabama

Project: GAMBLE INERT LANDFILL	Designed By: MIKE SHORT	Date:
Location: WALKER COUNTY	Reviewed By:	Date:
Subject/Title: DRAINAGE CALCULATIONS	Remarks:	Sheet No.: of

DIVERSION DITCH

80' x 850' AREA TO BE DIVERTED = 1.56 AC.

HEIGHT = 20'

LENGTH = 850'

t_c = 6 MIN. FROM NOMOGRAPH

$$I = \frac{K}{t_c + b} = \frac{260}{6+32} = 6.84 \text{ IN/HR}$$

$Q_P = CIA$

$= 0.5(6.84)(1.56)$

$Q = 5.3$ cfs

$C = 0.5$

$I = 6.84$

$A = 1.56$

Triangular Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: GAMBLE

Comment: DIVERSION DITCH

Solve For Depth

Given Input Data:

Left Side Slope..	3.00:1 (H:V)
Right Side Slope.	2.00:1 (H:V)
Manning's n.....	0.025
Channel Slope....	0.0200 ft/ft
Discharge.....	5.30 cfs

Computed Results:

Depth.....	0.72 ft
Velocity.....	4.05 fps
Flow Area.....	1.31 sf
Flow Top Width...	3.62 ft
Wetted Perimeter.	3.90 ft
Critical Depth...	0.77 ft
Critical Slope...	0.0138 ft/ft
Froude Number....	1.19 (flow is Supercritical)

Design Calculations

PERC Engineering Co., Inc.
Jasper, Alabama

Project:	Designed By:	Date:
Location:	Reviewed By:	Date:
Subject/Title:	Remarks:	Sheet No.: of

RUNOFF CALCULATIONS AT FINAL GRADE (AREA 1)

AREA1 = 5.51 ACRES

HEIGHT = 545.42 - 412 = 133.42 LENGTH = 600 Ft

t_c FROM NOMOGRAPH

t_c = 2 MIN

I CALCULATED FROM STEEL FORMULA USING PUBLISHED COEFFICIENTS FOR (K) & (b)

$$I = \frac{K}{t_c + b} = \frac{260}{2+32} = 7.65 \text{ IN/HR.} \quad (25 \text{ YR.})$$

$Q = CIA$ $C = 0.5$

$I = 7.65$

$A = 5.51$ Ac

$Q = 0.5\,(7.65)(5.51)$

Q = 21.1 cfs FINAL GRADE PEAK RUNOFF

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: GAMBLE

Comment: DOWN DRAIN

Solve For Depth

Given Input Data:

Bottom Width.....	2.00 ft
Left Side Slope..	2.00:1 (H:V)
Right Side Slope.	2.00:1 (H:V)
Manning's n.....	0.025
Channel Slope....	0.0500 ft/ft
Discharge.....	21.10 cfs

Computed Results:

Depth.....	0.74 ft
Velocity.....	8.20 fps
Flow Area.....	2.57 sf
Flow Top Width...	4.96 ft
Wetted Perimeter.	5.31 ft
Critical Depth...	1.07 ft
Critical Slope...	0.0114 ft/ft
Froude Number....	2.01 (flow is Supercritical)

Design Calculations

PERC Engineering Co., Inc.
Jasper, Alabama

Project:	Designed By:	Date:
Location:	Reviewed By:	Date:
Subject/Title:	Remarks:	Sheet No.: of

RUNOFF CALCULATIONS AT FINAL GRADE (AREA #2)

AREA = 13.77

LENGTH = 800 ft

HEIGHT = 545.42 - 429 = 116.42

t_c = 7.5 MIN FROM NOMOGRAPHIC

$$I = \frac{K}{t_c + b} = \frac{260}{7.5 + 32} = 6.58 \text{ IN/HR.} \quad (25 \text{ YR.})$$

$Q = CIA$

$= 0.5(6.58)(13.77)$

$C = 0.5$
$I = 6.58$
$A = 13.77$

$Q = 45.3$ cfs

FINAL GRADE PEAK RUNOFF

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: GAMBLE

Comment: DOWN DRAIN

Solve For Depth

Given Input Data:

