PRELIMINARY DETERMINATION

PERMIT RENEWAL

Prattville Solid Waste Disposal Authority
1798 Highway 14 East
Prattville, Alabama 36067

City of Prattville C/D Landfill
Permit No. 01-06

April 11, 2025

The Prattville Solid Waste Disposal Authority submitted to the Alabama Department of Environmental Management (ADEM) an application for a renewal of the Solid Waste Disposal Facility Permit for the City of Prattville C/D Landfill.

The waste stream for the City of Prattville C/D Landfill would remain non-putrescible and non-hazardous construction and demolition waste, discarded tires, rubbish as defined by ADEM Admin. Code 335-13-1-.03, and off-spec primed and unprimed Hardie board from James Hardie Building Products, Inc. This facility has also been approved to accept asbestos in accordance with ADEM Admin. Code 335-13-4-.26(2).

The service area for the City of Prattville C/D Landfill would remain the City of Prattville and Autauga, Elmore, Montgomery, Chilton, Lee and Lowndes Counties in Alabama. The maximum average daily volume of waste disposed at the City of Prattville C/D Landfill would remain 1000 cubic yards per day.

The landfill is located in the Southwest ¼ of Section 26 and the Southeast ¼ of Section 27, Township 17 North, Range 16 East in Autauga County, Alabama. The permitted facility consists of approximately 59.4 acres with 39.9 acres for disposal operations.

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

Technical Contact:

Isabel Bela
Solid Waste Engineering Section
Land Division
(334) 271-7954

Alabama Department of Environmental Management

SOLID WASTE DISPOSAL FACILITY PERMIT

PERMITTEE:	**Prattville Solid Waste Disposal Authority**
FACILITY NAME:	**City of Prattville C/D Landfill**
FACILITY LOCATION:	**Southwest ¼ of Section 26 and the Southeast ¼ of Section 27, Township 17 North, Range 16 East in Autauga County, Alabama. The facility area consists of approximately 59.4 acres with a disposal area of 39.9 acres.**
PERMIT NUMBER:	**01-06**
PERMIT TYPE:	**Construction/Demolition (C/D) Landfill**
WASTE APPROVED FOR DISPOSAL:	**Non-putrescible and non-hazardous construction and demolition waste, discarded tires, rubbish as defined by ADEM Admin. Code 335-13-1-.03, and off-spec primed and unprimed Hardie board from James Hardie Building Products, Inc. This facility has also been approved to accept asbestos in accordance with ADEM Admin. Code 335-13-4-.26(2).**
APPROVED WASTE VOLUME:	**Maximum Daily Volume of 1000 cubic yards per day**
APPROVED SERVICE AREA:	**The City of Prattville, Autauga, Elmore, Montgomery, Chilton, Lee and Lowndes Counties in Alabama**

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

ISSUANCE DATE:	**XXX**
EFFECTIVE DATE:	**XXX**
EXPIRATION DATE:	**XXX**

_____

Alabama Department of Environmental Management

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
SOLID WASTE PERMIT

Permittee:	Prattville Solid Waste Disposal Authority 1798 Highway 14 East Prattville, AL 36067
Landfill Name:	City of Prattville C/D Landfill
Landfill Location:	Southwest ¼ of Section 26 and the Southeast ¼ of Section 27, Township 17 North, Range 16 East in Autauga County, Alabama.
Permit Number:	01-06
Landfill Type:	Construction and Demolition Landfill

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), this permit is issued to Prattville Solid Waste Disposal Authority (hereinafter called the Permittee), to operate a solid waste disposal facility, known as the City of Prattville C/D Landfill.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions set forth herein (including those in any attachments), and the applicable regulations contained in Chapters 335-13-1 through 335-13-**16** of the ADEM Administrative Code (hereinafter referred to as the "ADEM Admin. Code"). Rules cited are set forth in this document for the purpose of Permittee reference. Any Rule that is cited incorrectly in this document does not constitute grounds for noncompliance on the part of the Permittee. Applicable ADEM Administrative Codes are those that are in effect on the date of issuance of this permit or any revisions approved after permit issuance.

This permit is based on the information submitted to ADEM on February 13, 2024 for permit renewal, and as amended, and is known as the Permit Application (hereby incorporated by reference and hereinafter referred to as the Permit 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 **XXX,** and shall remain in effect until **XXX**, 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 Administrative Code, Division 13. Issuance of this permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local laws or regulations. Except for actions brought under Code of Alabama 1975, Section 22-27-1, *et seq*., as amended, compliance with the conditions of this permit shall be deemed to be compliance with applicable requirements in effect as of the date of issuance of this permit and any future revisions.

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

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

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

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

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

E. Duties and Requirements.

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

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

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

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

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

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

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

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

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

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

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

   d. Sample or monitor, at reasonable times, any substances or parameters at any location for the purposes of assuring permit compliance or as otherwise authorized by Code of Alabama 1975, Section 22-27-1 *et seq*.

9. Monitoring, Corrective Actions, and Records.

   a. Samples and measurements taken for the purpose of monitoring or corrective action shall be representative of the monitored activity. The methods used to obtain representative samples to be analyzed must be the appropriate method from Chapter 335-13-4 or the methods as specified in the Application 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, Paragraph I, of all monitoring, or corrective action information, including all calibration and maintenance records, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record or for periods elsewhere specified in this permit. These periods may be extended by the request of the Department at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.

   c. Records of monitoring and corrective action information shall include:

      i. The exact place, date, and time of sampling or measurement.

      ii. The individual(s) and company who performed the sampling or measurements.

      iii. The date(s) analyses were performed.

      iv. The individual(s) and company who performed the analyses.

v. The analytical techniques or methods used.

vi. The results of such analyses.

d. The Permittee shall submit all monitoring and corrective action results at the interval specified elsewhere in this permit.

10. Reporting Planned Changes. The Permittee shall notify the Department, in the form of a request for permit modification, at least 120 days prior to any change in the permitted service area, increase in the waste received, or change in the design or operating procedure as described in this permit, including any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

11. Transfer of Permit. This permit may be transferred to a new owner or operator. All requests for transfer of permits shall be in writing and shall be submitted on forms provided by the Department. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of this permit.

12. Certification of Construction. Before the Permittee my commence disposal of waste in any new cell or phase:

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

b) The Department must inspect the constructed cells of 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 monitoring reports are submitted.

14. Other Information. If the Permittee becomes aware that information required by the Application was not submitted or was incorrect in the Application or in any report to the Department, the Permittee shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to the Department, within a reasonable time, information related to compliance with the permit.

F. Design and Operation of Facility. The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or 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 inspection and maintenance activities.

b. Daily Volume reports.

c. Personnel training documents and records.

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

e. Groundwater monitoring records.

f. Explosive gas monitoring records.

g. Surface water and leachate monitoring records.

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 action 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 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 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 City of Prattville C/D Landfill office, the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure.

1. Operating record.

2. Closure Plan.

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

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

2. Physical Address.
Chief, Solid Waste Branch
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 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 detecting and preventing the disposal of free liquids, regulated hazardous waste, PCB's, regulated medical waste, and other unauthorized waste streams at the facility.

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

E. Industrial Waste Disposal. The Permittee shall not dispose of industrial process waste at this landfill. Only those wastes shown in Section III, Paragraph B are allowed for disposal in this landfill.

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

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

SECTION III. SPECIFIC REQUIREMENTS FOR C/D LANDFILLS

A. Waste Identification and Management

1. Subject to the terms of this permit, the Permittee may dispose of the nonhazardous solid wastes listed in Section III, Paragraph 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 City of Prattville C/D Landfill is approximately 59.4 acres, with 39.9 acres permitted for disposal.

3. The maximum average daily volume of waste disposed at the facility, as contained in the permit application, shall not exceed 1000 cubic yards per day. Should the average daily volume exceed this value by 20% or 100 tons/day, whichever is less, for two (2) consecutive quarters the permittee shall be required to modify the permit in accordance with 335-13-5-.06(2)(b)2. The average daily volume shall be computed as specified by 335-13-4-.23(2)(f).

B. Waste Streams. The Permittee may accept for disposal non-putrescible and non-hazardous construction and demolition waste, discarded tires, rubbish as defined by ADEM Rule 335-13-1-.03, and off-spec primed and unprimed Hardie board from James Hardie Building Products Inc. The Permittee may also accept asbestos waste in accordance with Rule 335-13-4-.26(2).

C. Service Area. The Permittee is allowed to receive for disposal waste from the City of Prattville and Autauga, Elmore, Montgomery, Chilton, Lee and Lowndes Counties in Alabama.

D. Waste Placement, Compaction, and Cover. All waste shall be confined to an area as small as possible within a single working face and spread to a depth not exceeding two feet prior to compaction, and such compaction shall be accomplished on a faced slope not to exceed 4 to 1 (25%) or as otherwise approved by ADEM. All waste shall be 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 liner system shall be a minimum of five (5) feet above the highest measured groundwater level as determined by 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 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 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, Paragraph 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 Administrative Code, Division 13.

SECTION VI. SURFACE WATER MANAGEMENT

The permittee shall construct and maintain run-on and run-off control structures. 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 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.

B. Vegetative Cover. The Permittee shall establish a vegetative or other appropriate cover within 90 days after completion of final grading requirements in the Application. Preparation of a vegetative cover shall include, but not be limited to, the placement of seed, fertilizer, mulch, and water.

C. Notice of Intent. The Permittee shall place in the operating record and notify 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. Notice in Deed to Property. 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 the permit expiration, revocation, or as directed by ADEM as described in the Application.

K. Recording Instrument. 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.

L. Removal of Waste. If the Permittee, or any other person(s), wishes to remove waste, waste residues, or any liner or contaminated soils, the owner must request and receive prior approval from ADEM.

SECTION VIII. VARIANCES

There is no approved variance for the City of Prattville C/D Landfill.

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

PERMIT 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 City of Prattvile C/D Landfill (Permit No. 01-06)

3. Applicant/Permittee:

Name: City of Prattville

Address: 101 West Main Street
Prattville, AL 36067

Telephone: (334) 361-3609

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

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

Township 17 North **Range** 16 East
Section 26, 27 **County** Autauga

5. Land Owner:

Name: City of Prattville

Address: 101 West Main Street
Prattville, AL 36067

Telephone: (334) 361-3609

(Attach copy of agreement from landowner if applicable.)

6. **Contact Person:**

Name Joseph Bonicelli

Position or Affiliation Landfill Operator/Manager

Address: P.O. Box 1085
Wetumpka, AL 36092

Telephone: (334) 657-4835

7. **Size of Facility:** 59.4 **Acres**

Size of Disposal Area(s): 39.9 **Acres**

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

Non-putrescrible and non-hazardous construction and demolition waste, discarded tires, rubbish as defined by ADEM Rule 335-13-1-.03, and off-spec primed and unprimed Hardie board from James Hardie Building Products, Inc. This facility has also been approved to accept asbestos in accordance with Rul 335-13-4-.26(2).

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

_____ **Tons/Day** 1,000 **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.):**

The City of Prattville, Autagua, Elmore, Montgomery, Chilton, Lee, and Lowndes Counties in Alabama.

SIGNATURE (Responsible official of permit applicant):

Joseph Bonicelli **TITLE:** owner

Joseph Bonicelli **DATE:** 1/15/25

(please print or type name)

11 West Court Square
Andalusia, AL 36420
Post Office Box 278
Andalusia, AL 36420
Tel (334) 222-9431
Fax (334) 222-4018

cdge.com

February 12, 2024

Jared Kelly
Solid Waste Engineering Section
Land Division
1400 Coliseum Blvd.
Post Office Box 301463
Montgomery, AL 36130

Re: Prattville Landfill Permit Renewal Application
Permit No. 01-06

Dear Mr. Kelly,

Please find enclosed the permit renewal application for the Prattville C/D Landfill. Additionally, please accept this request for variance and minor modification for the following waste material to be accepted. The material is sanding dust (Finishing Baghouse Dust – Profile #162657) from the James Hardie Building Products facility in Prattville.

The attached information includes:

- ADEM Form 439 – Permit Application Solid Waste Disposal Facility
- ADEM Form 300 – Solid Waste Profile Sheet
- Waste Analysis
- Construction and Demolition Landfill Renewal Fee of $5,400.00
- Construction and Demolition Landfill Minor Modification Fee of $1,460.00
- Additional relevant documents included:
    - Current Variances and special conditions.
        - The Permittee is granted a variance from Rule 335-13-4-.23(1)(c) requiring a maximum slope of 4 to 1 (25%) for Cell 1. The Permittee is allowed a maximum slope of 2.5 to 1 (40%) for the southern slope of Cell 1.
        - The request for variance is attached in the supporting documents.
    - A copy of the original local approval and any subsequent local approvals relevant to current operations.
        - The local approval documentation attached from 1996.
    - Any siting requests and approvals relevant to current operations.
        - The facility meets all siting standards, an original siting documentation is attached.
    - The hydrogeological evaluation relevant to current operations.
        - The hydrogeologic evaluation is included in the siting documentation attached.
    - Stormwater runoff calculations used to size sediment ponds relevant to current operations.
        - The drainage calculations for the sediment pond are attached.

- The most recent operations plan as well as any additional modifications made since the last operations plan was written, including current waste screening procedures.
    - The Operational Plan is attached.
- The most recent gas monitoring plan as well as any modifications made since the last gas monitoring plan was written.
    - The gas monitoring plan can be found on Sheet 2 of the 2009 Permit Plans.
- The most recent closure plan as well as any modifications made since the last closure plan was written.
    - The closure plan can be found on Sheet 3 of the 2009 Permit Plans.
- The cell certification and subsequent approval letter from ADEM for the current cell waste is being disposed in.
    - Cell Certification for Cell 4 attached.
- The most recent permit drawings relevant to site operations.
    - Permit Drawings attached.
- Boundary plat and legal description prepared, signed, and sealed by a land surveyor of the permitted facility boundary and permitted disposal area of the facility.
    - The boundary plat and legal description of the permitted facility boundary is on Sheet 01 of the attached 2017 Permit Plans. The permitted disposal area limits are shown in the 2017 Permit Plans, and a legal description of the limits can be found in the 2009 Permit Plans on Sheet 2.

An updated adjacent landowner list and map will be sent upon request at a later date prior to public notice.

Please let me know if you need any additional information.

Sincerely,

CDG, Inc.

Gabby Sanders, P.E.
Project Manager

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** City of Prattville C/D Landfill (Permit No. 01-06)

3. **Applicant/Permittee:**

Name: City of Prattville

Address: 101 West Main Street
Prattville, AL 36067

Telephone: (334) 361-3609

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

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

Township 17 North **Range** 16 East
Section 26, 27 **County** Autauga

5. **Land Owner:**

Name: City of Prattville

Address: 101 West Main Street
Prattville, AL 36067

Telephone: (334) 361-3609

(Attach copy of agreement from landowner if applicable.)

6. **Contact Person:**

Name Joseph Bonicelli

Position or Affiliation Landfill Operator/Manager

Address: P.O. Box 1085
Wetumpka, AL 36092

Telephone: (334) 657-4835

7. **Size of Facility:** 59.4 **Acres**

Size of Disposal Area(s): 39.9 **Acres**

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

Non-putrescible and non-hazardous construction and demolition waste, discarded tires, rubbish as defined by ADEM Rule 335-13-1-.03, and off-spec primed and unprimed Hardie board from James Hardie Building Products, Inc. This facility has also been approved to accept asbestos in accordance with Rule 335-13-4-.26(2). Additionally, the facility is requesting to accept "sanding dust" from James Hardie Builiding Products, Inc.

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

_____ **Tons/Day** 1,000 **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.):**

The City of Prattville, Autauga, Elmore, Montgomery, Chilton, Lee & Lowndes Counties in Alabama.

SIGNATURE (Responsible official of permit applicant):

TITLE: owner

John Joseph Bonicelli **DATE:** 2/12/24

(please print or type name)

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300

General Information

Profile Type (check one): ☐ New Certification ☐ Recertification ☐ Modification to Active Profile

Generator Name: James Hardie Building Products Inc.

Generator Physical Address: 906 South Park Lane, Prattville, Al 36067

Generator County: Autauga EPA ID: ALR000063750

Generator Mailing Address: 906 South Park Lane, Prattville, Al 36067

Generator Contact: Justin Register Title: EHS Manager

Phone: 334-314-6963 Email: Justin.register@jameshardie.com

Submitted by (if different from above):

Company Name: James Hardie Building Products Inc. Contact: Thomas C. Pugh

Mailing Address: 1000 James Hardie Way Pulaski, VA 24301

Phone: 813-478-6242 Email: Tom.Pugh@jameshardie.com

Waste Information

Process Generating Waste: _____

Waste Name: _____

If this waste is subject to Corrective Action regulations 40 CFR Part 280 (UST) provide the following information:

UST Facility ID # _____ UST Incident # _____

Source of Petroleum Contamination (Gas, Diesel, Used Oil, Hydraulic Oil, etc.): _____

Does the waste contain any of the following: ☐ PCBs ☐ Cyanides ☐ Sulfides ☐ Asbestos

Concentration: _____ Units: ☐ mg/L ☐ mg/Kg ☐ PPM ☐ PPB

Waste Type: ☐ Remediation ☐ Process ☐ CERCLA Cleanup ☐ Other

Waste Volume: _____ Units: _____ Frequency: ☐ Annual ☐ Quarterly ☐ Monthly

Waste Properties

Physical State: ☐ Solid ☐ Liquid ☐ Bladeable Sludge ☐ Solid/Liquid Combination ☐ Other

% Free Liquids _____ pH (if liquid) _____ Flash Point (if liquid) _____

Will liquids be solidified prior to disposal (see instructions)? ☐ YES ☐ NO

Waste Disposition

Is this Foundry Waste handled in accordance to ADEM Code 335-13-4-.26(3)? ☐ YES ☐ NO

Is this Wood Ash handled in accordance to ADEM Code 335-13-4-.26(6)? ☐ YES ☐ NO

Landfill Name #1: Jettison Environmental Permit #: 01-06

Landfill Name #2: _____ Permit #: _____

Landfill Name #3: _____ Permit #: _____

Landfill Name #4: _____ Permit #: _____

Current Profile No. (if applicable) _____

Alabama Department of Environmental Management
Solid Waste Profile Sheet
Form 300
Continuation Form

Process Generating Waste continued:

Other:

Certification

I certify under penalty of law that this waste material does not contain regulated medical waste, regulated PCB waste, or hazardous waste which is not conditionally exempt from Division 14 Regulations. I further certify that, at the point of disposal, this waste material will not contain any free liquids. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John Joseph Bonicelli
Name (type or print)

Owner
Title

Signature

2/12/24
Date

SOLID WASTE PROFILE SHEET INSTRUCTIONS

GENERAL INFORMATION

Indicate if the submittal is a new certification, recertification, or a modification to a current certification. A modification is a request for a change to a current certification when information relative to the waste stream has changed or additional information is added.

Enter the generating facility's name, 12-digit USEPA Identification Number (if a number has been assigned to this location), physical address where the waste is generated, to include the county name and mailing address. Enter the name of the facility's contact person along with their official title, telephone number and e-mail address. This should be a person whom the Department can contact with questions regarding this certification or waste stream. Enter the name of the company and person making the profile submission, if it is different from the generator information. Include the company's mailing address along with the contact person's telephone number and e-mail address.

WASTE INFORMATION

Enter a description of the process generating this waste stream along with the name of the waste. The description should be clear and include background or historical information that will enable the Department to determine whether the waste is a hazardous or non-hazardous waste. General processes (i.e. spill cleanup, plant cleanup, decontamination, accidental release, wastewater treatment sludge, contaminated debris) will require additional clarifications to ensure that the waste is properly classified. For example, wastewater treatment sludge is too generic since this sludge could be hazardous depending on how the wastewater was generated (i.e. sludge from the treatment of wastewaters from electroplating operations could be a F006 listed hazardous waste). If the waste is subject to the corrective action regulations of 40 CFR Part 280 (Underground Storage Tank Program), include the UST Facility Identification Number and the UST Incident Number (if applicable). If the waste is contaminated with a petroleum product, indicate the type of petroleum. Also, indicate if the waste contains PCBs, cyanides, sulfides, or asbestos by checking the appropriate box, and supply the concentration and units as well. If necessary, attach Material Safety Data Sheets or other documents (i.e. laboratory analysis results) that describe the composition of the waste. Please indicate the annual volume for disposal. Place an "X" in the box indicating if the waste is a Remediation, CERCLA, or Process waste.

WASTE PROPERTIES

Place an "X" in the box indicating the correct physical state of the waste. If the waste is a liquid or contains free liquid, include values for percent free liquids, pH, and flash point. Plus indicate whether or not the waste will be solidified prior to disposal.

If the waste is to be solidified, please identify where the solidification process will occur and the product used for solidification. Please attach a Material Safety Data Sheet for the product, if necessary.

WASTE DISPOSITION

If the waste is Foundry Waste or Wood Ash, indicate whether or not it is being used as fill material in accordance with the requirements of ADEM Admin. Code r. 335-13-4-.26(3) and/or (6). Supply the name(s) and permit number(s) of the intended landfill(s).

CERTIFICATION

The certification for submitted information must be signed and dated by an authorized representative of the company.

PROFILE/CERTIFICATION NUMBER

If this is a recertification or a modification to an existing certification, enter the six-digit profile number assigned to the profile by the Department.

E-mail or mail completed form, pertinent analyses, and applicable fees (specified in Division 1, Chapter 6 (335-1-6) of the ADEM Administrative Code) to:

wasteapprovals@adem.alabama.gov

Or mail your profile to:

Waste Disposal Approvals
Land Division
Alabama Department of Environmental Management
PO Box 301463
Montgomery, AL 36130-1463

Tom Pugh <Tom.Pugh@Jameshardie.com>
Mon 2/12/2024 10:31 AM
To:Ashley Cole <ashley@jettisonenvironmental.com>

1 attachments (46 KB)
James Hadie 03032021-0652 TCLP Primed Board & Unprimed Board.pdf;

Ashely,

This is for the off-spec material. It will be the same for the dust.

Tom

From: Ashley Cole <ashley@jettisonenvironmental.com>
Sent: Monday, February 12, 2024 10:18 AM
To: Tom Pugh <Tom.Pugh@Jameshardie.com>
Subject: Waste analysis

Hello,
We have a meeting with the mayor today and need copies of the waste analysis for sanding dust ASAP!!! I'm not sure about the calcium carbonate approval you can send it as well.
Do you have the Form 300 info as well?
Thanks,

JETTISON
ENVIRONMENTAL, LLC

Ashley Cole
Business manager
802 Co Rd 4 E.
Prattville, Al 36067
334-301-4414

ENVIRO MANAGEMENT CORP.

2607 Commerce Boulevard
Birmingham, AL 35210
205 951-3400
1-800-23WATER
FAX 205 951-0808

James Hardie Building Products Inc.
Justin Register
906 South Park Lane
Prattville, AL 36067

Lab Number: 20210652
Date Reported: 3/18/2021
Date Received: 3/3/2021

Requested Analysis

Test	Method	Result	Units	Begin Date/Time	End Date/Time	Analyst
Sample No: 20210652-01 Description: Primed Board						
Sampled: 3/3/2021 2:50:00 PM						
Arsenic, TCLP	SW846 6020B	*B (<0.010)	mg/L		03/10/21 0:00	SEC
Barium, TCLP	SW846 6010B	0.38	mg/L		03/05/21 16:07	SB
Cadmium, TCLP	SW846 6010B	*B (<0.07)	mg/L		03/05/21 16:07	SB
Chromium, TCLP	SW846 6010B	*B (<0.07)	mg/L		03/05/21 16:07	SB
Lead, TCLP	SW846 6010B	*B (<0.05)	mg/L		03/05/21 16:07	SB
Mercury, TCLP	SW846 6020B	*B (<0.0005)	mg/L		03/10/21 0:00	SEC
Selenium, TCLP	SW846 6020B	*B (<0.010)	mg/L		03/10/21 0:00	SEC
Silver, TCLP	SW846 6010B	*B (<0.04)	mg/L		03/05/21 16:07	SB
Sample No: 20210652-02 Description: Unprimed Board						
Sampled: 3/3/2021 2:52:00 PM						
Arsenic, TCLP	SW846 6020B	*B (<0.010)	mg/L		03/10/21 0:00	SEC
Barium, TCLP	SW846 6010B	0.42	mg/L		03/05/21 16:10	SB
Cadmium, TCLP	SW846 6010B	*B (<0.07)	mg/L		03/05/21 16:10	SB
Chromium, TCLP	SW846 6010B	*B (<0.07)	mg/L		03/05/21 16:10	SB
Lead, TCLP	SW846 6010B	*B (<0.05)	mg/L		03/05/21 16:10	SB
Mercury, TCLP	SW846 6020B	*B (<0.0005)	mg/L		03/10/21 0:00	SEC
Selenium, TCLP	SW846 6020B	*B (<0.010)	mg/L		03/10/21 0:00	SEC
Silver, TCLP	SW846 6010B	*B (<0.04)	mg/L		03/05/21 16:10	SB

ADEM/EPA NODI code *B: result is below detection limit
SW846 - Test Methods for Evaluating Solid Waste Physical/Chemical Methods.
TCLP - Toxicity Characteristic Leaching Procedure, SW846 Method 1311

SB Seyvon Brown SEC Sutherland

Approved By Daneen Wilson
Lab Manager

LANCE R. LEFLEUR
DIRECTOR

BOB RILEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

November 19, 2021

Mr. Dennis Mullins, Chairman
Prattville Solid Waste Disposal Authority
802 County Rd. 4 East
Prattville, Alabama 36067

RE: Permit Modification
City of Prattville C/D Landfill
Permit 01-06

Dear Mr. Mullins:

Enclosed is the modified Solid Waste Facility Disposal Permit for the City of Prattville C/D Landfill. The modification is effective November 19, 2021 and the expiration date will remain August 8, 2024.

If you should have any questions, please contact Mrs. Mary Catherine Muscha of the Solid Waste Engineering Section at (334) 270-5651.

Sincerely,

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

SSS/mcm

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

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

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

Mobile-Coastal
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

FINAL DETERMINATION

PERMIT MODIFICATION

Prattville Solid Waste Disposal Authority
1798 Highway 14 East
Prattville, Alabama 36067

City of Prattville C/D Landfill
Permit No. 01-06

November 19, 2021

The Prattville Solid Waste Disposal Authority submitted to the Alabama Department of Environmental Management (ADEM) an application for a minor modification of the Solid Waste Disposal Facility Permit for the City of Prattville C/D Landfill. The proposed modification would add off-spec primed and unprimed Hardie board from James Hardie Building Products Inc. to the waste stream. The waste stream for the City of Prattville C/D Landfill would remain non-putrescible and non-hazardous construction and demolition waste, discarded tires, rubbish as defined by ADEM Rule 335-13-1-.03, and asbestos in accordance with Rule 335-13-4-.26(2) in addition to the off-spec primed and unprimed Hardie board. The service area for the City of Prattville C/D Landfill would remain City of Prattville and Autauga, Elmore, Montgomery, Chilton, Lee and Lowndes Counties in Alabama. The maximum average daily volume of waste disposed at the City of Prattville C/D Landfill would remain 1000 cubic yards per day.

The landfill is located in the Southwest ¼ of Section 26 and the Southeast ¼ of Section 27, Township 17 North, Range 16 East in Autauga County, Alabama. The permitted facility consists of approximately 59.4 acres with 39.9 acres for disposal operations.

The Land Division has determined that the modification of the permit meets the applicable requirements of ADEM's Administrative Codes Division 13.

Technical Contact:

Mary Catherine Muscha
Solid Waste Engineering Section
Land Division
(334) 270-5651

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SOLID WASTE DISPOSAL FACILITY *PERMIT*

PERMITTEE:	**Prattville Solid Waste Disposal Authority**
FACILITY NAME:	**City of Prattville C/D Landfill**
FACILITY LOCATION:	**Southwest ¼ of Section 26 and the Southeast ¼ of Section 27, Township 17 North, Range 16 East in Autauga County, Alabama. The facility area consists of approximately 59.4 acres with a disposal area of 39.9 acres.**
PERMIT NUMBER:	**01-06**
PERMIT TYPE:	**Construction/Demolition (C/D) Landfill**
WASTE APPROVED FOR DISPOSAL:	**Non-putrescible and non-hazardous construction and demolition waste, discarded tires, rubbish as defined by ADEM Rule 335-13-1-.03, and off-spec primed and unprimed Hardie board from James Hardie Building Products Inc. This facility has also been approved to accept asbestos in accordance with Rule 335-13-4-.26(2).**
APPROVED WASTE VOLUME:	**Maximum Daily Volume of 1000 cubic yards per day**
APPROVED SERVICE AREA:	**The City of Prattville, Autauga, Elmore, Montgomery, Chilton, Lee and Lowndes Counties in Alabama**

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

ISSUANCE DATE:	**August 9, 2019**
MODIFICATION DATE	**November 19, 2021**
EFFECTIVE DATE:	**August 9, 2019**
EXPIRATION DATE:	**August 8, 2024**

Alabama Department of Environmental Management

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
SOLID WASTE PERMIT

Permittee:	Prattville Solid Waste Disposal Authority 1798 Highway 14 East Prattville, AL 36067
Landfill Name:	City of Prattville C/D Landfill
Landfill Location:	Southwest ¼ of Section 26 and the Southeast ¼ of Section 27, Township 17 North, Range 16 East in Autauga County, Alabama.
Permit Number:	01-06
Landfill Type:	Construction and Demolition Landfill

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), this permit is issued to Prattville Solid Waste Disposal Authority (hereinafter called the Permittee), to operate a solid waste disposal facility, known as the City of Prattville C/D Landfill.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions set forth herein (including those in any attachments), and the applicable regulations contained in Chapters 335-13-1 through 335-13-15 of the ADEM Administrative Code (hereinafter referred to as the "ADEM Admin. Code"). Rules cited are set forth in this document for the purpose of Permittee reference. Any Rule that is cited incorrectly in this document does not constitute grounds for noncompliance on the part of the Permittee. Applicable ADEM Administrative Codes are those that are in effect on the date of issuance of this permit or any revisions approved after permit issuance.

This permit is based on the information submitted to ADEM on February 6, 2019 for permit renewal, and as amended, 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 **August 9, 2019, modified November 19, 2021,** and shall remain in effect until **August 8, 2024**, unless suspended or revoked.

11/19/2021

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

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

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

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

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

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

E. Duties and Requirements.

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

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

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

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

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

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

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

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

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

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

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

   d. Sample or monitor, at reasonable times, any substances or parameters at any location for the purposes of assuring permit compliance or as otherwise authorized by Code of Alabama 1975, Section 22-27-1 *et seq*.

9. Monitoring, Corrective Actions, and Records.

   a. Samples and measurements taken for the purpose of monitoring or corrective action shall be representative of the monitored activity. The methods used to obtain representative samples to be analyzed must be the appropriate method from Chapter 335-13-4 or the methods as specified in the Application 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, Paragraph I, of all monitoring, or corrective action information, including all calibration and maintenance records, copies of all reports and records required by this permit, and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record or for periods elsewhere specified in this permit. These periods may be extended by the request of the Department at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.

   c. Records of monitoring and corrective action information shall include:

      i. The exact place, date, and time of sampling or measurement.

      ii. The individual(s) and company who performed the sampling or measurements.

      iii. The date(s) analyses were performed.

      iv. The individual(s) and company who performed the analyses.

v. The analytical techniques or methods used.

vi. The results of such analyses.

d. The Permittee shall submit all monitoring and corrective action results at the interval specified elsewhere in this permit.

10. Reporting Planned Changes. The Permittee shall notify the Department, in the form of a request for permit modification, at least 90 days prior to any change in the permitted service area, increase in the waste received, or change in the design or operating procedure as described in this permit, including any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

11. Transfer of Permit. This permit may be transferred to a new owner or operator. All requests for transfer of permits shall be in writing and shall be submitted on forms provided by the Department. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of this permit.

12. Certification of Construction. The Permittee may not commence disposal of waste in any new cell or phase until the Permittee has submitted to ADEM, by certified mail or hand delivery, a letter signed by both the Permittee and a professional engineer stating that the facility has been constructed in compliance with the permit. ADEM must inspect the constructed cells or phases before the owner or operator can commence waste disposal unless the Permittee is notified that ADEM will waive the inspection.

13. Compliance Schedules. Reports of compliance or noncompliance with or any progress reports on interim and final requirements contained in any compliance schedule required and approved by the Department shall be submitted no later than 14 days following each schedule date.

14. Other Noncompliance. The Permittee shall report all instances of noncompliance with the permit at the time monitoring reports are submitted.

15. Other Information. If the Permittee becomes aware that information required by the Application was not submitted or was incorrect in the Application or in any report to the Department, the Permittee shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to the Department, within a reasonable time, information related to compliance with the permit.

F. Design and Operation of Facility. The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or 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 335-13.

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

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

H. Recordkeeping and Reporting.

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

a. Documentation of inspection and maintenance activities.

b. Daily Volume reports.

c. Personnel training documents and records.

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

e. Groundwater monitoring records.

f. Explosive gas monitoring records.

g. Surface water and leachate monitoring records.

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 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 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 City of Prattville C/D Landfill, office the following documents and amendments, revisions and modifications to these documents until an engineer certifies closure.

1. Operating record.

2. Closure Plan.

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

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

2. Physical Address.
Chief, Solid Waste Branch
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, Alabama 36110-2059

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 if the information is protected under Code of Alabama 1975 §§22-39-18, as amended.

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

SECTION II. GENERAL OPERATING CONDITIONS.

A. Operation of Facility. The Permittee shall operate and maintain the disposal facility consistent with the Application, this permit, and 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 for the detecting and preventing the disposal of free liquids, regulated hazardous waste, PCB's, and medical waste at the facility.

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

E. Industrial Waste Disposal. The Permittee shall not dispose of industrial process waste at this landfill. Only those wastes shown in Section III, Paragraph B are allowed for disposal in this landfill.

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

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

SECTION III. SPECIFIC REQUIREMENTS FOR C/D LANDFILLS

A. Waste Identification and Management

1. Subject to the terms of this permit, the Permittee may dispose of the nonhazardous solid wastes listed in Section III, Paragraph 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 City of Prattville C/D Landfill is approximately 59.40 acres, with 39.9 acres permitted for disposal.

3. The maximum average daily volume of waste disposed at the facility, as contained in the permit application, shall not exceed 1000 cubic yards per day. Should the average daily volume exceed this value by 20% or 100 tons/day, whichever is less, for two (2) consecutive quarters the permittee shall be required to modify the permit in accordance with 335-13-5-.06(2)(a)5. The average daily volume shall be computed as specified by 335-13-5-.06(2)(a)5.(i).

B. Waste Streams. The Permittee may accept for disposal non-putrescible and non-hazardous construction and demolition waste, discarded tires, rubbish as defined by ADEM Rule 335-13-1-.03, **and off-spec primed and unprimed Hardie board from James Hardie Building Products Inc.** The Permittee may also accept asbestos waste in accordance with Rule 335-13-4-.26(2).

C. Service Area. The Permittee is allowed to receive for disposal waste from the City of Prattville and Autauga, Elmore, Montgomery, Chilton, Lee and Lowndes Counties in Alabama.

D. Waste Placement, Compaction, and Cover. All waste shall be confined to an area as small as possible and placed onto an appropriate slope not to exceed 2.5 to 1 (40%) for the southern slope of Cell 1 or 4 to 1 (25%) for any other cell located at the site as approved by ADEM (See Section VIII, 1.). 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 shall be added at the conclusion of each week's operation unless a variance is granted in Section VIII.

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 temporal fluctuation of the groundwater table.

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 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 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, Paragraph 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 Administrative Code, Division 13.

SECTION VI. SURFACE WATER MANAGEMENT

The permittee shall construct and maintain run-on and run-off control structures. 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 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.

B. Vegetative Cover. The Permittee shall establish a vegetative or other appropriate cover within 90 days after completion of final grading requirements in the Application. Preparation of a vegetative cover shall include, but not be limited to, the placement of seed, fertilizer, mulch, and water.

C. Notice of Intent. The Permittee shall place in the operating record and notify 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 an 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 thirty (30) years following closure of the facility. ADEM may shorten or extend the post-closure care period applicable to the solid waste disposal facility. The Permittee shall reapply in order to fulfill the post-closure care requirements of this permit.

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 an engineer, verifying the post-closure has been completed according to the Post-Closure Plan.

J. Notice in Deed to Property. The Permittee shall record a notation onto the land deed containing the property utilized for disposal within 90 days after permit expiration, revocation or when closure requirements are achieved as determined by ADEM as stated in the Application. This notation shall state that the land has been used as a solid waste disposal facility, the name of the Permittee, type of disposal activity, location of the disposal facility and beginning and closure dates of the disposal activity.

K. Recording Instrument. The Permittee shall submit a certified copy of the recording instrument to ADEM within 120 days after permit expiration, revocation, or as directed by ADEM as described in the Application.

L. Removal of Waste. If the Permittee, or any other person(s), wishes to remove waste, waste residues, or any liner or contaminated soils, the owner must request and receive prior approval from ADEM

SECTION VIII. VARIANCES

1. The Permittee is granted a variance from Rule 335-13-4-.23(1)(c) requiring a maximum slope of 4 to 1 (25%) for Cell 1. The Permittee is allowed a maximum slope of 2.5 to 1 (40%) for the southern slope of Cell 1 (See Section III, D.).

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

CDG

Engineering. Environmental. Answers.

1840 East Three Notch Street
Andalusia, AL 36421
Post Office Box 278
Andalusia, AL 36420
Tel (334) 222-9431
Fax (334) 222-4018

www.cdge.com

May 15, 2019

Preston Waid
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130

Re: Request for Variances
Prattville C/D Landfill (No. 01-06)

Dear Mr. Waid,

As part of the completion of the renewal of Permit No. 01-06 for the Prattville C/D Landfill, the client would like to request to continue variance from Rule 335-13-4-.23(1)(c) which states that "all waste shall be confined to as small an area as possible and placed onto an appropriate slope not to exceed 4 to 1 (25%) for Cell 1."

Under current permit conditions, the permittee is allowed a maximum slope of 2.5 to 1 (40%) for the southern slope of Cell 1.

Please feel free to call should you have any questions.

Sincerely,

CDG Engineers & Associates, Inc.

Laura Kate Young

Laura Kate Young
Engineer I

ARCADIS
Infrastructure, environment, buildings

ARCADIS G&M, Inc.
2849 Paces Ferry Road
Suite 400
Atlanta
Georgia 30339
Tel 770 431 8666
Fax 770 435 2666
www.arcadis-us.com

WATER RESOURCES

Mr. Jonathan Crosby
Alabama Department of
Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36110

Subject:
Variance Request and Closure Certification for Cell 1 Steep Slopes
City of Prattville Construction/Demolition Landfill
Permit No. 01-06
Autauga County, Alabama

Date:
August 25, 2005

Contact:
J. Robin Blanton, PE

Extension:
634

E-mail:
rblanton@arcadis-us.com

Our ref:
GA063544.0000.00001

Dear Mr. Crosby:

On behalf of BFI Waste Services, LLC (BFI) we hereby submit a variance request and closure certification for existing Cell 1 steep slopes at the City of Prattville Construction/Demolition Landfill.

Prior to operation of the facility by BFI, the City of Prattville filled the southeast portion of Cell 1. The southern slopes were left at approximately 2.5:1, steeper than the 4:1 maximum slope required by the design plan. In accordance with the Notice of Violation dated February 10, 2005, and BFI's response letter dated February 25, 2005, BFI previously completed the following:

- Submittal of revised closure plan as part of the major modification
- Assessment and verification of cover thickness
- Establishment of permanent vegetation (Bermuda sod)
- Upgrade of existing stormwater facilities by constructing a sediment pond and redirecting runoff from Cell 1 into the pond

This variance request and closure certification includes the following documentation:

- Results of soil depth verification by Kelly Engineering, LLC dated March 2005
- Stability analysis for static and seismic conditions performed by ARCADIS

As a registered engineer in the state of Alabama, based on a review of the site and the above documentation, I certify that the existing Cell 1 slopes are stable under static and seismic loading conditions and have been closed in accordance with the approved permit plans.

If you have any questions, please contact me or Lindsey Agricola at BFI Waste Services. Ms. Agricola's office phone number is 850.437.7837.

Sincerely,

ARCADIS G&M, Inc.

J. Robin Blanton, PE
Senior Project Manager
Water/Wastewater Department Manager

Enclosure

Copies:
Alan Shehane, ADEM (letter only)
Eric Mead, BFI
Lindsey Agricola, BFI
Shane Harris, BFI
Wade Rogers, BFI

SLOPE STABILITY ANALYSIS

CITY OF PRATTVILLE C/D LANDFILL

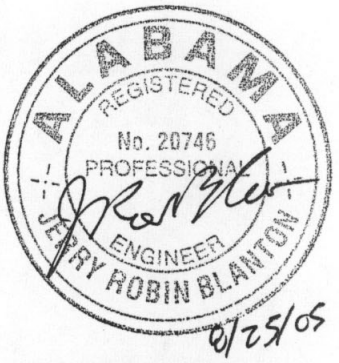
CELL 1 STEEP SLOPES

Autauga County, Alabama

ARCADIS

Infrastructure, environment, buildings

ARCADIS



Slope Stability Analysis

City of Prattville
Construction/Demolotion
Landfill
Cell 1 Steep Slopes

Prepared for:
Autauga County Landfill LLC/
BFI Waste Services

Prepared by:
ARCADIS G&M, Inc.
1210 Premier Drive
Suite 200
Chattanooga
Tennessee 37421
Tel 423 756 7193
Fax 423 756 7197

Our Ref.:
GA063544.0000

Date:
August 2005

Table of Contents

Introduction

The City of Prattville Construction/Demolition (C/D) Landfill is located in Autauga County, Alabama. The facility is located on the south side of the city of Prattville approximately 1 mile north of the Alabama River. Cell 1 of the site is currently in operation.

The southeast portion of Cell 1 was filled by the City of Prattville prior to operation by Autauga County Landfill LLC/BFI Waste Services. The south and east slopes were left at an approximately 2.5:1 slope which is steeper than ADEM regulations and the permit drawings allow. As part of a response to the Notice of Violation issued by ADEM on February 10, 2005, Autauga County LLC/BFI Waste Services proposed to close the slopes in place and request a variance for the steep slopes.

The analyses and calculations within this report document the slope stability analyses performed to demonstrate the stability of the existing steep slopes on the filled portion of Cell 1 as part of a variance request for the landfill. Specifically, the results of the analyses of the foundation soils and waste are provided to assess stability under load.

Area and Site Geology

The landfill site is within the Coastal Plain physiographic province. According to the Geologic Map of Alabama (Szabo and Copeland 1988), this site is located on Pleistocene Age high terrace deposits and the Upper Cretaceous Age Eutaw Formation. Downslope of the Eutaw Formation are more recent alluvial and low terrace deposits.

The high terrace deposits are described as typically being well graded sands, silt, clay, and gravel. The Eutaw Formation typically is composed of poorly graded fine to medium quartz sand interbedded with clay, sandy clay and thin beds of sandstone. Alluvial and low terrace deposits may contain fine to coarse sand with clay lenses and gravels in places. Alluvial and terrace deposits have been placed by the Alabama River.

No site-specific soil investigation reports are available for the site. Engineers familiar with the site have reported that the soils evident are primarily silty sands. This is consistent with the expected soil types according the geologic map.

Circular / Block Stability Analyses

A series of stability analyses was performed to determine whether the waste mass and foundation soils are capable of supporting the proposed slope under static and seismic conditions. The following sections describe the methodology, material properties, and results of the circular and block stability analyses.

A stability analysis of the existing slopes in their present geometry was completed in addition to the analysis of the final proposed slope.

Methodology

Critical Section

For this study, visual examination of the project drawings identified the critical cross sections for slope stability as the southeast slope of Cell 1. A plan view showing the existing and permitted final elevations of the landfill and the limits of the selected critical cross-section is included as Figure 1.

Modeling

The computer program UTEXAS4 (Wright 1999) is used to determine the embankments' most critical factors of safety against slope failure. The factor of safety is defined as the ratio of the resisting moments to the driving moments. Small failures such as those that only cause surface sloughing are ignored. The most critical failure circle is identified through an iterative process for each cross section. A noncircular, wedge-type failure of the slope is also analyzed for each cross section.

Piezometric conditions are modeled as piezometric lines in UTEXAS4. Pore water pressures are computed from the piezometric line by multiplying the vertical distance below the line by the unit weight of water. Soil below the groundwater table is assigned saturated unit weight, and the fill soils that are located above the phreatic surface are assigned moist unit weights.

Spencer's procedure is used for all analyses and computation of factors of safety. Spencer's procedure satisfies all requirements for static equilibrium. Both circular and noncircular wedge-type failures were searched for critical failures.

Loading Cases

The stability of the critical section was analyzed using the static and pseudo-static methods of analysis. UTEXAS4 allows the use of earthquake coefficients (expressed as a percentage of gravity) to generate a pseudo-static load representation of

earthquake effects within the model. A direct relationship is assumed to exist between the pseudo-static earthquake force acting on the sliding mass and the weight of the sliding mass. In the pseudo-static analysis, the earthquake forces are modeled as a horizontal force in the direction of potential sliding equal to the weight of the sliding mass multiplied by a seismic coefficient. The seismic coefficient of 0.05g corresponds to two-thirds of the peak rock acceleration value for the site with a 2 percent probability of exceedance in 50 years. The two-thirds of peak rock acceleration value is based on the expected attenuation of the rock acceleration within the subgrade soil as well as within the landfill material itself.

Failure Modes

Circular and noncircular failure modes were considered in the analysis for the overall stability of the combined waste and foundation soil geometry. Two loading scenarios were analyzed for each section. Global stability of the sections when subjected to a seismic load and global stability for the long-term condition were analyzed.

Material Properties for Stability Analysis

The following paragraphs discuss the selected unit weights and shear strength parameters for the C/D waste and foundation materials.

C/D Waste

Limited information on the strength parameters of C/D waste exists. Results of strength testing of landfill waste using large-diameter direct shear devices have been published (Landva and Clark 1990). Recent research and experience with landfill slopes have lead to the conclusion that municipal solid waste is a strong material capable of standing on steep slopes and resisting relatively strong earthquake motions. In 1990, Singh and Murphy reported, "Moderately steep sanitary landfills have had no slope failures even when they were shaken by relatively strong ground motions during earthquakes."

More recently, Stark and Evans (1997) stated:

> *Based on the 150-foot-high scarp that remained nearly vertical for seven months at this site and the results of large-scale laboratory tests on solid waste, as well as the experience of similar slope failures, we know that municipal solid waste is a strong material. The exact mechanisms behind its high shear strength are not known, but the interconnection of plastics and other materials plays a significant role.*

Results of strength testing of municipal solid waste using large-diameter direct shear devices have also been published (Landva and Clark 1990). A bi-linear shear strength envelope generated for municipal solid waste by Kavazanijian et al (1995) indicates that a cohesion value of 500 pounds per square foot (psf) and a friction angle of 33 degrees is reasonable for municipal solid waste.

C/D waste is different from municipal solid waste in three areas. First, it contains a larger percentage of rubble and linear elements but no household waste. Second, it degrades at a significantly lower rate, maintaining its cohesion longer. Third, it has a higher permeability and void ratio due to the nature of the waste and the lower percentage of cover soil. Since published strength data for C/D waste is scarce, it is conservative, given the positive differences of in-place characteristics over municipal solid waste, to use the published data for municipal solid waste. For a more conservative model, we have neglected cohesion while maintaining the friction angle at 33 degrees.

The unit weight of in-place C/D waste is highly variable depending on the waste stream composition and compaction effort. Recent calculations of remaining airspace indicate an average compacted density of approximately 55 pounds per cubic foot (pcf). The waste has been conservatively assigned a unit weight of 80 pcf for these analyses.

Foundation Materials

Site-specific field and laboratory data for assigning shear strengths are not available for the foundation soils. Existing data do not adequately describe the actual locations and thickness of the various subgrade soil types. Consequently, the subgrade soils are treated as one unit with material properties averaged from available descriptions. The site soils are described as silty sand. Because no engineering property data exist, the sands are assumed conservatively to have a loose density.

Drained conditions are expected in the silty sand soil in the long term, and a strength value of 0 cohesion and 30 degrees friction angle is assigned for the long-term case. The friction angle is based on a relationship between relative density and angle of internal friction for clean sands (Duncan and Wright 2005). Loose sands may exhibit friction angles of 30 to 35 degrees; the foundation soils are assigned a strength at the low end of this range due to the silt in the soil.

Undrained conditions may be possible in the silty sand during earthquake loading condition. The subgrade soil contains predominantly sand so the undrained strength is

assigned in the form of a friction angle of 25 degrees. Additional strength is assigned as a cohesion value of 200 psf.

Table 1 summarizes the selected material properties.

TABLE 1

Selected Material Parameters

Material Type	Unit Weight (lb/cf, moist)	Cohesion (psf)	Friction Angle (degrees)
C/D Waste	80	0	33
Silty Sand (drained)	115	0	30
Silty Sand (undrained)	120	200	25

Results of the Circular / Block Stability Analyses

The most critical factors of safety against slope failure were found for the static and seismic loading of a section through a section cut through Cell 1 as shown on Figure 1. The factor of safety was 1.994 for the static case and 1.693 for the seismic loading, both of which are much higher than the recommended minimum values. Table 2 summarizes the calculated safety factors for the various loading conditions. The results of the stability analyses are included in Appendix A.

TABLE 2

Summary of Analyses

Analysis Case	Loading Condition	Filename	Computed Factor of Safety (proposed slope)	Recommended Minimum Factor of Safety
Circular Failure	Static	Existing Waste-drained.UT4	2.120	1.5
Circular Failure	Seismic	Existing Waste-EQ2.UT4	1.818	1.0
Noncircular Failure	Static	Existing Waste-drained-n.UT4	1.994	1.5
Noncircular Failure	Seismic	Exisitng Waste-EQ2-n.UT4	1.693	1.0

Conclusion

This report presents the methods and results of slope stability performed for the Cell 1 steep slopes at the City of Prattville C/D landfill. The results indicate that the existing steep slopes of the C/D landfill will be stable under all anticipated loading conditions.

References

Duncan, J. Michael, and Stephen G. Wright. 2005. Soil Strength and Slope Stability. John Wiley & Sons, Hoboken, New Jersey.

Szabo, Michael W., and Charles W. Copeland. 1988. Geologic Map of Alabama. Geologic Survey of Alabama.

Wright, Stephen G. 1999. UTEXAS4, A Computer Program for Slope Stability Calculations. Shinoak Software, Austin, Texas.