Bottom Width.....	2.00 ft
Left Side Slope..	2.00:1 (H:V)
Right Side Slope.	2.00:1 (H:V)
Manning's n.....	0.025
Channel Slope....	0.0500 ft/ft
Discharge.....	45.30 cfs

Computed Results:

Depth.....	1.08 ft
Velocity.....	10.06 fps
Flow Area.....	4.50 sf
Flow Top Width...	6.33 ft
Wetted Perimeter.	6.84 ft
Critical Depth...	1.57 ft
Critical Slope...	0.0103 ft/ft
Froude Number....	2.10 (flow is Supercritical)

Open Channel Flow Module, Version 3.41 (c) 1991
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

Project:	Designed By:	Date:
Location:	Reviewed By:	Date:
Subject/Title:	Remarks:	Sheet No.: of

RUNOFF CALCULATIONS AT FINAL GRADE (AREA #3)

AREA = 4.59

LENGTH = 1200 ft

HEIGHT = 545.42 - 486 = 59.42

t_c = 6 MIN FROM NOMOGRAPH

$$I = \frac{K}{t_c + b} = \frac{260}{6+32} = 6.84 \text{ IN/HR.}$$

$Q = CIA$

$= 0.5(6.84)(4.59)$

$Q = 15.7$ cfs

$C = 0.5$

$I = 6.84$

$A = 4.59$

FINAL GRADE PEAK RUNOFF

Trapezoidal Channel Analysis & Design
Open Channel - Uniform flow

Worksheet Name: GAMBLE

Comment: DOWN DRAIN

Solve For Depth

Given Input Data:

Bottom Width.....	2.00 ft
Left Side Slope..	2.00:1 (H:V)
Right Side Slope.	2.00:1 (H:V)
Manning's n.....	0.025
Channel Slope....	0.0500 ft/ft
Discharge.....	15.70 cfs

Computed Results:

Depth.....	0.64 ft
Velocity.....	7.56 fps
Flow Area.....	2.08 sf
Flow Top Width...	4.54 ft
Wetted Perimeter.	4.84 ft
Critical Depth...	0.92 ft
Critical Slope...	0.0118 ft/ft
Froude Number....	1.97 (flow is Supercritical)

Open Channel Flow Module, Version 3.41 (c) 1991
Haestad Methods, Inc. * 37 Brookside Rd * Waterbury, Ct 06708

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: GAMBLE

Comment: PIPE UNDER ENTERANCE ROAD TO LANDFILL

Solve For Actual Depth

Given Input Data:

Diameter.....	2.00 ft
Slope.....	0.0300 ft/ft
Manning's n.....	0.015
Discharge.....	15.70 cfs