NO.	DATE	REVISION DESCRIPTION	BY	CKD

ARCADIS
2849 Paces Ferry Road
Suite 400, Atlanta, GA 30339
Tel: 770/431-8666 Fax: 770/435-2666

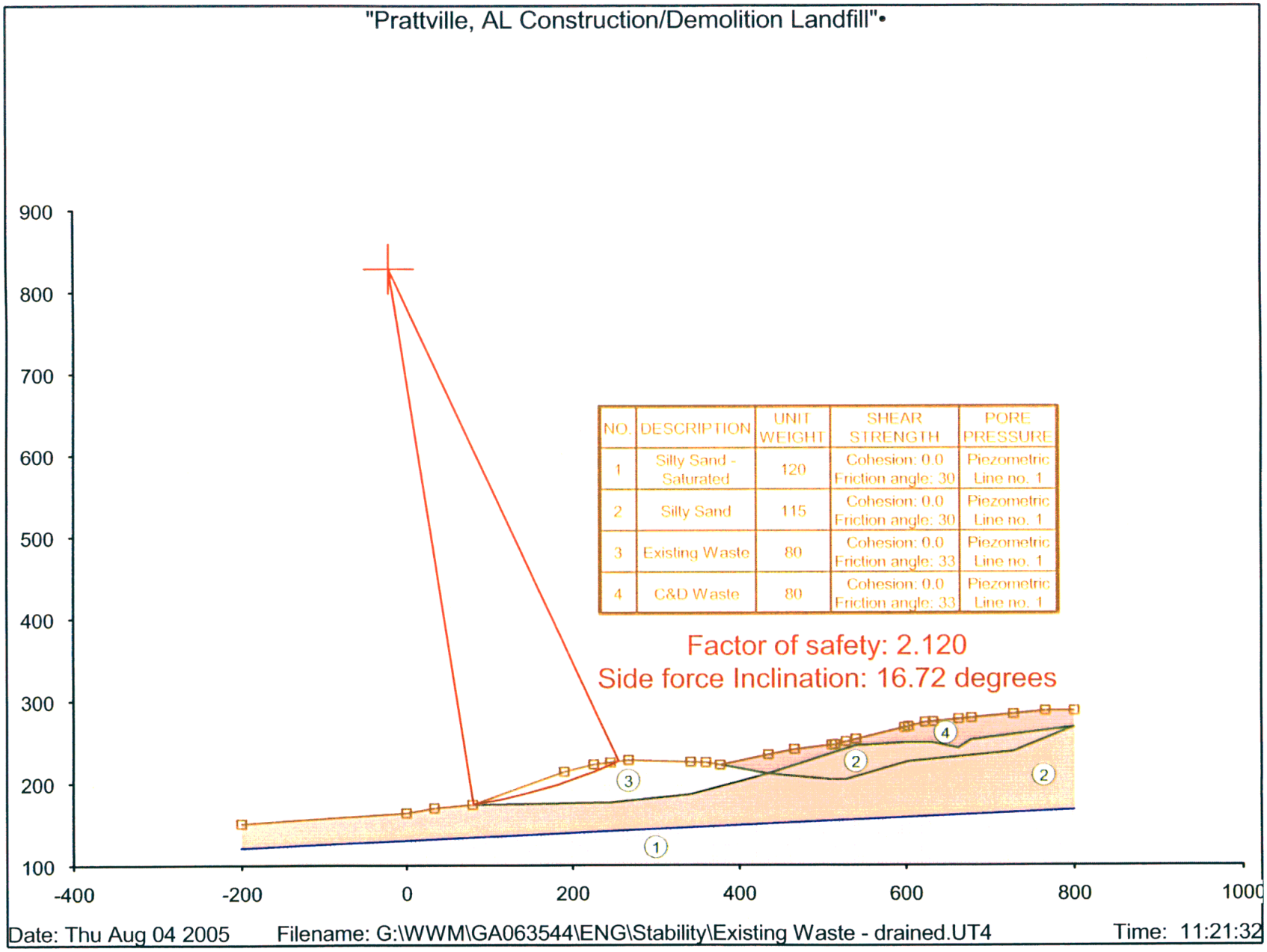
CITY OF PRATTVILLE
C&D LANDFILL
CELL 1 SLOPES
STABILITY ANALYSIS

DRAWN: CADD	DATE: 8/23/05	PROJECT MANAGER: R. BLANTON	DEPARTMENT MANAGER: R. BLANTON
		LEAD DESIGN PROF.: P ZIMMERMAN	CHECKED: DMCGEORGE
FIGURE 1		PROJECT NUMBER: GA063544	DRAWING NUMBER

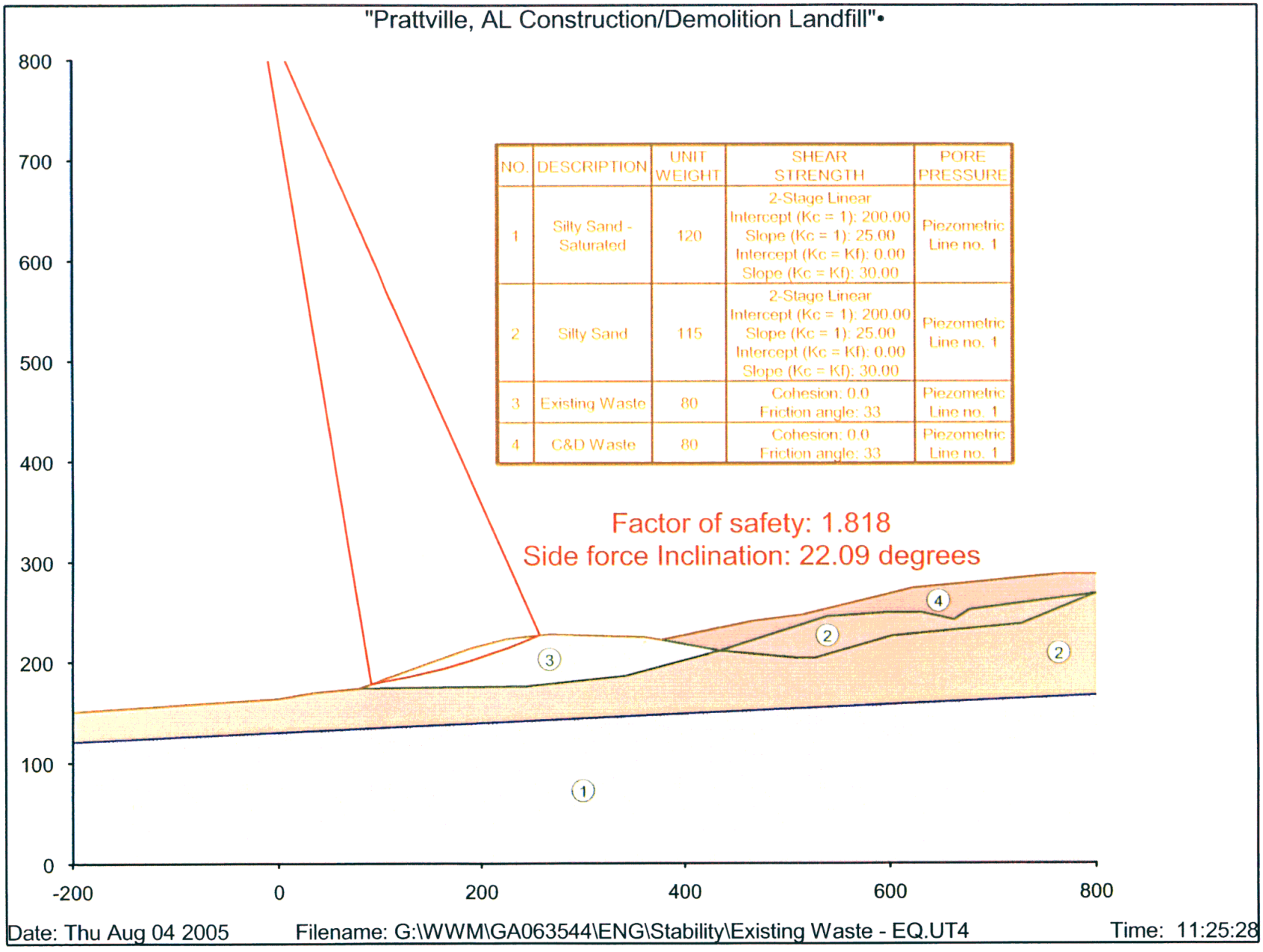
ARCADIS

Appendix A

Slope Stability


"Prattville, AL Construction/Demolition Landfill"•
900
800
700
600
500
400
300
200
100
-400
-200
0
200
400
600
800
1000
NO.
DESCRIPTION
UNIT WEIGHT
SHEAR STRENGTH
PORE PRESSURE
1
Silty Sand - Saturated
120
Cohesion: 0.0 Friction angle: 30
Piezometric Line no. 1
2
Silty Sand
115
Cohesion: 0.0 Friction angle: 30
Piezometric Line no. 1
3
Existing Waste
80
Cohesion: 0.0 Friction angle: 33
Piezometric Line no. 1
4
C&D Waste
80
Cohesion: 0.0 Friction angle: 33
Piezometric Line no. 1
Factor of safety: 2.120
Side force Inclination: 16.72 degrees
Date: Thu Aug 04 2005
Filename: G:\WWM\GA063544\ENG\Stability\Existing Waste - drained.UT4
Time: 11:21:32

"Prattville, AL Construction/Demolition Landfill"•



NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Silty Sand - Saturated	120	2-Stage Linear Intercept (Kc = 1): 200.00 Slope (Kc = 1): 25.00 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
2	Silty Sand	115	2-Stage Linear Intercept (Kc = 1): 200.00 Slope (Kc = 1): 25.00 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Existing Waste	80	Cohesion: 0.0 Friction angle: 33	Piezometric Line no. 1
4	C&D Waste	80	Cohesion: 0.0 Friction angle: 33	Piezometric Line no. 1

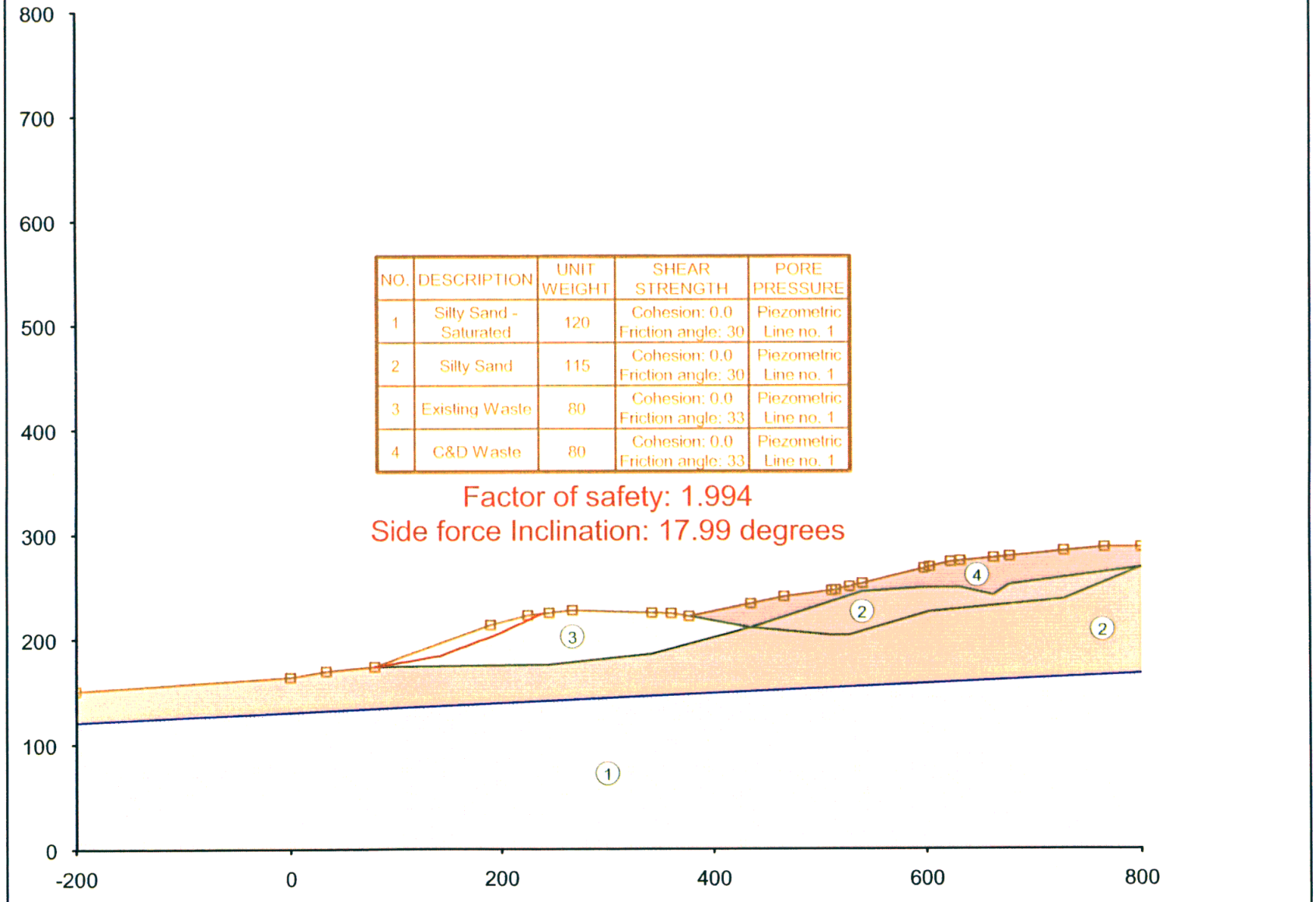
Date: Thu Aug 04 2005 Filename: G:\WWM\GA063544\ENG\Stability\Existing Waste - EQ.UT4 Time: 11:25:28

"Prattville, AL Construction/Demolition Landfill"•

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Silty Sand - Saturated	120	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
2	Silty Sand	115	Cohesion: 0.0 Friction angle: 30	Piezometric Line no. 1
3	Existing Waste	80	Cohesion: 0.0 Friction angle: 33	Piezometric Line no. 1
4	C&D Waste	80	Cohesion: 0.0 Friction angle: 33	Piezometric Line no. 1

Factor of safety: 1.994

Side force Inclination: 17.99 degrees



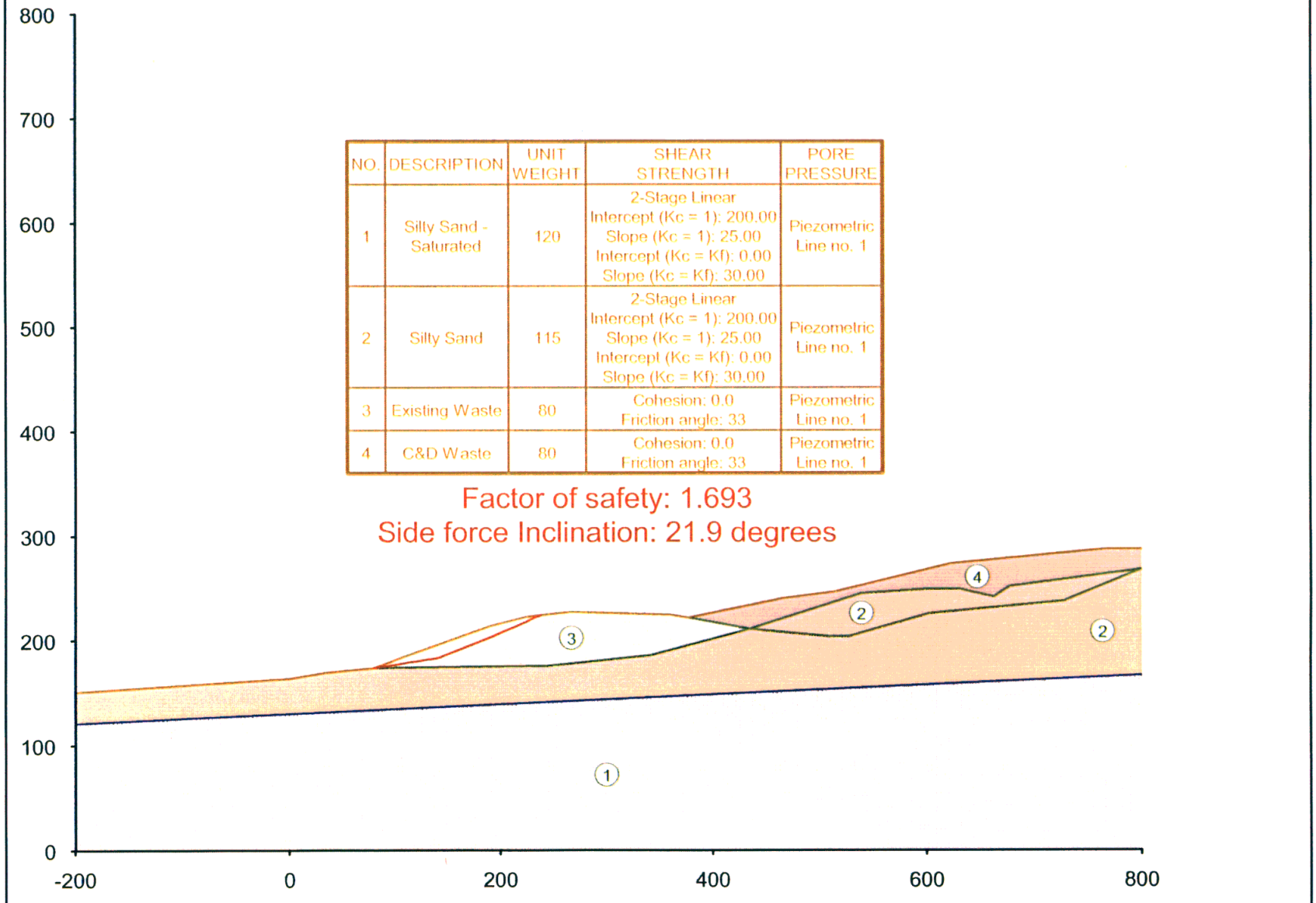
Date: Thu Aug 04 2005 Filename: G:\WWM\GA063544\ENG\Stability\Existing Waste - drained - n.UT4 Time: 11:20:42

"Prattville, AL Construction/Demolition Landfill"•

NO.	DESCRIPTION	UNIT WEIGHT	SHEAR STRENGTH	PORE PRESSURE
1	Silty Sand - Saturated	120	2-Stage Linear Intercept (Kc = 1): 200.00 Slope (Kc = 1): 25.00 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
2	Silty Sand	115	2-Stage Linear Intercept (Kc = 1): 200.00 Slope (Kc = 1): 25.00 Intercept (Kc = Kf): 0.00 Slope (Kc = Kf): 30.00	Piezometric Line no. 1
3	Existing Waste	80	Cohesion: 0.0 Friction angle: 33	Piezometric Line no. 1
4	C&D Waste	80	Cohesion: 0.0 Friction angle: 33	Piezometric Line no. 1

Factor of safety: 1.693

Side force Inclination: 21.9 degrees



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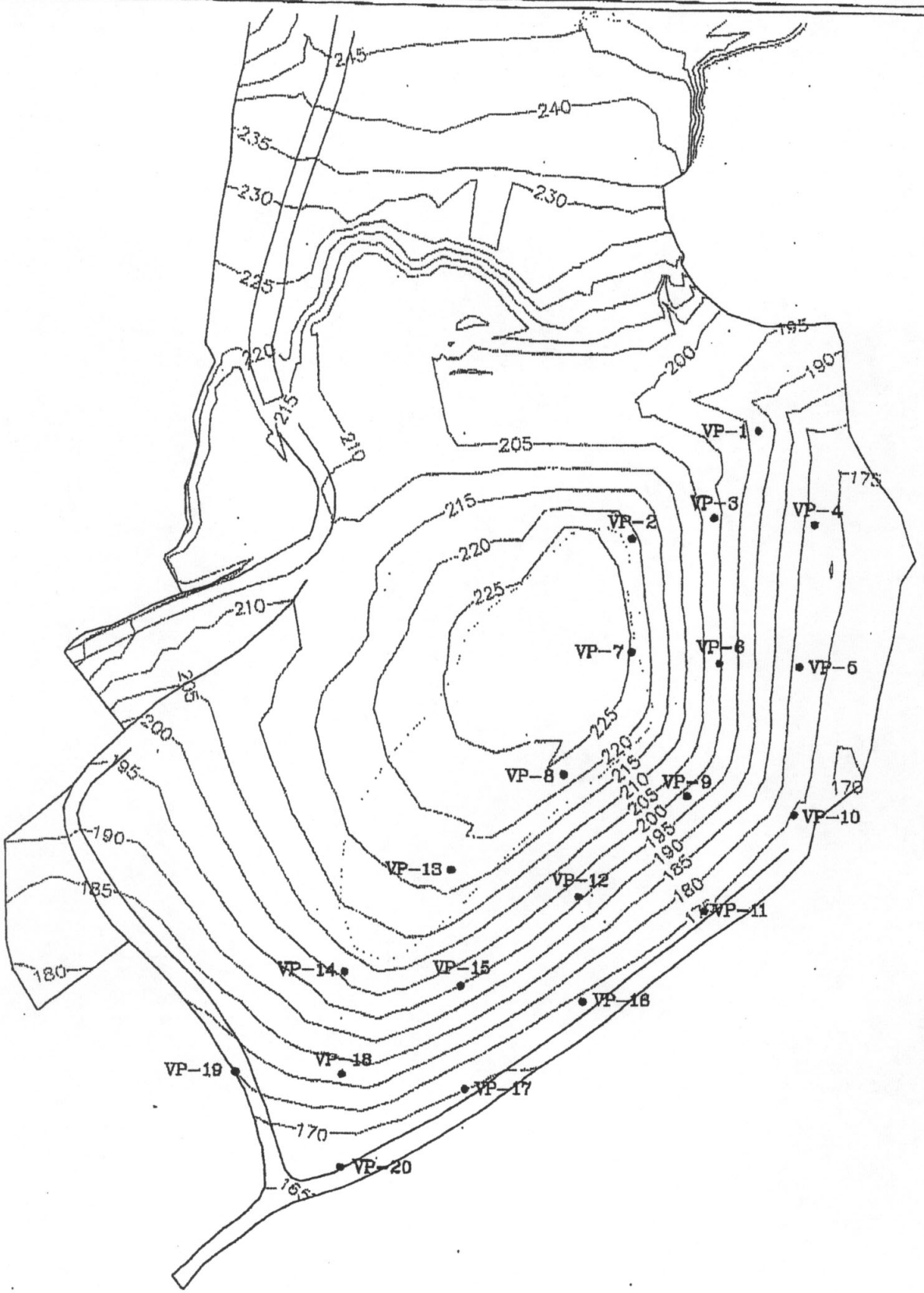


SOIL DEPTH VERIFICATION POINTS
PRATTVILLE C/D LANDFILL
BFI WASTE SERVICES, LLC

KELLY ENGINEERING, LLC
352 AVON ROAD
MONTGOMERY, ALABAMA 36109

FIGURE NO. 1	PROJECT NO. 2603-05	SCALE: 1" = 100'	DATE: MARCH 2005

SOIL DEPTH VERIFICATION
MARCH 13 & 24, 2005
PRATTVILLE C/D LANDFILL

Location	Description
VP-1	GS to 6" – Reddish Brown Loamy Sand 6" to 12" – Gray Sandy Clay Mottled with Clay 12" to 18" – Gray Loamy Sand with gravel 18" to 30" – Brownish Gray Loamy Sand
VP-2	GS to 12" – Reddish Tan Sand, gravel 12" to 18" – Tannish Red Clayey Sand 18" to 24" – Tannish Brown Clayey Sand, gravel 24" to 30" – Tannish Gray Clayey Sand Mottled with Gray Clay, gravel
VP-3	GS to 12" – Reddish Tan Sand, gravel 12" to 18" – Tannish Red Clayey Sand 18" to 24" – Tannish Brown Clayey Sand, gravel 24" to 30" – Tannish Gray Clayey Sand Mottled with Gray Clay, gravel
VP-4	GS to 6" – Reddish Brown Loamy Sand 6" to 12" – Gray Sandy Clay Mottled with Clay 12" to 18" – Gray Loamy Sand with gravel 18" to 30" – Brownish Gray Loamy Sand
VP-5	GS to 18" – Red Clayey Sand with gravel 18" to 124" – Red/Yellow Clayey Sand with gravel mottled with clay 12" to 18" – Gray Loamy Sand with gravel 24" to 30" – Tannish Brown Clayey Sand with gravel
VP-6	GS to 12" – Reddish Tan Sand, gravel 12" to 18" – Tannish Red Clayey Sand 18" to 30" – Tannish Brown Clayey Sand, gravel
VP-7	GS to 12" – Reddish Tan Sand, gravel 12" to 18" – Tannish Red Sand 18" to 24" – Tan/Yellow Red Sand, gravel 24" to 30" – Tan/Yellow Red Clayey Sand mottled with clay, gravel
VP-8	GS to 12" – Reddish Tan Sand, gravel 12" to 18" – Tannish Red Sand 18" to 30" – Yellow/Red Clayey Sand mottled with clay, gravel
VP-9	GS to 12" – Reddish Tan Sand, gravel 12" to 18" – Tannish Red Clayey Sand 18" to 30" – Tannish Brown Clayey Sand, gravel

Location	Description
VP-10	GS to 18" – Brown Loamy Sand 18" to 24" – Tan Loamy Sand 24" to 30" – Dark Brown Loamy Sand
VP-11	GS to 18" – Brownish Red Clayey Sand 18"to 24"– Reddish Brown Clayey Sand 24"to 27" – Dark Gray Clay 27"to 30" –Gray Clayey Sand
VP-12	GS to 12" - Reddish Tan Sand, gravel 12" to 18" – Tannish Red Clayey Sand 18" to 30" – Tannish Red Clayey Sand, gravel
VP-13	GS to 12" – Tan Sand, gravel 12" to 30" – Red Sand
VP-14	GS to 6" – Red Clayey Sand 6" to 12" – Red Clayey Sand to Gray Sandy Clay, gravel 12" to 18" – Red/Gray Sandy Clay, gravel 18"– Plastic Bag, Waste
VP-15	GS to 12" – Reddish Tan Sand, gravel 12" to 18" – Tan/Gray Clayey Sand with gravel 18" to 24" – Tan/Brown Clayey Sand, some clay and gravel 24" to 30" – Tan/Gray Clayey Sand with gravel
VP-16	GS to 18" – Brownish Red Clayey Sand 18"to 24"– Reddish Brown Clayey Sand 24"to 27" – Dark Gray Clay 27"to 30" –Gray Clayey Sand
VP-17	GS to 12" – Red Clayey Sand 12"to 30"– Brown/Gray Clayey Sand
VP-18	GS to 12" – Brown Sandy Clay 12"to 18"– Dark Gray Clayey Sand 18" – Plastic, Waste
VP-19	GS to 6" – Brown Clayey Sand 6" to 12" – Gray Clayey Sand 12" – Wood, Plastic Waste
VP-20	GS to 12" – Light Brown Clayey Sand 12" to 24" – Brown Clayey Sand 24" to 30" – Gray Sandy Clay

Note: GS – Ground Surface

SP#1

CERTIFICATE OF LOCAL APPROVAL
FOR
SOLID WASTE MANAGEMENT SERVICES

On November 5, 1996 the City of Prattville applied to the Prattville City Council with a proposal to provide for services described in the Solid Waste Management plan.

The City of Prattville proposes to provide a Construction/Demolition Landfill which will accept inert materials and special waste as detailed in the permit application.

On November 6, 1996, the City of Prattville did cause to be published in a newspaper of general circulation in the municipality (copy enclosed) and in the official gazette of the jurisdiction a notice of a public hearing on whether the Prattville City Council should deny or approve the contract approval made by the City of Prattville.

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

The notice contained the following information:

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

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

3. The notice identified a contact person from whom interested parties can obtain additional information and can review copies of both the local Solid Waste Management Plan and the application for the proposed City of Prattville Construction/Demolition Landfill.

All pertinent documents relating to the proposal for services made by the City of Prattville were made available for public inspection at City Hall, a location readily accessible to the public, during normal business hours of 9 a.m. to 4 p.m.

On December 17, 1996, at a public meeting the City Council did approve the contract for services proposed by the City of Prattville.

THE CITY OF PRATTVILLE located at 101 West Main intends to request the Alabama Department of Environmental Management for a CONSTRUCTION/DEMOLITION LANDFILL PERMIT with which they propose to service the Autauga County Area by accepting 300 cubic yards per day of inert materials as detailed in the permit application; the landfill will be located on the south side of AUTAUGA COUNTY ROAD NO. 4 approximately 1 mile west of the intersection of County Road No. 4 and U.S. Highway 31.
A public meeting will be held by PRATTVILLE CITY COUNCIL on December 17, 1996 at 6:00 p.m. at the Prattville City Hall, 101 West Main Street, to approve or deny the services proposed by the City of Prattville.

AFFIDAVIT OF PUBLICATION

THIS IS TO CERTIFY that the attached Legal notice appeared in The Prattville Progress, a newspaper published in the City of Prattville and the County of Autauga, Alabama 1 for consecutive issues, namely those of November 13, 1996

The Prattville Progress, in which the attached advertisement was carried, has a general circulation in the county in which it is published, which newspaper has been mailed under second-class mailing privileges for 52 consecutive weeks prior to the publication of the said Legal Notice.

Gail S. Cobb

Publisher

Sworn to and subscribed before me, this 21 day of November 19 96

Donna T. Mask

Notary Public

NOTARY PUBLIC STATE OF ALABAMA AT LARGE
MY COMMISSION EXPIRES: Apr. 13, 2000.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

My Commission Expires: 19

RESOLUTION

[To approve construction plans for Construction\Demolition Landfill]

WHEREAS, the City Council of the City of Prattville passed Resolution 96-C Page 186 on November 5, 1996, for the application process and Public Notice advertisement for the expansion of the city's inert landfill; and,

WHEREAS, the City Council of the City of Prattville held a public hearing at 6:00 p.m. on December 17, 1996 and considered all comments made at that time; and,

WHEREAS, the Certificate of Local Approval for Solid Waste Management Services requires adoption of the City of Prattville's plan by the governing body.

BE IT THEREFORE RESOLVED that the City Council of the City of Prattville hereby approves the plan of construction for a construction/demolition landfill facility prepared by Goodwyn, Mills and Cawood, Environmental Consultants, Inc. to be submitted to the Alabama Department of Environmental Management (ADEM).

ADOPTED THIS 17th DAY OF DECEMBER, 1996.

By: Jim L. Byard, Jr., President
Prattville City Council

AUTHENTICATED THIS 17th DAY OF DECEMBER, 1996.

By: E. M. Champion, Jr.
City Clerk

APPROVED:

By: David D. Whetstone, Jr.
Mayor

STATEMENT OF CONSISTENCY

The Central Alabama Regional Planning and Development Commission received a request for a statement of consistency from the City of Prattville on December 20, 1996. Local approval for this proposal was given by the Prattville City Council on December 17, 1996.

The Central Alabama Regional Planning and Development Commission has evaluated the proposal using the provisions of the current regional solid waste management needs assessment in particular the available existing capacity within the region and projected lifetime of such capacity. The commission has identified that the proposed capacity is not in excess of the expected regional needs.

Based upon our evaluation of the proposal using the above criteria, the undersigned has determined that this proposal is consistent with the Autauga County current regional solid waste management needs assessment.

Ann B. Harper, Executive Director
Signature of Authorized Official of
Regional Planning and Development Commission

12/23/96
Date

Rebecca Taylor
Signature of Notary Public

12/23/96
Date

GMCE FILE: V: D:\PROJECTS\LANDFILL\SLDWAST-.WPD

United States Department of the Interior

FISH AND WILDLIFE SERVICE
2001-A Highway 98
P. O. Drawer 1190
Daphne, Alabama 36526

IN REPLY REFER TO:

A4397089b

May 13, 1997

Mr. Parrish Strickland
Goodwyn, Mills & Cawood
Environmental Consultants, Inc.
P.O. Box 3605
Montgomery, AL 36109-0605

Dear Mr. Strickland:

Thank you for your letter of May 6, 1997, which provided further information concerning the critical habitat determination of a 59.4 acre proposed construction/demolition landfill for the city of Prattville, Autauga County, Alabama. We have reviewed the information you enclosed and are providing the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

We concur that no endangered, threatened or proposed species, or their critical habitat occur in the portion of the project area to be impacted by the proposed landfill. Therefore, no further endangered species consultation will be required for this portion of the project unless: 1) the identified action is subsequently modified in a manner that causes an effect on listed species or critical habitat; 2) new information reveals the identified action may affect Federally protected species or critical habitat in a manner or to an extent not previously considered; or 3) a new species is listed or critical habitat is designated under the Endangered Species Act that may be affected by the identified action.

If you need further information regarding our concerns, please contact Ms. Anna Cinkovich at our office (334/441-5181 Ext. 34).

Sincerely,

Larry E. Goldman
Field Supervisor

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

F. LAWERENCE OAKS
EXECUTIVE DIRECTOR

TELEPHONE NUMBER
334-242-3184

June 5, 1997

Mr. Parrish Strickland
Goodwyn, Mills & Cawood
125 Interstate Park Dr.
Montgomery, AL 36109-0605

Re: 97-0966
Cultural Resource Assessment
Landfill Site
Autauga County, AL

Dear Mr. Strickland:

Upon review of the cultural resource assessment conducted by the Office of Archaeological Services, the Alabama Historical Commission has determined the following. The results of the assessment indicate that there are no cultural resources listed on or eligible for the National Register of Historic Places within the project boundaries. Therefore, our office can concur with the proposed project.

We appreciate your efforts in helping us preserve Alabama's non-renewable cultural resources. Should you have any questions or comments or if we may be of further service, please contact this office.

Sincerely,

F. Lawerence Oaks
State Historic Preservation Officer

FLO/GCR/gtj

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

REPLY TO
ATTENTION OF:

March 3, 1998

Regulatory Branch
Operations Division

SUBJECT: Wetland Delineation for Prattville Construction and Demolition Landfill - Jurisdictional Number ALJ98-00173-K

Goodwyn, Mills and Cawood
Attention: Mr. Parrish Strickland
Post Office Box 3605
Montgomery, Alabama 36109-0605

Dear Mr. Strickland:

Per your request, this office has completed a field inspection on February 25, 1998, of the proposed Prattville Landfill in Prattville. Specifically, the property is located within Section 26 and 27, Township 17 North, Range 16 East, Autauga County, Alabama.

The inspection disclosed that the property contains wetlands subject to our Federal permitting authority pursuant to Section 404 of the Clean Water Act of 1977 (33 USC 1344). Section 404 prohibits filling activities in waters of the United States, including wetlands, unless the work has been authorized by a Department of the Army permit. Normally, a permit to fill wetland areas for nonwater-dependent activities under the present regulations is difficult to obtain.

Slab-on-grade construction, some pile-supported structures, excavation, grading, landclearing with heavy equipment, and construction of a built-up road are considered filling activities and will require a permit if located in wetlands. Activities that involve removing of vegetation above the ground (mowing, rotary cutting, and chainsawing), where the activity neither disturbs the root system nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material, do not require a Section 404 permit.

The wetlands as marked onsite by your company are correct as flagged. The approximate boundaries are shown on the enclosed sketch. The exact wetland limits can only be established by a site survey which is beyond the services provided by our office. If the wetlands are subsequently surveyed for inclusion on a legal description or property plat, please submit such a survey to this office for a review and sign-off in order to formally document this determination.

It is the understanding of this office that the wetland area is located within the proposed buffer zone of the landfill which will not be developed. If this is correct, a Department of the Army Permit will not be required for development.

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

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

Thank you for your cooperation with our permit program. If you have any questions or require further information concerning this matter, please contact Ms. Cindy J. House-Pearson of the Enforcement Section at (334) 694-3873.

Sincerely,

Ronald A. Krizman
Chief, Regulatory Branch
Operations Division

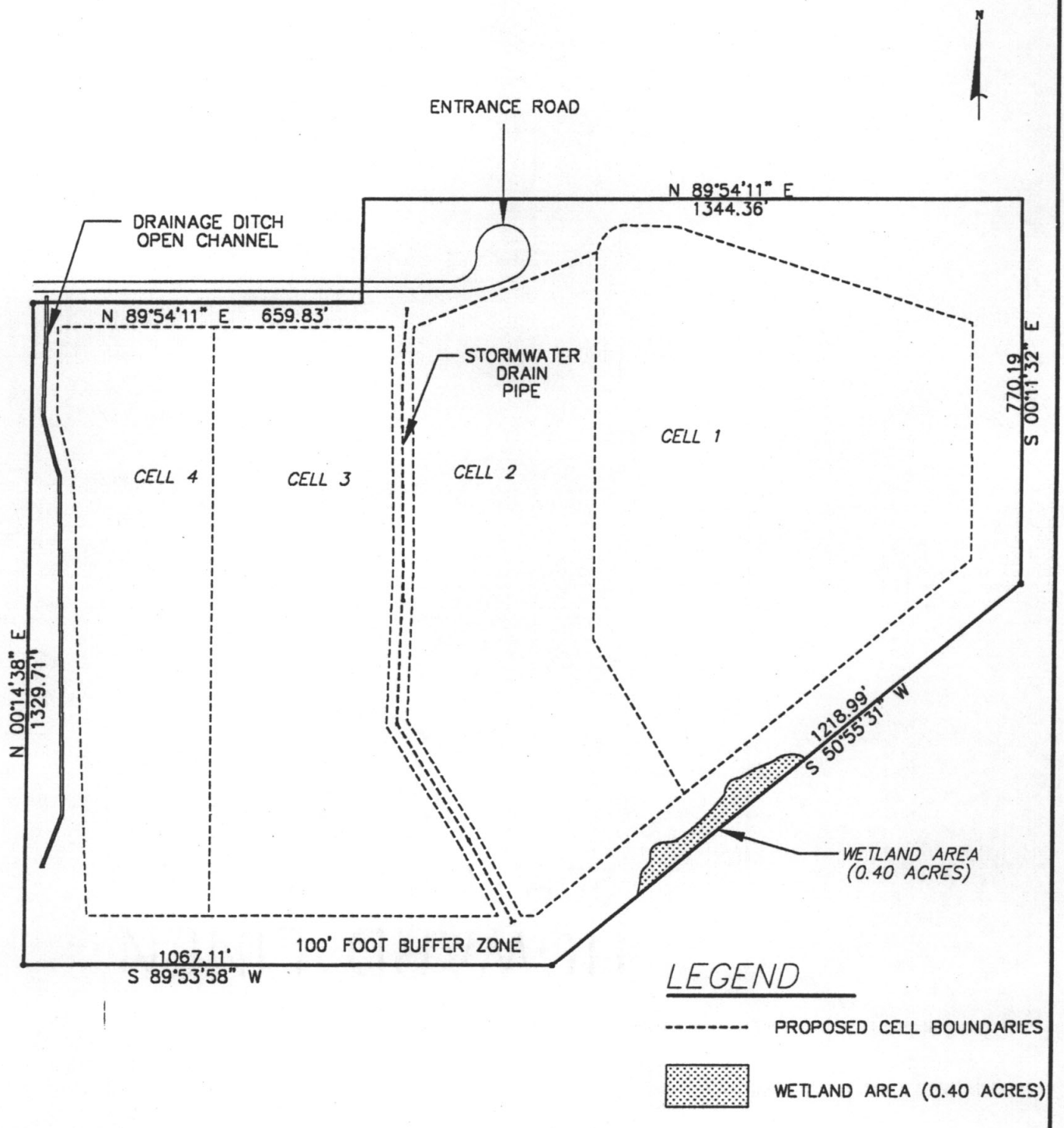


FIGURE 4

Goodwyn, Mills & Cawood Environmental Consultants, Inc. P. O. Box 3605 125 Interstate Park Drive Montgomery, Alabama	TITLE: WETLAND SCHEMATIC	DESIGNED:
		DRAWN: PLS
	PROJECT: CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL	SCALE: 1"=300'
		DATE: 1/20/98

LANDFILL SITING INFORMATION
TABLE OF CONTENTS

LANDFILL SITING INFORMATION:

I. Floodplain and Wetlands

The proposed landfill will be located on the south side of Autauga County Road 4 approximately one mile west of the intersection of County Road 4 and U.S. Highway 31 (Figure 1). The southeastern most portion of the proposed site contains some potential wetlands and is within flood zones A and B. The 100-year flood is shown on the Autauga County Flood Insurance Rate Map Panel Number 010314 0225 B to be approximately 160 feet above mean sea level (MSL) as indicated in Figure 2. The lowest elevation of the property is approximately 150 feet above MSL.

The soil type, Roanoke, is located in the lower elevations within the floodplain according to the 1977 Soil Conservation Service Soil Survey, and consists of an area approximately 85 feet wide by 1,000 feet along the southeast property line (Figure 3). This soil type is listed as a hydric soil in *Hydric Soils of the U.S.*, as well as in the listing of hydric soils for Autauga County. Reconnaissance of the southern property line revealed that the inundated areas lie south of the property. The wettest area is located near point H-2 (Figure 1). Groundwater in this area was located approximately two feet below the surface on June 4, 1996. Post holes were dug to approximately four feet below the surface at points H-1 and H-3, and groundwater was not encountered. The property lines appear to mark the toe of the slope where the Alabama River Flood plain begins. No filling shall be conducted on the property at elevations below 165 feet above MSL. The four proposed cells outlined in the construction plans have the lowest proposed fill elevation of 205 feet above MSL.

II. Site Geology

The proposed landfill is located within the Fall Line Hills Physiographic District of the East Gulf Coastal Plain Physiographic Province. The southern most property line lies approximately one mile north of the Alabama River which has a broad bank of Quaternary aged alluvium and high terrace deposits along the river. High terrace deposits, sediments of the Eutaw Formation and alluvium materials appear to outcrop at the site. The high terrace deposits appear to form the higher flat ground on the north side of the property and the sediments of the Eutaw Formation appear to crop out and form the slopes, while the alluvium and low terrace deposit appear to form the low ground within the floodplain.

The Eutaw Formation is the predominant geologic unit which outcrops at the site. The formation ranges in thickness from approximately 200 to 400 feet where the entire formation is present. The Eutaw Formation is composed of a lower and upper unit separated by a calcareous clay that ranges in thickness from 50 to 150 feet. The lower unit consists of 30 to 50 feet of glauconitic sand interbedded with sandy clay. The upper unit ranges from 0 to 150 feet in thickness and is composed of massive glauconitic sand interbedded with calcareous sandstone and sandy limestone.

Groundwater monitoring wells have been installed near the proposed landfill in association with the former sanitary landfill which adjoins the proposed landfill site on the west side. All of the monitoring wells were reported to have been screened within the Eutaw Formation. The location of the monitoring wells are illustrated in Figure 4. In addition, test holes were dug along the southern boundary of the landfill on June 4, 1996. The pits revealed a predominant brown to yellowish brown silty sand material with some scattered well-rounded quartz pebbles, which is typical of the alluvial deposits in the area.

III. Hydrogeology

Both the high terrace deposits and the Eutaw Formation form aquifer systems in southern Autauga County and Northern Montgomery County. In the vicinity of the proposed landfill, the high terrace deposits are discontinuous and irregular in the outcrop area; therefore, the high terrace deposits do not form a major aquifer system in the area and are generally not developed for drinking water. The high terrace deposits do, however, transmit groundwater to the underlying Eutaw Aquifer. The site is located in the southern extent of the recharge area of the Eutaw Aquifer which generally corresponds to the outcrop area of the formation. The aquifer is partially recharged south of the site from the overlying alluvium materials.

Groundwater elevations north and west of the property have been measured in conjunction with the former sanitary landfill. Groundwater elevations in these areas ranged from approximately 190 to 195 feet above MSL. The general groundwater flow within the upper portion of the Eutaw Aquifer is southeasterly with an average hydraulic slope of 0.01 (see Appendix A). The upper most portion of the aquifer appears to mimic the surface topography and is recharging the Alabama River and associated tributaries of the river. Groundwater was located approximately two feet below the surface on June 4, 1996 (reference Figure 1, point H-2) near the property line just north (approximately 75-100 feet) of a wetland area which was inundated at that time.

North of the proposed landfill boundary, a zone of perched water has been identified at an elevation of approximately 220 feet above MSL. The perched zone is probably related to the high terrace deposits which commonly form hematitic layers which create perched water conditions. Reference Appendix A for groundwater elevations and groundwater contours.

IV. Future Hydrogeological Assessment

No additional hydrogeological assessment is scheduled for the four proposed cells. Additional hydrogeological assessment will be conducted during future landfill cell additions where filling activities will be conducted at elevations below 200 feet above MSL. The assessment will include either test pits or temporary monitoring wells to determine seasonal high groundwater elevations. The determination of seasonal high groundwater elevations will be made so that a minimum of five feet can be maintained between the base of the landfill cells and the seasonal high groundwater table.

V. Buffer Zones

A 100-foot buffer zone will be maintained along the east and south sides of the proposed landfill property. A 50-foot buffer zone is proposed along the west side between the existing landfill and

the proposed new landfill location, and a 50-foot buffer zone is proposed along the northern landfill boundary where the City of Prattville owns an additional 31.53± acres of unpermitted property.

VI. Adjacent Property Owners

The following is a list of all property owners adjacent to the proposed landfill.

1. City of Prattville
   101 West Main Street
   Prattville, Alabama 36067

2. Malcolm Smith
   112 Heritage Hill Drive
   Prattville, Alabama 36067

3. Mary W.R. Waite & Charles Rice
   102 East Main Street
   Prattville, Alabama 36067

4. Iris W. Lipscomb, et. al.
   802 Lipscomb Court
   Prattville, Alabama 36067

VII. Landfill Life Expectancy

New Prattville Construction/Demolition Landfill
Life Expectancy
08/05/96

Current C&D Disposal Rate 250 yd^3/day

300 yd^3/day used for life expectancy estimates

20% Compaction → 240 yd^3/day

Annual Disposal Rate = 62,300 yd^3/yr (compacted)

Estimated soil cover (weekly) 200 yd^3/wk

Annual C&D requirement with cover = 72,800 yd^3/yr

PMI requirement = 3,300 yd^3/yr

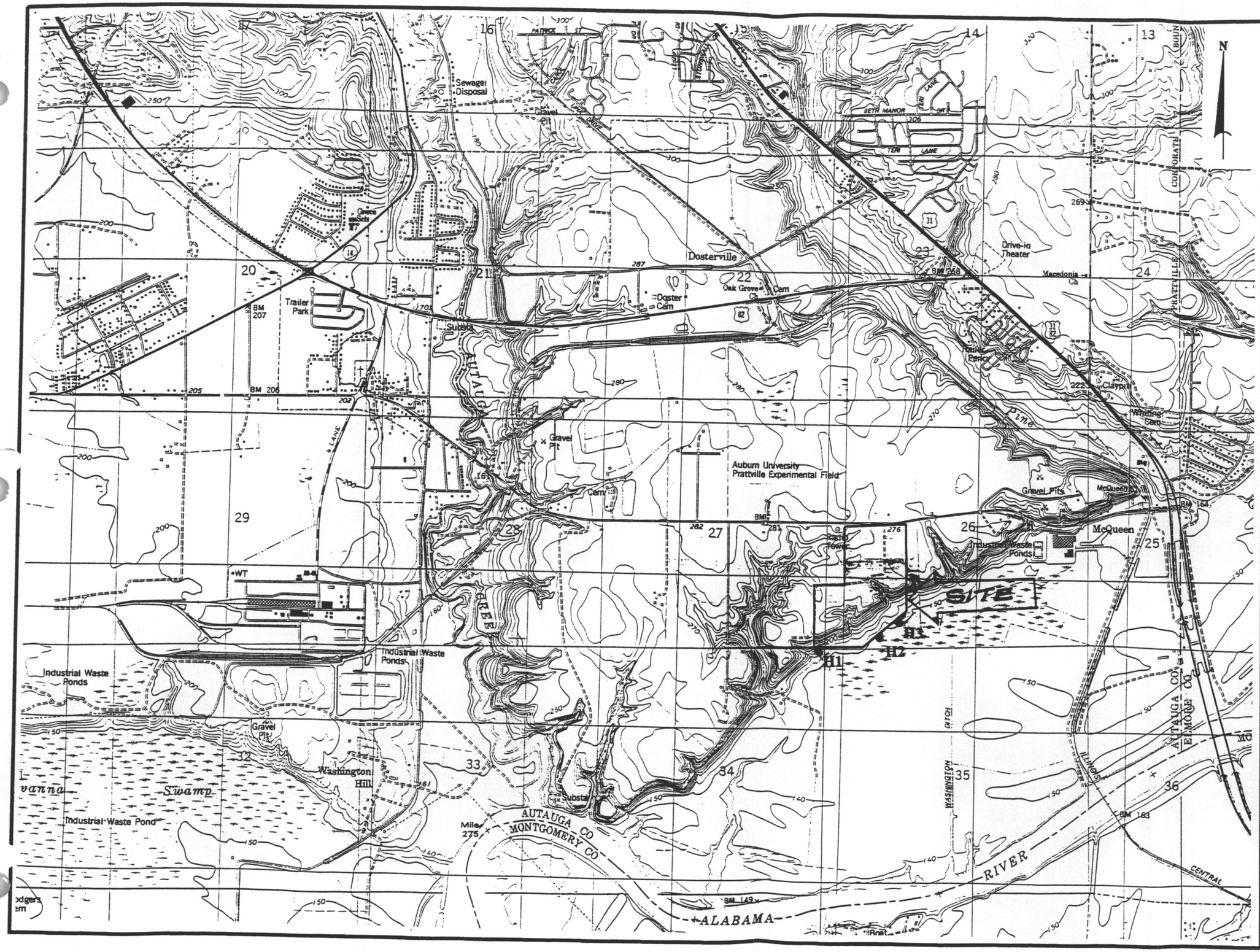
* Estimated net capacity 1,112,615 yd^3
(Cells 1-5)

*Estimated life 14.5 yrs
(Cells 1-5)

*The landfill area consists of 59.40 acres. 19.95 of the 59.40 acres are utilized in cells 1 through 5. Maintaining the same ratio of net capacity in cubic yards per acre over the remaining usable acres increases life expectancy an additional 15 years.

Estimated Life Entire Landfill Area = 30 years

FIGURES



SHEET TITLE:

SITE LOCATION MAP
U.S.G.S. QUADRANGLE
PRATTVILLE, AL
1981
7.5 m.o.a.

CLIENT:

CITY OF PRATTVILLE
POST OFFICE DRAWER 20
PRATTVILLE, AL 36067

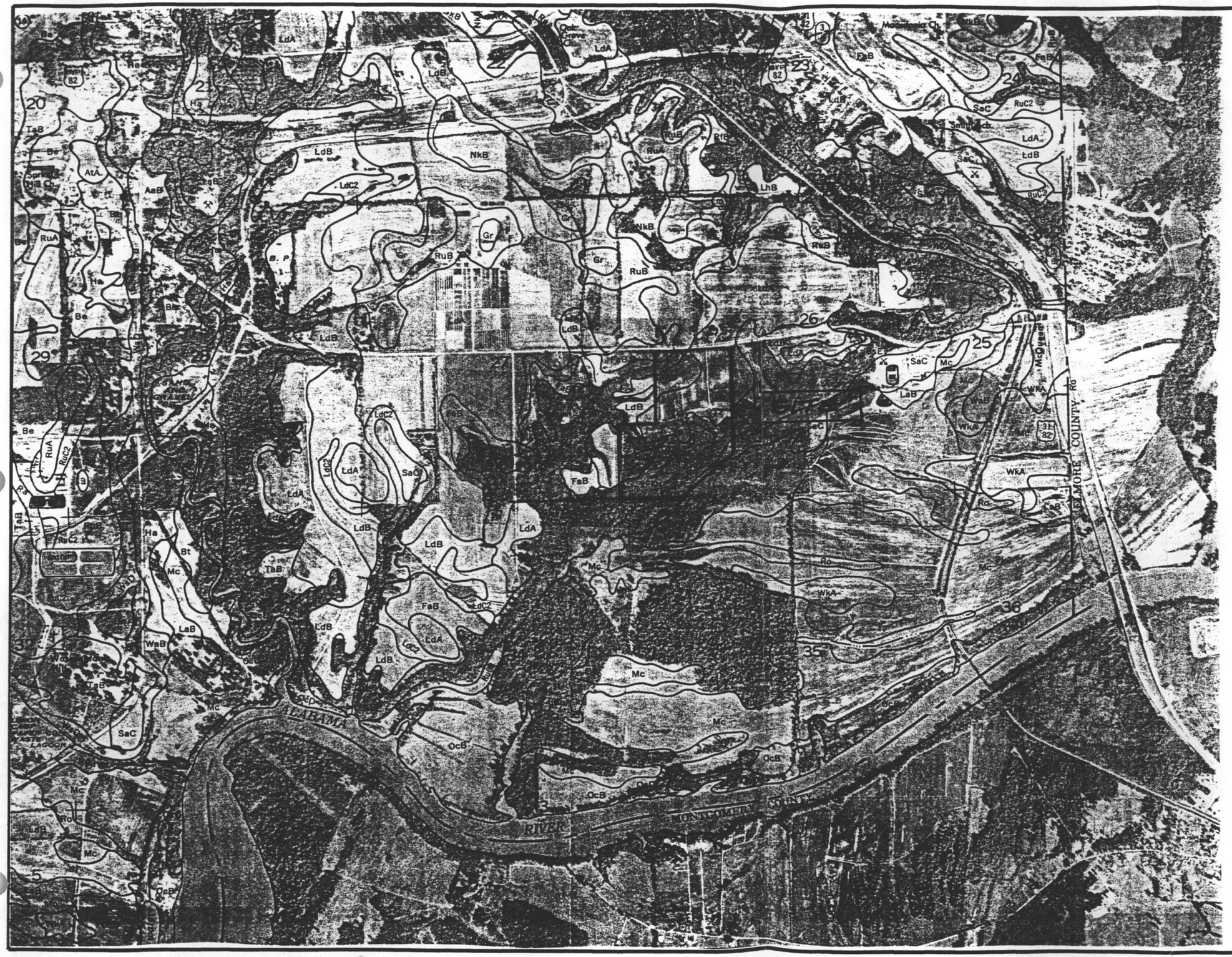
PROJECT:

CITY OF PRATTVILLE
CONSTRUCTION/DEMOLITION
LANDFILL

Goodwyn, Mills & Cawood, Inc.
Environmental Consultants,

P. O. Box 3605
125 Interstate Park Drive
Montgomery, Alabama

DESIGNED:	
DRAWN:	
SCALE:	1" = 2,000'
DATE:	APRIL 22, 1996
REV. NO.:	DATE:
FIGURE NO.:	1



SHEET TITLE:

1977 SOIL CONSERVATION SERVICE SOIL SURVEY AERIAL PHOTOGRAPH

CLIENT:

CITY OF PRATTVILLE
POST OFFICE DRAWER 20
PRATTVILLE, AL 36067

PROJECT:

CITY OF PRATTVILLE
CONSTRUCTION/DEMOLITION
LANDFILL

Goodwyn, Mills & Cawood
Environmental Consultants, Inc.

P. O. Box 3605
125 Interstate Park Drive
Montgomery, Alabama

DESIGNED:	
DRAWN:	
SCALE:	1" = 1,667'
DATE:	APRIL 22, 1996

REV. NO.:	DATE:	FIGURE NO.:
		3

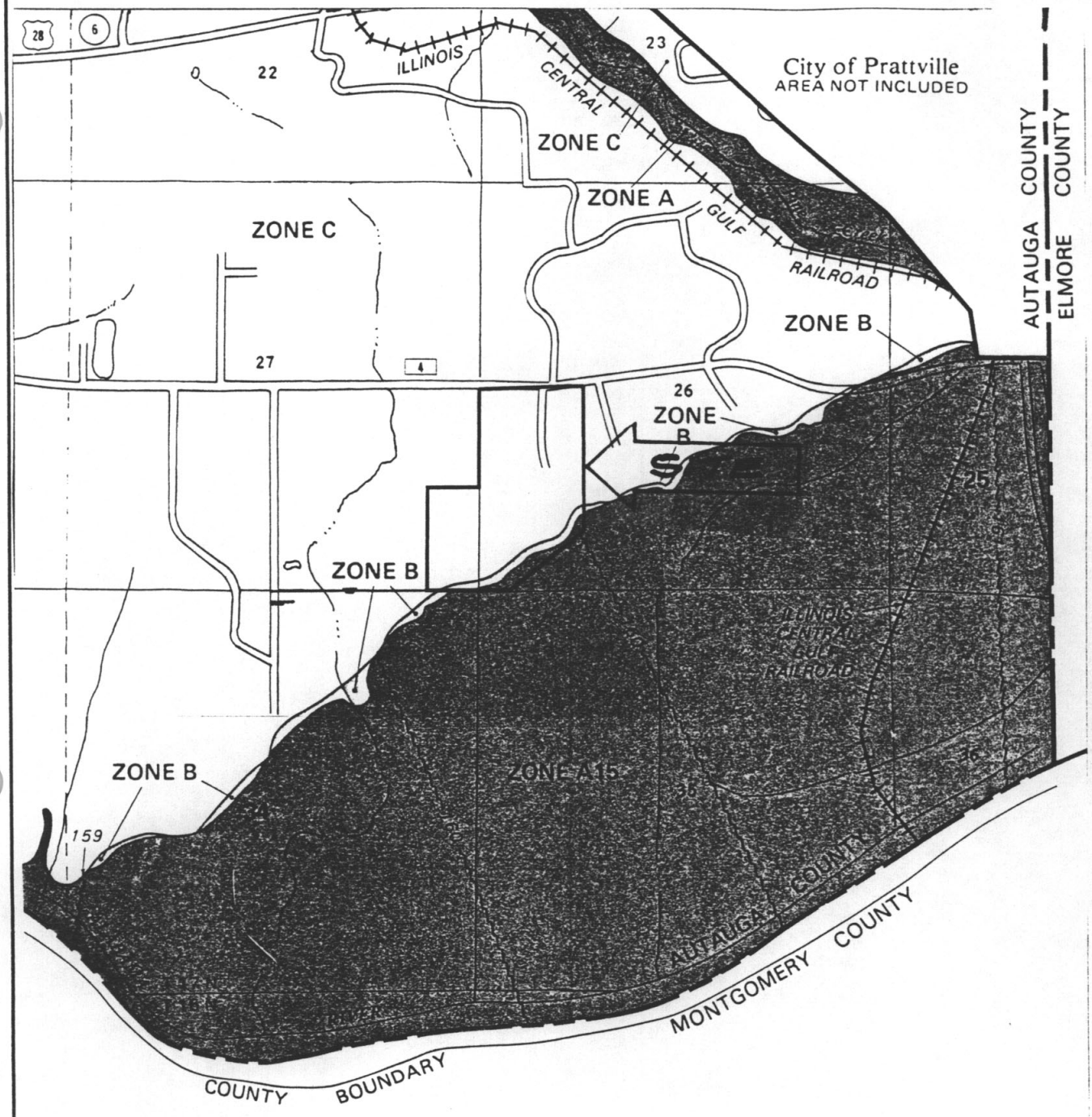


FIGURE 2

Goodwyn, Mills & Cawood Environmental Consultants, Inc. P. O. Box 3605 125 Interstate Park Drive Montgomery, Alabama	TITLE: FLOOD INSURANCE RATE MAP – PANEL 010314–0225B	DESIGNED:
		DRAWN:
	CLIENT: CITY OF PRATTVILLE PRATTVILLE, AL	SCALE: 1" = 2,000'
		DATE: APRIL 22, 1996

APPENDIX A
CWA GROUNDWATER MONITORING REPORT

GROUNDWATER ASSESSMENT REPORT
PRATTVILLE MUNICIPAL SOLID WASTE LANDFILL
PERMIT NO. 01-01A2
COUNTY ROAD 4
PRATTVILLE, AUTAUGA CO., AL

The CWA Group, Inc.

P. O. Box 8188
2623 Lower Wetumpka Road
Montgomery, Alabama 36110
(205) 264-4544

• Soil & Groundwater Environmental Services
• Consulting Hydrogeologist & Geotechnical Engineering
• Economic Geology

CWA PROJECT NO. 357.01N

PREPARED FOR:

THE CITY OF PRATTVILLE
P.O. DRAWER 20
PRATTVILLE, ALABAMA 36067

ATTN: MR. GARY FREEMAN

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Tommy Reid
Senior Geologist

L. Bruce Christian
President

PREPARED BY:
THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

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SECTION 1 EXECUTIVE SUMMARY

Groundwater assessment activities were undertaken at the Prattville Municipal Solid Waste Landfill from June, 1995, to November, 1995. The additional assessment activities included a review of the history of landfill operations and previous assessment activities, the installation of 2 monitoring wells, collection and interpretation of groundwater elevation data, collection and interpretation of groundwater quality data and interpretation of stratigraphic data. The final data for this assessment was obtained upon the analyses of groundwater samples collected during the regularly semi-annual groundwater monitoring.

The history of landfill operations indicated that wastes were initially disposed in a gully formerly located sub-parallel to County Road 4. The gully was covered after disposal cells in the southern portion of the landfill were opened. The cover has subsided and water often remains ponded on the cover in certain areas of the landfill for periods of time after rainfall events.

Groundwater data indicates that perched water exists in the vicinity of the gully, as evidenced by groundwater data collected from Monitoring Well #1 and another boring drilled for this assessment. Groundwater data indicates that the surficial aquifer is within the Eutaw Formation, as both the overlying alluvium and the upper portion of the Eutaw Formation were unsaturated, according to logs of borings for 6 of the 13 monitoring wells that have been installed.

Stratigraphic information indicates that at least 5 of the 13 monitoring wells are underlain by a relatively low permeability Eutaw clay that had a reported thickness of at least 3.2 feet in 1 of the monitoring wells.

Volatile organic compound concentrations in groundwater samples collected from the monitoring wells indicate that the majority of VOC constituents present have a specific density greater that water. Such constituents would tend to migrate to areas structurally down-dip and not necessarily in the direction of groundwater flow.

A review of all of the information in concert indicates that wastes disposed in the former gully contain VOC's. The cover placed over the gully is allowing the percolation of rainwater into and through the wastes within the gully. The VOC's are transported downward to the Eutaw clay where they disperse laterally into the groundwater within the Eutaw Formation. Contaminant distribution indicates that the direction of migration is not consistent with the direction of groundwater flow.

It is recommended that the cover overlying the gully be repaired and constructed in a manner that would greatly reduce or essentially eliminate the continued percolation of rainwater through the gully. It is recommended that the only assessment activities conducted at the facility be limited to semi-annual monitoring to provide for sufficient review of the effects of cover repair on the concentrations of the constituents within the groundwater. It is hoped that concentrations will steadily decline as fewer VOC's are provided a means of migration downward into the Eutaw aquifer.

SECTION 2 INTRODUCTION

Figure 1 illustrates the relative locations of existing monitoring wells and springs and may be used for reference during the following discussions. Law Engineering conducted a Preliminary Ground-Water Assessment of the Prattville Municipal Solid Waste Landfill (the landfill) and presented the findings in a report dated March 1, 1993. Alabama Department of Environmental Management (the Department) responded to the report in a letter addressed to the City of Prattville (the City) and dated July 14, 1993. The letter stated that the "new monitoring wells MW-9, MW-10, and MW-11 and old wells MW-1, MW-2 and MW-3 are acceptable for continued monitoring"; that "permanent monitoring stations at the three springs should be established"; that "old wells (MW-4, MW-5, and MW-6) that had a record of being dry could be abandoned"; and that "further assessment should include expanded monitoring parameters, assessment of extent, source area delineation, and water well inventory".

The CWA Group, Inc. was retained by the City in January, 1995, to conduct semi-annual groundwater monitoring at the facility, and was retained in March, 1995, to conduct additional assessment activities. Regular semi-annual groundwater monitoring activities were completed in February, 1995, at which time permanent monitoring stations were established at the 3 springs as directed by the Department. A report of the monitoring event was provided to the Department.

In a letter addressed to the City and dated March 3, 1995, the Department related that abandonment [of Monitoring Well No.'s 4, 5 and 6] should be by over-drilling and grouting back to the surface with a bentonitic seal as per ASTM D18-21. A request for authorization of alternate procedures for the abandonment of Monitoring Well No.'s 4, 5 and 6 was made to the Department in a letter dated March 7, 1995. The proposed procedure was to fill the

well casings with grout and to place 2 ft. x 2 ft. x 6 inch concrete pads over the grouted wells. The Department denied the authorization of such abandonment procedures, again offering over-drilling and grouting as the acceptable procedure. Abandonment of the above listed wells was not undertaken, as it was and is believed unlikely that the entire well casings could be successfully removed from the 3 wells and is believed that partial removal may lead to an ineffective seal and the abandoned wells could be more problematic than the wells if left as they now are. Monitoring Well No.'s 4, 5 and 6 will, therefore, not be abandoned, will remain locked and will be excluded from future monitoring events.

SECTION 3 BACKGROUND INFORMATION

Prior to the initiation of the additional assessment activities reported herein, an effort was made to review the history of the landfill's operations, to reconstruct the history of assessment activities undertaken at the landfill and to extract relevant information from the previously collected data and correspondence.

It was reported (Law, 1993) that "Mr. Major Smith, the acting Mayor of Prattville, allowed the City to fill certain areas of his (Mr. Smith's) property which is contiguous to the present landfill" and that the practice "began in the mid 1970's".

Based on interviews with City personnel, waste was initially disposed in a gully that previously extended from an area just west of Monitoring Well No.'s 1, 8 and 12, westward and sub-parallel with County Road 4, to an area northwest of Monitoring Well #3. The gully was reported to be about 5 feet deep on the eastern end and about 40 feet deep on the western end, at which point the gully intersected another gully that extended generally southwestward. It was further reported that the gully was dry, except during periods of heavy rainfall.

After termination of disposal into the gully, a clay cap was placed over the area. The clay was obtained from the excavation for the southern most landfill cells (now capped). It was reported that the clay cap was usually compacted with the loaders and dozers as they drove over the cap, because compaction equipment was not normally available.

Monitoring Well No.'s 1 - 6 were installed by the City in the early 1980's. Logs of Borings were not compiled for the wells and no records are available as to the construction details. Measurements of the depths of the wells were made as a part of this

assessment and are discussed later in this report. It is reasonably assumed that the wells were completed with a 10 foot length of 2" I.D. No. 10 Slot Schedule 40 PVC Screen set as the bottom of the well casing.

Monitoring Well #7 was installed by Waste Away Group, Inc. in November, 1989, as a part of a groundwater assessment program undertaken by them. According to records provided by Waste Away, the boring for Monitoring Well #7 was drilled to a depth of 218.5 feet beneath the ground surface. The well was constructed with a 20 foot length of 2" I.D. No. 10 Slot Schedule 40 PVC Screen set at depths from 198.0 to 218.5 feet beneath the ground surface, with 2" I.D. riser extending to a depth of about 3 feet above the ground surface. Split-spoon samples were collected at approximately 10 foot intervals from 118 feet beneath the ground surface, apparently well into the Eutaw Formation, to boring termination.

Previous groundwater monitoring reports indicated that groundwater was present in Monitoring Well #1. Monitoring Well #1 has a measured depth of 29.8 feet beneath the top of the PVC riser. The depth of the groundwater in Monitoring Well #1 did not appear consistent with groundwater surface (head) elevation data collected from other wells. It was reported by Law (1993) that an attempt was made to install a Monitoring Well #8 in the vicinity of Monitoring Well #1, probably to obtain additional groundwater data. It was reported by Law (1993) that "a boring was advanced to a depth of 39.5 feet...at the location of MW-8 and subsequently abandoned. The decision to abandon on MW-8 and to relocate to MW-11...was made by representatives of the City of Prattville". Based on observations in the field, Monitoring Well #8 was not abandoned and was installed to a measured depth of 60.8 feet beneath the top of the PVC riser.

As Monitoring Well No.'s 4, 5 and 6 have regularly been dry and the Department has stated that they could be abandoned, as neither stratigraphic information nor construction details are available for Monitoring Well No.'s 1, 2 and 3, as limited stratigraphic information is available for Monitoring Well #7, as the boring for Monitoring Well #8 was reportedly abandoned but appears to exist, and as groundwater has often been present in Monitoring Well #1 at an anomalously high elevation, it was felt that data collected from Monitoring Well No.'s 9, 10 and 11 was the most useful.

Monitoring Well #9 was drilled to a reported depth of 97.5 feet beneath the ground surface (bgs), Monitoring Well #10 was drilled to a reported depth of 107.5 feet bgs and Monitoring Well #11 was drilled to a reported depth of 90.0 feet bgs. Logs of Borings for the wells indicated that each encountered a relatively typical section of alluvium with no reported drilling returns of disposed wastes, that each encountered a notable alluvium/Eutaw contact, and that each encountered a light gray clay layer within the Eutaw. Each of the borings was terminated at or in that clay layer. Samples collected from the clay layer were determined to have permeabilities of 2×10^{-6} cm/sec and 8×10^{-8} cm/sec.

Based on a review of the data available prior to the additional assessment activities, the following interpretations were inferred:

1) The groundwater present in Monitoring Well #1 was perched water and, when present, was anomalously high to the calculated groundwater elevations present in other wells;

2) The surficial aquifer was present wholly within the Eutaw Formation beneath the landfill;

3) A relatively low permeability clay exists beneath at least portions, and perhaps all, of the landfill;

4) The clay layer may represent a confining or partially confining layer that would serve to isolate the uppermost aquifer within the Eutaw Formation from the groundwater within lower portions of the Eutaw Formation;

5) A majority of the volatile organic compounds (VOC's) determined to be present in groundwater samples collected during previous monitoring events were more dense than water and would tend to migrate in the direction of the structural dip of the Eutaw clay layer and not necessarily in the direction of groundwater flow;

6) Monitoring Well #7 was screened at a minimum depth of 198 feet beneath the ground surface, which would be beneath the Eutaw clay layer, if that layer is present beneath the well; and

7) Monitoring Well #7 had a measured groundwater level of greater that 100 feet (maximum depth of water interface probe) beneath the top of the PVC riser, making the maximum possible groundwater elevation anamolously low to the calculated groundwater elevations of other wells. This indicates a likelihood that the screened interval of Monitoring Well #7 is isolated (probably by at least 1 clay layer) from the other monitoring wells at the landfill.

SECTION 4 CURRENT INVESTIGATIONS

It was decided that 2 additional monitoring wells, Monitoring Well No.'s 12 and 13, would be installed at the landfill. Monitoring Well #12 was installed north of Monitoring Well #1 and south of Monitoring Well #8. The location was selected in an effort to demonstrate to the Department that the groundwater present in Monitoring Well #1 was perched and should not be used in the generation of groundwater surface (head) contour maps of the Eutaw aquifer, to provide meaningful data concerning the distribution of contaminants within the upper portion of the Eutaw aquifer at a location east of the terminus of the old disposal gully, and in an attempt to establish trends for the structural appearance of the top of the Eutaw Formation and the top of the Eutaw clay.

An attempt was made to install Monitoring Well #13 south of County Road 4, at a location approximately 200 feet south of the illustrated location. Soil cuttings from the boring were described as wet, gray sandy clay and garbage (muck) from 6 feet to 35 feet bgs, consistent with descriptions of the former gully. A split-spoon soil sample was collected from the boring at a depth of 35 feet bgs and was described as a tan/gray (discolored) sandy clay and gravel. It is believed that the soils within that sample were representative of the base of the former gully. The boring was extended to a depth of 40 feet bgs and continued to have gray muck returns, which were apparently flowing in from up-hole. It was felt unlikely that a monitoring well could be successfully installed at the location, the boring was abandoned and the well was installed north of County Road 4. The location was selected in an attempt to provide a more remote groundwater elevation datum for the Eutaw aquifer, in an attempt to establish trends for the structural appearance of the top of the Eutaw Formation and the top of the Eutaw clay and in an attempt to obtain up-gradient, or background, groundwater quality data.

Monitoring Well #12 was initially drilled with 2¼" I.D. hollow-stem augers to establish a depth to the top of the Eutaw Formation. Split-spoon soil samples were collected at 5 foot intervals from 30 feet beneath the ground surface to the top of the Eutaw Formation, which was encountered at a depth of about 35 feet bgs. The boring was then over-drilled with 10¼" I.D./14" O.D. augers to a depth of 40 feet bgs. A 40 foot length of 8" I.D. PVC surface casing was installed in the boring and grouted into place.

The boring was subsequently extended beneath the surface casing using 3¼" I.D. hollow-stem augers. Split-spoon soil samples were collected at 2½ foot intervals from 70 feet bgs to the top of the Eutaw clay layer, which was encountered at a depth of 99½ feet bgs. A 15 foot length of 2" I.D. No. 10 Slot Schedule 40 PVC Screen and 85 feet of 2" I.D. PVC Riser were installed through the surface casing.

Monitoring Well #13 was initially drilled with 2¼" I.D. hollow-stem augers to establish a depth to the top of the Eutaw Formation. Split-spoon soil samples were collected at 5 foot intervals from 40 feet bgs to the top of the Eutaw Formation, which was encountered at a depth of about 46 feet bgs. The boring was then over-drilled with 10¼" I.D./14" O.D. augers to a depth of 50 feet bgs. A 50 foot length of 8" I.D. PVC surface casing was installed in the boring and grouted into place.

The boring was subsequently extended beneath the surface casing using 3¼" I.D. hollow-stem augers. Split-spoon soil samples were collected continuously from 60 feet bgs to the top of the Eutaw clay layer, which was encountered at a depth of 83 feet bgs. A 15 foot length of 2" I.D. No. 10 Slot Schedule 40 PVC Screen and 70 feet of 2" I.D. PVC Riser were installed through the surface casing. Logs of Borings are provided in Appendix A. Monitoring Well construction details are summarized on Table 1 and as-built

diagrams are included in Appendix B.

The 2 newly installed monitoring wells were developed on July 3, 1995, using dedicated disposable bailers. The wells were developed by the removal of approximately 10 casing volumes of water. The wells were allowed to recharge and stabilize and were purged on July 5, 1995, using dedicated disposable bailers. The wells were purged by the removal of approximately 5 casing volumes of water. The wells were sampled upon completion of the purging activities.

A pesticide/herbicide odor was noticed in the soil cuttings of Monitoring Well #13. The groundwater samples collected from Monitoring Well No.'s 12 and 13 were therefore analyzed by Method 8080 to determine Appendix 2 pesticides/PCB and by Method 8260 to determine Appendix 1 volatiles concentrations. The results of the analyses are summarized on Table 2 and Table 3. A copy of the laboratory report is included in Appendix C.

It should be noted that the well numbers for this sampling event are not consistent with the remainder of the report. The wells were originally numbered with Monitoring Well #12 being located north of County Road 4 and Monitoring Well #13 being located south of County Road 4. The numbers were reversed during a re-survey of the landfill. All data contained in this report, except for the laboratory report of these analyses, have been amended to reflect that numbering. The Table 2 and Table 3 summaries have been amended to reflect the currently accepted numbering and will be opposite of the laboratory report. The remaining portions of this assessment were delayed pending the results of the semi-annual groundwater monitoring event conducted for the landfill in September, 1995.

SECTION 5 SITE HYDROLOGY

Monitoring Well No.'s 12 and 13 encountered groundwater within the Eutaw Formation. The alluvium and a portion of the Eutaw Formation were unsaturated at both locations. No indications of a perched water table were noted. It was concluded that the groundwater encountered in the 2 borings was indicative of groundwater within the Eutaw aquifer. The initial boring for Monitoring Well #13, which was abandoned, encountered groundwater within landfill debris to a depth of about 35 feet bgs, underlain by unsaturated alluvium. It is reasonably believed that the groundwater encountered in the abandoned boring was perched and was not indicative of groundwater within an aquifer.

Groundwater level measurement were attempted in Monitoring Well No.'s 1, 2, 3, 7, 9, 10, 11, 12 and 13 on September 26, 1995, prior to purging activities for the collection of groundwater samples. Groundwater levels were not measured in Monitoring Well No.'s 4, 5, 6 and 8 as they are not included in the groundwater monitoring program. Monitoring Well No.'s 1 and 3 were determined to be dry at the time of measurement. Groundwater was not present in Monitoring Well #7 to a depth of 100 feet beneath the top of the PVC riser. The groundwater level probe used for measurement was limited to a depth of 100 feet by design.

Table 4 is a summary of the groundwater level and elevation data. Groundwater levels ranged from 58.13 to 91.80 feet beneath the top of the PVC risers. Groundwater levels were subtracted from the surveyed elevations of the PVC risers for an approximation of groundwater elevations. Figure 2 illustrates groundwater surface (head) contours based on the calculated groundwater elevations. Groundwater flow direction is estimated to be generally southeast at a gradient of approximately 0.008. The illustrated flow direction appears fairly consistent with previous illustrations, considering the additional available data.

Monitoring Well #12 was determined to have a groundwater elevation of 189.35 feet. Information obtained during the drilling of the well indicated that the groundwater encountered was representative of the Eutaw aquifer. Monitoring Well #1, although dry during this event, has previously been reported to have a groundwater elevation of 219.51 feet (Law, 1993). It should now be concluded that the groundwater in Monitoring Well #1, when present, is perched.

SECTION 6 SITE GEOLOGY

The Logs of Borings for Monitoring Well No.'s 8 - 13 were reviewed for an evaluation of the underlying stratigraphy. Depths of stratigraphic markers as reported during drilling activities were in feet bgs. A re-survey of the landfill did not include ground surface elevations. To provide an estimate of such, the heights of the PVC risers of the monitoring wells above the ground surface were measured and subtracted from the elevations of the PVC risers as reported in the survey. Elevations of the stratigraphic markers were then calculated by subtracting the reported depths of the markers (in feet bgs) from the calculated ground elevations. Depths bgs were rounded to the nearest ½ foot and elevations were rounded to the nearest ½ foot, to eliminate any misconception that the degree of accuracy of the measurements may be to the hundredths of a foot. For the purposes of this report, accuracies within a ½ foot are sufficient. Table 5 provides a summary of the stratigraphic level and elevation data.

Alluvium was encountered in each of the above listed borings at depths ranging from 34½ feet to 46 feet bgs. The alluvium was unconformably underlain by the Eutaw Formation. The base of the alluvium generally consisted of fine to coarse sand with large gravel that was quite distinct in appearance from the generally greenish/yellowish gray fine micaceous, glauconitic sand of the underlying Eutaw Formation. The Eutaw remained generally sandy to silty with occasional minor clay layers and nodules from the base of the alluvium to depths ranging from 83 to 99½ feet bgs. The Eutaw Formation was then described as a medium to light gray clay. Thickness of the clay in not known as it was not fully penetrated in any of the listed borings. The clay was reported to be at least 3.2 feet thick in Monitoring Well #9 (Law, 1993).

Figure 3 illustrates the structural contour of the top of the Eutaw Formation. Based on the available stratigraphic data, the top of the Eutaw Formation dips generally to the northwest at a gradient of about 0.006. Based on the dip direction and gradient of the top of the Eutaw Formation and on the gradient and direction of groundwater flow, it is estimated that groundwater would be present within the alluvium at a location approximately 1,850 feet northwest of Monitoring Well #13.

Figure 4 illustrates the structural contour of the top of the Eutaw clay. Based on the available stratigraphic data, the top of the Eutaw clay appears to be a closed high, with the maximum elevation centered about midway between Monitoring Well No.'s 2 and 11. Based on the illustration of the top of the Eutaw clay and the illustration of the groundwater surface (head) elevations, portions of the Eutaw clay may be above the groundwater surface. The areas where the Eutaw clay may be unsaturated are noted on Figure 4 by a dotted pattern.

SECTION 7 GROUNDWATER QUALITY DATA

Groundwater samples were collected from Monitoring Well No.'s 2, 7, 9, 10, 11, 12 and 13 on September 26, 1995. Monitoring Well No.'s 4, 5, 6 and 8 are not a part of the monitoring program. Monitoring Well No.'s 1 and 3 were dry at the time of sample collection. The 3 springs were also dry at the time of sample collection.

Table 6 provides a summary of the VOC concentrations of the groundwater samples collected for the September, 1995, event. A copy of the laboratory report is included in Appendix C. Relatively low levels of Trichlorofluoromethane; 1,1-Dichloroethene; 1,1-Dichloroethane; Cis-1,2-Dichloroethene; 1,1,1-Trichloroethane; Benzene; Trichloroethene; Tetrachloroethene; and Chlorobenzene were present in various of the groundwater samples. Also included on Table 6 are the specific densities of the compounds determined to be present. Detected compounds are highlighted by bold text.

Each of the above listed compounds, except for benzene, has a specific density greater than water. Due to their specific densities (except for benzene), the compounds are more likely to migrate from the source area toward a structurally down-dip location of any underlying (or lower) confining or partially confining layer. It is known that a relatively dense clay layer exists beneath the locations of Monitoring Well No.'s 9, 10, 11, 12 and 13, and may exist beneath the entire landfill. The structural appearance of that clay layer was reviewed in conjunction with the relative concentrations of the contaminants in the groundwater samples collected to estimate the appearance and extent of the contaminant plumes (except for benzene). Figures 5, 6, 7 and 8 illustrate the distribution of 1,1-Dichloroethane; Cis-1,2-Dichloroethene; Trichloroethene; and Tetrachloroethene, respectively. The illustrated plumes are considered representative of the general appearances of the other plumes, except for benzene.

SECTION 8 CONCLUSIONS

Based on the appearance of the contaminant distribution as illustrated, the structural appearance of the top of the Eutaw clay, analyses of the permeability of the Eutaw clay in consideration of the likely relatively high permeability of the overlying Eutaw sand, and information concerning the history of the landfill, the source area and mechanism of contaminant distribution can be inferred.

It is known that disposal into a gully formerly located sub-parallel to County Road 4 was undertaken in the early life of the landfill. The gully was filled with waste and subsequently capped using clay materials excavated from the southern portion of the landfill. The gully did not extend to the groundwater surface. It was reported that compaction of the cap was most often by loader and dozer and not by equipment designed for compaction. The cap has subsided and water stands on the ground surface for extended periods of time after rainfall events. This is most apparent during the winter months. It is known that surface water penetrates the cap, as evidenced by the perched water often present in Monitoring Well #1 and by the perched water encountered in the initial boring for Monitoring Well #13.

It is therefore concluded that certain of the wastes placed into the gully contained VOC's. Rainfall enters into the filled gully through the ineffective cap. The VOC's are dissolved into the percolating water or are carried along with that water through the underlying alluvial column, through the upper sand portion of the Eutaw Formation, down to the Eutaw clay. The relatively dense contaminants then migrate downward along the unsaturated Eutaw clay high into the Eutaw aquifer. Migration likely continues down-gradient as the VOC's dissolve into the groundwater, at which time their migration may be influenced somewhat by the direction of groundwater flow.

Groundwater samples collected from Monitoring Well #11 historically have been determined to have some of the highest concentrations of the samples collected, and to have the most constituents present. This indicates that the contaminants are migrating along structure, and allows for the conclusion either that the dip gradient of the Eutaw clay is greatest in the direction of Monitoring Well #11, or that the concentrations are high because the well is so near the point at which groundwater contacts the Eutaw clay, or some combination of the 2.

It was previously stated that Heptachlor Epoxide was determined to be present in groundwater samples collected from Monitoring Well No.'s 12 and 13. Groundwater samples were collected from Monitoring Well #11 on June 28, 1995, for a single well monitoring event unrelated to other field activities. The samples were analyzed by Method 8141 to determine organophosphorus pesticide concentrations, by Method 8080 to determine Appendix 2 pesticide/PCB concentrations, by 8150 to determine Appendix 2 chlorinated herbicide concentrations and by Method 8260 to determine Appendix 1 volatiles concentrations. Each of the pesticide/herbicide/PCB compounds for which analyses were performed were determined to be present at concentrations below method detection limits, or ND. VOC's were present in the sample collected, as in other reported monitoring events. A copy of the laboratory reports is included in Appendix C. Data concerning the specific density of Heptachlor Epoxide could not be found. It is relatively insoluble, reported to be only 0.275 mg/l at 25° C (Montgomery, et.al., 1990). Auburn University-Prattville Experimental Field is located approximately 2,000 feet northwest of the landfill. The possibility exists that the presence of Heptachlor Epoxide is due to its use by the experimental station on fields located in the vicinity of the landfill.

SECTION 9 RECOMMENDATIONS

It is recommended that the cover that currently exists over the former gully be repaired. The surface vegetation and surficial soils that may contain decayed organic matter or which demonstrate relatively high permeability should be excavated from the area overlying the former gully. The recommended area of cover repair in the north/south direction is from south of County Road 4 to just north of Monitoring Well No.'s 3 and 7, being approximately 600 feet wide; and in the east/west direction is from just east of Monitoring Well No.'s 1, 8 and 12 to north of Monitoring Well #7, being approximately 2,000 feet long. The above described area consists of approximately 1,200,000 $ft.^2$, or approximately 27 acres.

A minimum of at least 2 feet of additional cover material, classified as CL or CH, with a minimum plasticity index of 16, should be placed in lifts of a maximum of 1 foot at 95% compaction. The cover material should be graded with a minimum slope of 5%, with open ditches at the base of each slope to divert water from the cover material and to limit or restrict ponding in the vicinity of the cover. An additional 6 inches to 1 foot of soils suitable to support vegetation should be placed over the cover. Suitable vegetation should be established to minimize erosion and to maximize evapotranspiration.

It is recommended that any additional assessment activities, with the exception of semi-annual groundwater monitoring, be temporarily suspended for a period of 2 years pending an assessment of the effects of cover repair over time. It is hoped that the cover repair will greatly limit the amount of rainfall which percolates through the wastes within the former gully, thereby reducing the volume of leachate created. A reduction in leachate may affect a reduction in the concentrations of contaminants present within the Eutaw aquifer.

It is recommended that semi-annual monitoring reports be submitted to the Department which include a brief summary of field activities, a table of groundwater level and elevation data, a table of historic groundwater elevations beginning from the September, 1995, monitoring event, a groundwater surface (head) elevation contour map of the current monitoring event, a table of constituent concentrations which includes each of the parameters currently monitored, a table of historic VOC concentrations beginning from the September, 1995, monitoring event, and discussions of developing trends or notable changes which have occurred since the September, 1995, monitoring event.

SECTION 10 TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS

Well Number	Well Depth	Depth of Surface Casing	Screen Interval	Depth to Sand	Depth to Bentonite
MW12	100'	40'	98.0' - 83.0'	79.8'	76.9'
MW13	85'	49'	84.7' - 69.7'	65.6'	60.4'

NOTES:
Measured depths in feet beneath ground surface.

TABLE 2
GROUNDWATER SAMPLE PESTICIDES/PCB ANALYSES
MONITORING WELL NO.'S 12 AND 13
JULY 5, 1995

Parameter	MW12	MW13
Aldrin	ND	ND
Alpha-BHC	ND	ND
Beta-BHC	ND	ND
Delta-BHC	ND	ND
Gamma-BHC	ND	ND
Alpha-Chlordane	ND	ND
4,4'-DDD	ND	ND
4,4'-DDE	ND	ND
4,4'-DDT	ND	ND
Dieldrin	ND	ND
Endosulfan I	ND	ND
Endosulfan II	ND	ND
Endosulfan Sulfate	ND	ND
Endrin	ND	ND
Endrin Aldehyde	ND	ND
Gamma-Chlordane	ND	ND
Heptachlor	ND	ND
Heptachlor Epoxide	0.11	0.14
Methoxychlor	ND	ND
Arochlor-1016	ND	ND
Arochlor-1221	ND	ND
Arochlor-1232	ND	ND
Arochlor-1242	ND	ND
Arochlor-1248	ND	ND
Arochlor-1254	ND	ND
Arochlor-1260	ND	ND
Toxaphene	ND	ND

NOTES:

Units - µg/l, or parts per billion (ppb).
ND - Not detected within method reporting limit.

TABLE 3
GROUNDWATER SAMPLE VOC ANALYSES
MONITORING WELL NO.'S 12 AND 13
JULY 5, 1995

Parameter	MW12	MW13
Acetone	ND	ND
Benzene	3	2
Acrylonitrile	ND	ND
Bromochloromethane	ND	ND
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon Tetrachloride	ND	ND
Carbon Disulfide	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
Cis 1,2 Dichloroethylene	14	5
Chlorodibromomethane	ND	ND
Dibromomethane	ND	ND
1,2-Dibromo-3-Chloropropane	ND	ND
1,2 Dibromoethane	ND	ND
1,4-Dichlorobenzene	ND	ND
1,2-Dichlorobenzene	ND	ND
1,1-Dichloroethane	32	ND
1,2-Dichloropropane	ND	ND
Trans-1,4-Dichloro-2-Butene	ND	ND
Cis-1,3-Dichloropropene	ND	ND
Ethyl Benzene	ND	ND
2-Hexanone	ND	ND
Iodomethane	ND	ND
Methyl Isobutyl Ketone	ND	ND
Methyl Ethyl Ketone	ND	ND
Methylene Chloride	ND	ND
Styrene	23	ND
1,1,1,2-Tetrachloroethane	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND

Parameter	MW12	MW13
Tetrachloroethene	8	ND
Toluene	ND	ND
Trans 1,2 Dichloroethylene	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane	ND	ND
1,2,3 Trichloropropane	ND	ND
Vinyl Chloride	ND	ND
Vinyl Acetate	ND	ND
M,P-Xylene	ND	ND
O-Xylene	ND	ND

NOTES:

Units - µg/l, or parts per billion (ppb).
ND - Not detected above method reporting limits.

TABLE 4
GROUNDWATER LEVEL AND ELEVATION DATA
SEPTEMBER 26, 1995

Well Number	Well Depth	Elevation Ground	Elevation Top of PVC	Groundwater Level	Elevation Groundwater
MW1	29.8	272.09	275.17	Dry	—
MW2	77.0	254.41	257.41	58.13	199.28
MW3	59.2	257.84	260.84	Dry	—
MW4	91.8	279.63	282.55	NM	—
MW5	93.2	277.26	280.26	NM	—
MW6	71.0	265.34	268.42	NM	—
MW7	218	267.29	270.21	NM	—
MW8	60.8	273.03	275.61	NM	—
MW9	100.1	279.74	282.32	91.80	190.52
MW10	98.2	277.06	280.31	90.16	190.15
MW11	93.1	279.10	282.10	87.01	195.09
MW12	98.0	272.47	274.97	85.62	189.35
MW13	84.7	271.85	274.15	73.10	201.05

NOTES:

"Well Depth" - Measured distance from top of PVC riser to bottom of well casing, in feet.

"Elevation Ground" - elevation of ground surface adjacent to well as calculated by subtracting height of PVC riser above ground surface from elevation of top of PVC riser.

"Elevation Top of PVC" - elevation of the top of the PVC casing as surveyed, in feet above Mean Sea Level.

"Groundwater Level" - Distance from top of PVC riser to "static" groundwater level in well casing, in feet.

Groundwater level measured on September 26, 1995.

"Elevation Groundwater" - Elevation Top of PVC minus Groundwater Level, in feet above Mean Sea Level.

TABLE 5
STRATIGRAPHIC LEVEL AND ELEVATION DATA
MONITORING WELL NO.'S 8 - 13

Well Number	Well Depth	Elevation Ground	Depth to Eutaw	Elevation Eutaw	Depth to Eutaw Clay	Elevation Eutaw Clay
MW8	60.8	273.03	37½	235.5	Well Abandoned	
MW9	100.1	279.74	40½	239.25	94½	185.25
MW10	98.2	277.06	34½	242.5	95½	181.5
MW11	93.1	279.10	46	233.0	90	189.0
MW12	98.0	272.47	35	237.5	99½	173.0
MW13	84.7	271.85	46	225.75	83	188.75

Notes: "Well Depth" - Measured distance from top of PVC riser to bottom of well casing, in feet.

"Elevation Ground" - elevation of ground surface adjacent to well as calculated by subtracting height of PVC riser above ground surface from elevation of top of PVC riser.

"Depth to Eutaw" - Depth to the top of the Eutaw Formation as reported in Logs of Borings, in feet beneath ground surface, rounded to nearest ½ foot.

"Elevation Eutaw" - Difference between the elevation of the ground surface, rounded to the nearest ¼ foot and the reported depth of the top of the Eutaw Formation, in feet above Mean Sea Level.

"Depth to Eutaw Clay" - Depth to the first significant and apparently contiguous clay layer within the Eutaw Formation as reported in Logs of Borings, in feet beneath the ground surface, rounded to the nearest ½ foot.

"Elevation Eutaw Clay" - Difference between the elevation of the ground surface, rounded to the nearest ¼ foot and the reported depth of the first significant clay layer within the Eutaw Formation.

TABLE 6
GROUNDWATER SAMPLE VOC ANALYSES
SEPTEMBER 26, 1995

COMPOUND	Density	MW2	MW7	MW9	MW10	MW11	MW12	MW13
Trichlorofluoromethane	**1.476**	**BDL**	**BDL**	**11**	**BDL**	**BDL**	**3.4**	**BDL**
1,1-Dichloroethene	**1.218**	**BDL**	**BDL**	**16**	**BDL**	**11**	**2.8**	**BDL**
Methylene Chloride	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
trans-1,2-Dichloroethene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1-Dichloroethane	**1.1757**	**BDL**	**BDL**	**46**	**BDL**	**190**	**32**	**BDL**
Cis-1,2-Dichloroethene	**1.2565**	**47**	**1.2**	**11**	**BDL**	**130**	**17**	**11**
Chloroform	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,1-Trichloroethane	**1.3390**	**BDL**	**BDL**	**9.4**	**BDL**	**8**	**BDL**	**BDL**
1,2-Dichloroethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene	**0.8765**	**3.3**	**BDL**	**4.1**	**BDL**	**6.1**	**2.1**	**1.7**
Trichloroethene	**1.4642**	**3.4**	**BDL**	**11**	**BDL**	**3.0**	**1.7**	**BDL**
Carbon Tetrachloride	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2-Trichloroethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	**1.6227**	**15**	**1.3**	**55**	**BDL**	**21**	**5**	**BDL**
Chlorobenzene	**1.1058**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**2.2**	**BDL**
Ethylbenzene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromoform	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2,2-Tetrachloroethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2-Cloroethylvinyl ether	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dibromochloromethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichloropropane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL

NOTES:

Units - µg/l, or parts per billion (ppb).
BDL - Below method detection limits.
NA - Not applicable.

SECTION 11 FIGURES

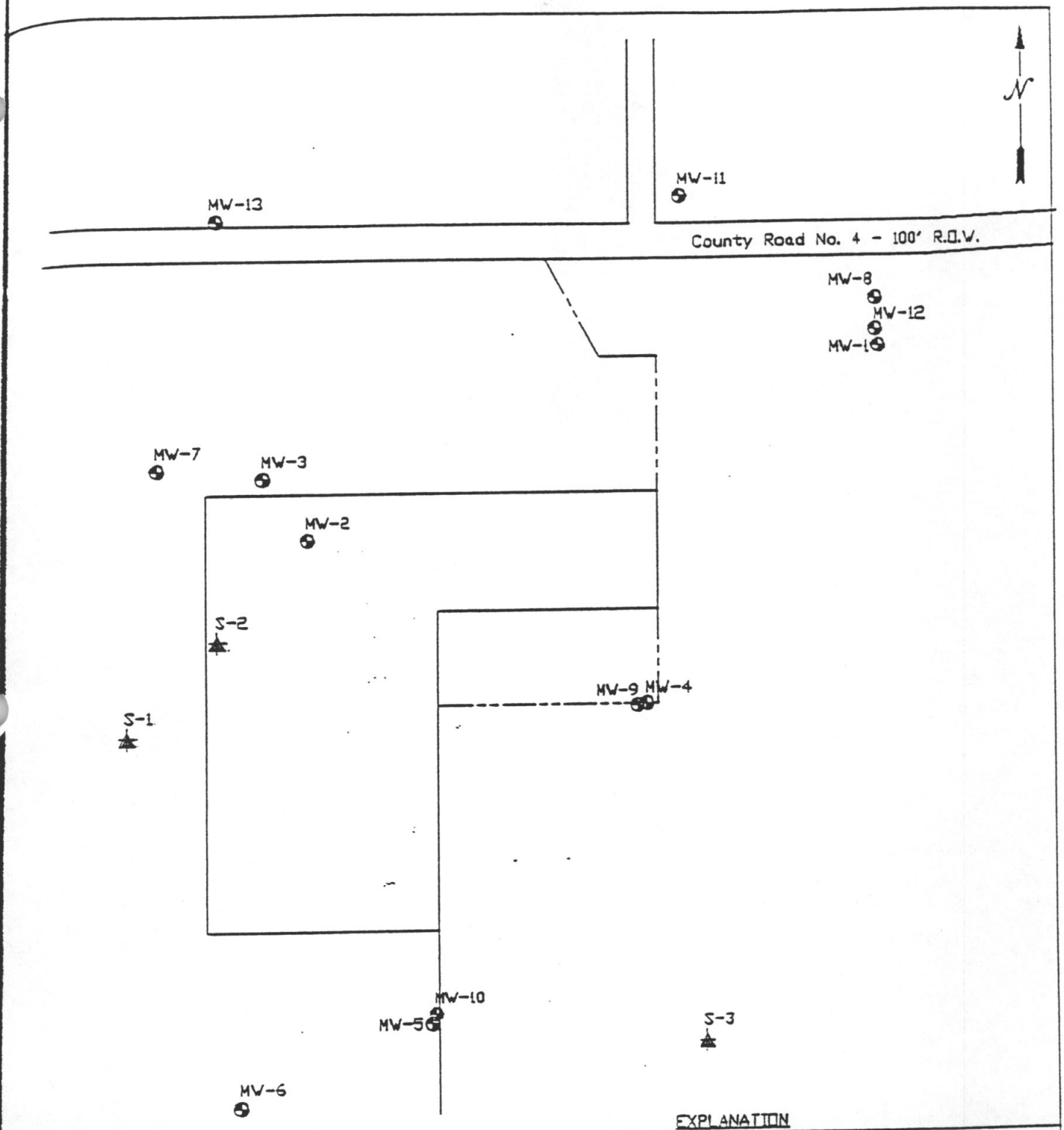


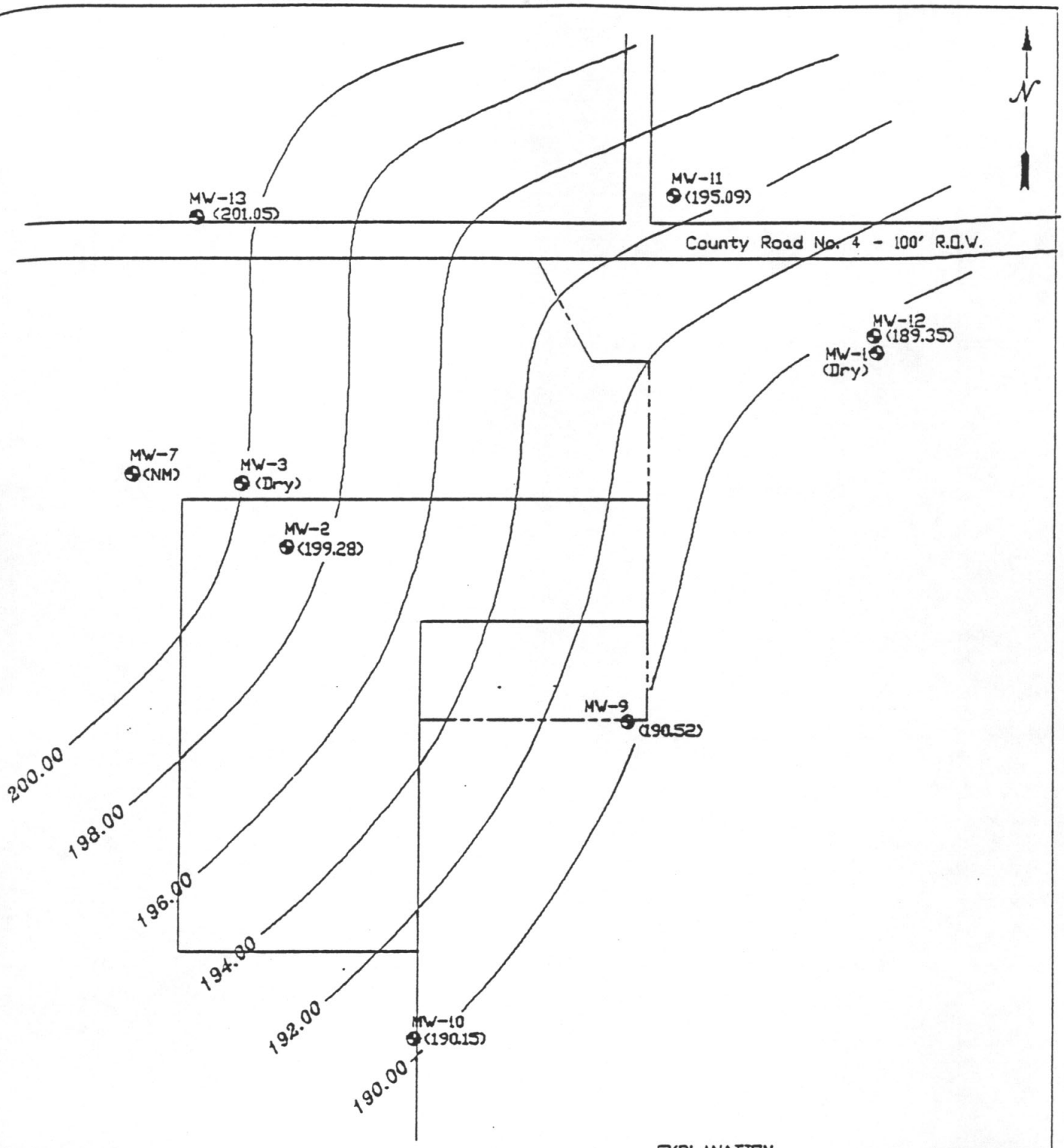
Figure 1

SITE PLAT

CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (190.52) Location of Monitoring Well #9 Groundwater (head) elevation (ft.)

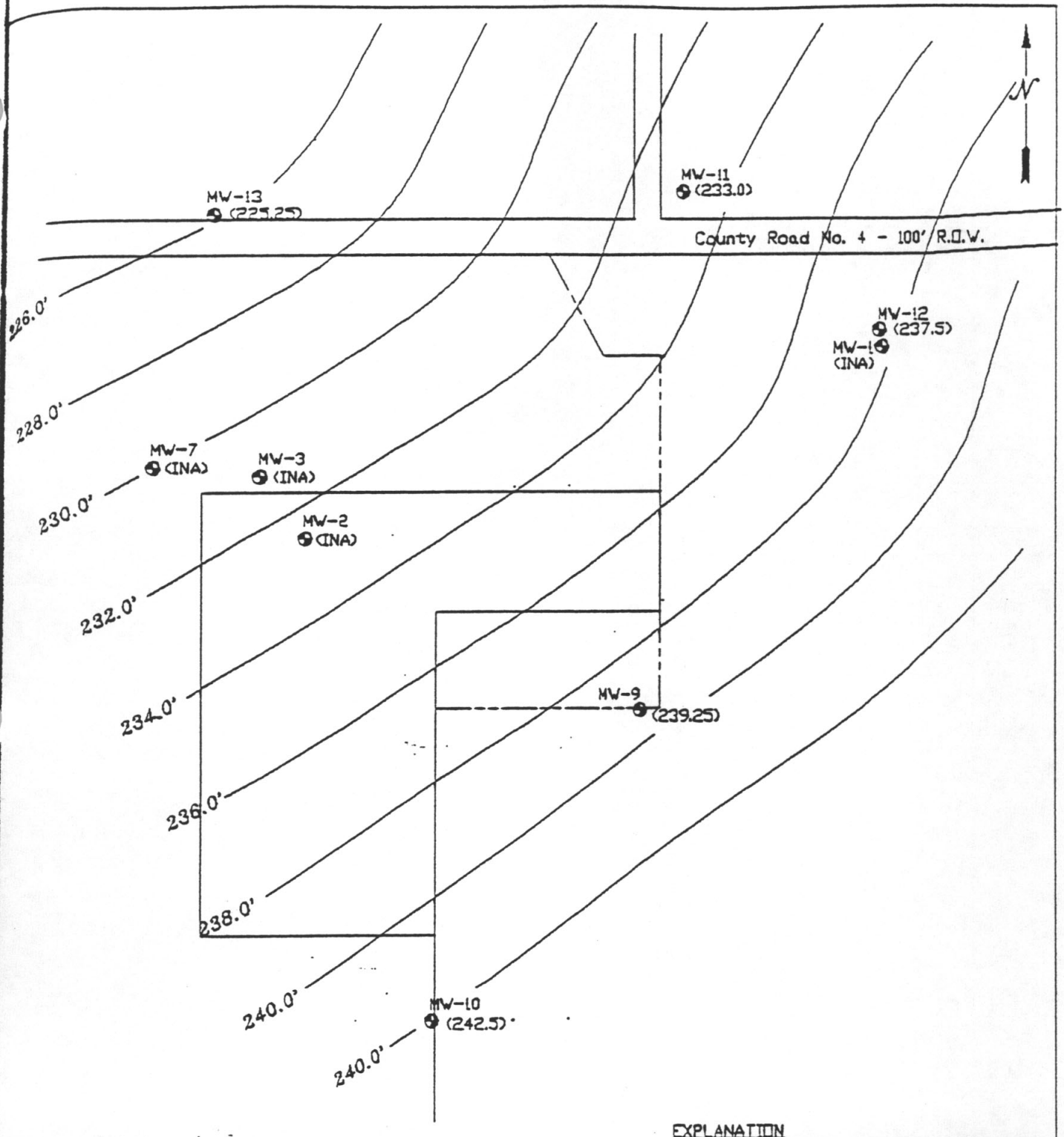
Contour Interval: 2.0 ft.

Figure 2

POTENTIOMETRIC (HEAD) ELEVATION MAP
EUTAW AQUIFER (09/26/95)
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (239.25) Location of Monitoring Well #9 Elevation Top of Eutaw Formation (ft.), rounded to nearest 0.25 ft.