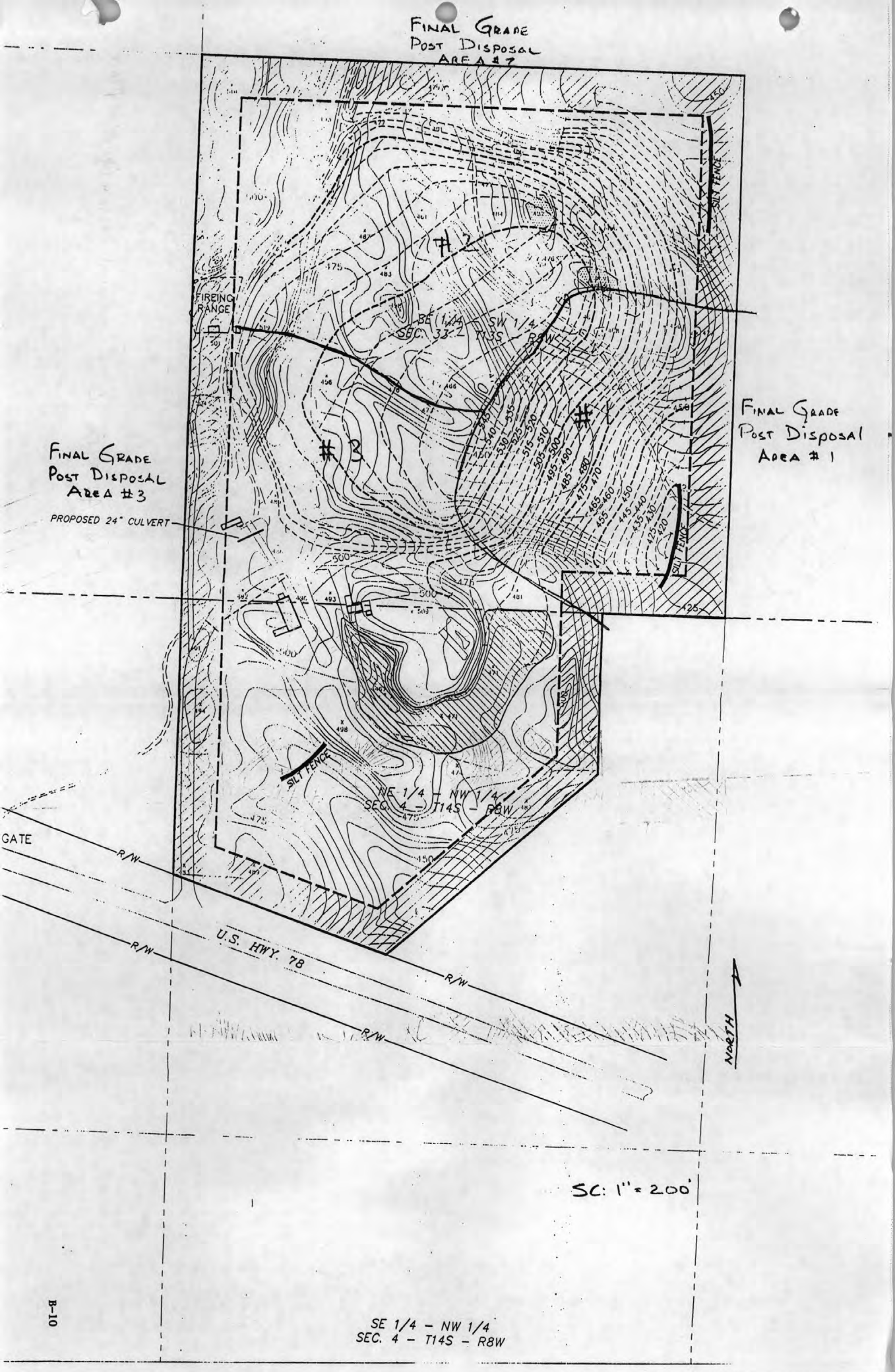
Computed Results:

Depth.....	0.96 ft
Velocity.....	10.60 fps
Flow Area.....	1.48 sf
Critical Depth....	1.43 ft
Critical Slope....	0.0087 ft/ft
Percent Full.....	47.77 %
Full Capacity.....	33.96 cfs
QMAX @.94D.....	36.53 cfs
Froude Number.....	2.17 (flow is Supercritical)

FINAL GRADE
POST DISPOSAL
AREA #2

FINAL GRADE
POST DISPOSAL
AREA #3

FINAL GRADE
POST DISPOSAL
AREA #1



SE 1/4 - NW 1/4
SEC. 4 - T14S - R8W

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 WALKER (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: Director

Rodney Cain _____ DATE: _____

(please print or type name)

SIGNATURE (Certifying Engineer):

_____ TITLE: Engineering Manager

_____ DATE: _____

(please print or type name)

FIRM: McGehee Engineering Corp. STAMP OR SEAL:

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NO: ✓ YES: ___

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SIGNATURE (Responsible official of permit applicant): _____ TITLE: Director

Rodney Cain DATE: 12-18-2024

(please print or type name)

SIGNATURE (Certifying Engineer): _____ TITLE: Engineering Manager

BRADLEY YOUNGBLOOD DATE: 12/18/24

(please print or type name)

FIRM: McGehee Engineering Corp.

ALABAMA LICENSED No. 35679 PROFESSIONAL ENGINEER BRAD YOUNGBLOOD