INA Information not available

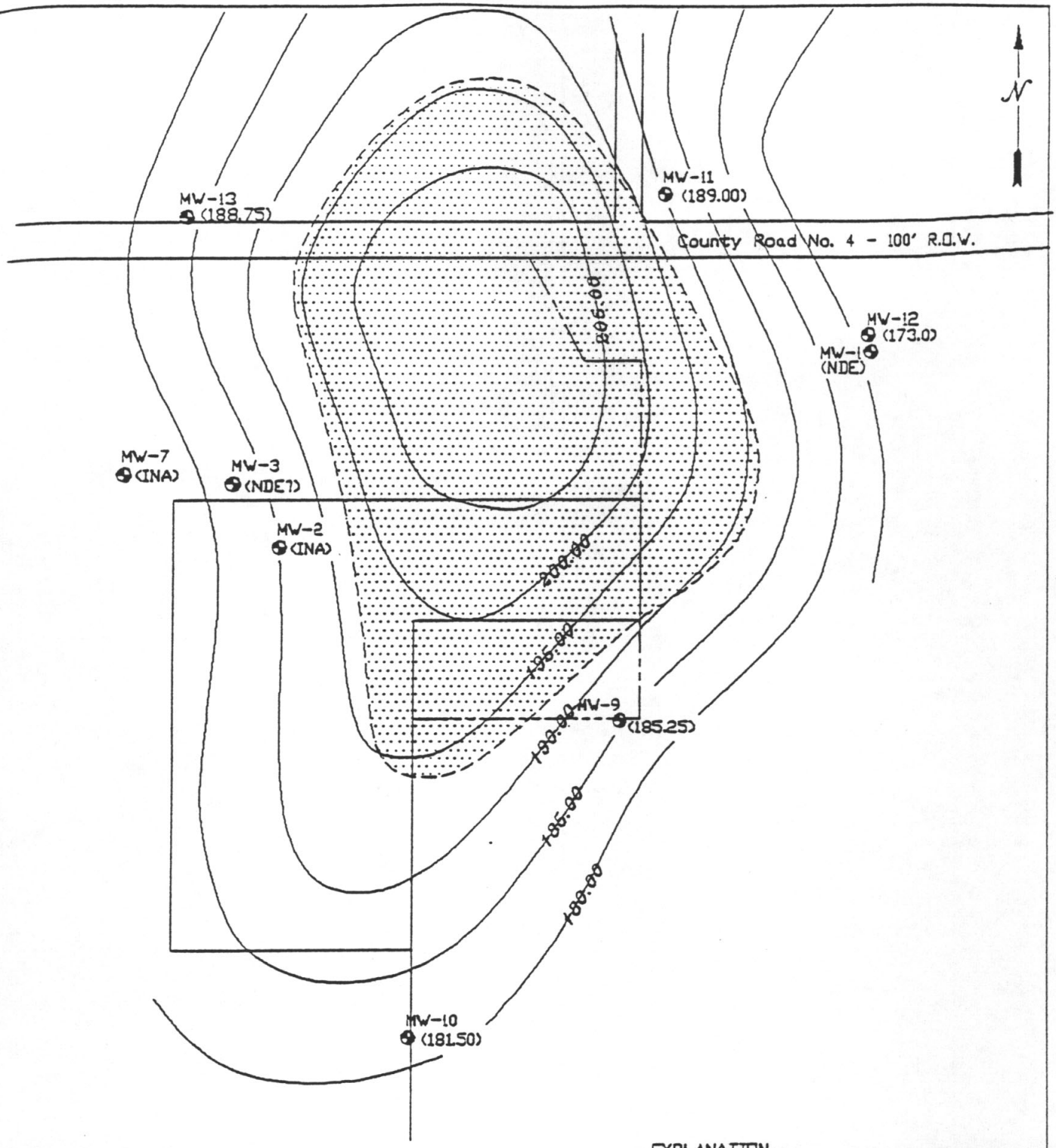
Contour Interval: 2.0 ft.

Figure 3

STRUCTURAL CONTOUR MAP
TOP OF EUTAW FORMATION
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (185.25)	Location of Monitoring Well #9 Elevation First Eutaw Clay, rounded to nearest 0.25 feet.
INA	Information not available
NDE	Not Deep Enough
	Indicates area where First Eutaw Clay is above current groundwater (head) elevation.

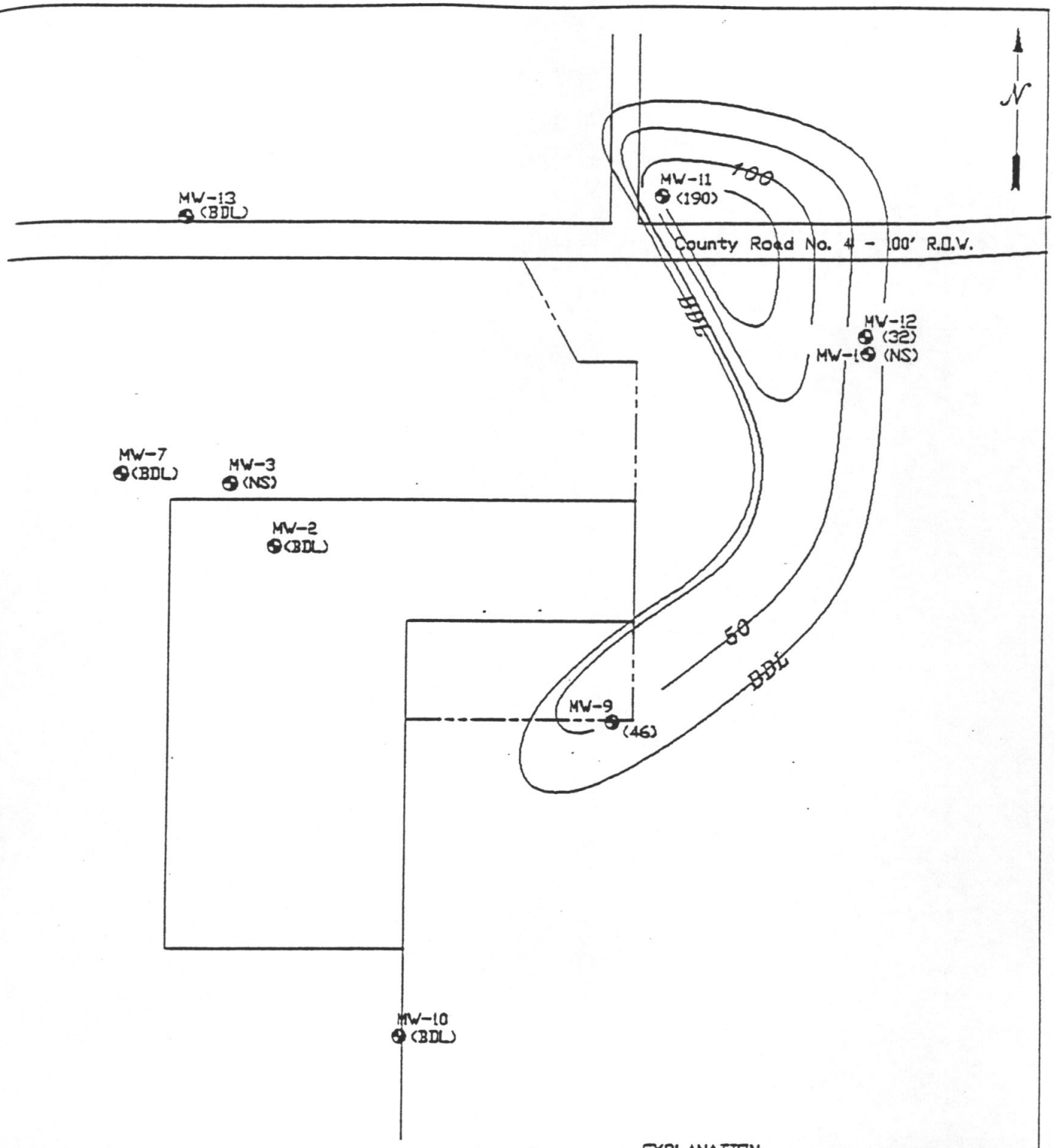
Contour Interval: 5.0 ft.

Figure 4

STRUCTURAL CONTOUR MAP
FIRST EUTAW CLAY
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJL		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (46)	Location of Monitoring Well #9 1,1 Dichloroethane Concentration (ppb)
BDL	Below detection limit

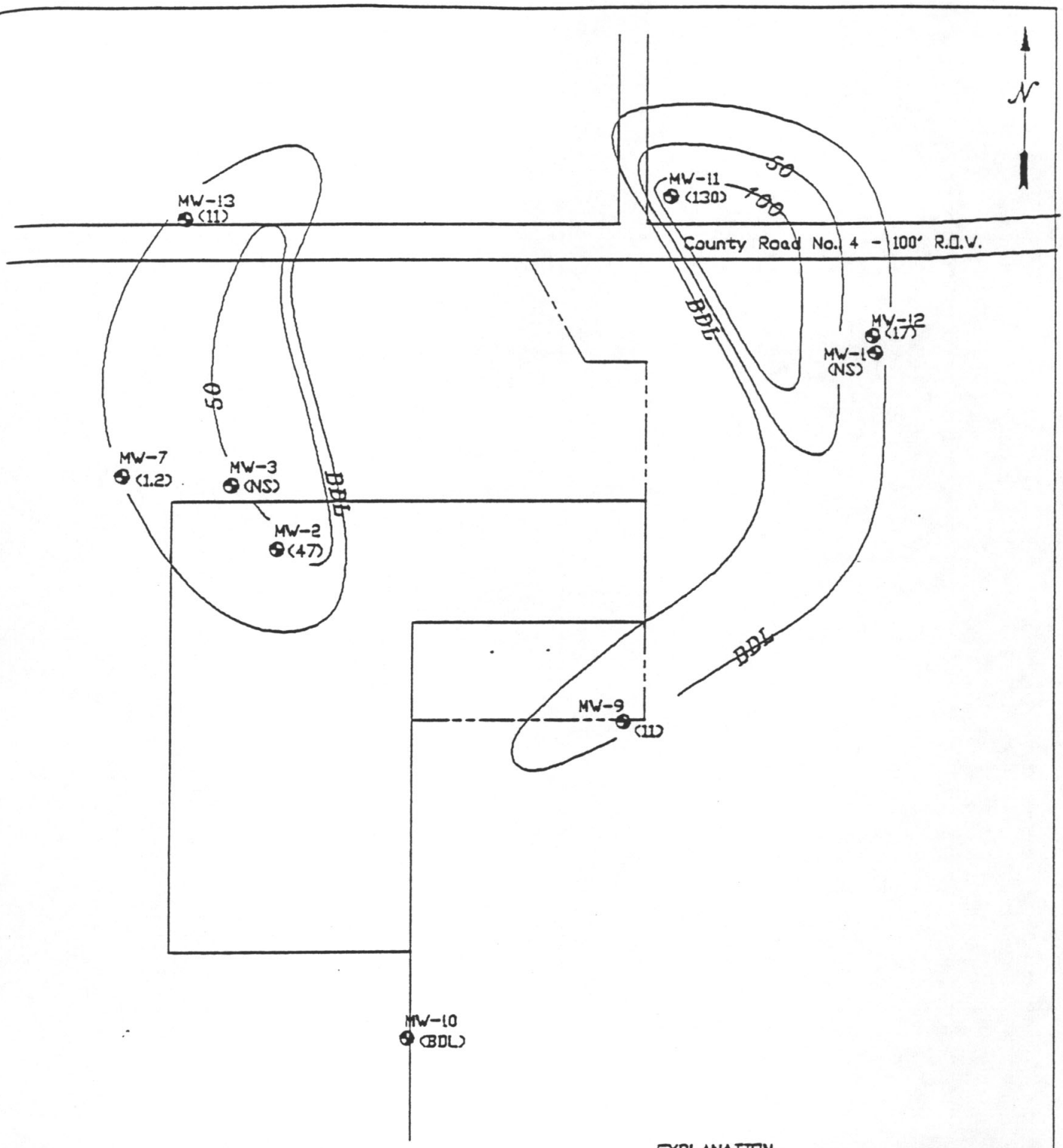
Contour Interval: 50 ppb.

Figure 5

1,1 DICHLOROETHANE DISTRIBUTION MAP
FIRST EUTAW AQUIFER
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9. (11)	Location of Monitoring Well #9 Cis 1,2 Dichloroethene Concentration (ppb.)
BDL	Below detection limit
NS	Not Sampled

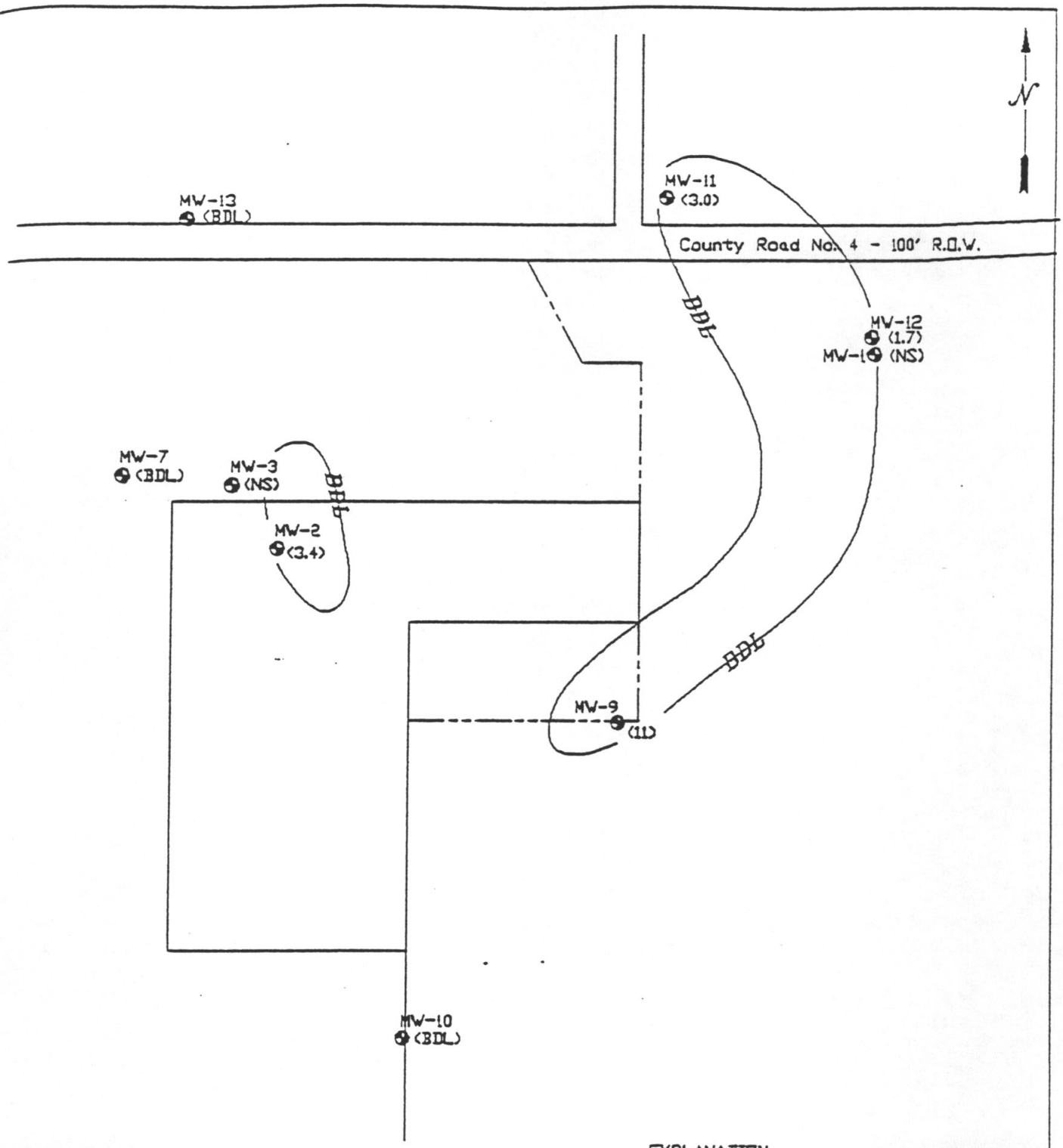
Contour Interval: 50 ppb.

Figure 6

CIS 1,2 DICHLOROETHENE DISTRIBUTION MAP
FIRST EUTAW AQUIFER
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (11)	Location of Monitoring Well #9 Trichloroethene Concentration (ppb)
BDL	Below detection limit

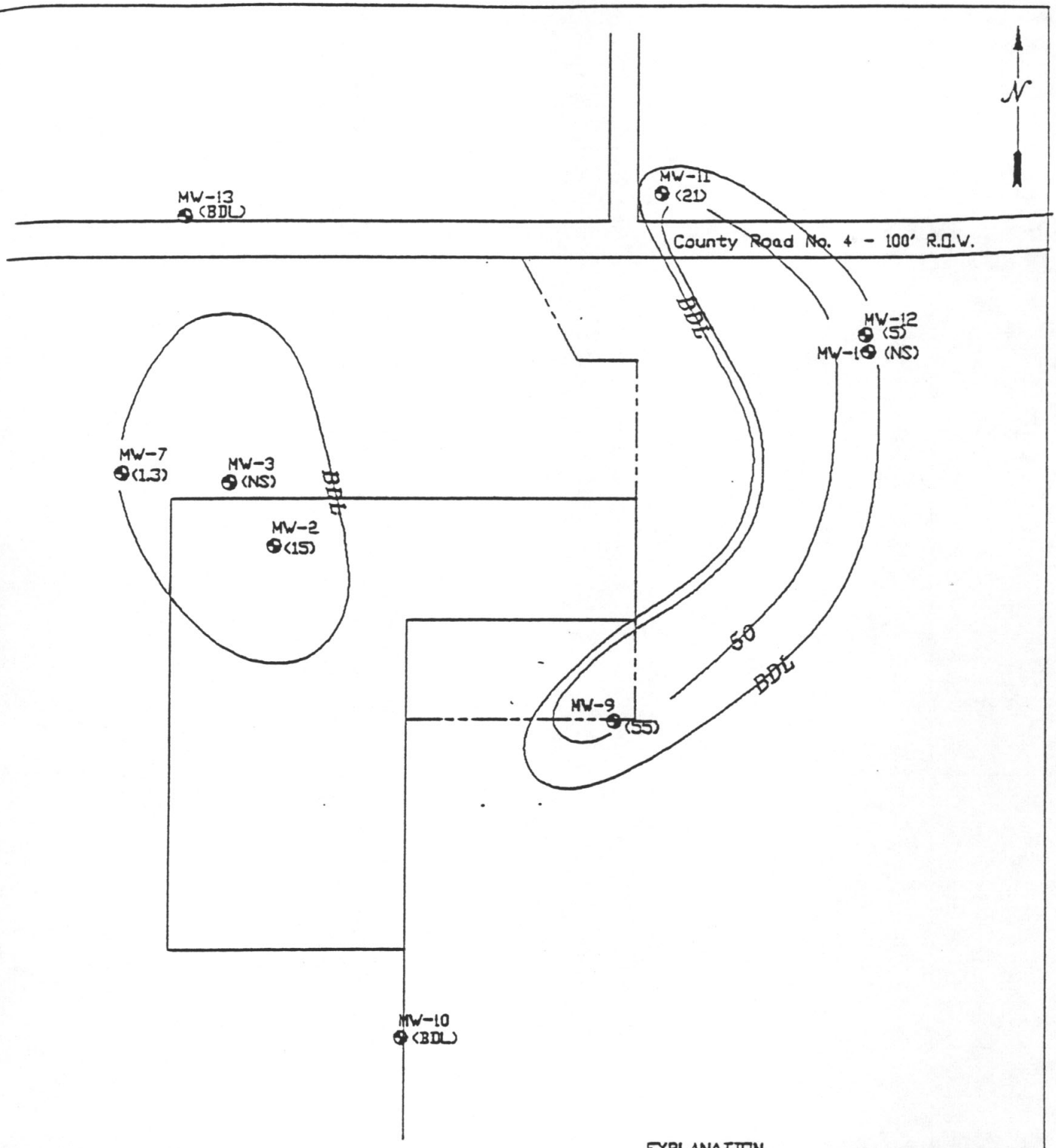
Contour Interval: 50 ppb.

Figure 7

TRICHLOROETHENE DISTRIBUTION MAP
FIRST EUTAW AQUIFER
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (55)	Location of Monitoring Well #9 Tetrachloroethane Concentration (ppb)
BDL	Below detection limit

Contour Interval: 50 ppb.

Figure 8

TETRACHLOROETHENE DISTRIBUTION MAP
FIRST EUTAW AQUIFER
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJH		11/22/95

OASIS
CONSTRUCTION
SERVICES, INC.

CQA AND
MATERIAL TESTING
LANDFILL SPECIALISTS

February 23, 2009

Mr. Shane Lovett
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36110

Subject: City of Prattville Construction/Demolition, Permit No. 01-06
Permit Renewal Application
Prattville, Alabama

Dear Mr. Lovett:

On behalf of Allied Waste/Autauga County Landfill, LLC, pursuant to your request, we are submitting the enclosed sediment pond calculations and drainage map for the Prattville Construction/Demolition Landfill. The pond was included in the Major Modification design submitted in 2005.

Please contact me at (678) 438-6268 or rblanton@oasis-cs.com with any questions or comments that you may have.

Sincerely,

J. Robin Blanton, PE
Vice President

cc: Craig Bryan, General Manager
Amber Hoffman, Environmental Manager
Majid Zibanejadrad (letter only)

645 WESTHOLLOW CT. • ROSWELL, GA 30075
(770) 642-2838 • FAX (770) 642-2839

Sediment Pond Design

Pond for the City of Prattville C&D landfill will be designed for both sediment and detention. The pond will be constructed in 2 phases. Phase 1 will provide sediment and detention for cells 1 and 2. Phase 2 will constructed during the construction of cell 3, and will provide sediment and detention for the entire landfill. Pre-developed and post-developed flows were developed for the 2, 5, 10, 25, 50, and 100 year rainfall events using the Soil Conservation Service Hydrology for a 24-hour storm event with a Type III rainfall distribution.

Phase 1

Pre-developed Condition

The pre-developed area is 26.45 acres consisting of the existing landfill and unimproved grassed areas.

The runoff curve number of 58 representing a meadow good condition with Group B soils will be used.

The basin flow length is 1,803 feet with an average slope of 5.5 %. Using the "lag method", the time of concentration is 39.48 minutes.

Post-developed Condition

The post-developed area is 26.45 acres consisting of existing grassed landfill slopes.

The runoff curve number of 74 representing a pasture in good condition with Group C soils will be used.

The basin flow length is 1,803 feet with an average slope of 5.5 %. Using the "lag method", the time of concentration is 25.90 minutes.

Sediment Storage Calculations

Total sediment storage is based on sediment loss of 1 inch per acre disturbed or 67 cubic yards per acre disturbed. The total disturbed acreage is 26.45 acres.

Pond volume is determined by average end method. The following table shows the stage/ storage relationship for the pond:

Elevation	Area (sq.ft.)	Height (ft)	Volume (cu.ft.)	Total Volume (cu.ft.)	Total Volume (cu.yd.)
161.3	0				
		1	2,211		
162	6,316			2,211	81.87
		2	37,235		
164	30,919			39,446	1460.95
		2	79,736		
166	48,817			119,182	4414.13
		2	106,520		
168	57,703			225,702	8359.32
		2	124,385		
170	66,682			350,087	12966.17

The maximum sediment volume is:

= 26.45 acres * 67 cuyd/acre = 1,772.15 cuyd

The elevation in the pond equal to this volume is:

$$elevation = 164 + \left(2 \times \frac{1{,}772.15 - 1{,}460.95}{4{,}414.13 - 1{,}460.95} \right) = 164.21$$

Pond Route Results

Pond calculations are based on pond storage above the sediment storage elevation. The sum of the Bypass hydrographs and the routed pond outflow hydrographs must be less than the pre-developed hydrographs. The following is a summary of the data in Appendix A:

	Design Storm			
	2	5	10	25
Pre-developed Flows	11.95	24.24	33.83	46.42
Post-developed Flows	35.92	55.69	69.94	87.71
Routed Flows	0	3.75	8.53	23.10

Outfall Design

The existing outfall pipe is a 36" CMP, 101' long at a 1.0% slope with an invert in elevation of 161.30 ' and an invert out elevation of 160.29'. When a 24-hour/25-year storm event is routed through the pond, the peak elevation is 169.07', and the peak outflow is 23.10 cfs. The capacity of the 36" CMP outlet pipe at 2.0% is as follows:

$Q = (1.486/n)\ AR^{2/3}\ S^{1/2}$ using n=0.024 and S = 0.01
Q = 36.13cfs which is more than required.

The peak inflow to the pond during the 25-year storm event is 87.71cfs. The emergency spillway must be able to handle the 24-hour/25-year storm event, in the case that the principle spillway is clogged. The emergency spillway will be a width of 30 feet. The capacity of the emergency spillway is:

$$Q=3.2LH^{3/2}$$

With H=1, and L=30, Q=96.00 cfs which is more than required.

Phase 2

Pre-developed Condition

The pre-developed area is 64.33 acres consisting of 26.45 acres of existing landfill, 18 acres of woods, and 19.88 acres of grassed meadow.

The runoff curve number representing a meadow good condition with Group B soils is 58, the runoff curve number representing wooded area in fair condition with a group B soil is 60, and the curve number representing grassed landfill is 74. The weighted curve number is:

26.45/64.33 * 74 = 30.46
18.00/64.33 * 60 = 16.79
19.88/64.33 * 58 = 17.92
65.17

The basin flow length is 2,814 feet with an average slope of 1.92 %. Using the "lag method", the time of concentration is 79.9 minutes.

Post-developed Condition

The post-developed area is 48.65 acres consisting of existing grassed landfill slopes.

The runoff curve number of 74 representing a pasture in good condition with Group C soils will be used.

The basin flow length is 3,300 feet with an average slope of 2.94 %. Using the "lag method", the time of concentration is 57.6 minutes.

The bypass area is 15.68 acres consisting of existing grassed landfill slopes and grassed sports field.

The runoff curve number representing a pasture in good condition with Group C soils is 74.

The basin flow length is 3,300 feet with an average slope of 2.94 %. Using the "lag method", the time of concentration is 43.8 minutes.

Sediment Storage Calculations

Total sediment storage is based on sediment loss of 1 inch per acre disturbed or 67 cubic yards per acre disturbed. The total disturbed acreage is 48.65 acres.

Pond volume is determined by average end method. The following table shows the stage/ storage relationship for the pond:

Elevation	Area (sq.ft.)	Height (ft)	Volume (cu.ft.)	Total Volume (cu.ft.)	Total Volume (cu.yd.)
161.3	0				
		1	2,211		
162	6,316			2,211	81.87
		2	37,547		
164	31,231			39,758	1472.50
		2	97,409		
166	66,178			137,167	5080.24
		2	149,650		
168	83,472			286,817	10622.84
		2	181,475		
170	98,003			468,292	17344.13
		2	207,991		
172	109,988			676,283	25047.50

The maximum sediment volume is:

= 48.65 acres * 67 cuyd/acre = 3,259.55 cuyd

The elevation in the pond equal to this volume is:

$$elevation = 164 + \left(2 \times \frac{3{,}259.55 - 1472.50}{5{,}080.24 - 1{,}472.50} \right) = 164.99$$

Pond Route Results

Pond calculations are based on pond storage above the sediment storage elevation. The sum of the Bypass hydrographs and the routed pond outflow hydrographs must be less than the pre-developed hydrographs. The following is a summary of the data in Appendix A:

	Design Storm			
	2	5	10	25
Pre-developed Flows	31.40	54.90	72.58	95.25
Post-developed Flows	45.28	70.26	88.45	111.17
Bypass Flows	16.13	25.07	31.53	39.59
Routed Flows	0	5.71	13.23	33.10
Combined Post-Developed Flows	16.13	25.07	31.53	41.25

Outfall Design

The existing outfall pipe is a 36" CMP, 101' long at a 1.0% slope with an invert in elevation of 161.30 ' and an invert out elevation of 160.29'. When a 24-hour/25-year storm event is routed through the pond,

the peak elevation is 170.85', and the peak outflow is 33.10 cfs. The capacity of the 36" CMP outlet pipe at 2.0% is as follows:

$Q = (1.486/n)\ AR^{2/3}\ S^{1/2}$ using n=0.024 and S = 0.01
Q = 36.13cfs which is more than required.

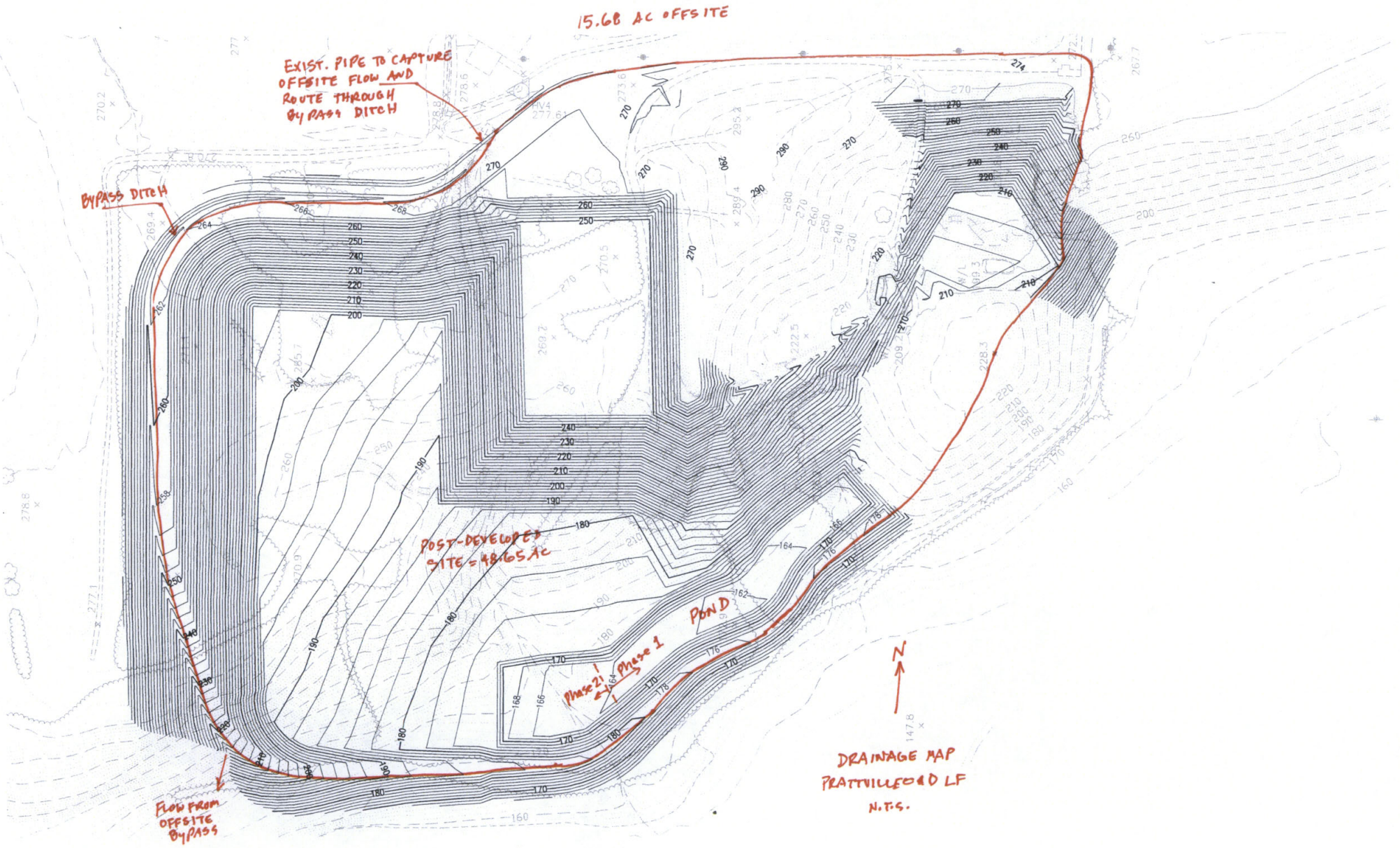
The peak inflow to the pond during the 25-year storm event is 111.17cfs. The emergency spillway must be able to handle the 24-hour/25-year storm event, in the case that the principle spillway is clogged. The emergency spillway will be a width of 35 feet. The capacity of the emergency spillway is:

$Q=3.2LH^{3/2}$

With H=1, and L=35, Q= 112.00 cfs which is more than required.

Phase 2

Elevation	Area (sq.ft.)	Height (ft)	Volume (cu.ft.)	Total Volume (cu.ft.)	Total Volume (cu.yd.)
161.3	0				
		1	2,211		
162	6,316			2,211	81.87
		2	37,547		
164	31,231			39,758	1472.50
		2	97,409		
166	66,178			137,167	5080.24
		2	149,650		
168	83,472			286,817	10622.84
		2	181,475		
170	98,003			468,292	17344.13
		2	207,991		
172	109,988			676,283	25047.50


15.68 AC OFFSITE
EXIST. PIPE TO CAPTURE OFFSITE FLOW AND ROUTE THROUGH BYPASS DITCH
BYPASS DITCH
POST-DEVELOPED SITE = 48.65 AC
POND
PHASE 2
PHASE 1
FLOW FROM OFFSITE BYPASS
N
DRAINAGE MAP
PRATTVILLE 40 D LF
N.T.S.

1.0 GENERAL OPERATIONAL STANDARDS

1.1 ORIGIN OF WASTE

The origin of waste for the Prattville Landfill shall include the City of Prattville and Autauga, Elmore, Montgomery, Chilton, Lee and Lowndes counties in Alabama.

1.2 ACCEPTABLE WASTE

Typical wastes to be accepted at the Prattville Landfill are as follows:

Construction/Demolition waste - waste building materials, packaging and rubble resulting from construction, remodeling, repair, or demolition operations on houses, commercial buildings, and other structures. Such wastes include, but are not limited to, masonry materials, sheet rock, roofing waste, insulation (not including asbestos), scrap metal, and wood products.

Rubbish - nonputrescible solid wastes, excluding ashes, consisting of both combustible and noncombustible wastes. Combustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, and similar materials. Noncombustible rubbish includes glass, crockery, metal cans, metal furniture and like materials which will not burn at ordinary incinerator temperatures, not less than 1600° F.

Foundry Waste - Waste, including but not limited to, slag, sand, baghouse dust, etc. generated from foundry smelting and metal casting processes. (Upon approval from the Department).

Uncontaminated concrete, soil, brick, waste asphalt paving, ash resulting from the combustion of untreated wood, rock, yard trimmings, leaves, stumps, limbs and similar materials.

1.3 UNACCEPTABLE WASTE

Typical wastes which are unacceptable at the Prattville Landfill are household garbage, medical waste, sewage sludge and insecticides/herbicides. Non-putrescible material which has been mixed with household garbage may not be disposed at this facility. Industrial wastes may not be disposed at this facility unless approved by the Department. Containerized and bulk liquid waste will not be disposed at the facility.

1.4 HAZARDOUS AND RESTRICTED WASTE DETECTION PLAN

The following plan shall be implemented by the Landfill Operator to detect and prevent the disposal of hazardous and restricted wastes at the landfill facility.

1. The landfill personnel shall make random inspections of incoming loads to ensure that the loads do not contain hazardous or restricted waste.
2. The landfill personnel shall inspect any suspicious load.
3. The landfill personnel shall keep records of the inspections performed at the facility. The information recorded from each inspection shall be the following:
   - The origin of the waste (if known) that is suspected to be hazardous or restricted at the facility.
   - The transporter of the waste.
   - Any certifications which are provided by the waste generator.
4. The landfill personnel shall receive training from the Landfill Operator to detect hazardous or restricted waste.
5. The Landfill Operator shall notify ADEM, the waste generator, and the transporter if any hazardous or restricted waste is discovered.
6. The Landfill Operator shall notify ADEM prior to allowing the disposal of any waste stream that may be questionable in terms of being acceptable at a C/D Landfill.

1.5 DISPOSAL OF SPECIAL WASTE

Special wastes are defined in the ADEM Administrative Code as those wastes requiring specific processing, handling or disposal techniques as determined necessary by the Department which are different from the techniques normally utilized for handling or disposal.

Examples of such waste types may include but are not limited to: mining waste; fly ash; bottom ash; sludges; friable asbestos; industrial waste; liquid waste; large dead animals or large quantities of dead animals and residue; medical waste; foundry waste; petroleum contaminated wastes; municipal solid waste ash; or contaminated soil and water from the cleanup of a spill.

1.6 OPEN BURNING

Open burning of solid waste shall not occur at the landfill unless it is approved by ADEM as follows:

1. Clearing debris at the landfill such as trees and stumps may be burned if prior approval is received from ADEM and the Alabama Forestry Commission.
2. Emergency clean-up debris resulting from catastrophic incidents may be burned at the landfill if prior approval is received from ADEM and the other appropriate agencies.
3. If approved, open burning shall not occur over previously filled areas or within 200'of the existing disposal operations unless otherwise specified by ADEM.
4. If approved, open burning shall not cause a public nuisance or pose a threat to public health.

A written request shall be submitted to ADEM by the person or agency requesting permission to burn solid waste. The request shall be made by submitting the following information to ADEM in writing:

1. The type of waste to be burned;
2. The reason for the request;
3. The specific area of the landfill to be utilized;
4. Projected days and hours of operation, and;
5. Projected starting/completion dates of the project.

1.7 DAILY VOLUME

The daily tonnage received at the landfill will be estimated in cubic yards per day and reported using Quarterly Volume Report Forms approved by the Department.

1.8 PERSONNEL AND PERSONNEL FACILITIES

An adequate number of trained personnel will be provided to insure continued and smooth operation of the site. Personnel which will be at the site on a daily basis will have access to facilities which provide shelter, communications, lavatory, and toilets which will be kept clean and well repaired.

1.9 LANDFILL EQUIPMENT

Equipment allocated to the landfill shall be such that the site can be properly maintained.

1.10 MONITORING STRUCTURES

All monitoring structures will be protected from damage due to heavy equipment operation by notifying the landfill personnel of the location of the structures and by ensuring that each structure is marked, and that vegetation is properly maintained. The monitoring structures will be inspected by the landfill personnel on a biannual basis to ensure that they remain in good repair.

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

February 28, 2023

Mr. Dennis Mullins
Prattville Solid Waste Authority
101 W. Main Street
Prattville, Alabama 36067

RE: Pre-Disposal Inspection
City of Prattville Construction and Demolition Landfill
Permit 01-06

Dear Mr. Mullins:

On February 24, 2023, Mary Catherine Muscha of the Alabama Department of Environmental Management performed a post-construction, pre-disposal inspection of Cell 4 at the referenced landfill. Based on the visual inspection of the referenced cell and the engineer certification received February 23, 2023, the Department has determined that the cell is in compliance with all requirements and conditions of the permit and disposal activities may commence.

If you have any questions regarding this matter, please contact Mary Catherine Muscha of the Solid Waste Engineering Section at (334) 270-5651.

Sincerely,

Jared Kelly, Chief
Solid Waste Engineering Section
Land Division

JDK/mcm

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

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

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

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

CDG
Engineering. Environmental. Answers.

1840 East Three Notch Street
Andalusia, AL 36421
Post Office Box 278
Andalusia, AL 36420
Tel (334) 222-9431
Fax (334) 222-4018

www.cdge.com

February 23, 2023

Jared Kelly
Alabama Department of Environmental Management
PO Box 301463
Montgomery, Alabama 36130-1463

RE: Prattville C/D Landfill - Permit No. 01-06
Cell 4 Certification

Dear Mr. Kelly:

Partial construction of Cell 4 has been completed. In accordance with the solid waste permit, the cell construction must be approved and certified prior to disposal of waste in the cell. Based upon the survey performed by CDG,I hereby certify that partial construction of Cell 4 has been completed in substantial accordance with the permit.

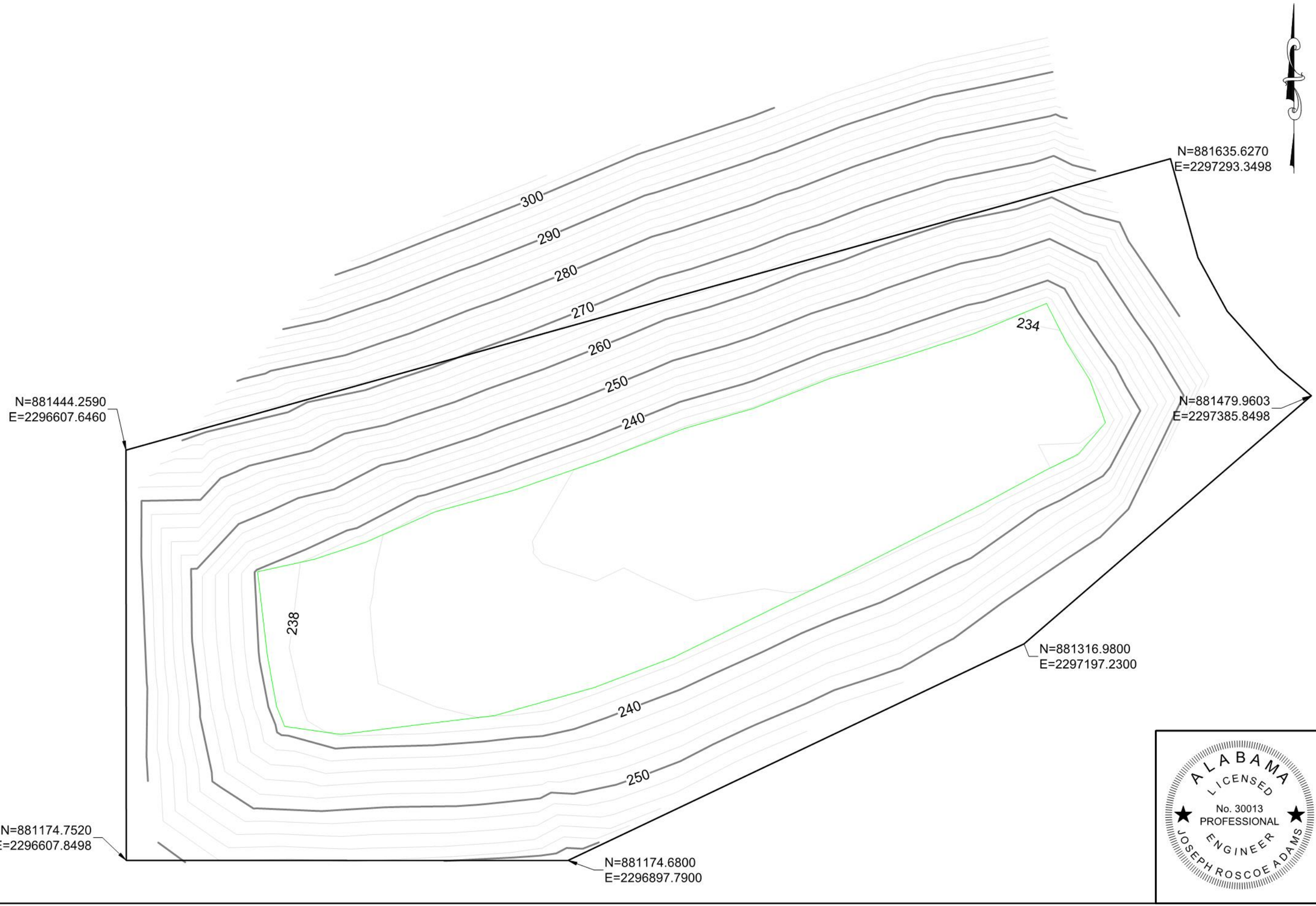
If you have any questions, please do not hesitate to call.

Sincerely,

CDG, Inc.

Joe Adams

Joseph R. Adams, PE
Alabama Reg. No.30013



CDG
Engineering Environmental Answers
1840 EAST THREE NOTCH ST.
ANDALUSIA, AL 36421
P.O. BOX 278 (36420)
PH: (334) 222-9431
ANDALUSIA, AL
AUBURN, AL
DOTHAN, AL
GADSDEN, AL
HOOVER, AL
HUNTSVILLE, AL

CELL 4 CERTIFICATION

ALABAMA LICENSED
No. 30013
PROFESSIONAL
ENGINEER
JOSEPH ROSCOE ADAMS

SCALE:	AS SHOWN
DATE:	2/23/23
REVISED	
PROJECT NO:	
SHEET NO.	C-101

Prattville Cell Cert.dwg

MAJOR MODIFICATION PLANS

FOR THE

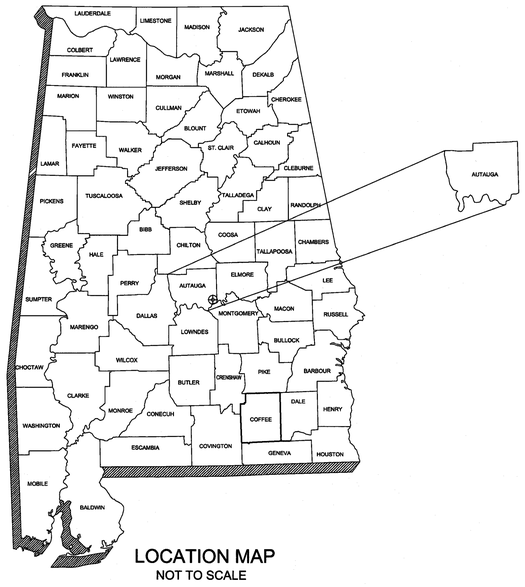
CITY OF PRATTVILLE C/D LANDFILL

PRATTVILLE SOLID WASTE DISPOSAL AUTHORITY

DENNIS MULLINS - CHAIRMAN

Operator: Jettison Environmental

JUNE 2017



LOCATION MAP
NOT TO SCALE

Engineering. Environmental. Answers.

CDG PROJECT # 061601412

SHEET INDEX

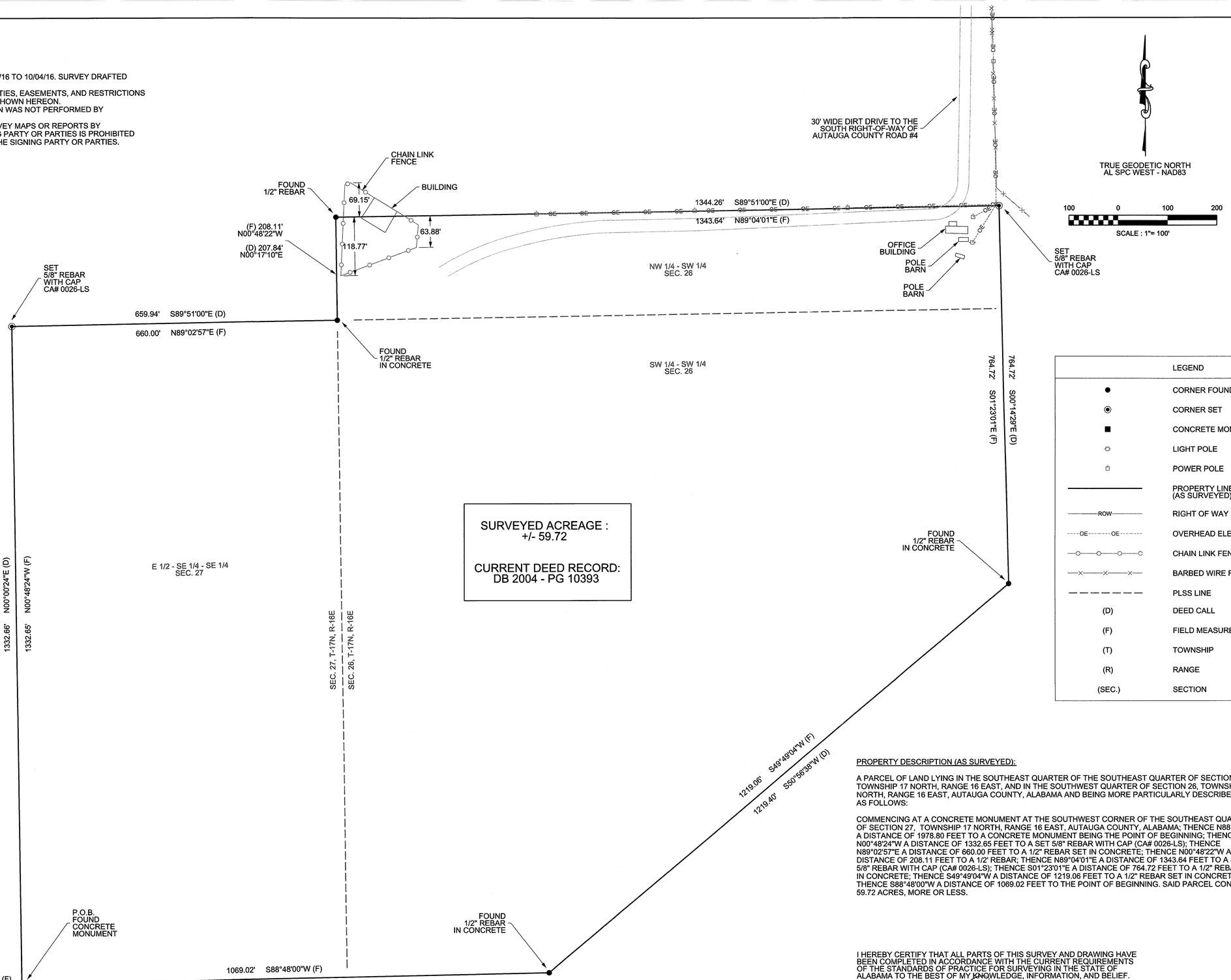
R. Daniel Wells, PE

07 JUNE 17
DATE

ALABAMA LICENSED NO. 27032-E PROFESSIONAL ENGINEER R. DANIEL WELLS

GENERAL NOTES:

1. FIELD WORK PERFORMED ON 09/26/16 TO 10/04/16. SURVEY DRAFTED ON 10/14/16
2. ADDITIONAL IMPROVEMENTS, UTILITIES, EASEMENTS, AND RESTRICTIONS MAY EXIST THAT HAVE NOT BEEN SHOWN HEREON.
3. A TITLE SEARCH AND TITLE OPINION WAS NOT PERFORMED BY THIS COMPANY.
4. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY ANYONE OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.



LEGEND	
●	CORNER FOUND
◉	CORNER SET
■	CONCRETE MONUMENT
☼	LIGHT POLE
⏚	POWER POLE
———	PROPERTY LINE (AS SURVEYED)
ROW	RIGHT OF WAY
OE	OVERHEAD ELECTRIC
	CHAIN LINK FENCE
	BARBED WIRE FENCE
	PLSS LINE
(D)	DEED CALL
(F)	FIELD MEASUREMENT
(T)	TOWNSHIP
(R)	RANGE
(SEC.)	SECTION

PROPERTY DESCRIPTION (AS SURVEYED):

A PARCEL OF LAND LYING IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 17 NORTH, RANGE 16 EAST, AND IN THE SOUTHWEST QUARTER OF SECTION 26, TOWNSHIP 17 NORTH, RANGE 16 EAST, AUTAUGA COUNTY, ALABAMA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A CONCRETE MONUMENT AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 27, TOWNSHIP 17 NORTH, RANGE 16 EAST, AUTAUGA COUNTY, ALABAMA; THENCE N88°56'58"E A DISTANCE OF 1978.80 FEET TO A CONCRETE MONUMENT BEING THE POINT OF BEGINNING; THENCE N00°48'24"W A DISTANCE OF 1332.65 FEET TO A SET 5/8" REBAR WITH CAP (CA# 0026-LS); THENCE N89°02'57"E A DISTANCE OF 660.00 FEET TO A 1/2" REBAR SET IN CONCRETE; THENCE N00°48'22"W A DISTANCE OF 208.11 FEET TO A 1/2' REBAR; THENCE N89°04'01"E A DISTANCE OF 1343.64 FEET TO A SET 5/8" REBAR WITH CAP (CA# 0026-LS); THENCE S01°23'01"E A DISTANCE OF 764.72 FEET TO A 1/2" REBAR SET IN CONCRETE; THENCE S49°49'04"W A DISTANCE OF 1219.06 FEET TO A 1/2" REBAR SET IN CONCRETE; THENCE S88°48'00"W A DISTANCE OF 1069.02 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINING 59.72 ACRES, MORE OR LESS.

I HEREBY CERTIFY THAT ALL PARTS OF THIS SURVEY AND DRAWING HAVE BEEN COMPLETED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR SURVEYING IN THE STATE OF ALABAMA TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

JARED KEITH LOWE
PLS #33950

11/10/2016
DATE

CDG
Engineering. Environmental. Answers.
ANDALUSIA, AL
ALBERTVILLE, AL GADSDEN, AL
AUBURN, AL HOOVER, AL
DOTHAN, AL HUNTSVILLE, AL

1840 E. THREE NOTCH STREET
ANDALUSIA, AL 36421

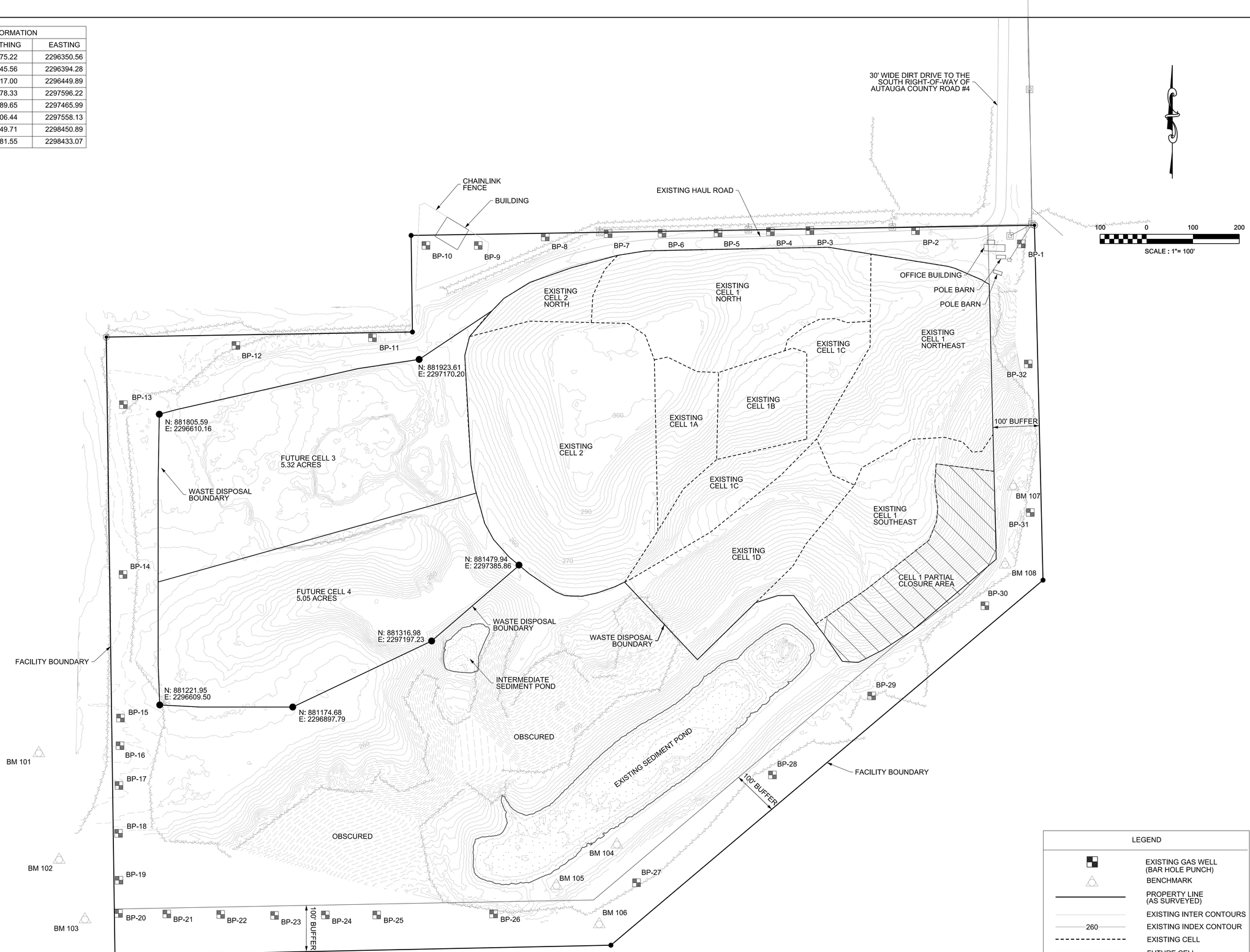
P. O. BOX 278 (36420)
PH: (334) 222-9431
FX: (334) 222-4018

BOUNDARY SURVEY
PRATTVILLE LANDFILL
PRATTVILLE, AL

ALABAMA LICENSED PROFESSIONAL ENGINEER REGISTERED No. 33950 LAND SURVEYOR JARED K. LOWE

SCALE:	1"=100'
DATE:	NOVEMBER 2016
DESIGNED BY:	JSO
DRAWN BY:	BTH
REVIEWED BY:	JSO
QC REVIEWER:	JKL
REVISED	
DGN:	
PROJECT NO:	061601412
SHEET NO.	01

BENCHMARK INFORMATION			
BM NO.	ELEV.	NORTHING	EASTING
BM 101	276.99	881075.22	2296350.56
BM 102	275.68	880845.56	2296394.28
BM 103	249.67	880717.00	2296449.89
BM 104	176.68	880878.33	2297596.22
BM 105	176.83	880789.65	2297465.99
BM 106	159.50	880706.44	2297558.13
BM 107	172.76	881649.71	2298450.89
BM 108	171.03	881481.55	2298433.07



LEGEND

- EXISTING GAS WELL (BAR HOLE PUNCH)
- BENCHMARK
- PROPERTY LINE (AS SURVEYED)
- EXISTING INTER CONTOURS
- 260 EXISTING INDEX CONTOUR
- EXISTING CELL
- FUTURE CELL
- N: 881174.68 E: 2296897.79 HORIZONTAL CONTROL POINTS
- WOODLINE

NOTE: AERIAL TOPOGRAPHY PERFORMED DECEMBER 1, 2016

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AUBURN, AL HOOVER, AL
DOTHAN, AL HUNTSVILLE, AL

1840 E. THREE NOTCH STREET
ANDALUSIA, AL 36421

P.O. BOX 278 (36420)
PH: (334) 222-9431
FX: (334) 222-4018

SITE LAYOUT
MAJOR MODIFICATION PLANS
CITY OF PRATTVILLE LANDFILL
PRATTVILLE, AL

ALABAMA LICENSED No. 27032 PROFESSIONAL ENGINEER RALPH DANIEL WELLS

SCALE:	1"=100'
DATE:	JUNE 2017
DESIGNED BY:	SJS
DRAWN BY:	MDM
REVIEWED BY:	RDW

REVISED	

DGN:	2_Site Layout.dgn
PROJECT NO:	061601416
SHEET NO.	02

File Path: J:\Projects\06\16\01412 Prattville CD LF Major Modification\Drawings\Plans\2_Site Layout.dgn

50 0 50 100

SCALE : 1"= 50'

FACILITY BOUNDARY

4' WIDE STORMWATER DITCH @ 1.0% SLOPE

20' WIDE ALL WEATHER ACCESS ROAD

EXISTING HAUL ROAD

EXISTING DISPOSAL AREA

FUTURE CELL 3
5.32 ACRES

236.5

FUTURE CELL 4
5.05 ACRES

230.4

20' WIDE BERM

PROPOSED CLASS II RIP RAP

INTERMEDIATE SEDIMENT POND

EXISTING RIP RAP

EXISTING SEDIMENT POND

OBSCURED

LEGEND

- EXISTING CONTOURS
- PROPOSED INTER CONTOURS
- PROPOSED INDEX CONTOURS
- ACCESS ROAD
- FACILITY BOUNDARY
- WOODLINE

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ANDALUSIA, AL
ALBERTVILLE, AL GADSDEN, AL
AUBURN, AL HOOVER, AL
DOTHAN, AL HUNTSVILLE, AL

1840 E. THREE NOTCH STREET
ANDALUSIA, AL 36421

P.O. BOX 278 (36420)
PH: (334) 222-9431
FX: (334) 222-4018

BASE GRADING PLAN
MAJOR MODIFICATION PLANS
CITY OF PRATTVILLE LANDFILL
PRATTVILLE, AL

ALABAMA LICENSED No. 27032 PROFESSIONAL ENGINEER RALPH DANIEL WELLS

SCALE:	1"=50'
DATE:	JUNE 2017
DESIGNED BY:	MDM
DRAWN BY:	SJS
REVIEWED BY:	RDW
REVISED	
DGN:	RDW
PROJECT NO:	01412
SHEET NO.	03

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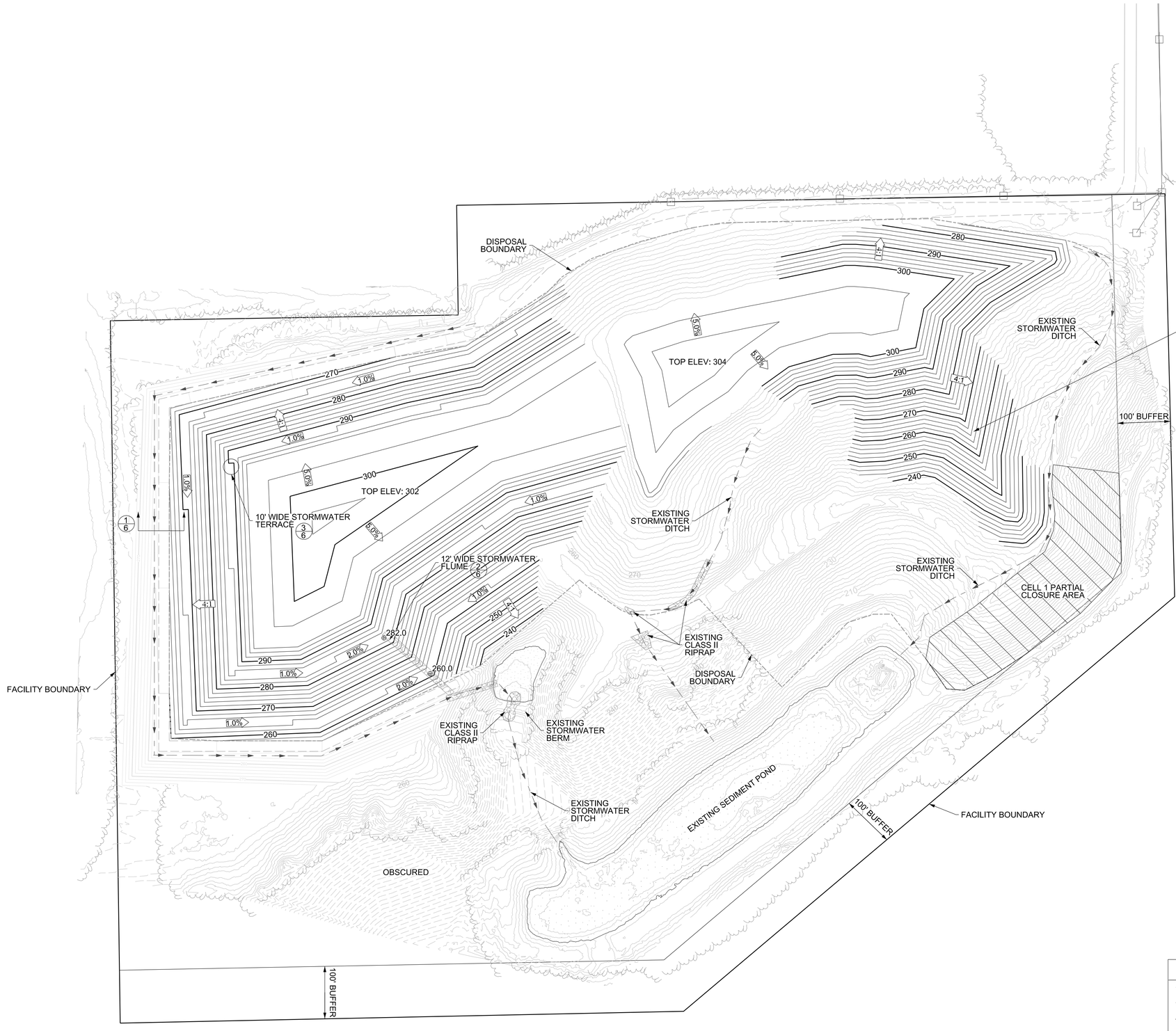

CDG
Engineering, Environmental, Answers.
ANDALUSIA, AL
1840 E. THREE NOTCH STREET
ANDALUSIA, AL 36421
P.O. BOX 278 (36420)
PH: (334) 222-9431
FX: (334) 222-4018
ALBERTVILLE, AL GADSDEN, AL
AUBURN, AL HOOVER, AL
DOTHAN, AL HUNTSVILLE, AL

FINAL GRADING PLAN
MAJOR MODIFICATION PLANS
CITY OF PRATTVILLE LANDFILL
PRATTVILLE, AL

LEGEND

- EXISTING CONTOURS
- PROPOSED INTER CONTOURS
- 270 PROPOSED INDEX CONTOURS
- ACCESS ROAD
- FACILITY BOUNDARY
- WASTE DISPOSAL BOUNDARY
- STORMWATER DITCHES
- 3/7 DETAIL AND SHEET NUMBER

ALABAMA LICENSED No. 27032 PROFESSIONAL ENGINEER RALPH DANIEL WELLS

SCALE:	1"=100'
DATE:	JUNE 2017
DESIGNED BY:	SJS
DRAWN BY:	MDM
REVIEWED BY:	RDW

REVISED	

DGN:	4_FG.dgn
PROJECT NO:	061601416
SHEET NO.	04

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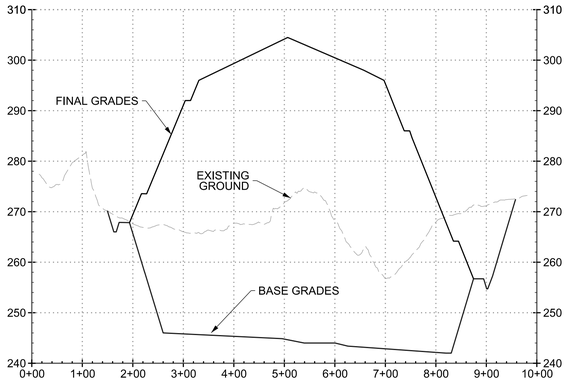
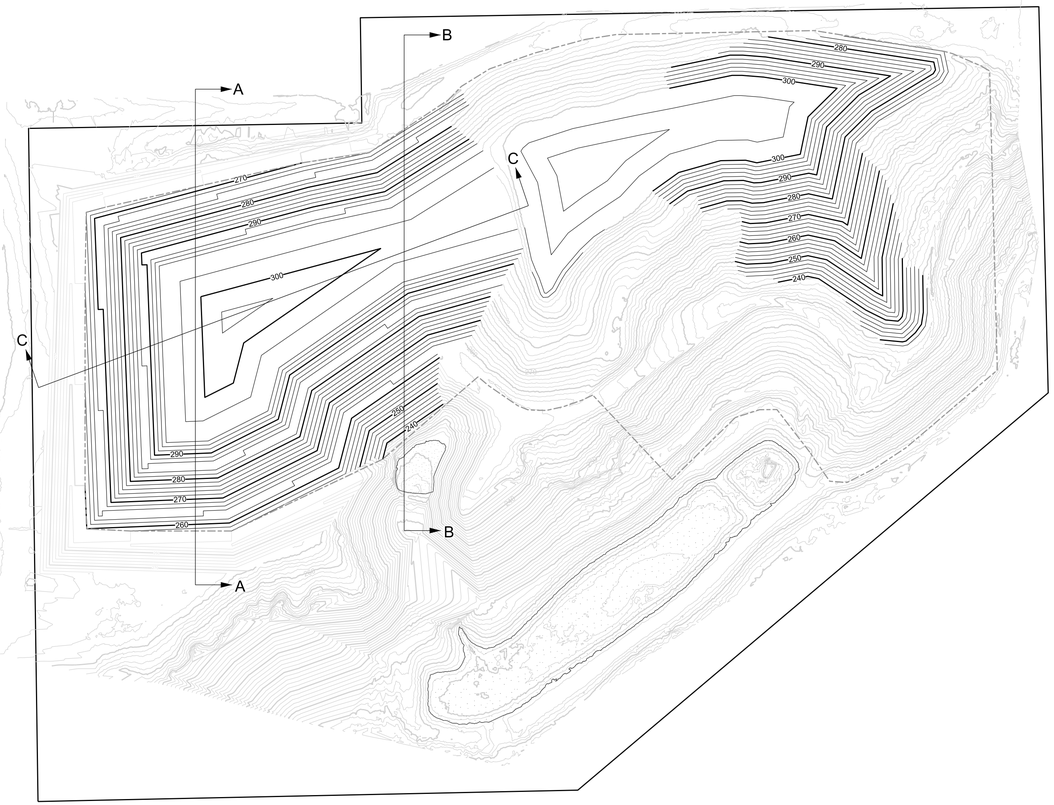
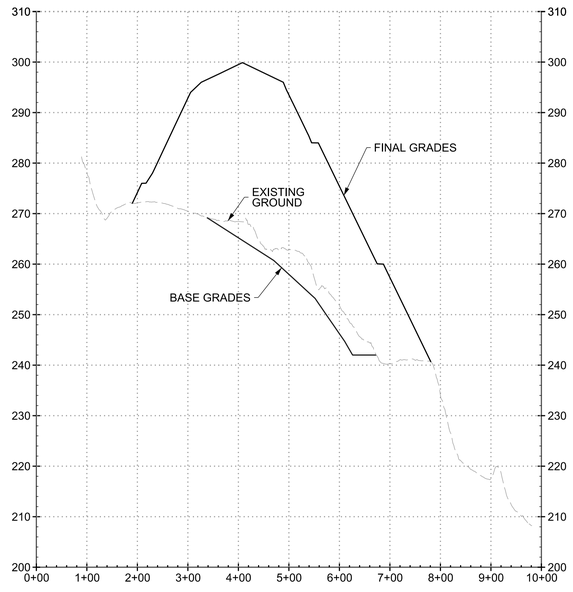


CROSS SECTION A - A





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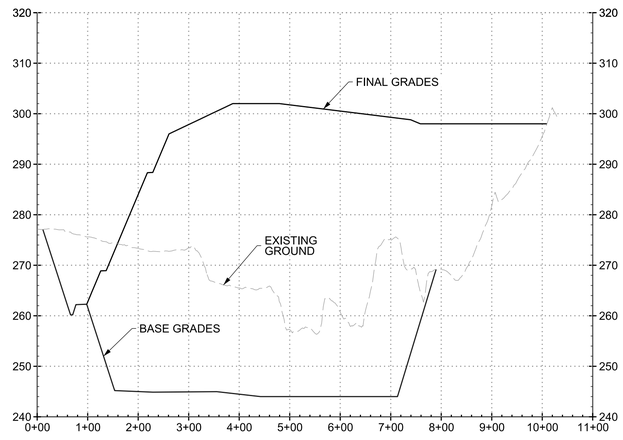

CROSS SECTION C - C

CDG
Engineering, Environmental, Answers.
1840 E. THREE NOTCH STREET
ANDALUSIA, AL 36421
P.O. BOX 278 (36420)
PH: (334) 222-9431
FX: (334) 222-4018
ANDALUSIA, AL
ALBERTVILLE, AL GADSDEN, AL
AUBURN, AL HOOVER, AL
DOTHAN, AL HUNTSVILLE, AL

CROSS SECTIONS
MAJOR MODIFICATION PLANS
CITY OF PRATTVILLE LANDFILL
PRATTVILLE, AL

ALABAMA LICENSED
No. 27032
PROFESSIONAL
ENGINEER
RALPH DANIEL WELLS

SCALE:	AS SHOWN
DATE:	JUNE 2017
DESIGNED BY:	SJS
DRAWN BY:	MDM
REVIEWED BY:	RDW

REVISED

DGN: 5_CrossSections.dgn

PROJECT NO:

SHEET NO. 05

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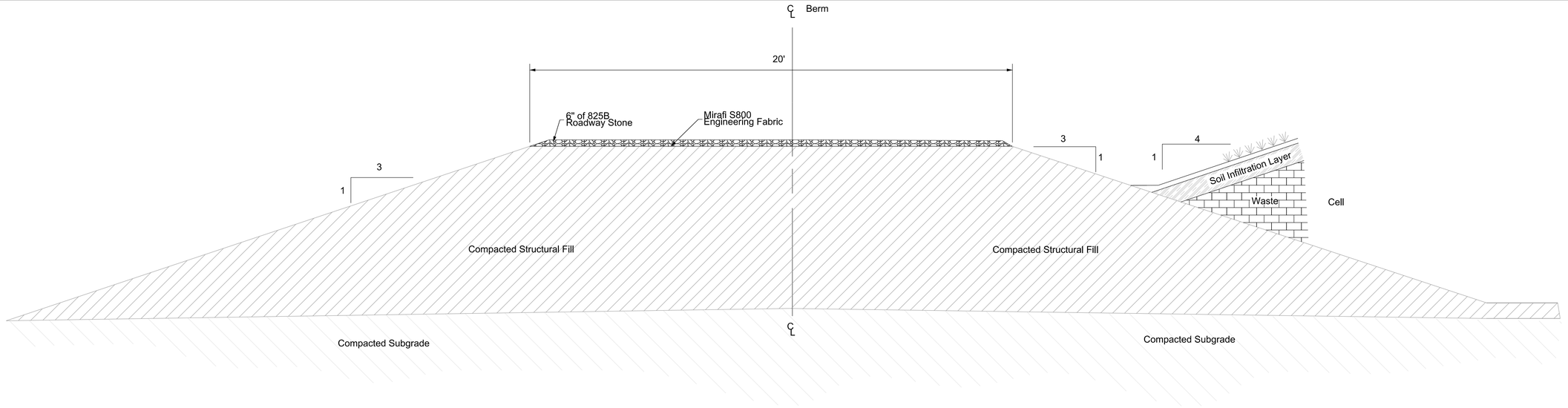
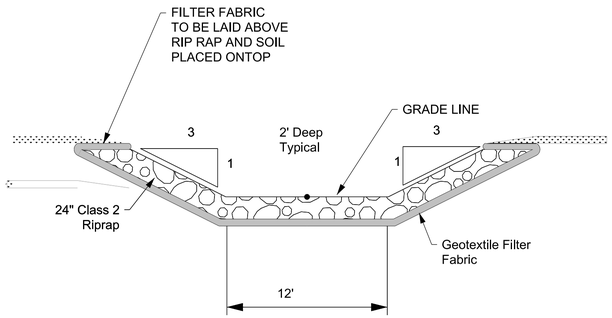
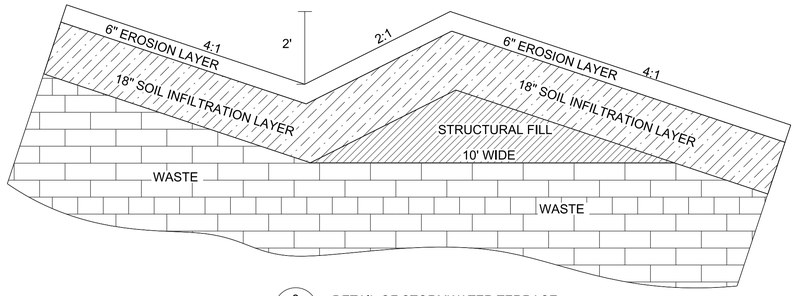


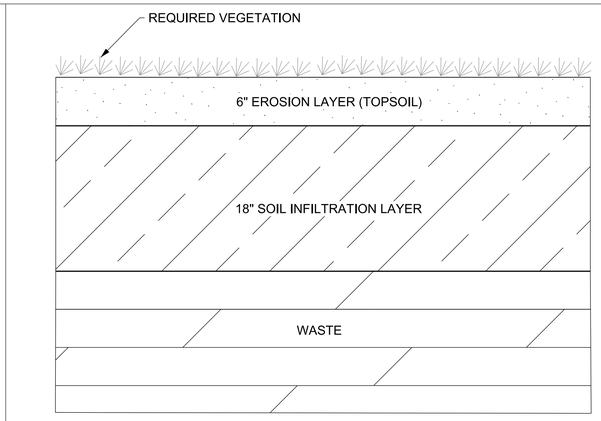
1/6 DETAIL ALL-WEATHER ACCESS ROAD
NTS



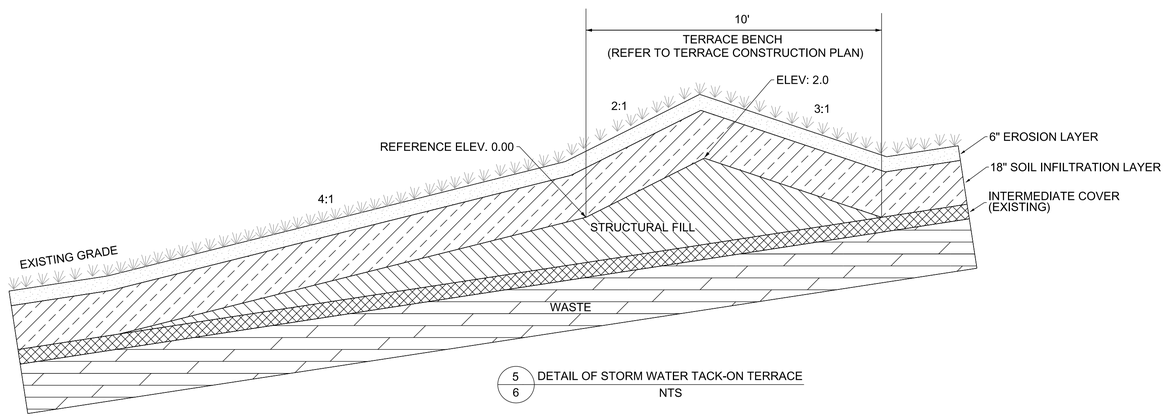
2/6 DETAIL OF RIP RAP FLUME
NTS



3/6 DETAIL OF STORMWATER TERRACE
NTS



4/6 DETAIL OF FINAL COVER
NTS



5/6 DETAIL OF STORM WATER TACK-ON TERRACE
NTS

CDG
Engineering, Environmental, Answers.
ANDALUSIA, AL
ALBERTVILLE, AL GADSDEN, AL
AUBURN, AL HOOVER, AL
DOTHAN, AL HUNTSVILLE, AL

1840 E. THREE NOTCH STREET
ANDALUSIA, AL 36421

P.O. BOX 278 (36420)
PH: (334) 222-9431
FX: (334) 222-4018

DETAILS
MAJOR MODIFICATION PLANS
CITY OF PRATTVILLE LANDFILL
PRATTVILLE, AL

ALABAMA LICENSED No. 27032 PROFESSIONAL ENGINEER RALPH DANIEL WELLS

SCALE:	NTS
DATE:	JUNE 2017
DESIGNED BY:	SJS
DRAWN BY:	MDM
REVIEWED BY:	RDW

REVISED	

DGN: 06_Details.dgn
PROJECT NO:061601416

SHEET NO. 06

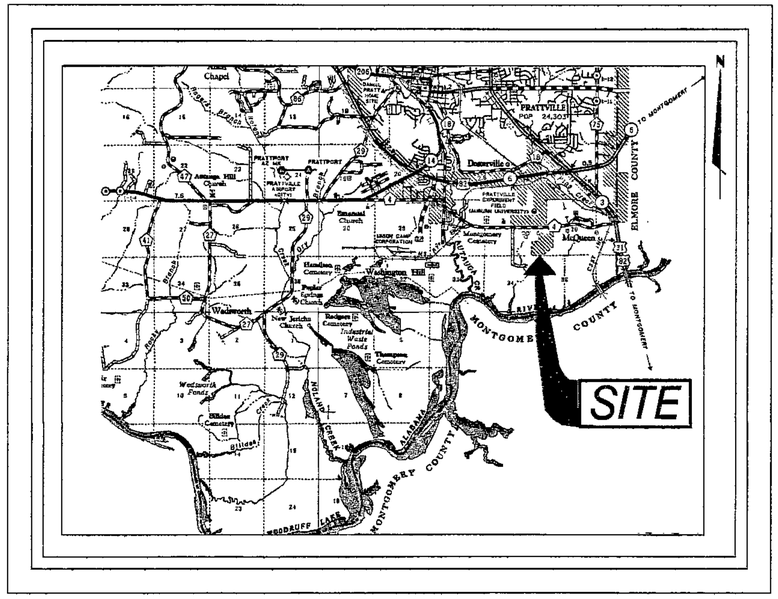
File Path: J:\Projects\06\16\01412 Prattville CD LF Major Modification\Drawings\Plans\06_Details.dgn

AUTAUGA COUNTY LANDFILL, LLC

MAJOR MODIFICATION TO DESIGN AND OPERATION PLANS FOR CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL

PRATTVILLE, ALABAMA

DRAWING INDEX



LOCATION MAP

LOCATED IN: AUTAUGA COUNTY, ALABAMA

LANDFILL OPERATOR

CONTACT:
CRAIG BRYAN, GENERAL MANAGER
AUTAUGA COUNTY LANDFILL, LLC
1121 WILBANKS STREET
MONTGOMERY, AL 36108
(334) 834-5582

ALTERNATE CONTACT:
JOHN COOPER
PRATTVILLE SOLIDWASTE DISPOSAL AUTHORITY
1798 HIGHWAY 14 EAST
PRATTVILLE, AL 36067
(334) 380-2137

OFFICIAL SITE NAME

CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL

LANDOWNER

CITY OF PRATTVILLE
101 WEST MAIN STREET
PRATTVILLE, AL 36067
(334) 361-3609

CONSULTANT

OASIS CONSTRUCTION SERVICES, INC.

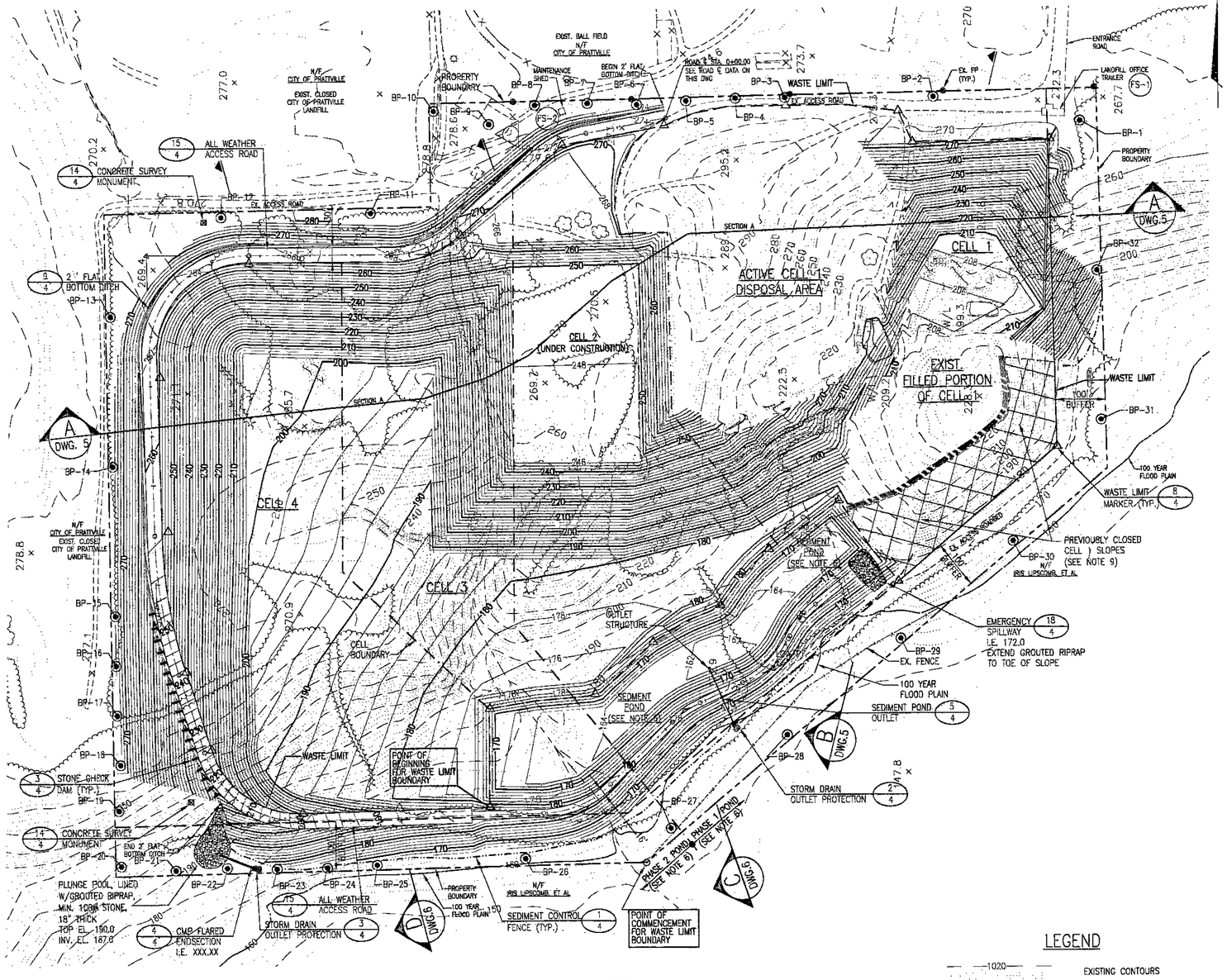
45 WOODSTOCK STREET
ROSWELL, GA 30075
Tel: (678) 739-2400 Fax: (770) 552-5550

PROJECT MANAGER: J. ROBIN BLANTON, P.E.
ALABAMA LICENSE NO. 20746

ALABAMA REGISTERED PROFESSIONAL ENGINEER No. 20746 JAMES ROBIN BLANTON

3/9/09
DATE

NO.	DATE	REVISION DESCRIPTION
1	3/09/09	REISSUE TO ADEM BY OASIS
0	8/15/05	ORIGINAL ISSUE BY ARCADIS



ACCESS ROAD CENTERLINE DATA				
Station	Radius	Delta	North	East
0+00			882,158.37	2,297,628.99
2+19.83	200.00	31°04'05" Left	882,119.32	2,297,412.86
5+89.41	200.00	41°27'01" Right	881,886.79	2,297,147.98
11+28.01	200.00	91°37'09" Left	881,888.26	2,296,581.72
17+44.31	1000.00	16°20'03" Left	881,181.55	2,296,599.84
22+00.08	200.00	73°37'52" Left	880,745.76	2,296,738.79
28+72.03	200.00	43°04'02" Left	880,763.64	2,297,453.90
31+54.60	200.00	19°35'29" Right	880,986.97	2,297,580.79
33+50.47	200.00	37°15'18" Left	881,049.75	2,297,839.04
34+61.17	200.00	23°37'54" Right	881,151.87	2,297,892.86
36+27.22			881,256.06	2,298,023.78

TABLE 1.1
SEEDING REQUIREMENTS
(RATES PER ACRE)

AREA	SOWING SEASON	SPECIES	PURE LIVE SEED (lbs)
PERMANENT			
ALL	3/15 – 7/15	COMMON BERMUDA (UNHULLED)	10
ALL	3/1 – 7/1	BAHIA GRASS PENSACOLA	40
ALL	3/1 – 7/15	SERICEA LESPEDEZA (UNSCARIFIED)	40–60
ALL	9/1 – 11/1	TALL FESCUE	40–50
TEMPORARY			
ALL	7/1 – 8/15	PERENNIAL RYE	30
ALL	4/1 – 8/15	MILLET	40

CONSTRUCTION/FILL SEQUENCE

IN CONJUNCTION WITH THE FILL SEQUENCE AND LIFTS SHOWN ON THE CROSS SECTIONS ON DRAWINGS 5 AND 6, THE SITE SHALL GENERALLY BE CONSTRUCTED AND FILLED AS FOLLOWS:

1. CONSTRUCT UPPER CELL 2 FLOOR AND PHASE 1 POND, FILL CELL 2 AGAINST ACTIVE CELL 1 DISPOSAL AREA.
2. CONSTRUCT NORTHEAST QUADRANT OF CELL 1 AND FILL OVER CELLS 1 AND 2.
3. CONSTRUCT LOWER CELL 2 AND FILL AGAINST UPPER CELL 2.
4. CONSTRUCT CELL 3 FLOOR AND PHASE 2 POND, FILL AGAINST CELL 2.
5. CONSTRUCT CELL 4 FLOOR AND FILL AGAINST CELL 3

NOTES:

1. BOUNDARY INFORMATION FROM "CITY OF PRATTVILLE LANDFILL BOUNDARY SURVEY", LANDFILL, LAYOUT, CONSTRUCTION AND CLOSURE PLANS, FOR CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL, DATED 3/25/98, APPROVED BY ADEM 8/10/98. THIS DRAWING IS NOT INTENDED AS A BOUNDARY SURVEY.
2. TOPOGRAPHIC INFORMATION FROM AERIAL SURVEY BY BULLSEYE DESIGN SERVICES DATED 1/7/05. REFERENCE DATUM IS MEAN SEA LEVEL.
3. PROPOSED GRADES ARE FINISHED CELL BOTTOM GRADES.
4. CELL BOTTOM GRADES SHALL NOT EXCEED 3H:1V.
5. 100 YEAR FLOOD PLAIN INDICATED AS SHOWN ON FIRM PANEL NO. 010314 0225B, DATED 12/18/85.
6. SEDIMENT POND SHALL BE CONSTRUCTED IN TWO PHASES. PHASE 1 SHALL BE COMPLETED DURING CELL 1 & 2 OPERATIONS. PHASE 2 SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF CELL 3.
7. ALL DISTURBED AREAS LEFT EXPOSED GREATER THAN 45 DAYS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT VEGETATION PER TABLE 1.1.
8. AREAS THAT HAVE REACHED FINAL GRADE SHALL BE STABILIZED WITH PERMANENT VEGETATION PER TABLE 1.1.
9. CERTIFICATION HAS BEEN PROVIDED TO ADEM FOR FINAL CLOSURE OF SE CELL 1 SLOPES.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING CREEK
- EXISTING LIGHT STANDARD
- EXISTING POWER/TEL. POLE
- EXISTING FENCE
- EXISTING STORM DRAIN
- EXISTING SPOT ELEVATION
- EXISTING POND
- EXISTING WOODS LINE
- EXISTING TREE
- CELL LIMIT
- WASTE LIMIT MARKER
- CONCRETE SURVEY MONUMENT
- EXPLOSIVE GAS BAR PUNCH MONITORING LOCATIONS
- FACILITY STRUCTURE MONITORING LOCATIONS
- SEDIMENT CONTROL FENCE

OPERATIONAL PLAN

Waste Acceptance

Waste accepted at the facility shall be strictly controlled so as to allow only waste stipulated on the permit or otherwise as may be approved by ADEM. The permittee of any facility permitted under ADEM rules must have in the operating record a plan describing procedures the permittee will implement for detecting and preventing the disposal of free liquids, regulated hazardous wastes, regulated medical wastes, and regulated PCB wastes at the facility. This plan must include at a minimum:

1. Random inspections of incoming loads to ensure that incoming loads do not contain free liquids, regulated hazardous wastes, regulated medical wastes, or regulated PCB wastes.
2. Inspection of suspicious loads.
3. Records of all inspections to include origin of waste suspected to be regulated hazardous, regulated medical, or regulated PCB waste if known; transporters, to include transfer stations and all handlers of the waste enroute to the disposal site; and any certifications from generators provided to the permittee or facility personnel. These records must be maintained on file in the operating record of the facility.
4. Training of facility personnel to recognize free liquids, regulated hazardous wastes, regulated medical wastes, and regulated PCB wastes.
5. Procedures for notifying the proper authorities if free liquids, regulated hazardous wastes, regulated medical wastes, or regulated PCB wastes are discovered at the facility.
6. Methods to identify all industrial users of the facility, producers of special wastes, and transporters of these wastes.

Discharges

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

1. Any discharge resulting from a landfill unit or practice may require:
   (i) A National Pollutant Discharge Elimination System (NPDES) permit under the Alabama Water Pollution Control Act as issued by the Department.
   (ii) A dredge or fill permit from the Army Corps of Engineers as required under Section 404 of the Clean Water Act, as amended; or
   (iii) That a non-point source of surface waters does not violate an area wide or statewide water quality management plan that has been approved under the Alabama Water Pollution Control Act.
2. The groundwater shall not be contaminated as specified by ADEM rules.

Open Burning

Open burning of solid waste at any landfill unit is prohibited unless approved by ADEM as follows:

1. Clearing debris at the landfill unit such as trees and stumps may be burned if prior approval is received from ADEM and the Alabama Forestry Commission.
2. Emergency clean-up debris resulting from catastrophic incidents may be burned at a permitted landfill unit if consistent with the intent of ADEM rules and air pollution control requirements. Prior approval must be received from ADEM and other appropriate agencies.
3. If approved, the burning shall not occur over previously filled areas or within 200 feet of existing disposal operations unless otherwise specified by ADEM and such burning shall not cause a public nuisance or pose a threat to public health.

The person or agency requesting permission to burn solid waste shall apply in writing to ADEM, outlining why a 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.

Specific Requirements for Construction/Demolition Landfills (C/DLFs)

Operation

All waste shall be covered as follows:

1. A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by ADEM shall be added at the conclusion of each week's operation or as otherwise specified by ADEM to control disease vectors, fires, odors, blown litter and scavenging.
2. Final closure shall be carried out in accordance with 335-13-4-.20 of ADEM rules.

All waste shall be thoroughly 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 as specified in ADEM rule 335-13-4-.23(1)(c)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 ADEM.
All waste shall be confined to as small an area as possible and placed onto an appropriate slope not to exceed 4 to 1 (25%) or as approved by ADEM.
The facility shall be operated in accordance with approved plans and permits.
The site shall be adequately secured to prevent entry except by authorized person(s) unless an operator is on site.
If the site is available to the public or commercial haulers, a sign shall be posted at the landfill stating:

1. name of permittee,
2. owner and/or operator,
3. name of landfill,
4. days and hours of operation,
5. waste types accepted, and
6. disposal fees for use of the landfill.

Provisions shall be made for disposal activities in adverse weather conditions.
Adequate personnel shall be provided to insure continued and smooth operation of the site.
Adequate equipment shall be provided to insure continued operation in accordance with permit and regulations.
Liquid waste shall not be accepted.
Empty containers larger than 10 gallons in size must be rendered unsuitable for holding liquids prior to disposal in the landfill unit unless otherwise approved by the Department.

Routine Maintenance

Scavenging shall not be permitted, and salvaging operations shall be controlled.
Litter shall be controlled within the permitted facility.
Completed sites or portions of sites shall be properly closed as provided by ADEM rules and approved facility plans.
An all-weather access road shall be provided to the dumping face.
Environmental monitoring and treatment structures shall be protected and maintained in good repair and easily accessible.
Records shall be maintained on the daily volume of waste received at C/DLFs. 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 r record of the facility by the permittee.
Measures shall be taken to prevent the breeding or accumulation of disease vectors. If determined necessary by ADEM or the State Health Department, additional disease vector control measures shall be conducted.

Additional Requirements

Notwithstanding this Rule, certain requirements for operating and maintaining a C/DLF or may be modified by ADEM as deemed necessary to comply with the Act and ADEM rules. Any action by ADEM to modify the requirement(s) must be done in writing from ADEM.

Access

The owner or operator of the facility must control public access and prevent unauthorized vehicular traffic and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment.

EXPLOSIVE GASES MONITORING PLAN

Control

Explosive gases shall not exceed the lower explosive limit at the facility boundary. Explosive gases shall not exceed 25 percent of the lower explosive limit in facility structures except for gas control or recovery system components.

Monitoring

Gas monitoring equipment as required by ADEM shall be provided at the landfill unit by the operating agency. ADEM upon review of waste type, facility structures, site geology and surrounding land use may require installation of permanent gas monitoring structures, gas vents, gas control or recovery systems.

The minimum frequency for monitoring shall be yearly. All monitoring reports shall be submitted to the ADEM and placed in the operating record of the facility within 30 days of the monitoring event. Levels of gas detected shall be expressed in percent LEL and percent volume.
If explosive gas levels exceed the limits specified, the permittee shall:

(i) Immediately take all necessary steps to ensure protection of human health and property and notify the Department;
(ii) Within 7 days of detection, place in the operating record of the facility the explosive gas levels detected and the immediate steps taken to protect human health and property;
(iii) Within 20 days of detection, submit to ADEM for approval a remedial plan for the explosive gas releases. This plan shall describe the nature and extent of the problem and the proposed remedy. The plan shall be implemented upon approval by the Department, but within 60 days of detection. Also within 60 days of detection, a copy of the plan shall be placed in the operating record of the facility and ADEM notified that the plan has been implemented.

Monitoring points shall be located every 300 feet along the landfill permit boundaries. in areas where a dwelling is within 1000 feet of the boundaries, the monitoring points shall be 100 feet apart or as otherwise directed by ADEM. Monitoring shall be conducted in structures, culverts, under bridges, drop inlets, and any other place that is conducive to gas accumulation. Permanent gas monitoring structures, or use of the bar hole punch method, are required by ADEM. A minimum depth of six feet must be obtained for permanent monitoring structures and four feet when using the bar hole punch method.

WASTE LIMIT BOUNDARY LEGAL DESCRIPTION:

Commencing at the southwest corner of the southeast quarter of SEC 27, T-17-N, R-16-E, Autauga Alabama;
Thence South 89°57'34"East, a distance of 1,978.58 feet to a concrete monument;
Thence South 89°53'03" West, a distance of 1068.28 feet to a concrete monument;
Thence North 70°21'02" West to the Point of Beginning;
Thence South 88°33'55" West, a distance of 378.47 feet to the beginning of a curve tangent to said line;
Thence westerly, northwesterly and northerly a distance of 237.74 feet along the curve concave to the northeast, having a radius of 185.00 feet and a central angle of 73°37'52";
Thence North 17°48'13" West tangent to said curve, a distance of 164.50 feet to the beginning of a curve tangent to said line;
Thence northerly a distance of 280.81 feet along the curve concave to the east, having a radius of 985.00 feet and a central angle of 16°20'03";
Thence North 01°28'09" West tangent to said curve, a distance of 357.70 feet to the beginning of a curve tangent to said line;
Thence northerly, northeasterly and easterly a distance of 295.83 feet along the curve concave to the southeast, having a radius of 185.00 feet and a central angle of 91°37'09";
Thence South 89°51'00" East tangent to said curve, a distance of 284.66 feet to the beginning of a curve tangent to said Line;
Thence easterly and northeasterly a distance of 155.54 feet along the curve concave to the north, having a radius of 215.00 feet and a central angle of 41°27'01";
Thence North 48°41'59" East tangent to said curve, a distance of 272.47 feet;
Thence North 79°46'04" East, a distance of 177.92 feet;
Thence North 76°52'13" East, a distance of 31.87 feet;
Thence North 67°40'27" East, a distance of 60.86 feet;
Thence North 79°10'21" East, a distance of 71.49 feet;
Thence North 89°20'31" East, a distance of 234.21 feet;
Thence South 82°50'14" East, a distance of 111.08 feet;
Thence South 24°14'35" East, a distance of 68.49 feet;
Thence North 89°04'09" East, a distance of 274.15 feet;
Thence South 01°19'20" East, a distance of 617.29 feet;
Thence South 49°51'47" West, a distance of 417.82 feet;
Thence North 40°08'13" West, a distance of 85.01 feet;
Thence North 34°12'11" West, a distance of 118.42 feet;
Thence South 52°49'08" West, a distance of 42.36 feet;
Thence South 55°20'34" West, a distance of 128.66 feet;
Thence South 49°05'30" West, a distance of 43.05 feet;
Thence South 41°51'14" West, a distance of 46.93 feet;
Thence South 34°55'17" West, a distance of 59.38 feet;
Thence South 63°17'53" West, a distance of 22.67 feet;
Thence South 68°59'12" West, a distance of 48.65 feet;
Thence South 58°00'19" West, a distance of 86.10 feet;
Thence South 46°41'53" West, a distance of 143.27 feet;
Thence South 73°07'41" West, a distance of 30.26 feet;
Thence South 85°17'35" West, a distance of 99.83 feet;
Thence South 80°44'45" West, a distance of 97.16 feet;
Thence South 00°04'27" West, a distance of 198.24 feet to the Point of Beginning. The waste limit boundary contains 39.938 ACRES, more or less.

0 100 200 300 FEET
SCALE IN FEET

OASIS CONSTRUCTION SERVICES, INC.

ISSUE	DATE	RESPONSIBLE ENG.	DESCRIPTION
1	3/09/09	OASIS CONSTRUCTION SERVICES	REISSUE TO ADEM
0	8/15/05	ARCADIS	INITIAL ISSUE

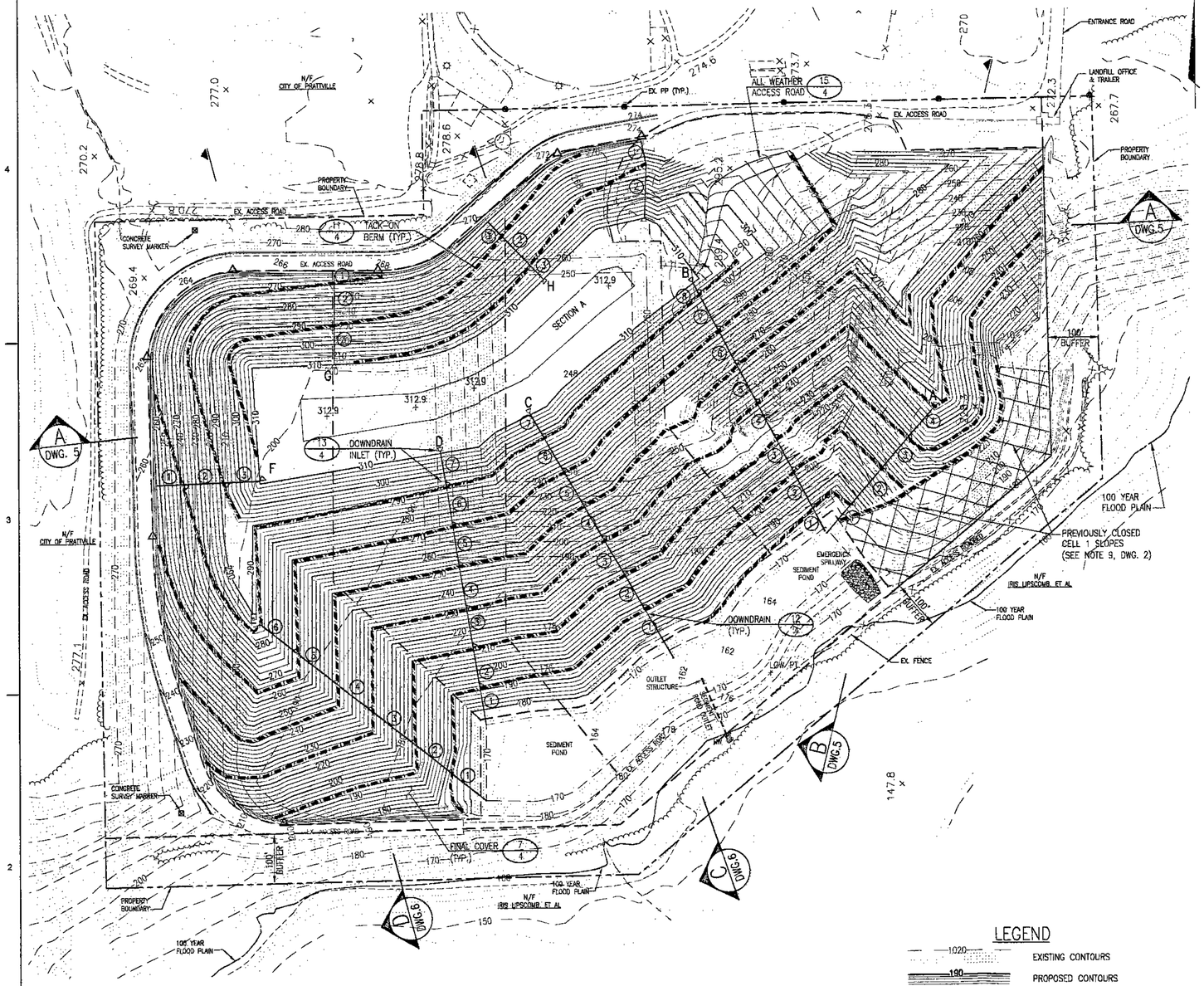
PROJECT MANAGER:	R. BLANTON, PE
DESIGNED BY:	D. McGEORGE
QC'ED BY:	R. BLANTON, PE
DRAWN BY:	S. SIN
PROJECT NUMBER	PRATTVILLE MAJOR M

ALABAMA No. 20748 PROFESSIONAL ENGINEER R. BLANTON 4/9/09

MAJOR MODIFICATION TO CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL PRATTVILLE, ALABAMA AUTAUGA COUNTY LANDFILL, LLC

BOTTOM GRADING & OPERATIONAL PLAN

FILENAME	PRgrdBOTpln.DWG	2
DIRECTORY	PRATTVILLE/MAJOR MOD	SHEET



DOWNDRAIN SCHEDULE	
PIPE NO.	PIPE SIZE
A4	18
A3	18
A2	18
A1	18
B8	18
B7	18
B6	18
B5	18
B4	18
B3	18
B2	24
B1	24
C7	18
C6	18
C5	18
C4	18
C3	18
C2	18
C1	24
D7	18
D6	18
D5	18
D4	18
D3	18

DOWNDRAIN SCHEDULE	
PIPE NO.	PIPE SIZE
D2	18
D1	18
E6	18
E5	18
E4	18
E3	18
E2	18
E1	24
F3	18
F2	18
F1	18
G3	18
G2	18
G1	18
H3	18
H2	18
H1	18
I2	18
I1	18

NOTES:
1. BOUNDARY INFORMATION FROM "CITY OF PRATTVILLE LANDFILL BOUNDARY SURVEY", LANDFILL, LAYOUT, CONSTRUCTION AND CLOSURE PLANS, FOR CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL, DATED 3/25/98, APPROVED BY ADEM 8/10/98. THIS DRAWING IS NOT INTENDED AS A BOUNDARY SURVEY.
2. TOPOGRAPHIC INFORMATION FROM AERIAL SURVEY BY BULLSEYE DESIGN SERVICES DATED 1/7/05. REFERENCE DATUM IS MEAN SEA LEVEL.
3. PROPOSED GRADES ARE FINISHED GRADES (TOP OF COVER)
4. FINAL GRADES SHALL NOT EXCEED 4H:1V EXCEPT FOR PREVIOUSLY CLOSED SLOPES OF CELL 1.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED CONTOURS
- EXISTING CREEK
- EXISTING LIGHT STANDARD
- EXISTING POWER/TEL. POLE
- EXISTING FENCE
- EXISTING STORM DRAIN
- EXISTING SPOT ELEVATION
- EXISTING WOODS LINE
- CELL LIMIT
- WASTE LIMIT MARKER
- CONCRETE SURVEY MONUMENT

CLOSURE/POST-CLOSURE PLAN

Closure

Final Cover

A final cover system must be installed which is designed to minimize infiltration and erosion. The final cover system must be comprised of an erosion layer(s) underlain by an infiltration layer(s) as follows:

1. The infiltration layer for C/DLFs must be comprised of a minimum of 18 inches of compacted earthen material excluding sands, and,
2. The erosion layer must consist of a minimum 6 inches of earthen material that is capable of sustaining native plant growth, as specified in 335-13-4-.20(2)(d).
3. ADEM may approve an alternative final cover design that includes:
   (i) An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in rule 335-13-4-.20(2)(b) 1., and
   (ii) An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in rule 335-13-4-.20(2)(b)2.

Final soil cover shall be graded so that:

1. Surface water does not pond over the landfill unit.
2. The maximum final grade of the final cover system shall not exceed 25 percent or as specified by ADEM to minimize erosion.
3. Slopes longer than 25 feet shall require horizontal terraces, of sufficient width for equipment operation, for every 20 feet rise in elevation or utilize other erosion control measures approved by ADEM.
4. The minimum final grade of the final cover system shall not be less than 5 percent or as specified by ADEM to minimize ponding.
5. For a permitted facility utilizing the area fill method or the trench method, final grading of the infiltration layer shall be completed within 90 days after the unit has received the last known receipt of waste.

Establishment of Vegetative Cover

A vegetative or some other appropriate cover must be established to minimize erosion and, when applicable, maximize evapotranspiration. Within 90 days after completion of final grading requirements on each phase or each trench as specified in rule 335-13-4-.20(2)(a), the
Permittee or owner of a permitted landfill unit shall prepare the final cover for the establishment of a vegetative cover or alternative cover.
Deep rooted vegetation (roots that may grow below the 6 inch erosion layer) shall be prohibited as vegetative cover. Preparation of a vegetative cover shall include, but not be limited to, the following:

1. Placement of appropriate species of grass seed, fertilizer and mulch; and
2. Watering and maintenance necessary such that germination of grass will occur.

Closure Area

The largest possible area to be closed during the active life of the landfill is 10 acres.

Waste Inventory

Over the operational life of the landfill, approximately 2,741,577 cubic yards of waste and cover will be deposited.

Notice of Closure

Prior to beginning closure of each landfill unit as specified in ADEM rules, an owner or operator must submit to ADEM and place in the operating record a notice of the intent to close the unit.

Closure Schedule

The owner or operator must begin closure activities of each LF unit no later than 30 days after the date of which the LF unit receives the known final receipt of wastes. If the LF unit has remaining capacity and there is reasonable likelihood that the LF unit will receive additional wastes, closure activities of each LF unit must begin no later than one year after the date of known final receipt of wastes. Extensions beyond the one-year deadline for beginning closure may be granted by ADEM if the owner or operator demonstrates that the LF unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed LF unit.
The owner or operator of all LF units must complete closure activities of each LF unit in accordance with the closure plan within 180 days following the last known receipt of waste. Extensions of the closure period may be granted by ADEM if the owner or operator demonstrates that closure will, of necessity, take longer than 180 days and he has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed LF unit. Extensions granted for closure of each LF unit shall not exceed a total of 180 days.

Closure Certification

Following closure of each LF unit, the owner or operator must submit to ADEM a certification, signed by an independent registered professional engineer verifying that closure has been completed in accordance with the closure plan, and a copy placed in the operating record. C/DLF owners or operators may submit certification signed by a registered professional engineer in lieu of an independent registered professional engineer.

Erosion and Sediment Control

Upon closure, all ditches, diversion berms, culverts, riprap, silt fence, and other structures serving disturbed areas but not already built, will be constructed and placed according to the final grading plan.

Sediment Pond Cleanout

The sediment pond(s) will be cleaned upon the completion of closure activities. All drainage pipe will be cleaned to allow unobstructed flow of stormwater to drain runoff from the surface of the site.

Property Identification and Deed Notation

Within 90 days after permit expiration, revocation or when final closure requirements in rule 335-13-4-.20 are achieved as determined by ADEM, the permittee or owner of a facility shall record a notation onto the land deed containing the property utilized for disposal, and/or some other legal instrument that is normally examined during a title search, that will in perpetuity, notify any potential purchaser of the property that:

1. The land has been used as a solid waste disposal facility landfill unit;
2. Its use is restricted by the items contained in rules 335-13-4-.20(3)(c) and 335-13-4-.20(3)(d);
3. The locations and dimensions of the landfill unit with respect to permanently surveyed benchmarks and section corners shall be on a plat prepared and sealed by a land surveyor;
4. Contain a note, prominently displayed, which states the name of the Permittee or operating agency, the type of landfill unit and the beginning and closure dates of the disposal activity.
5. Certification by an Engineer or Land Surveyor that all closure requirements have been completed as determined necessary by ADEM.

For a permitted facility, the permittee or land owner shall submit a certified copy of the recording instrument to ADEM and place a copy in the operating record within 120 days after permit expiration, revocation or as otherwise directed by ADEM.

Post-Closure

The requirements for post-closure of existing and proposed landfill units shall include the following unless otherwise noted.

Post-Closure Care and Maintenance

Following closure of each LF unit, the owner or operator must conduct post-closure care. Post-closure care must be conducted for a minimum of 30 years; or a minimum of 5 years if closed prior to October 9,1993, or the effective date of § 258.1 of 40 CFR 258, Solid Waste Disposal Criteria, whichever is later; except as provided under rule 335-13-4-.20(3)(b), and consist of at least the following:

1. Eroded areas shall be filled with suitable soil cover, compacted, graded and appropriate cover established as described in rule 335-13-4-.20(2)(d).
2. Areas which provide for ponding of surface water shall be filled, graded and an appropriate cover established as described in rule 335-13-4-.20(2)(d).
3. Landfilled areas with extensive surface cracks in soil cover shall be corrected as necessary, or as determined by ADEM, to prevent infiltration of surface water.
4. An appropriate cover shall be maintained on the facility at all times as described in rule 335-13-4-.20(2)(d).
5. Access control structures shall be maintained or erected and signs shall be posted stating that the facility is closed and giving the location of the nearest permitted landfill unit.
6. Any waste dumped at the landfill unit following closure shall be removed to an approved landfill unit by the permittee, operating agency, or owner.
7. Monitoring devices and pollution control equipment such as groundwater monitoring wells, explosive gas monitoring systems, erosion, and surface water control structures, and leachate facilities shall be maintained. Monitoring requirements shall continue in effect throughout the active life and post-closure care period as determined by the Department unless all solid waste is removed and no unpermitted discharge to waters has occurred.
8. Other deficiencies such as vector control which may be observed by the Department shall be corrected.

The length of the post-closure care period may be:

1. Decreased by ADEM if the owner or operator demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by ADEM or
2. Increased by ADEM if ADEM determines that the lengthened period is necessary to protect human health and the environment.

Erosion and Sediment Control

Throughout the post-closure care period, all ditches, diversion berms, culverts, riprap, silt fence, and other drainage structures will be maintained and repaired as necessary to function as designed.

Sediment Pond Cleanout

The sediment pond(s) will be cleaned upon the accumulation of the design depth of sediment.

Vegetative Maintenance

Throughout the post-closure care period, vegetative cover will be mowed, fertilized, and maintained to ensure that all areas are properly vegetated to minimize the risk of erosion and loss of cover soil.

Post-Closure Use

Post-closure use of the property used for the disposal operation must never be allowed to disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems necessary to comply with the requirements of ADEM rules. ADEM may approve any other disturbance if the owner or operator demonstrates that the disturbance, including any removal of waste, complies with the following:

1. The activities will not increase the potential threat to human health or the environment; or
2. The activities are necessary to reduce a threat to human health or the environment.

There is no planned use of this property during the post-closure care period at this time.

Post-Closure Certification

Following completion of the post-closure care period for each LF unit, the owner or operator must submit to ADEM a certification, signed by an independent registered professional engineer verifying that post-closure care has been completed in accordance with the post-closure plan, and a copy placed in the operating record. A C/DLF Owner or Operator may submit certification signed by a registered professional engineer in lieu of an independent registered professional engineer.

Removal of Wastes

If the Permittee or owner, or any subsequent owner of the land upon which a landfill unit is located wishes to remove waste, waste residues, the liner, if any, or any contaminated soils, the owner must request approval from ADEM. The owner may also ask permission to remove the notation from the recording instrument if all waste and contaminated soils are removed from the property and no unpermitted discharges to waters have occurred.

Limited Access

Throughout the post-closure care period, access to the site will be controlled by the existing gated entrance to the property. Only authorized persons will be allowed on the site.

Informational Sign

A sign will be posted at the entrance gate notifying the public that the facility is closed. A telephone number will provided on the sign for informational purposes and to report emergencies.

0 100 200 300 FEET
SCALE IN FEET

OASIS CONSTRUCTION SERVICES, INC.

ISSUE	DATE	RESPONSIBLE ENG.	DESCRIPTION
1	3/09/09	OASIS CONSTRUCTION SERVICES	REISSUE TO ADEM
0	8/15/05	ARCADIS	INITIAL ISSUE

PROJECT MANAGER:	R. BLANTON, PE
DESIGNED BY:	D. McGEORGE
QC'ED BY:	R. BLANTON, PE
DRAWN BY:	S. SIN
PROJECT NUMBER	PRATTVILLE MAJOR M

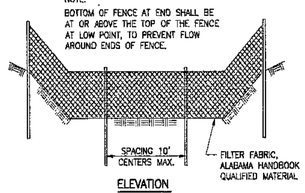
ALABAMA REGISTERED No. 23185 PROFESSIONAL ENGINEER ROBIN BLANTON 3/19/09

MAJOR MODIFICATION TO CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL PRATTVILLE, ALABAMA AUTAUGA COUNTY LANDFILL, LLC

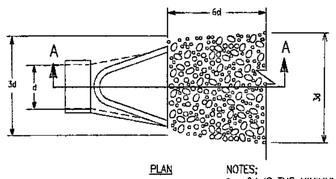
FINAL GRADING & CLOSURE/POST-CLOSURE PLAN

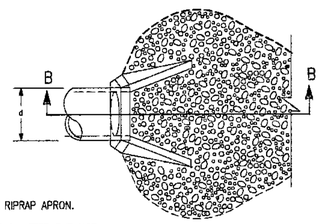
FILENAME	PRgrdFINL.pln.DWG
DIRECTORY	PRATTVILLE/MAJOR MOD

SHEET 3

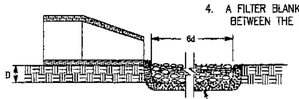


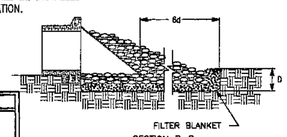
1 / 3 SEDIMENT CONTROL FENCE N. T. S.





NOTES;
1. 6d IS THE MINIMUM LENGTH OF THE RIPRAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHALL BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

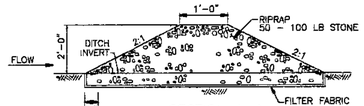


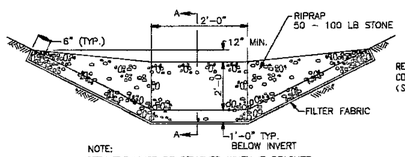


PIPE SIZE	RIP-RAP SIZE
OVER - 72"	150 - LB.
54" - 66"	100 - LB.
48" - 24"	50 - LB.
18" - 12"	40 - LB.
-	-

ADDITIONAL SIZES AS FOLLOWS:
CLASS 1 DOT STANDARD 250 LB ARMOR TYPE 2000-LB OR PER APPENDIX C OF MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA

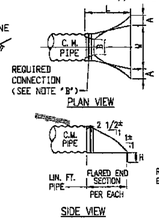
2 / 3 STORM DRAIN INLET/ OUTLET PROTECTION N. T. S.





3 / 3 STONE CHECK DAM N. T. S.

NOTE "B":
THE CONNECTION BETWEEN METAL FLARED END SECTION AND C.M. PIPE WILL BE OF THE FOLLWING:
(a) A STRAP BAND OR THREADED ROD PROVIDED BY THE MANUFACTURER WILL LOCK END SECTION ONTO PIPE.
A CORRUGATION AT THE PIPE END WILL BE NON-SPIRALED (PERPENDICULAR TO C OF PIPE).
(b) A CIMFLEX BAND COLLAR WILL BE SNAP BOLTED TO END SECTION. PIPE WILL BE INSERTED INTO THE BAND COLLAR TO MEET THE END SECTION.
(c) A STUB PIPE WILL BE RIVETED TO THE END SECTION AND THE MAIN PIPE CONNECTED TO THE STUB WITH A NORMAL CONNECTING BAND.
(d) OTHER TYPE CONNECTION IF RECOMMENDED BY THE MANUFACTURER.

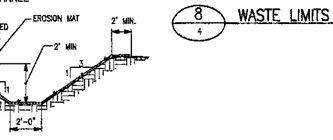


NOTE: GALVANIZED STEEL FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED STEEL PIPE AND ALUMINUM FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED ALUMINUM PIPE.

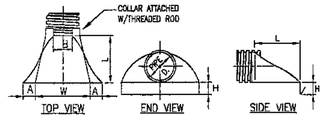
FLARED END SECTION DIMENSIONS							
PIPE SIZE "D"	THICKNESS GALV. STEEL	THICKNESS ALUM.	A A=0.40 ±½"	B B=0.50 ±½"	H H=0.25 ±½"	L L=1.67 ±½"/2	W W=1.67 ±2"
12"	.064"	.060"	5"	6"	6"MIN	1'-8"	2'-0"
15"	.064"	.060"	6"	7"	6"MIN.	2'-1"	2'-6"
18"	.064"	.060"	7"	9"	6"MIN.	2'-6"	3'-0"
24"	.064"	.060"	9"	1'-0"	6"	3'-4"	4'-0"
30"	.079"	.105"	1'-0"	1'-3"	7"	4'-2"	5'-0"
36"	.079"	.105"	1'-2"	1'-6"	8"	5'-0"	6'-0"
42"	.109"	.164"	1'-5"	1'-9"	10"	5'-10"	7'-0"

NOTE; WHERE METAL FLARED END SECTIONS ARE USED WITH MULTIPLE PIPE LINES, THE STANDARD SPACING BETWEEN PIPES (S=D OR 3FT.) MAY HAVE TO BE INCREASED (S=1.75 D TYPICAL). TO PREVENT OVERLAP OF END SECTION WINGTIPS.

4 / 3 CORRUGATED METAL PIPE FLARED END SECTION N. T. S.



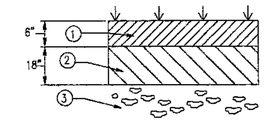
9 / 3 2' FLAT BOTTOM DITCH N. T. S.



PIPE DIAMETER	DIMENSIONS (INCHES) A(1±)	B MAX	H(1½)	L(1/2±)	W(2±)
12" & 15"	6.5	10"	6.5	25	29
18"	7.5	15	6.5	32	35
24"	7.5	18	6.5	36	45
30"	10.5	NA	7.0	53	68
36"	10.5	NA	7.0	53	68

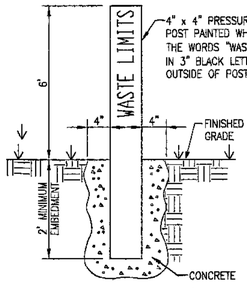
NOTE: PLACE BACKFILL AROUND THE END SECTION AND OVER THE TOE PLATE.

10 / 3 HDPE FLARED END SECTION N. T. S.

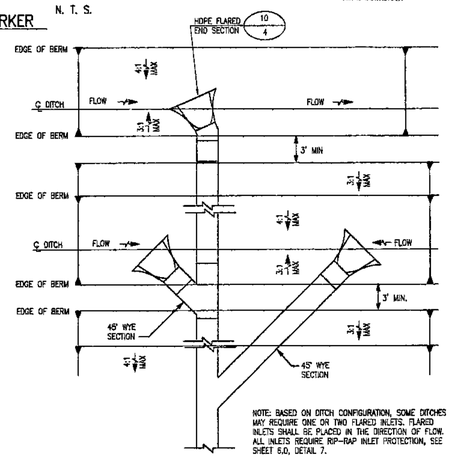


1. 6" EROSION LAYER CAPABLE OF SUPPORTING VEGETATIVE GROWTH
2. 18" COMPACTED SOIL INFILTRATION LAYER EXCLUDING SANDS
3. WASTE

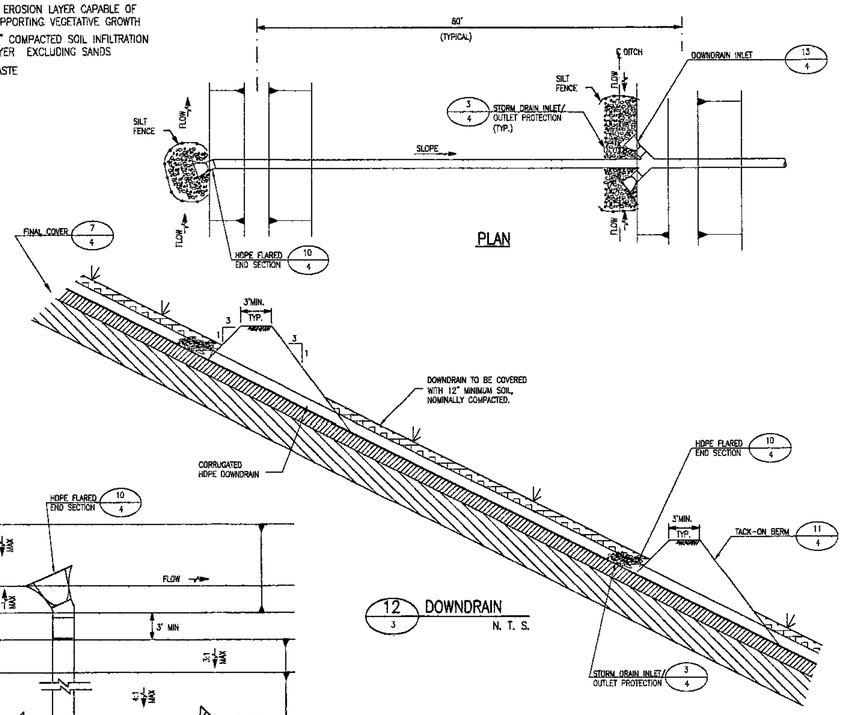
7 / 3,4 FINAL COVER N. T. S.



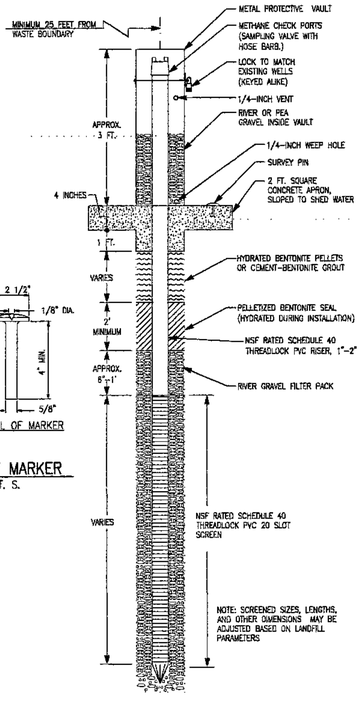
8 / 4 WASTE LIMITS MARKER N. T. S.



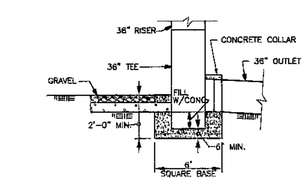
13 / 5 DOWNDRAIN INLET N. T. S.



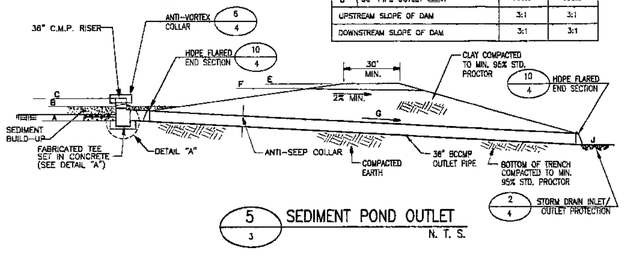
12 / 3 DOWNDRAIN N. T. S.



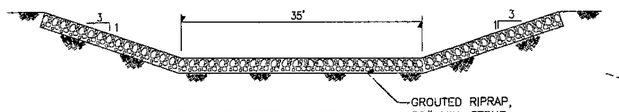
16 / 4 STANDARD METHANE MONITORING WELL N. T. S.



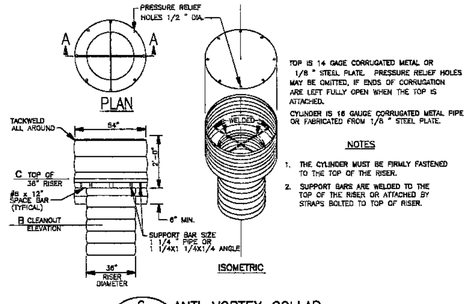
ELEVATION TABLE			
MARK	DESCRIPTION	PHASE 1 ELEVATION	PHASE 1 ELEVATION
A	INVERT 36" PIPE	161.3	161.3
B	CLEANOUT ELEVATION	164.21	164.99
C	TOP OF 36" RISER	168.40	170.0
—	—	—	—
E	TOP OF DAM	176.2	176.2
F	EMERGENCY OUTLET	172.0	172.0
G	SLOPE OF OUTLET PIPE (ft./ft.)	0.01	0.01
—	—	—	—
I	PIPE LENGTH	101'	101'
J	36" PIPE OUTLET ELEV.	160.3	160.3
	UPSTREAM SLOPE OF DAM	3:1	3:1
	DOWNSTREAM SLOPE OF DAM	3:1	3:1



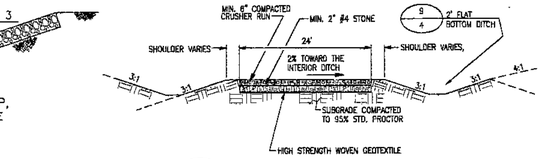
5 / 3 SEDIMENT POND OUTLET N. T. S.



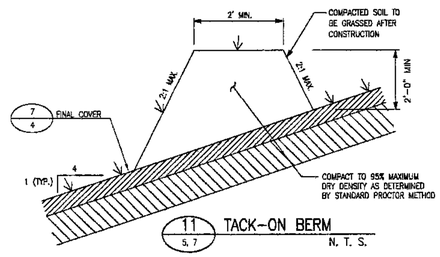
18 / 2 EMERGENCY SPILLWAY N. T. S.



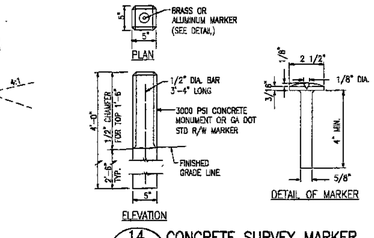
6 / 3 ANTI-VORTEX COLLAR N. T. S.



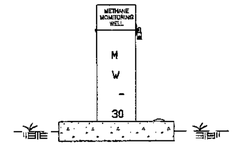
15 / 5 ALL WEATHER ACCESS ROAD TYPICAL SECTION N. T. S.



11 / 5,7 TACK-ON BERM N. T. S.



14 / 3,4 CONCRETE SURVEY MARKER N. T. S.



17 / 4 MARKER FOR METHANE MONITORING WELL N. T. S.

				PROJECT MANAGER:	R. BLANTON, PE
				DESIGNED BY:	D. McGEORGE
				QC'ED BY:	R. BLANTON, PE
				DRAWN BY:	S. SIN
1	3/09/09	OASIS CONSTRUCTION SERVICES	REISSUE TO ADEM		
0	8/15/05	ARCADIS	INITIAL ISSUE		
ISSUE	DATE	RESPONSIBLE ENG.	DESCRIPTION	PROJECT NUMBER	PRATTVILLE MAJOR M

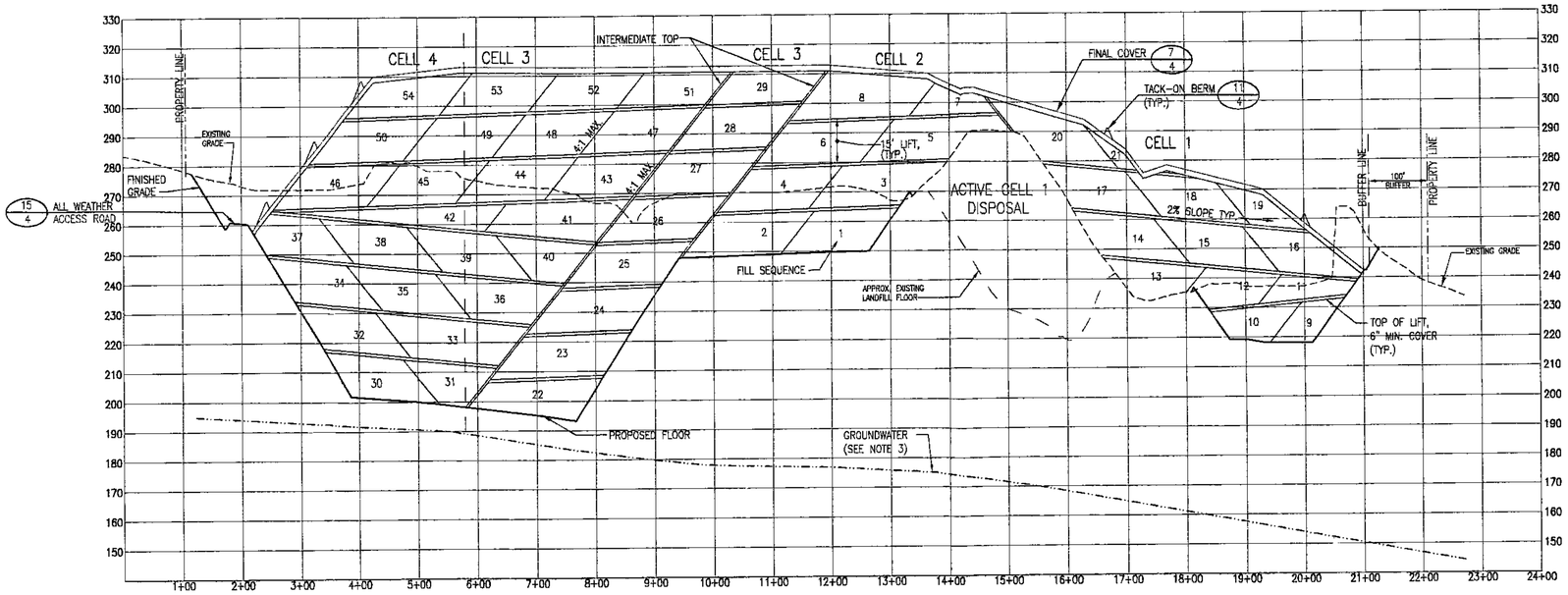
OASIS CONSTRUCTION SERVICES, INC.

ALABAMA — No. 23765 — PROFESSIONAL ENGINEER — JERRY ROBIN BLANTON — 3/1/09

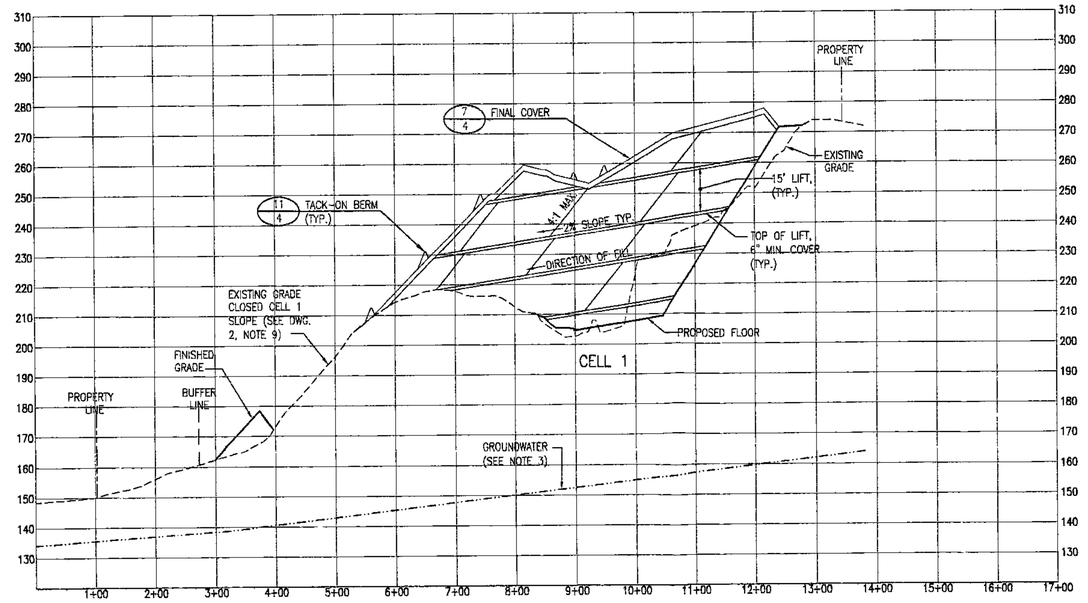
MAJOR MODIFICATION TO CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL PRATTVILLE, ALABAMA AUTAUGA COUNTY LANDFILL, LLC

DETAILS

FILENAME	PRDetails1.DWG	4
DIRECTORY	PRATVILLE/MAJOR MOD	SHEET



A/3 SECTION
SCALE: 1" = 100' HORIZ.
1: = 20' VERT.



B/3 SECTION
SCALE: 1" = 100' HORIZ.
1: = 20' VERT.

NOTES:

1. BOUNDARY INFORMATION FROM "CITY OF PRATTVILLE LANDFILL BOUNDARY SURVEY", LANDFILL, LAYOUT, CONSTRUCTION AND CLOSURE PLANS, FOR CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL, DATED 3/25/98, APPROVED BY ADEM 8/10/98. THIS DRAWING IS NOT INTENDED AS A BOUNDARY SURVEY.
2. TOPOGRAPHIC INFORMATION FROM AERIAL SURVEY BY BULLSEYE DESIGN SERVICES DATED 1/7/05. REFERENCE DATUM IS MEAN SEA LEVEL.
3. GROUNDWATER LEVEL TAKEN FROM "POTENTIOMETRIC MAP WITH MONITORING WELL LOCATIONS" FOR CITY OF PRATTVILLE "CORRECTIVE ACTION PLAN RESPONSE TO NOV", DATED 2/19/04, PREPARED BY GOODWIN, MILLS & CAWOOD ENVIRONMENTAL CONSULTANTS, INC..
4. FILL SEQUENCE MAY BE MODIFIED AS SITE CONDITIONS WARRANT.

OASIS CONSTRUCTION SERVICES, INC.

ISSUE	DATE	RESPONSIBLE ENG.	DESCRIPTION
1	3/09/09	OASIS CONSTRUCTION SERVICES	REISSUE TO ADEM
0	8/15/05	ARCADIS	INITIAL ISSUE

PROJECT MANAGER:	R. BLANTON, PE
DESIGNED BY:	D. McGEORGE
QC'ED BY:	R. BLANTON, PE
DRAWN BY:	S. SIN
PROJECT NUMBER	PRATTVILLE MAJOR M

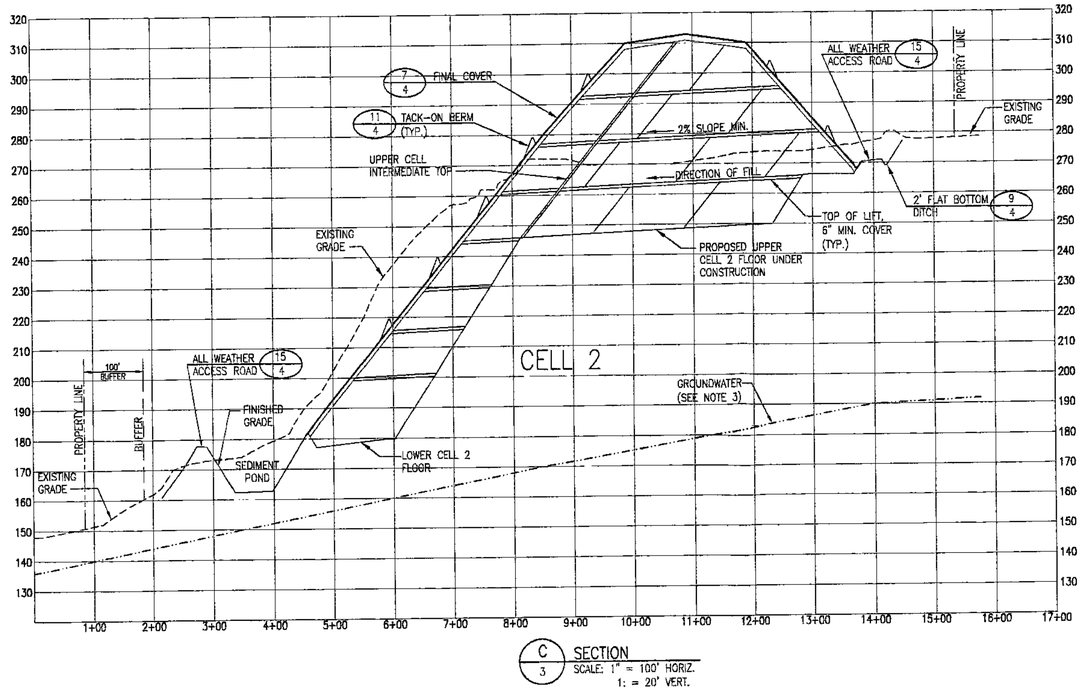
ALABAMA REGISTERED ENGINEER No. 22745 PROFESSIONAL JOHN ROBIN BLANTON 3/9/09

MAJOR MODIFICATION TO CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL PRATTVILLE, ALABAMA AUTAUGA COUNTY LANDFILL, LLC

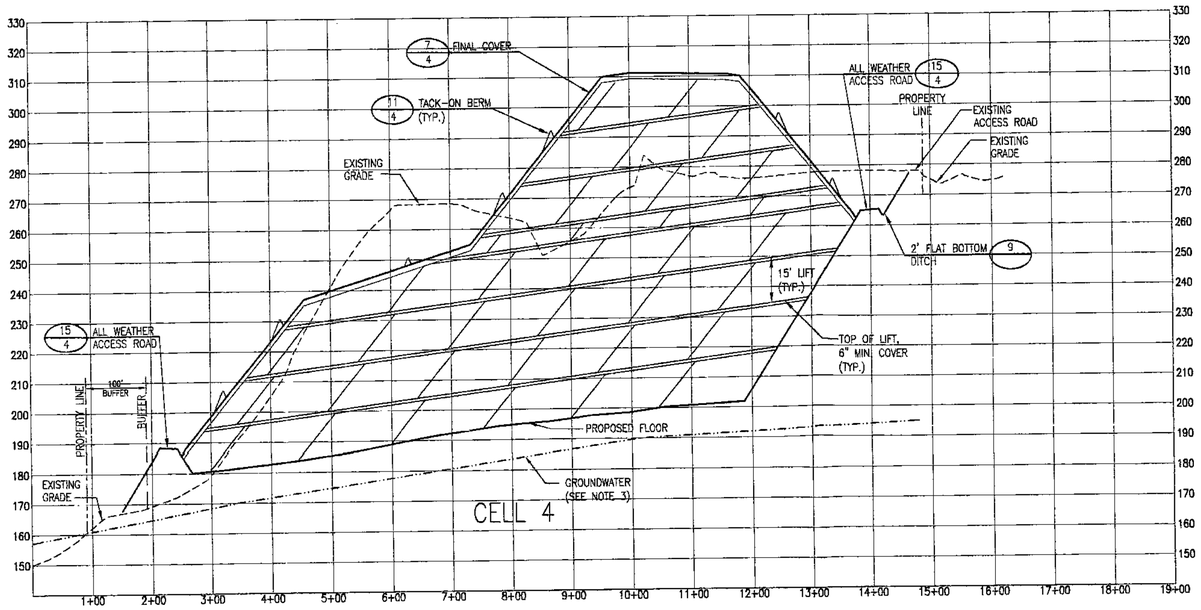
CROSS SECTIONS & FILL SEQUENCE

FILENAME	PRsectA_B.DWG
DIRECTORY	PRATTVILLE/MAJOR MOD

SHEET 5



C/3 SECTION
SCALE: 1" = 100' HORIZ.
1: = 20' VERT.



D/3 SECTION
SCALE: 1" = 100' HORIZ.
1: = 20' VERT.

NOTES:
1. BOUNDARY INFORMATION FROM "CITY OF PRATTVILLE LANDFILL BOUNDARY SURVEY", LANDFILL, LAYOUT, CONSTRUCTION AND CLOSURE PLANS, FOR CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL, DATED 3/25/98, APPROVED BY ADEM 8/10/98. THIS DRAWING IS NOT INTENDED AS A BOUNDARY SURVEY.
2. TOPOGRAPHIC INFORMATION FROM AERIAL SURVEY BY BULLSEYE DESIGN SERVICES DATED 1/7/05. REFERENCE DATUM IS MEAN SEA LEVEL
3. GROUNDWATER LEVEL TAKEN FROM "POTENTIOMETRIC MAP WITH MONITORING WELL LOCATIONS" FOR CITY OF PRATTVILLE "CORRECTIVE ACTION PLAN RESPONSE TO NOV", DATED 2/19/04, PREPARED BY GOODWIN, MILLS & CAWOOD ENVIRONMENTAL CONSULTANTS, INC..
4. FILL SEQUENCE MAY BE MODIFIED AS SITE CONDITIONS WARRANT.

OASIS CONSTRUCTION SERVICES, INC.

ISSUE	DATE	RESPONSIBLE ENG.	DESCRIPTION
1	3/09/09	OASIS CONSTRUCTION SERVICES	REISSUE TO ADEM
0	8/15/05	ARCADIS	INITIAL ISSUE

PROJECT MANAGER:	R. BLANTON, PE
DESIGNED BY:	D. McGEORGE
QC'ED BY:	R. BLANTON, PE
DRAWN BY:	S. SIN
PROJECT NUMBER	PRATTVILLE MAJOR M

ALABAMA REGISTERED PROFESSIONAL ENGINEER JERRY ROBIN BLANTON No. 20749

MAJOR MODIFICATION TO CITY OF PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL PRATTVILLE, ALABAMA AUTAUGA COUNTY LANDFILL, LLC

CROSS SECTIONS & FILL SEQUENCE

FILENAME	PRxsectC_D.DWG
DIRECTORY	PRATVILLE/MAJOR MOD

SHEET 6

FACILITY DIAGRAMS

CITY OF PRATTVILLE

PRATTVILLE CONSTRUCTION/DEMOLITION LANDFILL

AUTAUGA COUNTY, ALABAMA

LANDFILL LAYOUT, CONSTRUCTION AND CLOSURE PLANS

PREPARED BY

GOODWYN, MILLS, AND CAWOOD
ENVIRONMENTAL CONSULTANTS, INC.

125 INTERSTATE PARK DRIVE
MONTGOMERY, ALABAMA

SHEET INDEX

DATE NOVEMBER 5, 1997

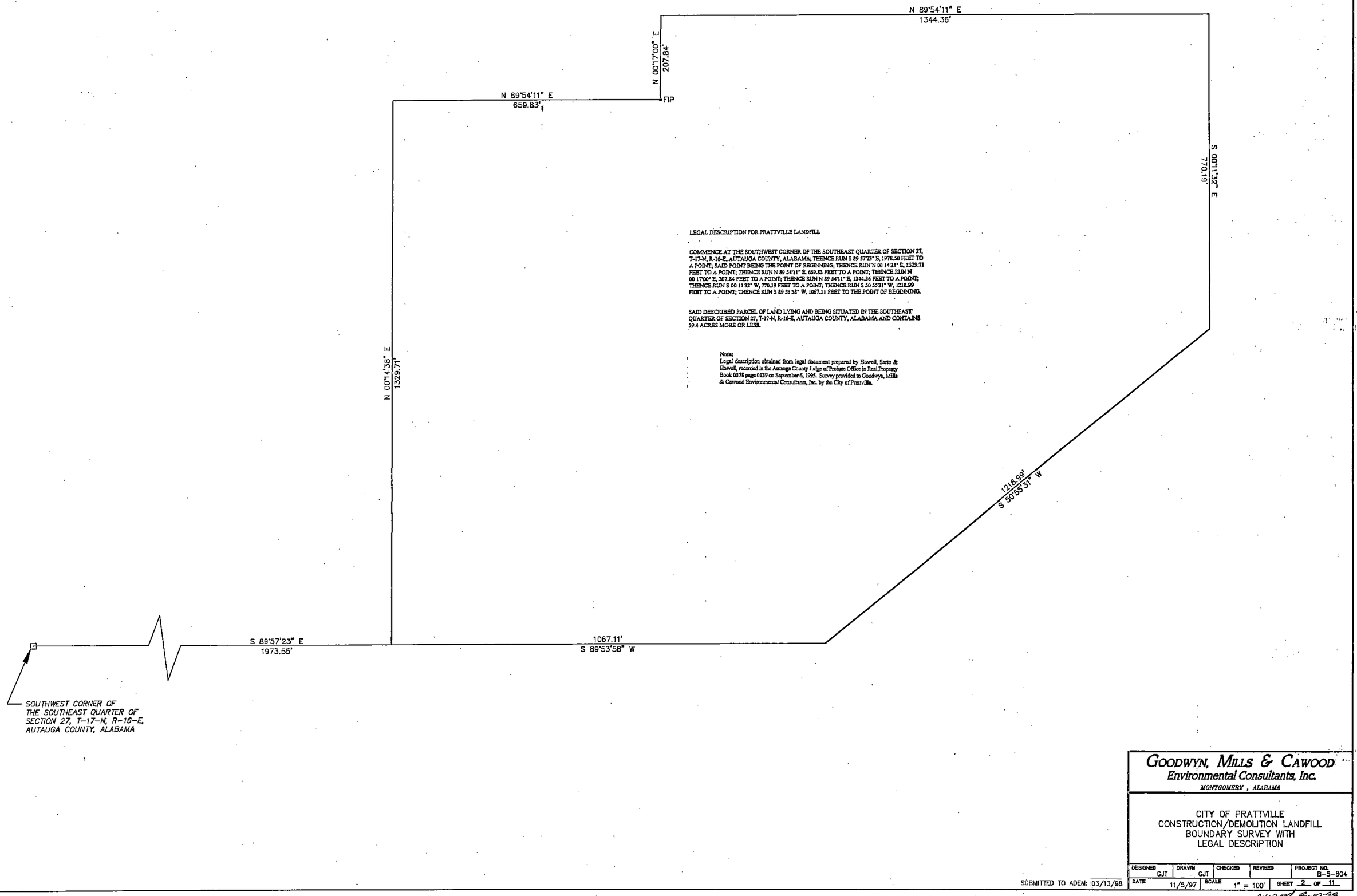
SUBMITTED TO ADEM: 03/13/98

SHT 00 OF 11

C00

TITLE

Approved 8-10-98
PEC 01-01



LEGAL DESCRIPTION FOR PRATTVILLE LANDFILL

COMMENCE AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 27, T-17-N, R-16-E, AUTAUGA COUNTY, ALABAMA; THENCE RUN S 89 57'23" E, 1978.50 FEET TO A POINT; SAID POINT BEING THE POINT OF BEGINNING; THENCE RUN N 00 14'38" E, 1329.71 FEET TO A POINT; THENCE RUN N 89 54'11" E. 659.83 FEET TO A POINT; THENCE RUN N 00 17'00" E, 207.84 FEET TO A POINT; THENCE RUN N 89 54'11" E, 1344.36 FEET TO A POINT; THENCE RUN S 00 11'32" W, 770.19 FEET TO A POINT; THENCE RUN S 50 55'31" W, 1218.99 FEET TO A POINT; THENCE RUN S 89 53'58" W, 1067.11 FEET TO THE POINT OF BEGINNING.

SAID DESCRIBED PARCEL OF LAND LYING AND BEING SITUATED IN THE SOUTHEAST QUARTER OF SECTION 27, T-17-N, R-16-E, AUTAUGA COUNTY, ALABAMA AND CONTAINS 59.4 ACRES MORE OR LESS.

Notes
Legal description obtained from legal document prepared by Howell, Sarto & Howell, recorded in the Autauga County Judge of Probate Office in Real Property Book 0378 page 0139 on September 6, 1995. Survey provided to Goodwyn, Mills & Cawood Environmental Consultants, Inc. by the City of Prattville.

SUBMITTED TO ADEM: 03/13/98

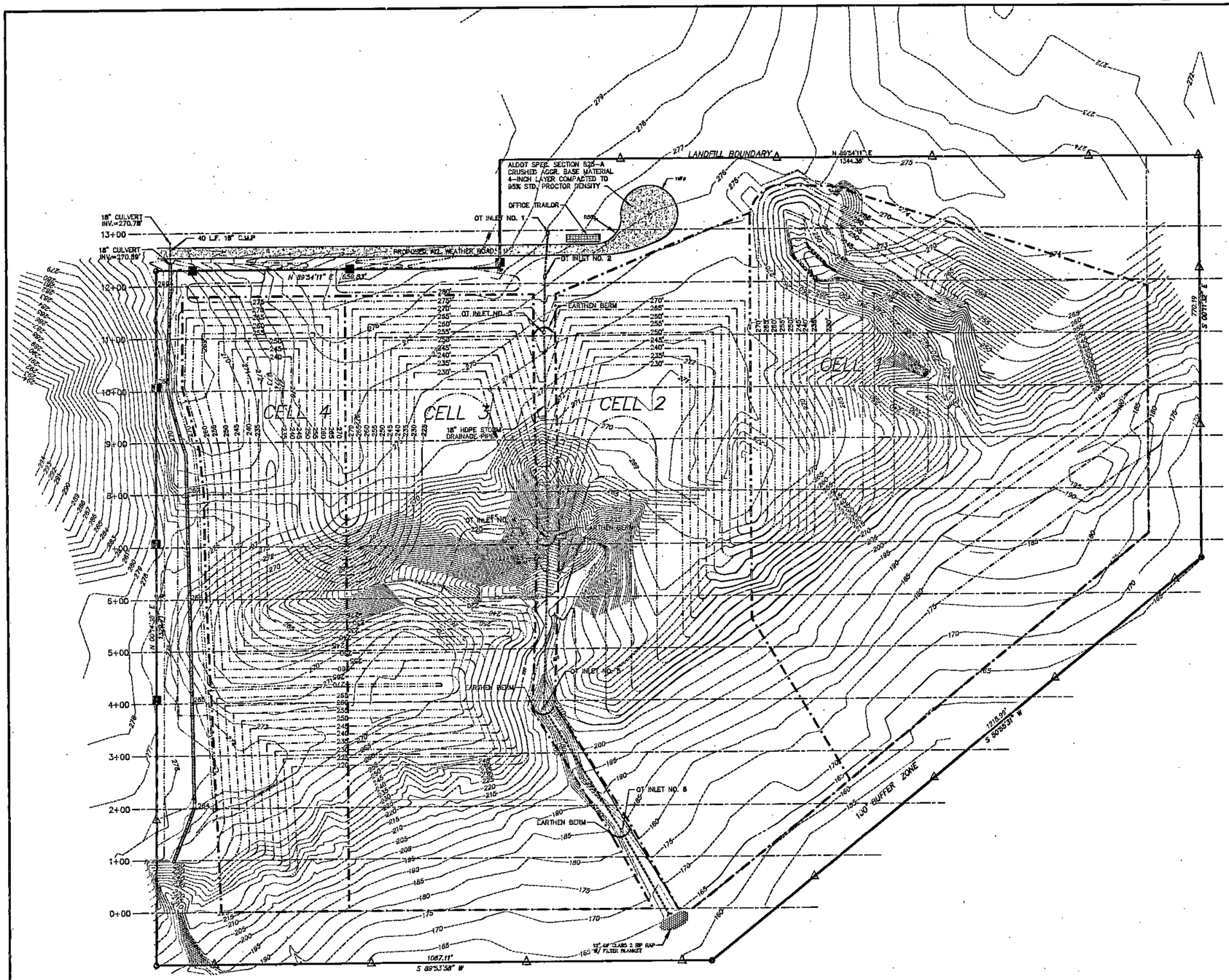
GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

CITY OF PRATTVILLE
CONSTRUCTION/DEMOLITION LANDFILL
BOUNDARY SURVEY WITH
LEGAL DESCRIPTION

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT	GJT			B-5-804
DATE 11/5/97	SCALE 1" = 100'	SHEET 2 OF 11		

APPROVED 5-10-98
01-01

G:\LANDFILL\PRATTVILLE\BOUNDARY
I:\LANDFILL\Prattville\boundary.dwg Thu Nov 13 07:42:17 1997



PROPOSED 5 FOOT ELEVATION CONTOURS OF CONSTUCTED CELL

EXISTING CONTOURS

PROPOSED CELL BOUNDARY

12" OF CLASS 2 RIP RAP W/ FILTER BLANKET

CROSS SECTION LINE

LIMIT OF DIPSOSAL AREA

PROPOSED GAS MONITORING WELL

EXISTING MONITORING WELL (ASSOCIATED WITH ADJACENT LANDFILL)

Notes:

- *Contour Labels Read Up Hill.*
- *One Foot Contours not shown in Extreme Conditions.*
- *Bench Mark – Ex. Monitor Well 1 275.34'.*
- *Boundary By Others. Bearing Base S 00° 17' 10" W along the East Line of Section 27, T-17-N, R-16-E Autauga County, Alabama, as shown on the Boundary Map of 3 Parcels of the Malcolm Smith, Et al Property by Goodwyn, Mills and Cawood, Inc, Dated Nov. 27, 1991.*
- *Locations of all proposed landfill cells is approximate.*

SUBMITTED TO ADEM: 03/13/98

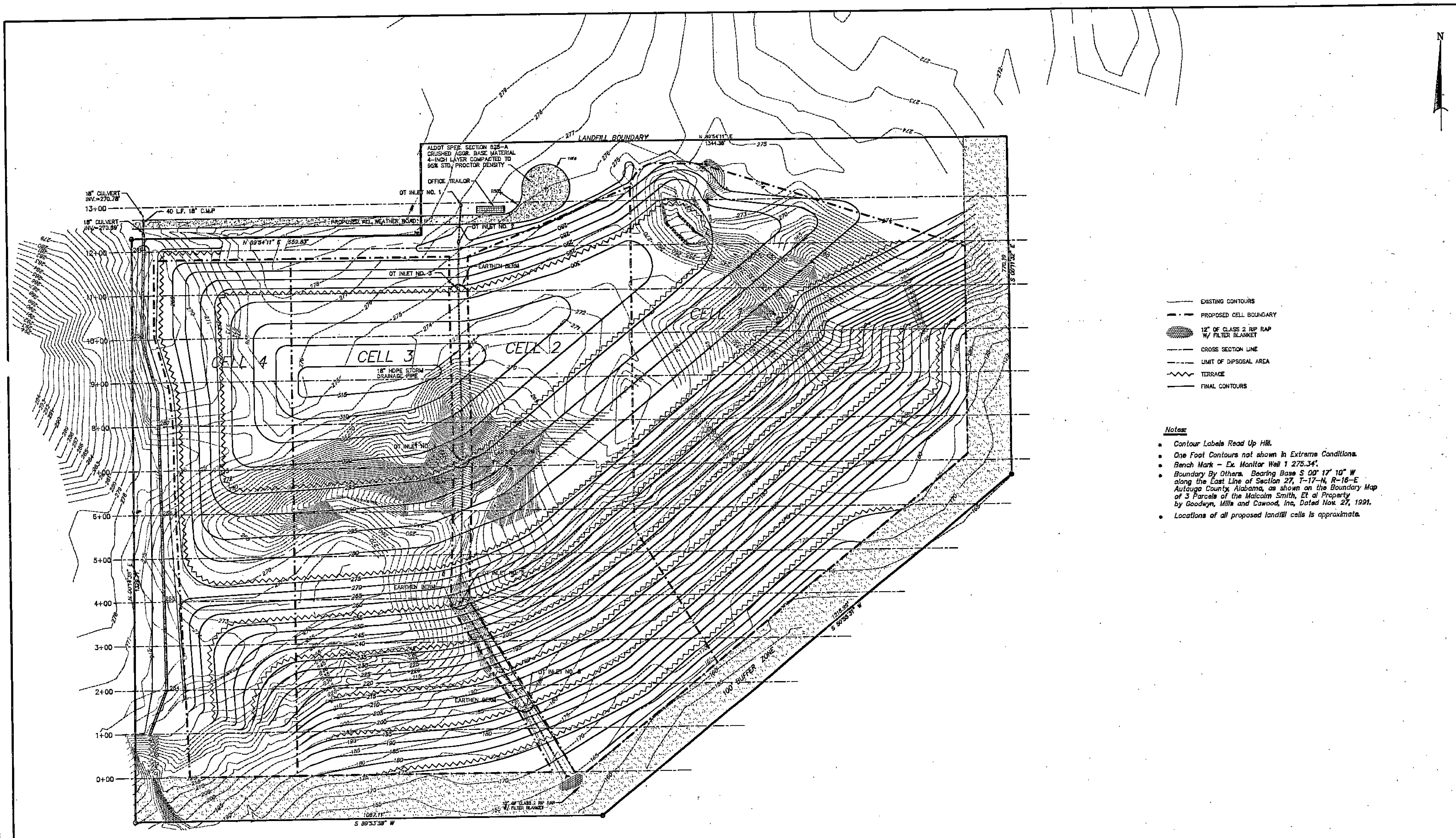
GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
EXCAVATION GRADING/GAS MONITORING PLAN
FOR LANDFILL CONSTRUCTION

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT			3/11/98	B-5-8045
DATE	SCALE	SHEET		
11/5/97	1" = 100'	3 OF 11		

Approved 3-10-98
01-01

D:\LANDFILL\Prattville\pacons3.dwg Fri Mar 13 14:33:04 1998



— — — EXISTING CONTOURS
— · — PROPOSED CELL BOUNDARY
12" OF CLASS 2 RIP RAP W/ FILTER BLANKET
— - — CROSS SECTION LINE
— - - — LIMIT OF DIPSOSAL AREA
/\/\/\ TERRACE
——— FINAL CONTOURS

Notes:

- *Contour Labels Read Up Hill.*
- *One Foot Contours not shown in Extreme Conditions.*
- *Bench Mark – Ex. Monitor Well 1 275.34'.*
- *Boundary By Others. Bearing Base S 00° 17' 10" W along the East Line of Section 27, T-17-N, R-16-E Autauga County, Alabama, as shown on the Boundary Map of 3 Parcels of the Malcolm Smith, Et al Property by Goodwyn, Mills and Cawood, Inc, Dated Nov. 27, 1991.*
- *Locations of all proposed landfill cells is approximate.*

GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

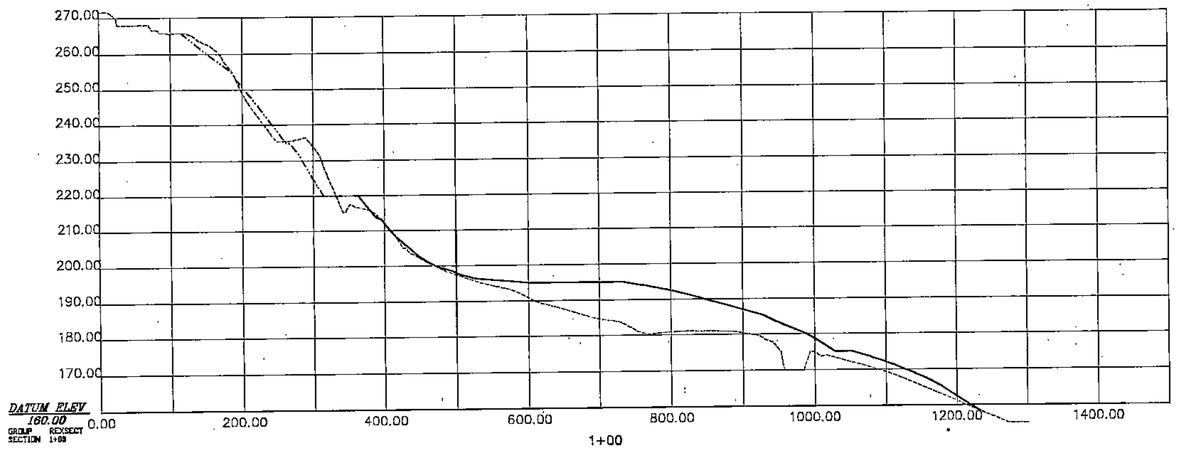
CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
FINAL GRADING PLAN FOR
LANDFILL CLOSURE/POST CLOSURE

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT				B-5-804
DATE 11/5/97	SCALE 1" = 100'	SHEET 4 OF 11		

SUBMITTED TO ADEM: 03/13/98

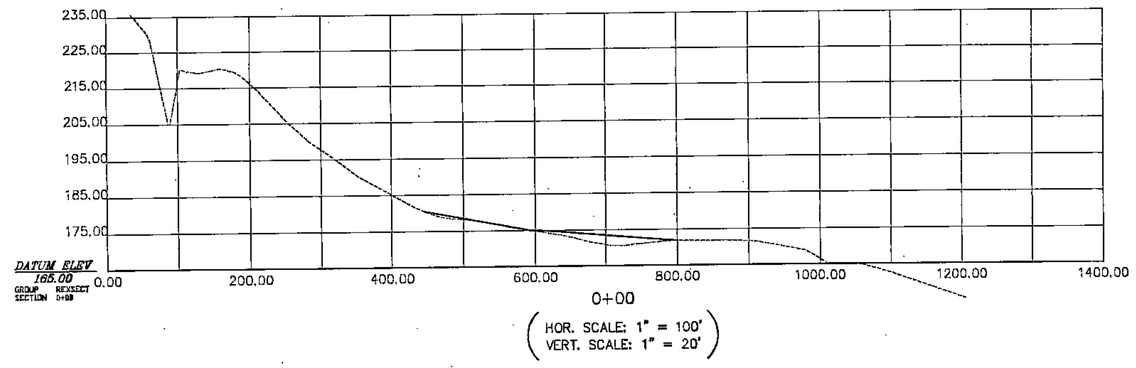
Approved 8-10-98
01-01

D:\LANDFILL\Prattville\excon3.dwg Tue Nov 11 15:58:16 1997



1+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')



0+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')

LEGEND

- EXISTING CONTOURS
- EXCAVATED GRADE
- FINAL CONTOURS

SUBMITTED TO ADEM: 03/13/98

GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
CROSS SECTIONS 0+00 THROUGH 1+00

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT				B-5-804
DATE	SCALE	SHEET		
11/5/97	1" = 100'	5 OF 11		

Approved 8/10/98
a-01

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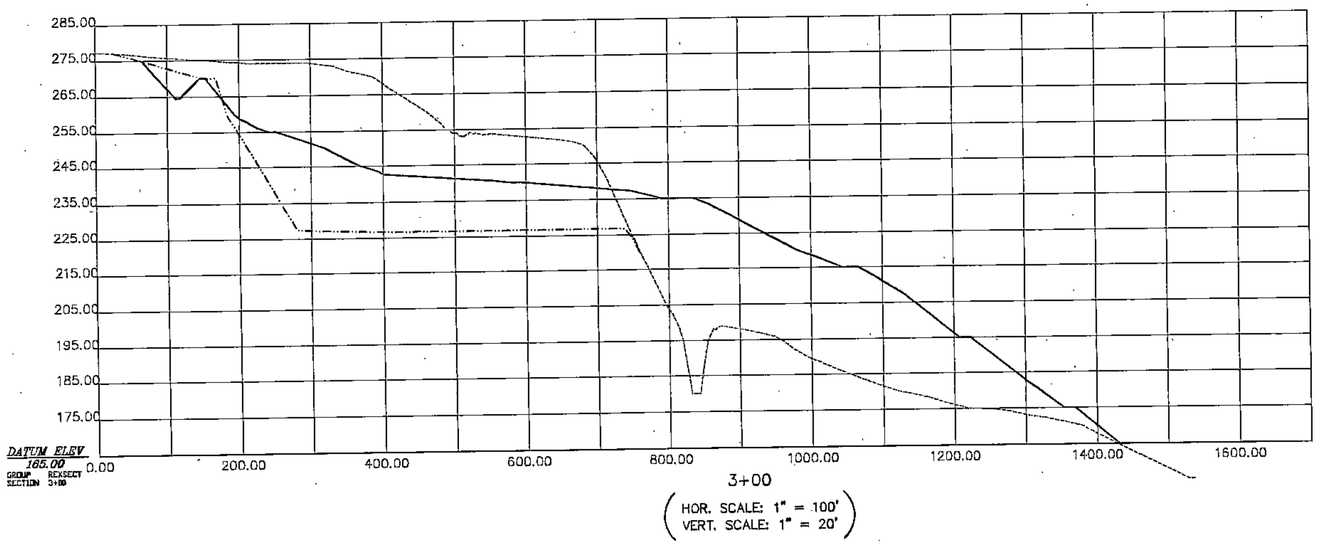

3+00

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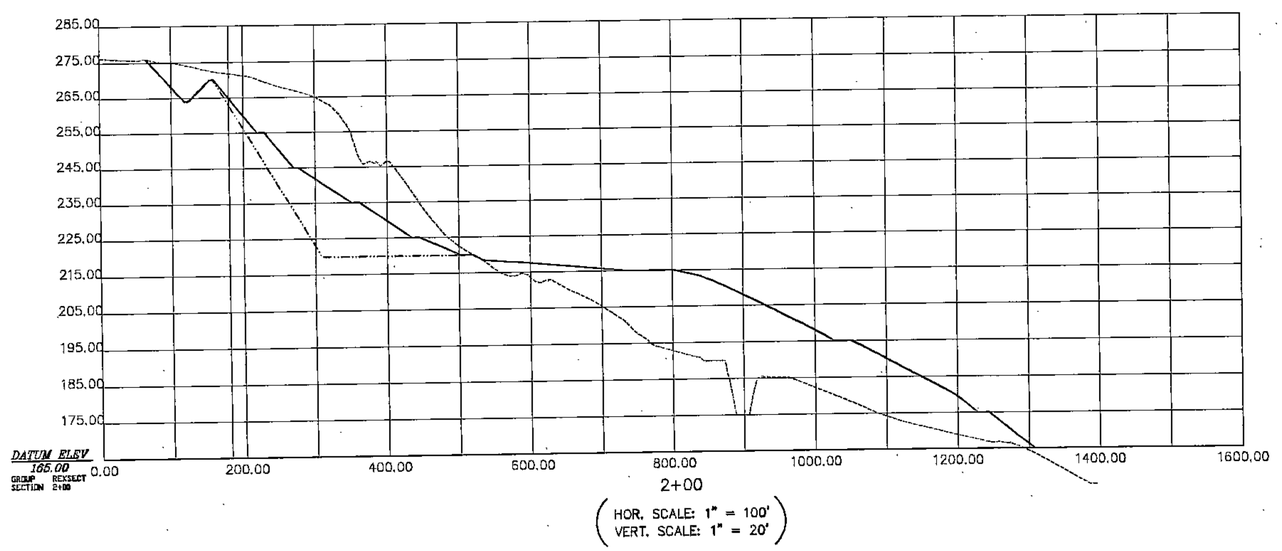


2+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')

LEGEND

- EXISTING CONTOURS
- EXCAVATED GRADE
- FINAL CONTOURS

GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

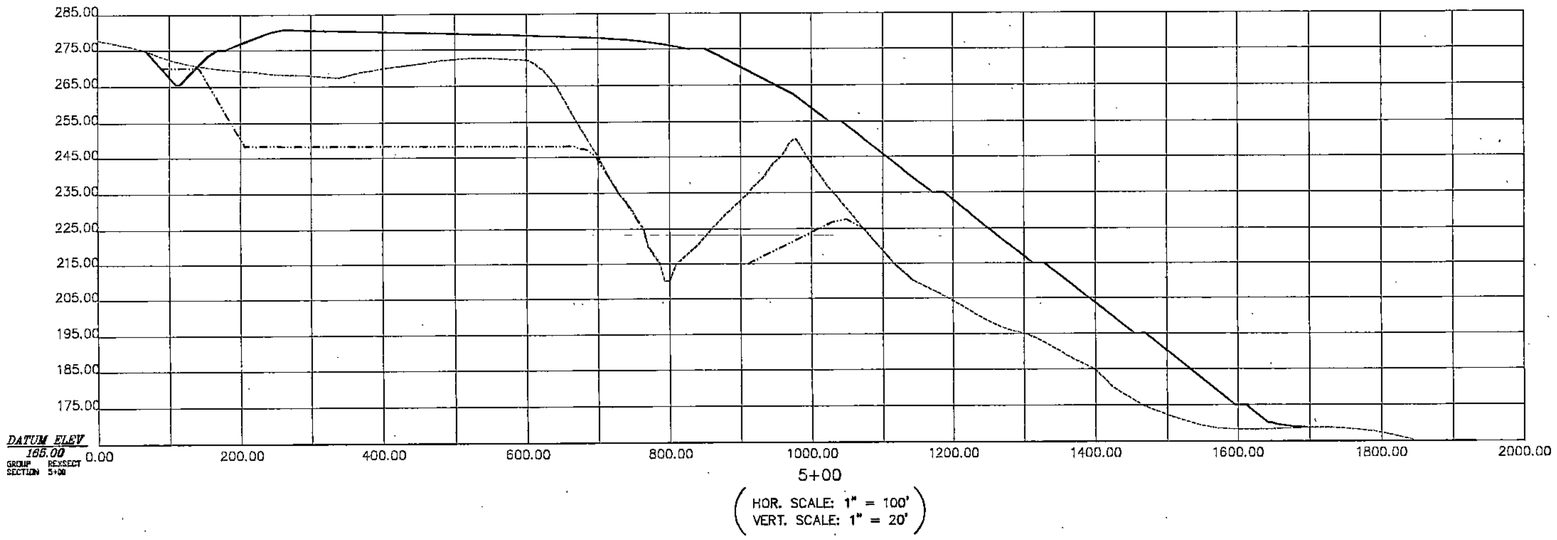
CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
CROSS SECTIONS 2+00 THROUGH 3+00

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT				B-5-804
DATE	SCALE	SHEET		
11/5/97	1" = 100'	8 OF 11		

SUBMITTED TO ADEM: 03/13/98

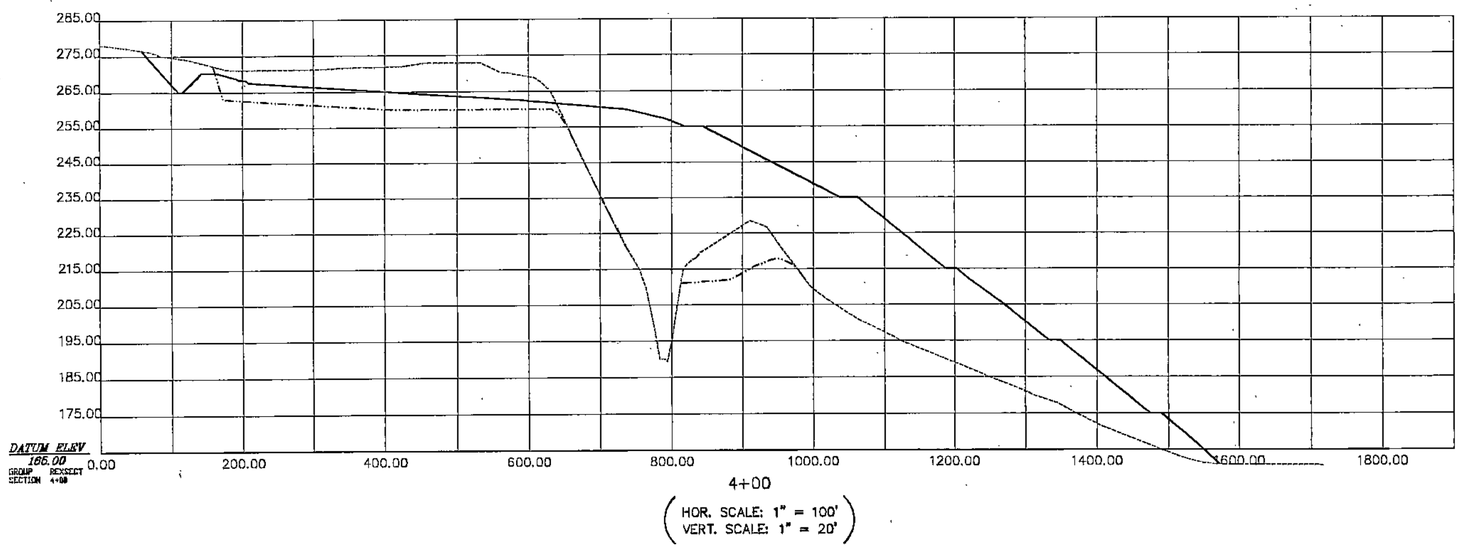
Approved 8-10-98 01-01
EEC

D:\LANDFILL\Prattville\xsecons3.dwg Thu Nov 13 08:25:46 1997



5+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')



4+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')

LEGEND

- EXISTING CONTOURS
- EXCAVATED GRADE
- FINAL CONTOURS

GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
CROSS SECTIONS 4+00 THROUGH 5+00

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT				B-5-804
DATE 11/5/97	SCALE 1" = 100'	SHEET 7 OF 11		

SUBMITTED TO ADEM: 03/13/98

Approved RKT 8-10-98

01-01

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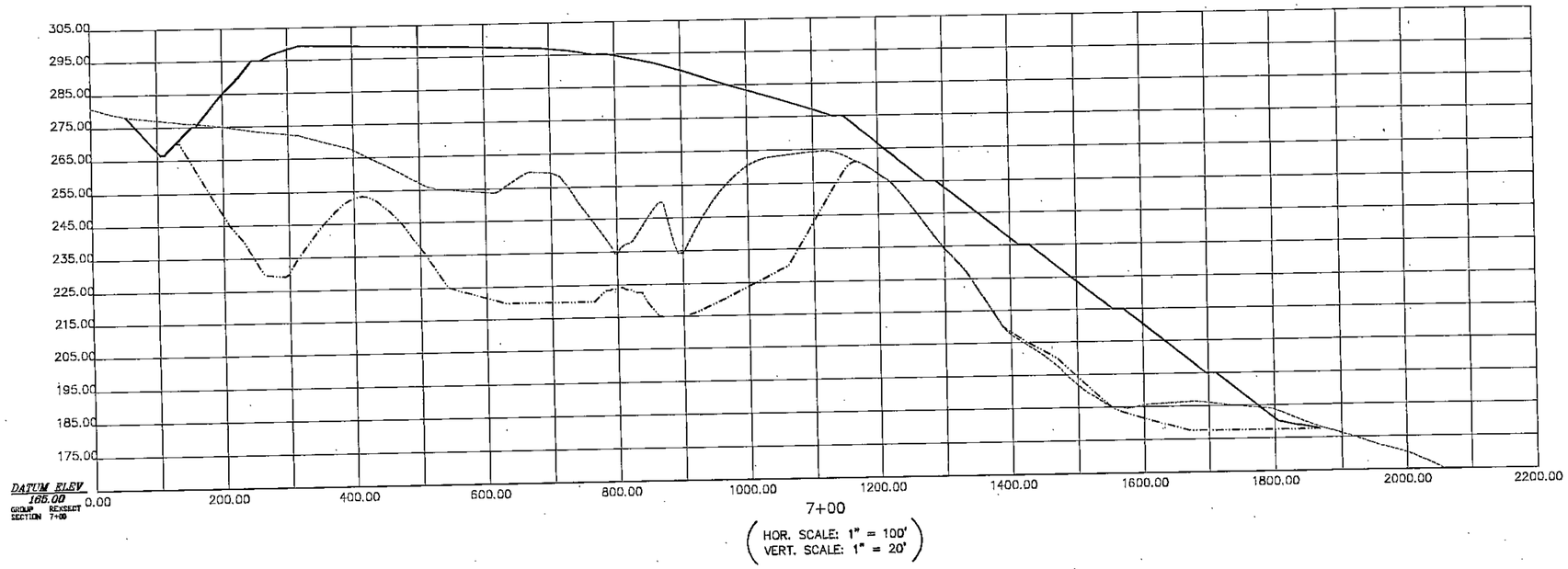
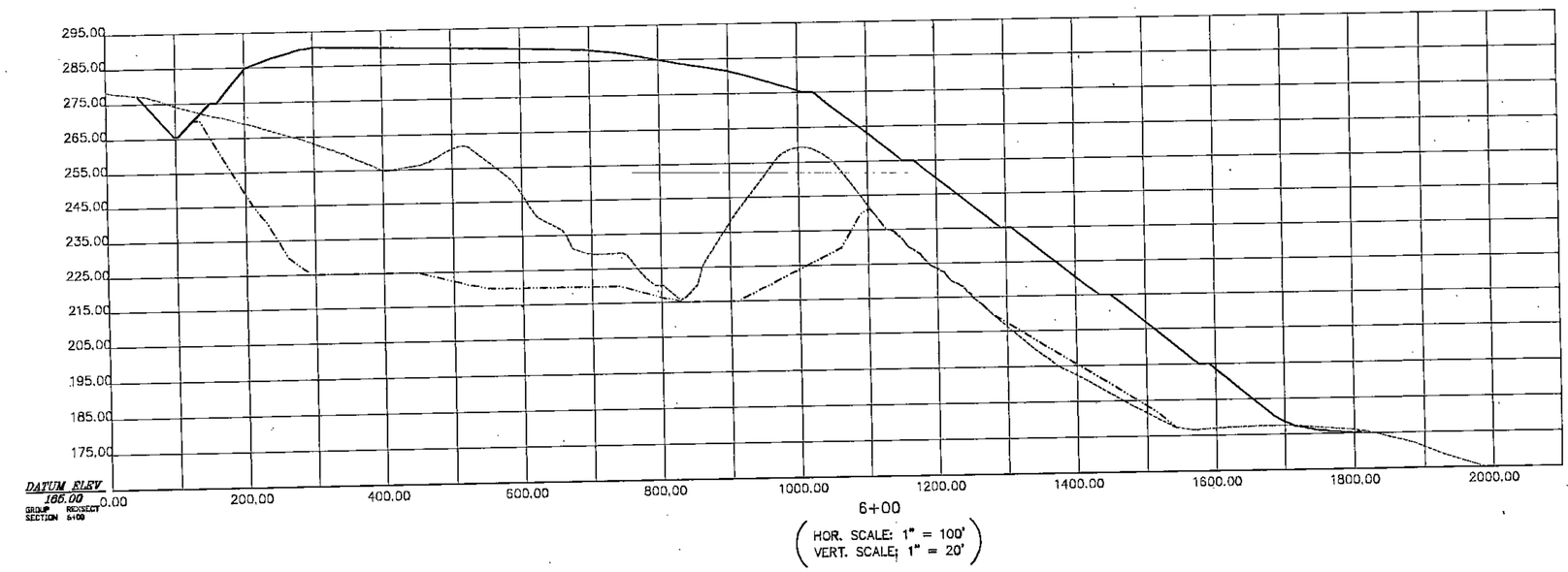


7+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')



6+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')

LEGEND

- EXISTING CONTOURS
- EXCAVATED GRADE
- FINAL CONTOURS

GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
CROSS SECTIONS 6+00 THROUGH 7+00

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT				B-5-804
DATE 11/5/97	SCALE 1" = 100'			SHEET 8 OF 11

SUBMITTED TO ADEM: 03/13/98

Approved 8-10-98
01-01

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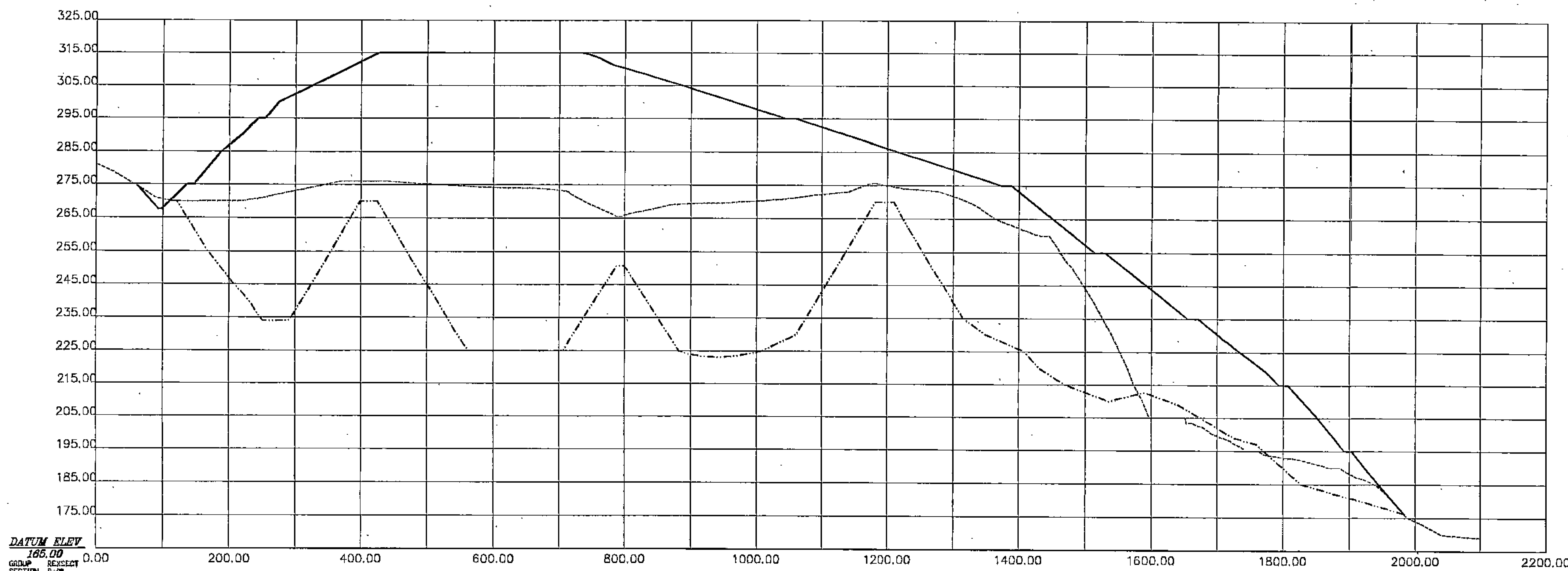

9+00

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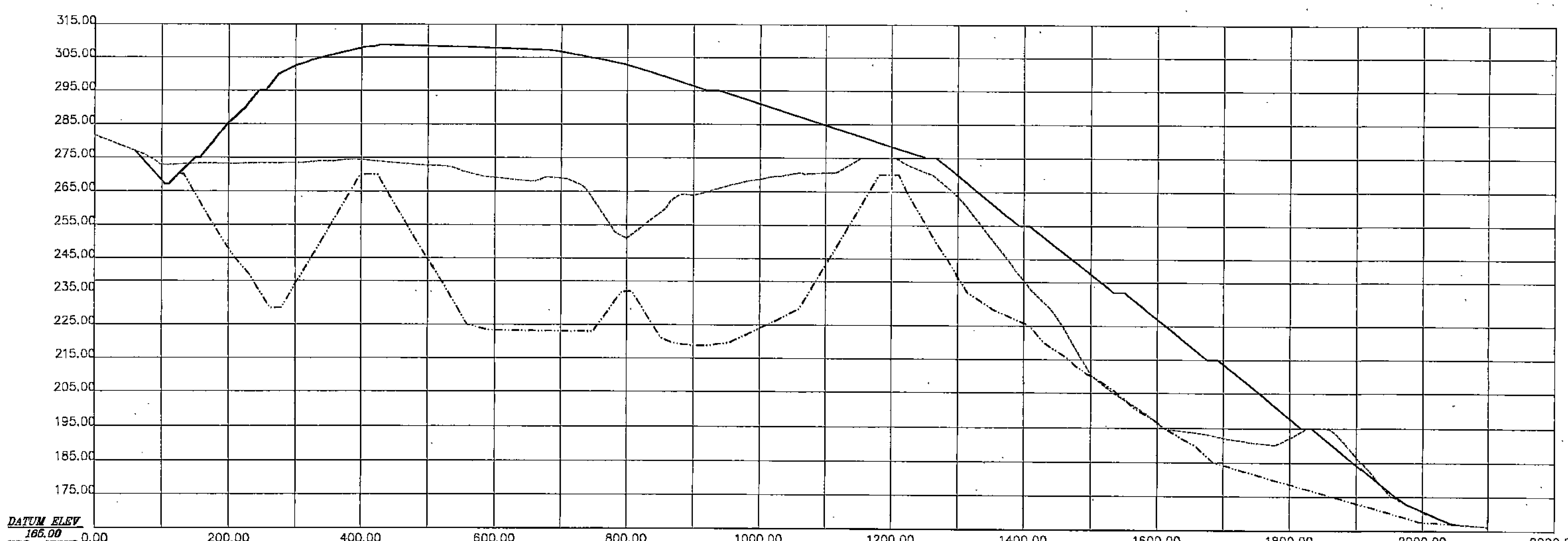

8+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')

LEGEND

- EXISTING CONTOURS
- EXCAVATED GRADE
- FINAL CONTOURS

GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
CROSS SECTIONS 8+00 THROUGH 9+00

DESIGNED GJT	DRAWN	CHECKED	REVISED	PROJECT NO. B-5-804
DATE 11/5/97	SCALE 1" = 100'			SHEET 9 OF 11

SUBMITTED TO ADEM: 03/13/98

Approved 8-10-98 [illegible]

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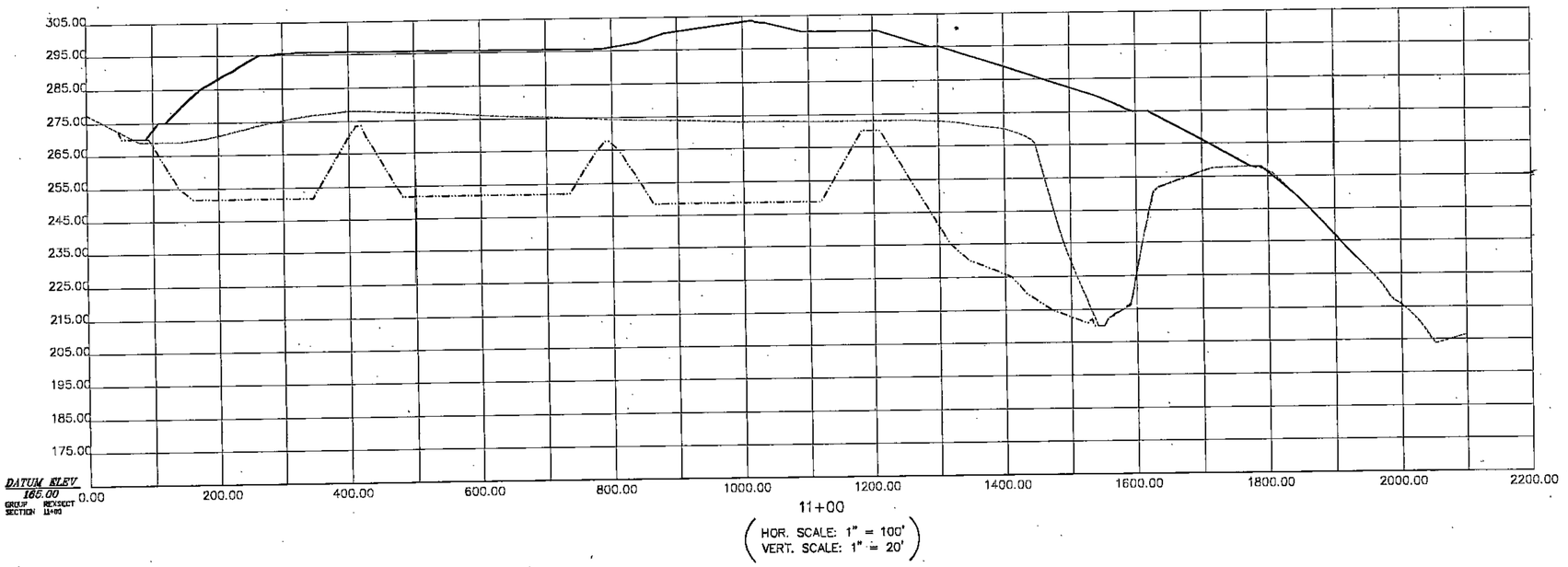
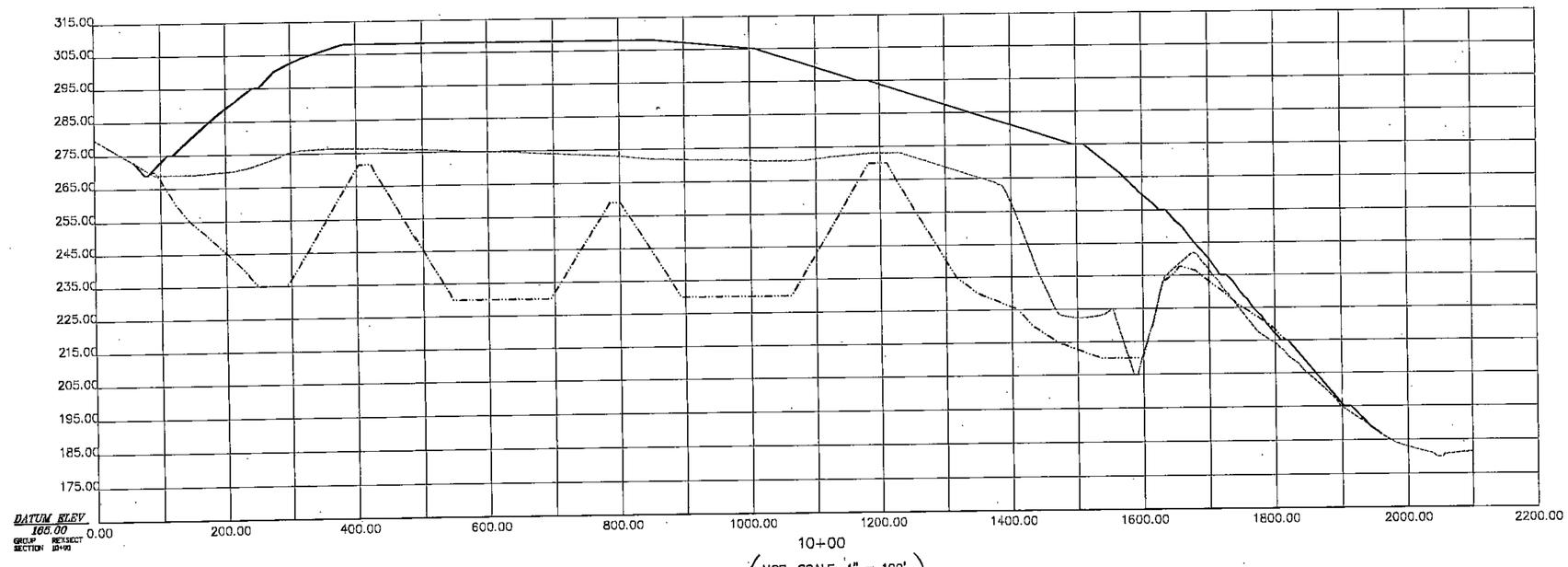


11+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')



10+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')

LEGEND

- EXISTING CONTOURS
- EXCAVATED GRADE
- FINAL CONTOURS

GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
CROSS SECTIONS 10+00 THROUGH 11+00

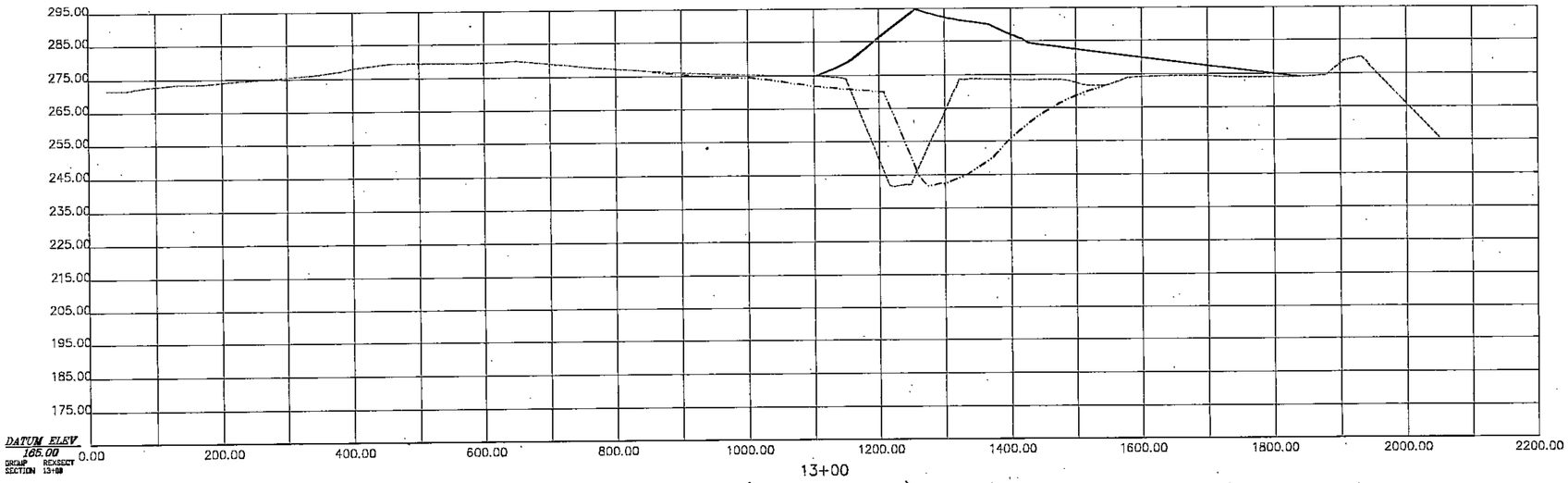
DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT				B-5-804
DATE 11/5/97	SCALE 1" = 100'	SHEET 10 OF 11		

SUBMITTED TO ADEM: 03/13/98

Approved 8-10-98
GEC

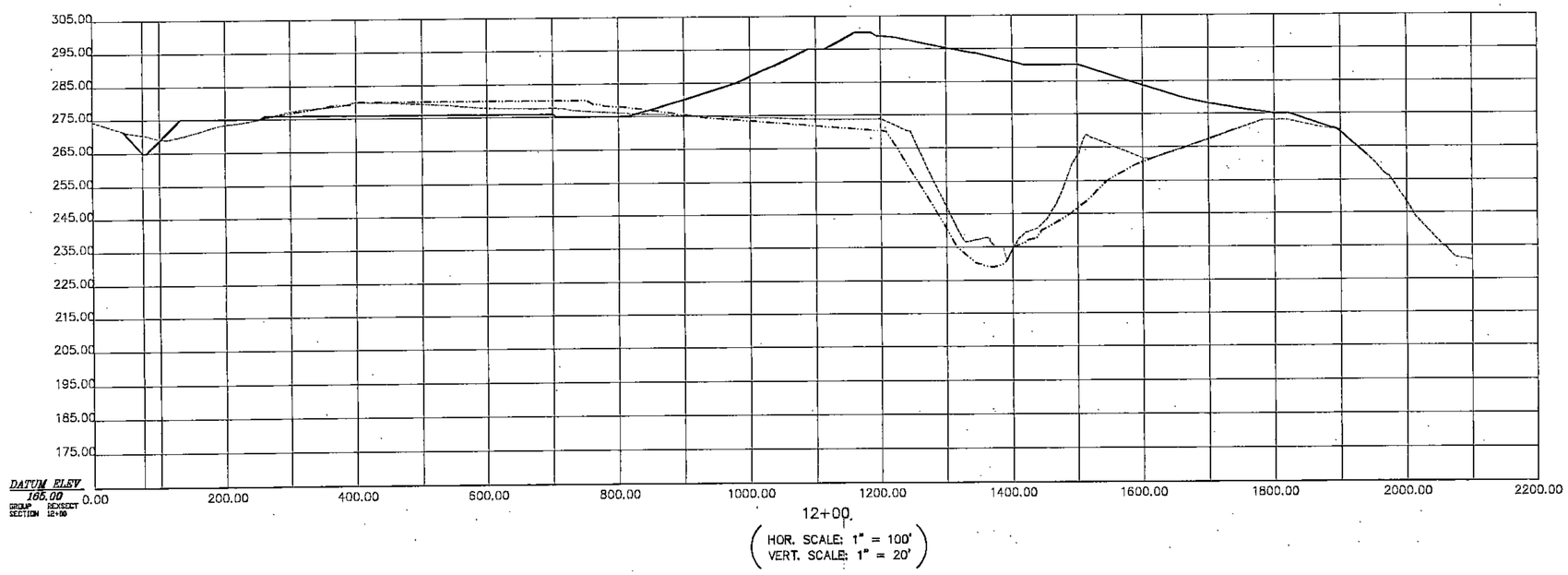
01-01

D:\LANDFILL\Prattville\xsecons3.dgn Thu Nov 13 08:21:32 1997



13+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')



12+00

(HOR. SCALE: 1" = 100'
VERT. SCALE: 1" = 20')

LEGEND

- EXISTING CONTOURS
- EXCAVATED GRADE
- FINAL CONTOURS

GOODWYN, MILLS & CAWOOD
Environmental Consultants, Inc.
MONTGOMERY, ALABAMA

CITY OF PRATTVILLE
CONSTRUCTION DEMOLITION LANDFILL
CROSS SECTIONS 12+00 THROUGH 13+00

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
GJT				B-5-804
DATE 11/5/97	SCALE 1" = 100'	SHEET 11 OF 11		

SUBMITTED TO ADEM: 03/13/98

Approved 8-10-98 01-01

D:\LANDFILL\Prattville\rexcons3.dwg Thu Nov 13 09:19:03 1997

STATE OF ALABAMA)
AUTAUGA COUNTY)

I, ROY JONES A REGISTERED LAND SURVEYOR IN THE STATE OF ALABAMA DO HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT MAP OF THE FOLLOWING DESCRIBED PROPERTY TO WIT:

LEGAL DESCRIPTION

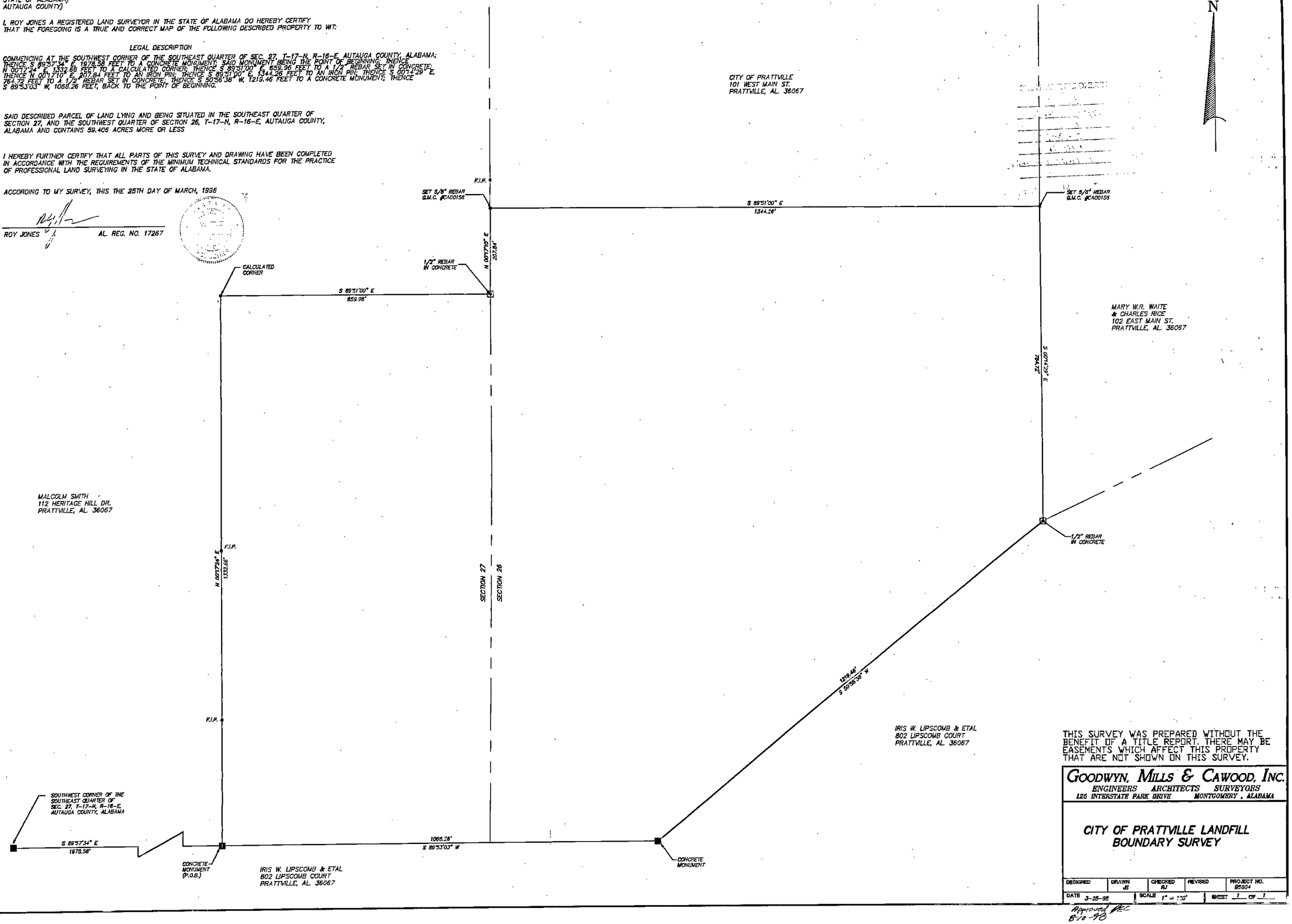
COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SEC. 27, T-17-N, R-16-E, AUTAUGA COUNTY, ALABAMA; THENCE S 89°57'34" E, 1978.58 FEET TO A CONCRETE MONUMENT; SAID MONUMENT BEING THE POINT OF BEGINNING; THENCE N 00°17'24" E, 1332.68 FEET TO A CALCULATED CORNER; THENCE S 89°51'00" E, 659.96 FEET TO A 1/2" REBAR SET IN CONCRETE; THENCE N 00°17'10" E, 207.84 FEET TO AN IRON PIN; THENCE S 89°51'00" E, 1344.26 FEET TO AN IRON PIN; THENCE S 00°14'29" E, 784.72 FEET TO A 1/2" REBAR SET IN CONCRETE; THENCE S 50°56'38" W, 1219.46 FEET TO A CONCRETE MONUMENT; THENCE S 89°53'03" W, 1068.26 FEET, BACK TO THE POINT OF BEGINNING.

SAID DESCRIBED PARCEL OF LAND LYING AND BEING SITUATED IN THE SOUTHEAST QUARTER OF SECTION 27, AND THE SOUTHWEST QUARTER OF SECTION 26, T-17-N, R-16-E, AUTAUGA COUNTY, ALABAMA AND CONTAINS 59.405 ACRES MORE OR LESS

I HEREBY FURTHER CERTIFY THAT ALL PARTS OF THIS SURVEY AND DRAWING HAVE BEEN COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM TECHNICAL STANDARDS FOR THE PRACTICE OF PROFESSIONAL LAND SURVEYING IN THE STATE OF ALABAMA.

ACCORDING TO MY SURVEY, THIS THE 25TH DAY OF MARCH, 1998

ROY JONES AL. REG. NO. 17267



THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. THERE MAY BE EASEMENTS WHICH AFFECT THIS PROPERTY THAT ARE NOT SHOWN ON THIS SURVEY.

GOODWYN, MILLS & CAWOOD, INC.
ENGINEERS ARCHITECTS SURVEYORS
125 INTERSTATE PARK DRIVE MONTGOMERY, ALABAMA

CITY OF PRATTVILLE LANDFILL BOUNDARY SURVEY

DESIGNED	DRAWN	CHECKED	REVISED	PROJECT NO.
	JS	RJ		98604

DATE 3-25-98 SCALE 1" = 100' SHEET 1 OF 1

Approved 8-10-98

C:\PLANFILL\PLANFILL.DWG

11 West Court Square
Andalusia, AL 36420
Post Office Box 278
Andalusia, AL 36420
Tel (334) 222-9431
Fax (334) 222-4018

cdge.com

August 14, 2024

Isabel Bela
Solid Waste Engineering Section
Land Division
1400 Coliseum Blvd.
Post Office Box 301463
Montgomery, AL 36130

Re: Response to ADEM April 9, 2024, Comment Email
Prattville Landfill Permit Renewal Application
Permit No. 01-06

Dear Ms. Bela,

On behalf of the City of Prattville and Jettison Environmental, CDG is submitting this response to address the comments from the Alabama Department of Environmental Management (ADEM) provided in an email dated April 9, 2024. ADEM's original comments, as well as the Permittee's responses, are provided below:

ADEM Comment No. 1:

The 2009 drawings included in the application reference a 2/19/04 Response to NOV letter that contains groundwater elevations. I haven't been able to find this document in our files, so would y'all happen to have a copy of either this or another item indicating how the current groundwater elevations were obtained?

Permittee's Response: The letter requested by ADEM was not able to be located. The groundwater report which included the hydrologic data collected at the facility is included with the application package dated January of 1997. The referenced groundwater report (see attached) noted that the groundwater in the area of the landfill ranged from 190 to 195 feet above mean sea level (MSL). Please note that the current drawings for the landfill show a minimum base grade of greater than 240 feet MSL.

ADEM Comment No. 2:

With the most recent cell certification being in Cell 4, is it correct that Cell 1 is not being worked in, making the current variance no longer applicable to the permit?

Permittee's Response: The current variance is no longer applicable to the permit as stated in the ADEM comment.

ADEM Comment No. 3:

Within the next 30 days, could you provide adjacent landowner information and a siting document indicating that the facility is outside of seismic impact zones/a fault displaced within the Holocene epoch?.

Permittee's Response: See attached seismic impact zone figures and adjacent landowner information.

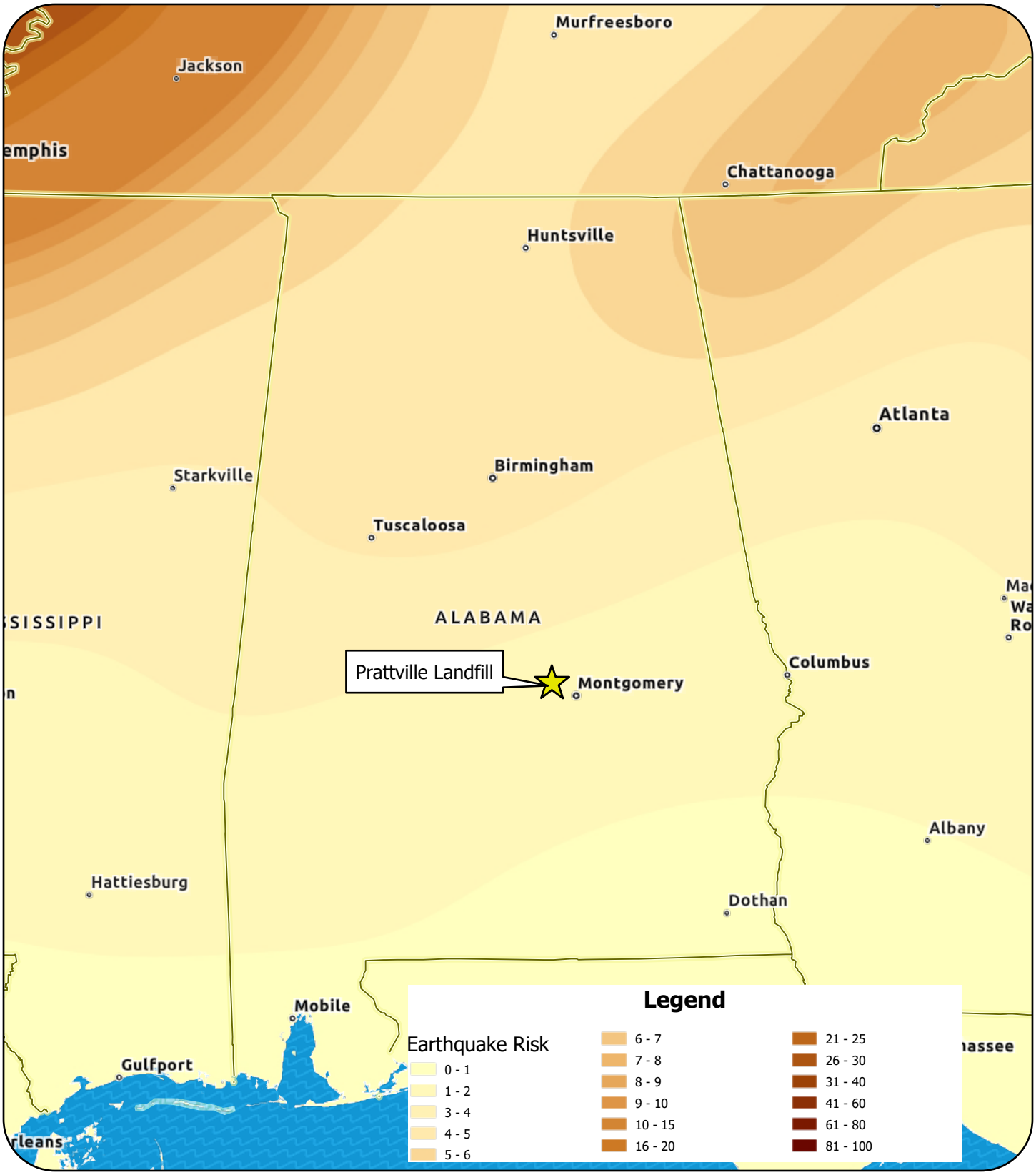
Please contact me at (334) 677-9431 or brad.anders@cdge.com if you have any questions regarding this response.

Sincerely,

CDG, Inc.

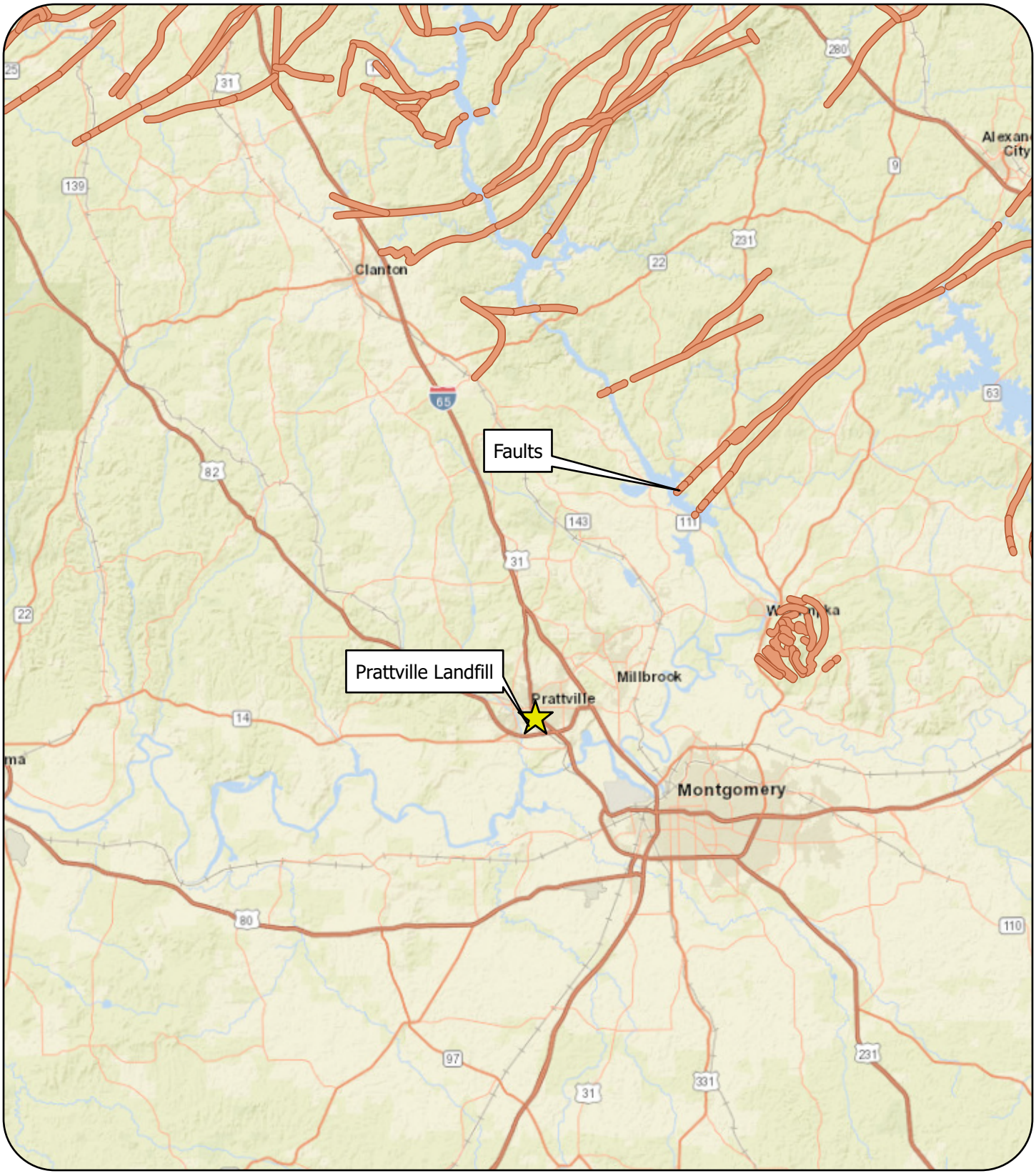
Brad Anders, P.G.
Project Manager

Attachments: Seismic Impact Zone Figures
Adjacent Landowner Documentation
January 1997 Groundwater Report



PRATTVILLE LANDFILL
SEISMIC ZONE MAP

N
W
E
S



PRATTVILLE LANDFILL
SEISMIC IMPACT ZONE MAP

CDG

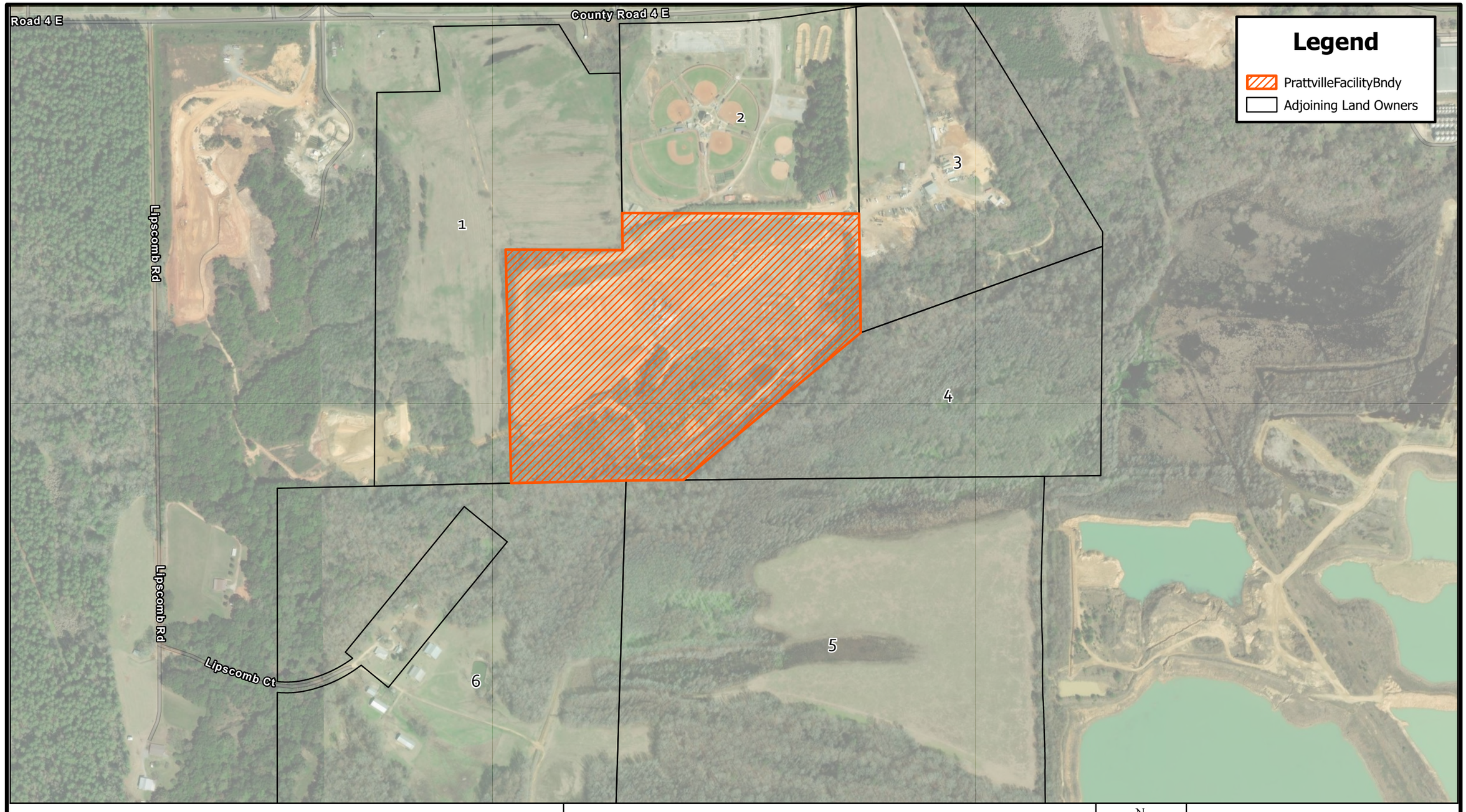
N
W E
S

0 2.5 5 10 15
Miles

PRATTVILLE C/D LANDFILL

Permit No. 01-06

Land Owners Adjacent to Landfill				
Number	**Name**	**Address**	**Parcel Number**	**Date Checked**
1	THE CITY OF PRATTVILLE	101 W MAIN ST PRATTVILLE, AL 36067	19 08 27 4 000 002.000	4/25/2024
2	THE CITY OF PRATTVILLE	102 W MAIN ST PRATTVILLE, AL 36067	19 07 26 0 000 004.000	4/25/2024
3	JETTISON ENVIRONMENTAL, LLC	812 COUNTY ROAD 4 E PRATTVILLE, AL 36067	19 07 26 0 000 001.003	4/25/2024
4	LIPSCOMB WILLIAM F	1153 LIPSCOMB ROAD PRATTVILLE, AL 36067	19 07 26 0 000 005.000	4/25/2024
5	LIPSCOMB WILLIAM F & ETALS	1154 LIPSCOMB ROAD PRATTVILLE, AL 36067	19 07 35 0 000 002.000	4/25/2024
6	LIPSCOMB WILLIAM F & ETALS	1155 LIPSCOMB ROAD PRATTVILLE, AL 36067	19 08 34 0 000 003.001	4/25/2024



ADJOINING LAND OWNER MAP 2024

PRATTVILLE C/D LANDFILL

PRATTVILLE, AL

CDG

N

Sheet No. 1

Drawn By:	JRA
Checked by:	JRA
Date:	APRIL 2024

PARCEL #:	**19 08 27 4 000 002.000**
OWNER:	THE CITY OF PRATTVILLE
ADDRESS:	101 W MAIN ST PRATTVILLE AL 36067
LOCATION:	COUNTY RD 4 PRATTVILLE AL 36067

	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CAB1**
Land: **384,000**	Imp: **0**	Total: **384,000**
Acres: **60.000**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY **LAND** BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 07 26 0 000 004.000**
OWNER:	THE CITY OF PRATTVILLE
ADDRESS:	101 W MAIN PRATTVILLE AL 36067
LOCATION:	0

	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CAB1**
Land: **211,200**	Imp: **0**	Total: **211,200**
Acres: **33.000**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 07 26 0 000 001.003**
OWNER:	JETTISON ENVIRONMENTAL, LLC
ADDRESS:	812 COUNTY ROAD 4 E PRATTVILLE AL 36..
LOCATION:	812 COUNTY RD 4 PRATTVILLE AL 36067

[MISCIMP-NONE]	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CAC1**
Land: **219,700**	Imp: **25,300**	Total: **245,000**
Acres: **36.000**	Sales Info: **04/17/2017**	**$235,000**

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 07 26 0 000 005.000**
OWNER:	LIPSCOMB WILLIAM F
ADDRESS:	1153 LIPSCOMB ROAD PRATTVILLE AL 36067
LOCATION:	LIPSCOMB CT PRATTVILLE AL 36067

	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CBC3**
Land: **72,400**	Imp: **0**	Total: **72,400**
Acres: **37.700**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 07 35 0 000 002.000**
OWNER:	LIPSCOMB WILLIAM F & ETALS
ADDRESS:	1153 LIPCOMB RD PRATTVILLE AL 36067
LOCATION:	LIPSCOMB CT PRATTVILLE AL 36067

	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CBC2**
Land: **711,900**	Imp: **0**	Total: **711,900**
Acres: **282.000**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 08 34 0 000 003.001**
OWNER:	LIPSCOMB WILLIAM F & ETALS
ADDRESS:	1153 LIPSCOMB RD PRATTVILLE AL 36067
LOCATION:	LIPSCOMB RD PRATTVILLE AL 36067

[MISCIMP-NONE]	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CBC2**
Land: **670,300**	Imp: **52,400**	Total: **722,700**
Acres: **245.000**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

GROUNDWATER ASSESSMENT REPORT
PRATTVILLE MUNICIPAL SOLID WASTE LANDFILL
PERMIT NO. 01-01A2
COUNTY ROAD 4
PRATTVILLE, AUTAUGA CO., AL

The CWA Group, Inc.

P. O. Box 8188
2623 Lower Wetumpka Road
Montgomery, Alabama 36110
(205) 264-4544

• Soil & Groundwater Environmental Services
• Consulting Hydrogeologist & Geotechnical Engineering
• Economic Geology

CWA PROJECT NO. 357.01N

PREPARED FOR:

THE CITY OF PRATTVILLE
P.O. DRAWER 20
PRATTVILLE, ALABAMA 36067

ATTN: MR. GARY FREEMAN

GROUNDWATER ASSESSMENT REPORT
PRATTVILLE MUNICIPAL SOLID WASTE LANDFILL
PERMIT NO. 01-01A2
COUNTY ROAD 4
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

Tommy Reid
Senior Geologist

L. Bruce Christian
President

PREPARED BY:
THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

NOVEMBER 22, 1995

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LANDFILL SITING INFORMATION
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LANDFILL SITING INFORMATION:

I. Floodplain and Wetlands

The proposed landfill will be located on the south side of Autauga County Road 4 approximately one mile west of the intersection of County Road 4 and U.S. Highway 31 (Figure 1). The southeastern most portion of the proposed site contains some potential wetlands and is within flood zones A and B. The 100-year flood is shown on the Autauga County Flood Insurance Rate Map Panel Number 010314 0225 B to be approximately 160 feet above mean sea level (MSL) as indicated in Figure 2. The lowest elevation of the property is approximately 150 feet above MSL.

The soil type, Roanoke, is located in the lower elevations within the floodplain according to the 1977 Soil Conservation Service Soil Survey, and consists of an area approximately 85 feet wide by 1,000 feet along the southeast property line (Figure 3). This soil type is listed as a hydric soil in *Hydric Soils of the U.S.*, as well as in the listing of hydric soils for Autauga County. Reconnaissance of the southern property line revealed that the inundated areas lie south of the property. The wettest area is located near point H-2 (Figure 1). Groundwater in this area was located approximately two feet below the surface on June 4, 1996. Post holes were dug to approximately four feet below the surface at points H-1 and H-3, and groundwater was not encountered. The property lines appear to mark the toe of the slope where the Alabama River Flood plain begins. No filling shall be conducted on the property at elevations below 165 feet above MSL. The four proposed cells outlined in the construction plans have the lowest proposed fill elevation of 205 feet above MSL.

II. Site Geology

The proposed landfill is located within the Fall Line Hills Physiographic District of the East Gulf Coastal Plain Physiographic Province. The southern most property line lies approximately one mile north of the Alabama River which has a broad bank of Quaternary aged alluvium and high terrace deposits along the river. High terrace deposits, sediments of the Eutaw Formation and alluvium materials appear to outcrop at the site. The high terrace deposits appear to form the higher flat ground on the north side of the property and the sediments of the Eutaw Formation appear to crop out and form the slopes, while the alluvium and low terrace deposit appear to form the low ground within the floodplain.

The Eutaw Formation is the predominant geologic unit which outcrops at the site. The formation ranges in thickness from approximately 200 to 400 feet where the entire formation is present. The Eutaw Formation is composed of a lower and upper unit separated by a calcareous clay that ranges in thickness from 50 to 150 feet. The lower unit consists of 30 to 50 feet of glauconitic sand interbedded with sandy clay. The upper unit ranges from 0 to 150 feet in thickness and is composed of massive glauconitic sand interbedded with calcareous sandstone and sandy limestone.

Groundwater monitoring wells have been installed near the proposed landfill in association with the former sanitary landfill which adjoins the proposed landfill site on the west side. All of the monitoring wells were reported to have been screened within the Eutaw Formation. The location of the monitoring wells are illustrated in Figure 4. In addition, test holes were dug along the southern boundary of the landfill on June 4, 1996. The pits revealed a predominant brown to yellowish brown silty sand material with some scattered well-rounded quartz pebbles, which is typical of the alluvial deposits in the area.

III. Hydrogeology

Both the high terrace deposits and the Eutaw Formation form aquifer systems in southern Autauga County and Northern Montgomery County. In the vicinity of the proposed landfill, the high terrace deposits are discontinuous and irregular in the outcrop area; therefore, the high terrace deposits do not form a major aquifer system in the area and are generally not developed for drinking water. The high terrace deposits do, however, transmit groundwater to the underlying Eutaw Aquifer. The site is located in the southern extent of the recharge area of the Eutaw Aquifer which generally corresponds to the outcrop area of the formation. The aquifer is partially recharged south of the site from the overlying alluvium materials.

Groundwater elevations north and west of the property have been measured in conjunction with the former sanitary landfill. Groundwater elevations in these areas ranged from approximately 190 to 195 feet above MSL. The general groundwater flow within the upper portion of the Eutaw Aquifer is southeasterly with an average hydraulic slope of 0.01 (see Appendix A). The upper most portion of the aquifer appears to mimic the surface topography and is recharging the Alabama River and associated tributaries of the river. Groundwater was located approximately two feet below the surface on June 4, 1996 (reference Figure 1, point H-2) near the property line just north (approximately 75-100 feet) of a wetland area which was inundated at that time.

North of the proposed landfill boundary, a zone of perched water has been identified at an elevation of approximately 220 feet above MSL. The perched zone is probably related to the high terrace deposits which commonly form hematitic layers which create perched water conditions. Reference Appendix A for groundwater elevations and groundwater contours.

IV. Future Hydrogeological Assessment

No additional hydrogeological assessment is scheduled for the four proposed cells. Additional hydrogeological assessment will be conducted during future landfill cell additions where filling activities will be conducted at elevations below 200 feet above MSL. The assessment will include either test pits or temporary monitoring wells to determine seasonal high groundwater elevations. The determination of seasonal high groundwater elevations will be made so that a minimum of five feet can be maintained between the base of the landfill cells and the seasonal high groundwater table.

V. Buffer Zones

A 100-foot buffer zone will be maintained along the east and south sides of the proposed landfill property. A 50-foot buffer zone is proposed along the west side between the existing landfill and

the proposed new landfill location, and a 50-foot buffer zone is proposed along the northern landfill boundary where the City of Prattville owns an additional 31.53± acres of unpermitted property.

VI. Adjacent Property Owners

The following is a list of all property owners adjacent to the proposed landfill.

1. City of Prattville
   101 West Main Street
   Prattville, Alabama 36067

2. Malcolm Smith
   112 Heritage Hill Drive
   Prattville, Alabama 36067

3. Mary W.R. Waite & Charles Rice
   102 East Main Street
   Prattville, Alabama 36067

4. Iris W. Lipscomb, et. al.
   802 Lipscomb Court
   Prattville, Alabama 36067

VII. Landfill Life Expectancy

New Prattville Construction/Demolition Landfill
Life Expectancy
08/05/96

Current C&D Disposal Rate 250 yd^3/day

300 yd^3/day used for life expectancy estimates

20% Compaction → 240 yd^3/day

Annual Disposal Rate = 62,300 yd^3/yr (compacted)

Estimated soil cover (weekly) 200 yd^3/wk

Annual C&D requirement with cover = 72,800 yd^3/yr

PMI requirement = 3,300 yd^3/yr

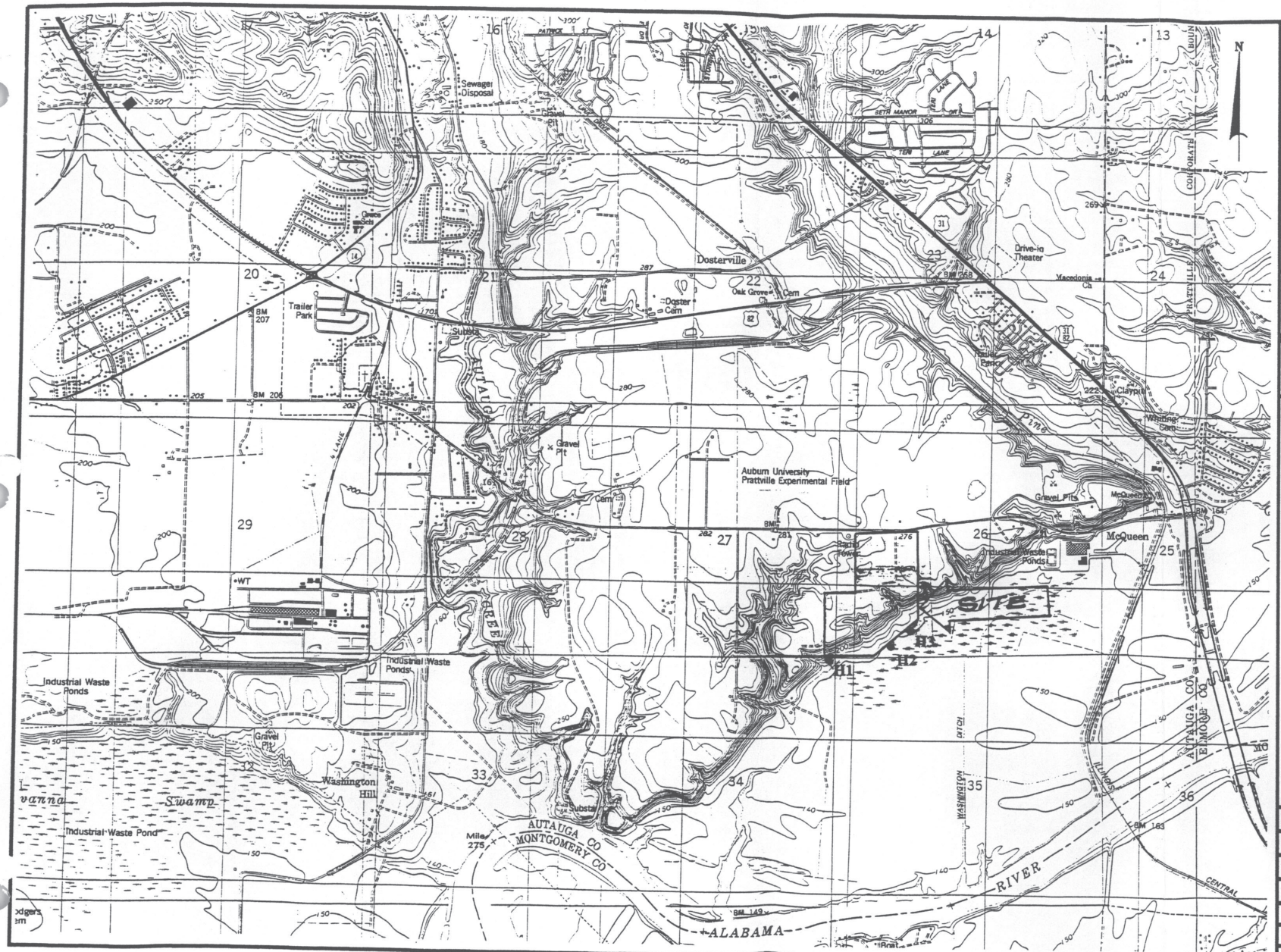
* Estimated net capacity 1,112,615 yd^3
(Cells 1-5)

*Estimated life 14.5 yrs
(Cells 1-5)

*The landfill area consists of 59.40 acres. 19.95 of the 59.40 acres are utilized in cells 1 through 5. Maintaining the same ratio of net capacity in cubic yards per acre over the remaining usable acres increases life expectancy an additional 15 years.

Estimated Life Entire Landfill Area = 30 years

FIGURES



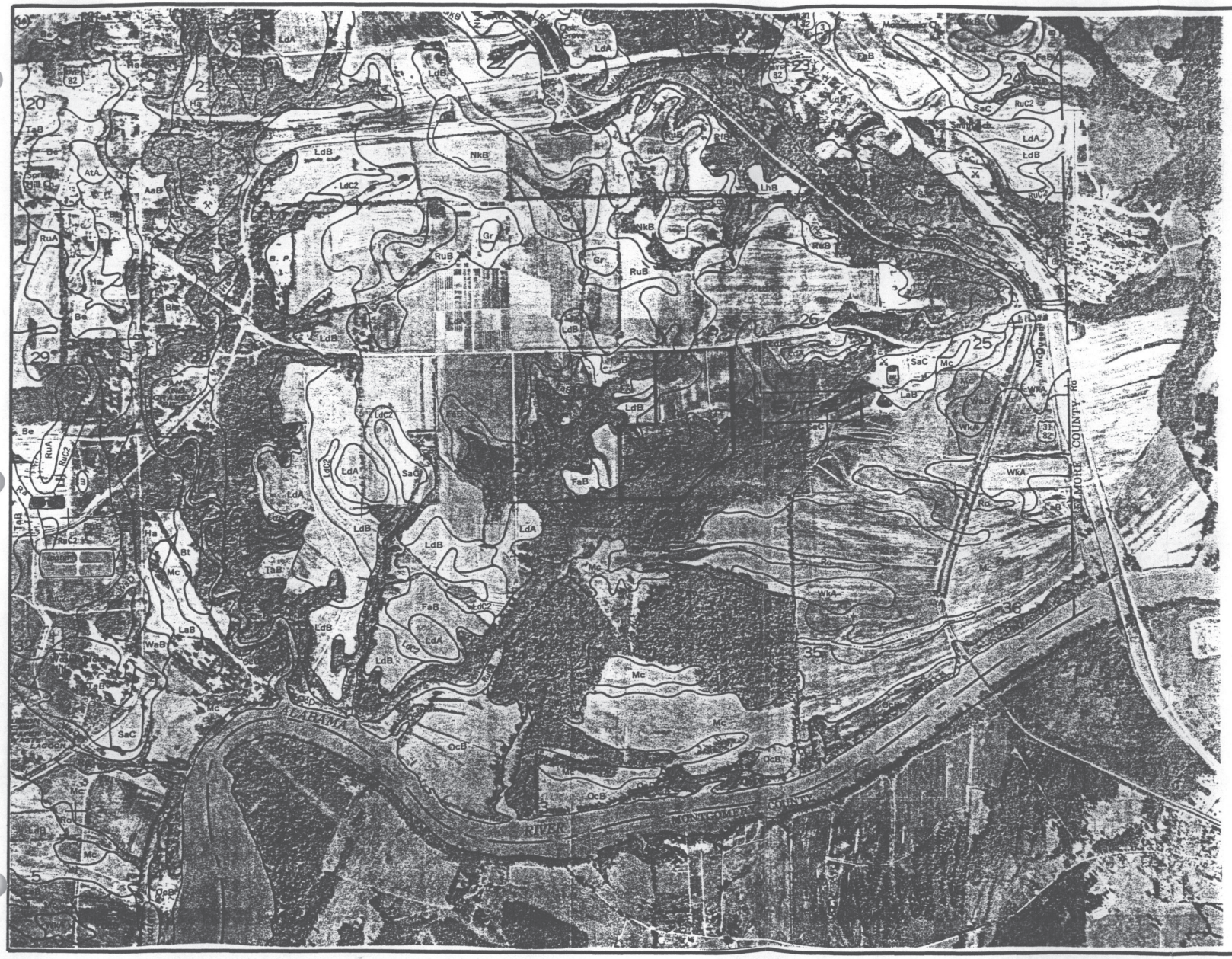
SHEET TITLE:
SITE LOCATION MAP
U.S.G.S. QUADRANGLE
PRATTVILLE, AL
1981
7.5 m.o.a.

CLIENT:
CITY OF PRATTVILLE
POST OFFICE DRAWER 20
PRATTVILLE, AL 36067

PROJECT:
CITY OF PRATTVILLE
CONSTRUCTION/DEMOLITION
LANDFILL

Goodwyn, Mills & Cawood
Environmental Consultants, Inc.
P. O. Box 3605
125 Interstate Park Drive
Montgomery, Alabama

DESIGNED:
DRAWN:
SCALE: 1" = 2,000'
DATE: APRIL 22, 1996
FIGURE NO.: 1
REV. NO.: **DATE:**



SHEET TITLE:

1977 SOIL CONSERVATION SERVICE SOIL SURVEY AERIAL PHOTOGRAPH

CLIENT:

CITY OF PRATTVILLE
POST OFFICE DRAWER 20
PRATTVILLE, AL 36067

PROJECT:

CITY OF PRATTVILLE
CONSTRUCTION/DEMOLITION LANDFILL

Goodwyn, Mills & Cawood
Environmental Consultants, Inc.

P. O. Box 3605
125 Interstate Park Drive
Montgomery, Alabama

DESIGNED:	
DRAWN:	
SCALE:	1" = 1,667'
DATE:	APRIL 22, 1996
REV. NO.:	DATE:
FIGURE NO.:	3

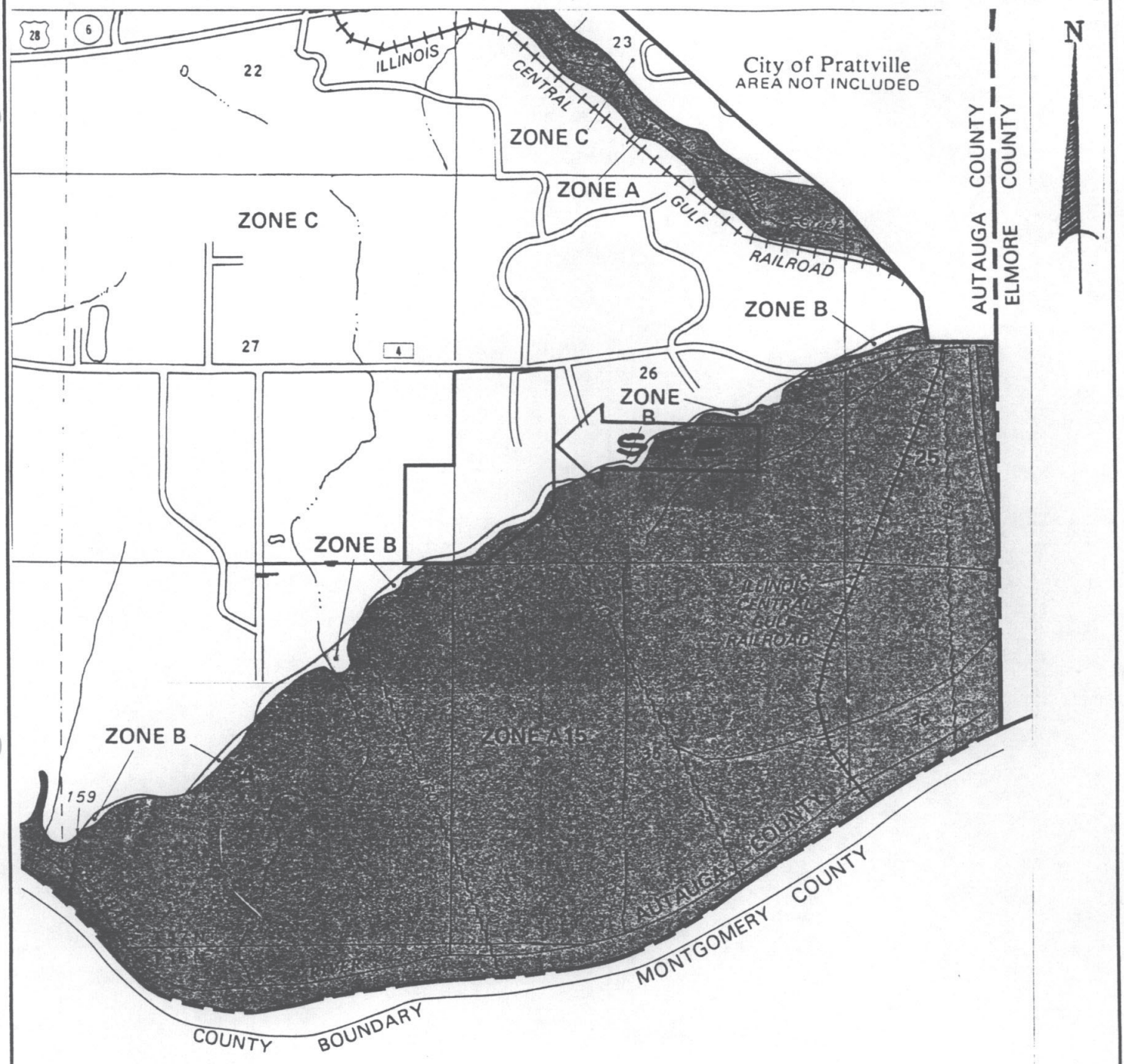


FIGURE 2

Goodwyn, Mills & Cawood Environmental Consultants, Inc. P. O. Box 3605 125 Interstate Park Drive Montgomery, Alabama	TITLE: FLOOD INSURANCE RATE MAP – PANEL 010314–0225B	DESIGNED:
		DRAWN:
	CLIENT: CITY OF PRATTVILLE PRATTVILLE, AL	SCALE: 1" = 2,000'
		DATE: APRIL 22, 1996

APPENDIX A
CWA GROUNDWATER MONITORING REPORT

GROUNDWATER ASSESSMENT REPORT
PRATTVILLE MUNICIPAL SOLID WASTE LANDFILL
PERMIT NO. 01-01A2
COUNTY ROAD 4
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SECTION 1 EXECUTIVE SUMMARY

Groundwater assessment activities were undertaken at the Prattville Municipal Solid Waste Landfill from June, 1995, to November, 1995. The additional assessment activities included a review of the history of landfill operations and previous assessment activities, the installation of 2 monitoring wells, collection and interpretation of groundwater elevation data, collection and interpretation of groundwater quality data and interpretation of stratigraphic data. The final data for this assessment was obtained upon the analyses of groundwater samples collected during the regularly semi-annual groundwater monitoring.

The history of landfill operations indicated that wastes were initially disposed in a gully formerly located sub-parallel to County Road 4. The gully was covered after disposal cells in the southern portion of the landfill were opened. The cover has subsided and water often remains ponded on the cover in certain areas of the landfill for periods of time after rainfall events.

Groundwater data indicates that perched water exists in the vicinity of the gully, as evidenced by groundwater data collected from Monitoring Well #1 and another boring drilled for this assessment. Groundwater data indicates that the surficial aquifer is within the Eutaw Formation, as both the overlying alluvium and the upper portion of the Eutaw Formation were unsaturated, according to logs of borings for 6 of the 13 monitoring wells that have been installed.

Stratigraphic information indicates that at least 5 of the 13 monitoring wells are underlain by a relatively low permeability Eutaw clay that had a reported thickness of at least 3.2 feet in 1 of the monitoring wells.

Volatile organic compound concentrations in groundwater samples collected from the monitoring wells indicate that the majority of VOC constituents present have a specific density greater that water. Such constituents would tend to migrate to areas structurally down-dip and not necessarily in the direction of groundwater flow.

A review of all of the information in concert indicates that wastes disposed in the former gully contain VOC's. The cover placed over the gully is allowing the percolation of rainwater into and through the wastes within the gully. The VOC's are transported downward to the Eutaw clay where they disperse laterally into the groundwater within the Eutaw Formation. Contaminant distribution indicates that the direction of migration is not consistent with the direction of groundwater flow.

It is recommended that the cover overlying the gully be repaired and constructed in a manner that would greatly reduce or essentially eliminate the continued percolation of rainwater through the gully. It is recommended that the only assessment activities conducted at the facility be limited to semi-annual monitoring to provide for sufficient review of the effects of cover repair on the concentrations of the constituents within the groundwater. It is hoped that concentrations will steadily decline as fewer VOC's are provided a means of migration downward into the Eutaw aquifer.

SECTION 2 INTRODUCTION

Figure 1 illustrates the relative locations of existing monitoring wells and springs and may be used for reference during the following discussions. Law Engineering conducted a Preliminary Ground-Water Assessment of the Prattville Municipal Solid Waste Landfill (the landfill) and presented the findings in a report dated March 1, 1993. Alabama Department of Environmental Management (the Department) responded to the report in a letter addressed to the City of Prattville (the City) and dated July 14, 1993. The letter stated that the "new monitoring wells MW-9, MW-10, and MW-11 and old wells MW-1, MW-2 and MW-3 are acceptable for continued monitoring"; that "permanent monitoring stations at the three springs should be established"; that "old wells (MW-4, MW-5, and MW-6) that had a record of being dry could be abandoned"; and that "further assessment should include expanded monitoring parameters, assessment of extent, source area delineation, and water well inventory".

The CWA Group, Inc. was retained by the City in January, 1995, to conduct semi-annual groundwater monitoring at the facility, and was retained in March, 1995, to conduct additional assessment activities. Regular semi-annual groundwater monitoring activities were completed in February, 1995, at which time permanent monitoring stations were established at the 3 springs as directed by the Department. A report of the monitoring event was provided to the Department.

In a letter addressed to the City and dated March 3, 1995, the Department related that abandonment [of Monitoring Well No.'s 4, 5 and 6] should be by over-drilling and grouting back to the surface with a bentonitic seal as per ASTM D18-21. A request for authorization of alternate procedures for the abandonment of Monitoring Well No.'s 4, 5 and 6 was made to the Department in a letter dated March 7, 1995. The proposed procedure was to fill the

well casings with grout and to place 2 ft. x 2 ft. x 6 inch concrete pads over the grouted wells. The Department denied the authorization of such abandonment procedures, again offering over-drilling and grouting as the acceptable procedure. Abandonment of the above listed wells was not undertaken, as it was and is believed unlikely that the entire well casings could be successfully removed from the 3 wells and is believed that partial removal may lead to an ineffective seal and the abandoned wells could be more problematic than the wells if left as they now are. Monitoring Well No.'s 4, 5 and 6 will, therefore, not be abandoned, will remain locked and will be excluded from future monitoring events.

SECTION 3 BACKGROUND INFORMATION

Prior to the initiation of the additional assessment activities reported herein, an effort was made to review the history of the landfill's operations, to reconstruct the history of assessment activities undertaken at the landfill and to extract relevant information from the previously collected data and correspondence.

It was reported (Law, 1993) that "Mr. Major Smith, the acting Mayor of Prattville, allowed the City to fill certain areas of his (Mr. Smith's) property which is contiguous to the present landfill" and that the practice "began in the mid 1970's".

Based on interviews with City personnel, waste was initially disposed in a gully that previously extended from an area just west of Monitoring Well No.'s 1, 8 and 12, westward and sub-parallel with County Road 4, to an area northwest of Monitoring Well #3. The gully was reported to be about 5 feet deep on the eastern end and about 40 feet deep on the western end, at which point the gully intersected another gully that extended generally southwestward. It was further reported that the gully was dry, except during periods of heavy rainfall.

After termination of disposal into the gully, a clay cap was placed over the area. The clay was obtained from the excavation for the southern most landfill cells (now capped). It was reported that the clay cap was usually compacted with the loaders and dozers as they drove over the cap, because compaction equipment was not normally available.

Monitoring Well No.'s 1 - 6 were installed by the City in the early 1980's. Logs of Borings were not compiled for the wells and no records are available as to the construction details. Measurements of the depths of the wells were made as a part of this

assessment and are discussed later in this report. It is reasonably assumed that the wells were completed with a 10 foot length of 2" I.D. No. 10 Slot Schedule 40 PVC Screen set as the bottom of the well casing.

Monitoring Well #7 was installed by Waste Away Group, Inc. in November, 1989, as a part of a groundwater assessment program undertaken by them. According to records provided by Waste Away, the boring for Monitoring Well #7 was drilled to a depth of 218.5 feet beneath the ground surface. The well was constructed with a 20 foot length of 2" I.D. No. 10 Slot Schedule 40 PVC Screen set at depths from 198.0 to 218.5 feet beneath the ground surface, with 2" I.D. riser extending to a depth of about 3 feet above the ground surface. Split-spoon samples were collected at approximately 10 foot intervals from 118 feet beneath the ground surface, apparently well into the Eutaw Formation, to boring termination.

Previous groundwater monitoring reports indicated that groundwater was present in Monitoring Well #1. Monitoring Well #1 has a measured depth of 29.8 feet beneath the top of the PVC riser. The depth of the groundwater in Monitoring Well #1 did not appear consistent with groundwater surface (head) elevation data collected from other wells. It was reported by Law (1993) that an attempt was made to install a Monitoring Well #8 in the vicinity of Monitoring Well #1, probably to obtain additional groundwater data. It was reported by Law (1993) that "a boring was advanced to a depth of 39.5 feet...at the location of MW-8 and subsequently abandoned. The decision to abandon on MW-8 and to relocate to MW-11...was made by representatives of the City of Prattville". Based on observations in the field, Monitoring Well #8 was not abandoned and was installed to a measured depth of 60.8 feet beneath the top of the PVC riser.

As Monitoring Well No.'s 4, 5 and 6 have regularly been dry and the Department has stated that they could be abandoned, as neither stratigraphic information nor construction details are available for Monitoring Well No.'s 1, 2 and 3, as limited stratigraphic information is available for Monitoring Well #7, as the boring for Monitoring Well #8 was reportedly abandoned but appears to exist, and as groundwater has often been present in Monitoring Well #1 at an anomalously high elevation, it was felt that data collected from Monitoring Well No.'s 9, 10 and 11 was the most useful.

Monitoring Well #9 was drilled to a reported depth of 97.5 feet beneath the ground surface (bgs), Monitoring Well #10 was drilled to a reported depth of 107.5 feet bgs and Monitoring Well #11 was drilled to a reported depth of 90.0 feet bgs. Logs of Borings for the wells indicated that each encountered a relatively typical section of alluvium with no reported drilling returns of disposed wastes, that each encountered a notable alluvium/Eutaw contact, and that each encountered a light gray clay layer within the Eutaw. Each of the borings was terminated at or in that clay layer. Samples collected from the clay layer were determined to have permeabilities of 2×10^{-6} cm/sec and 8×10^{-8} cm/sec.

Based on a review of the data available prior to the additional assessment activities, the following interpretations were inferred:

1) The groundwater present in Monitoring Well #1 was perched water and, when present, was anomalously high to the calculated groundwater elevations present in other wells;

2) The surficial aquifer was present wholly within the Eutaw Formation beneath the landfill;

3) A relatively low permeability clay exists beneath at least portions, and perhaps all, of the landfill;

4) The clay layer may represent a confining or partially confining layer that would serve to isolate the uppermost aquifer within the Eutaw Formation from the groundwater within lower portions of the Eutaw Formation;

5) A majority of the volatile organic compounds (VOC's) determined to be present in groundwater samples collected during previous monitoring events were more dense than water and would tend to migrate in the direction of the structural dip of the Eutaw clay layer and not necessarily in the direction of groundwater flow;

6) Monitoring Well #7 was screened at a minimum depth of 198 feet beneath the ground surface, which would be beneath the Eutaw clay layer, if that layer is present beneath the well; and

7) Monitoring Well #7 had a measured groundwater level of greater that 100 feet (maximum depth of water interface probe) beneath the top of the PVC riser, making the maximum possible groundwater elevation anamolously low to the calculated groundwater elevations of other wells. This indicates a likelihood that the screened interval of Monitoring Well #7 is isolated (probably by at least 1 clay layer) from the other monitoring wells at the landfill.

SECTION 4 CURRENT INVESTIGATIONS

It was decided that 2 additional monitoring wells, Monitoring Well No.'s 12 and 13, would be installed at the landfill. Monitoring Well #12 was installed north of Monitoring Well #1 and south of Monitoring Well #8. The location was selected in an effort to demonstrate to the Department that the groundwater present in Monitoring Well #1 was perched and should not be used in the generation of groundwater surface (head) contour maps of the Eutaw aquifer, to provide meaningful data concerning the distribution of contaminants within the upper portion of the Eutaw aquifer at a location east of the terminus of the old disposal gully, and in an attempt to establish trends for the structural appearance of the top of the Eutaw Formation and the top of the Eutaw clay.

An attempt was made to install Monitoring Well #13 south of County Road 4, at a location approximately 200 feet south of the illustrated location. Soil cuttings from the boring were described as wet, gray sandy clay and garbage (muck) from 6 feet to 35 feet bgs, consistent with descriptions of the former gully. A split-spoon soil sample was collected from the boring at a depth of 35 feet bgs and was described as a tan/gray (discolored) sandy clay and gravel. It is believed that the soils within that sample were representative of the base of the former gully. The boring was extended to a depth of 40 feet bgs and continued to have gray muck returns, which were apparently flowing in from up-hole. It was felt unlikely that a monitoring well could be successfully installed at the location, the boring was abandoned and the well was installed north of County Road 4. The location was selected in an attempt to provide a more remote groundwater elevation datum for the Eutaw aquifer, in an attempt to establish trends for the structural appearance of the top of the Eutaw Formation and the top of the Eutaw clay and in an attempt to obtain up-gradient, or background, groundwater quality data.

Monitoring Well #12 was initially drilled with 2¼" I.D. hollow-stem augers to establish a depth to the top of the Eutaw Formation. Split-spoon soil samples were collected at 5 foot intervals from 30 feet beneath the ground surface to the top of the Eutaw Formation, which was encountered at a depth of about 35 feet bgs. The boring was then over-drilled with 10¼" I.D./14" O.D. augers to a depth of 40 feet bgs. A 40 foot length of 8" I.D. PVC surface casing was installed in the boring and grouted into place.

The boring was subsequently extended beneath the surface casing using 3¼" I.D. hollow-stem augers. Split-spoon soil samples were collected at 2½ foot intervals from 70 feet bgs to the top of the Eutaw clay layer, which was encountered at a depth of 99½ feet bgs. A 15 foot length of 2" I.D. No. 10 Slot Schedule 40 PVC Screen and 85 feet of 2" I.D. PVC Riser were installed through the surface casing.

Monitoring Well #13 was initially drilled with 2¼" I.D. hollow-stem augers to establish a depth to the top of the Eutaw Formation. Split-spoon soil samples were collected at 5 foot intervals from 40 feet bgs to the top of the Eutaw Formation, which was encountered at a depth of about 46 feet bgs. The boring was then over-drilled with 10¼" I.D./14" O.D. augers to a depth of 50 feet bgs. A 50 foot length of 8" I.D. PVC surface casing was installed in the boring and grouted into place.

The boring was subsequently extended beneath the surface casing using 3¼" I.D. hollow-stem augers. Split-spoon soil samples were collected continuously from 60 feet bgs to the top of the Eutaw clay layer, which was encountered at a depth of 83 feet bgs. A 15 foot length of 2" I.D. No. 10 Slot Schedule 40 PVC Screen and 70 feet of 2" I.D. PVC Riser were installed through the surface casing. Logs of Borings are provided in Appendix A. Monitoring Well construction details are summarized on Table 1 and as-built

diagrams are included in Appendix B.

The 2 newly installed monitoring wells were developed on July 3, 1995, using dedicated disposable bailers. The wells were developed by the removal of approximately 10 casing volumes of water. The wells were allowed to recharge and stabilize and were purged on July 5, 1995, using dedicated disposable bailers. The wells were purged by the removal of approximately 5 casing volumes of water. The wells were sampled upon completion of the purging activities.

A pesticide/herbicide odor was noticed in the soil cuttings of Monitoring Well #13. The groundwater samples collected from Monitoring Well No.'s 12 and 13 were therefore analyzed by Method 8080 to determine Appendix 2 pesticides/PCB and by Method 8260 to determine Appendix 1 volatiles concentrations. The results of the analyses are summarized on Table 2 and Table 3. A copy of the laboratory report is included in Appendix C.

It should be noted that the well numbers for this sampling event are not consistent with the remainder of the report. The wells were originally numbered with Monitoring Well #12 being located north of County Road 4 and Monitoring Well #13 being located south of County Road 4. The numbers were reversed during a re-survey of the landfill. All data contained in this report, except for the laboratory report of these analyses, have been amended to reflect that numbering. The Table 2 and Table 3 summaries have been amended to reflect the currently accepted numbering and will be opposite of the laboratory report. The remaining portions of this assessment were delayed pending the results of the semi-annual groundwater monitoring event conducted for the landfill in September, 1995.

SECTION 5 SITE HYDROLOGY

Monitoring Well No.'s 12 and 13 encountered groundwater within the Eutaw Formation. The alluvium and a portion of the Eutaw Formation were unsaturated at both locations. No indications of a perched water table were noted. It was concluded that the groundwater encountered in the 2 borings was indicative of groundwater within the Eutaw aquifer. The initial boring for Monitoring Well #13, which was abandoned, encountered groundwater within landfill debris to a depth of about 35 feet bgs, underlain by unsaturated alluvium. It is reasonably believed that the groundwater encountered in the abandoned boring was perched and was not indicative of groundwater within an aquifer.

Groundwater level measurement were attempted in Monitoring Well No.'s 1, 2, 3, 7, 9, 10, 11, 12 and 13 on September 26, 1995, prior to purging activities for the collection of groundwater samples. Groundwater levels were not measured in Monitoring Well No.'s 4, 5, 6 and 8 as they are not included in the groundwater monitoring program. Monitoring Well No.'s 1 and 3 were determined to be dry at the time of measurement. Groundwater was not present in Monitoring Well #7 to a depth of 100 feet beneath the top of the PVC riser. The groundwater level probe used for measurement was limited to a depth of 100 feet by design.

Table 4 is a summary of the groundwater level and elevation data. Groundwater levels ranged from 58.13 to 91.80 feet beneath the top of the PVC risers. Groundwater levels were subtracted from the surveyed elevations of the PVC risers for an approximation of groundwater elevations. Figure 2 illustrates groundwater surface (head) contours based on the calculated groundwater elevations. Groundwater flow direction is estimated to be generally southeast at a gradient of approximately 0.008. The illustrated flow direction appears fairly consistent with previous illustrations, considering the additional available data.

Monitoring Well #12 was determined to have a groundwater elevation of 189.35 feet. Information obtained during the drilling of the well indicated that the groundwater encountered was representative of the Eutaw aquifer. Monitoring Well #1, although dry during this event, has previously been reported to have a groundwater elevation of 219.51 feet (Law, 1993). It should now be concluded that the groundwater in Monitoring Well #1, when present, is perched.

SECTION 6 SITE GEOLOGY

The Logs of Borings for Monitoring Well No.'s 8 - 13 were reviewed for an evaluation of the underlying stratigraphy. Depths of stratigraphic markers as reported during drilling activities were in feet bgs. A re-survey of the landfill did not include ground surface elevations. To provide an estimate of such, the heights of the PVC risers of the monitoring wells above the ground surface were measured and subtracted from the elevations of the PVC risers as reported in the survey. Elevations of the stratigraphic markers were then calculated by subtracting the reported depths of the markers (in feet bgs) from the calculated ground elevations. Depths bgs were rounded to the nearest ½ foot and elevations were rounded to the nearest ½ foot, to eliminate any misconception that the degree of accuracy of the measurements may be to the hundredths of a foot. For the purposes of this report, accuracies within a ½ foot are sufficient. Table 5 provides a summary of the stratigraphic level and elevation data.

Alluvium was encountered in each of the above listed borings at depths ranging from 34½ feet to 46 feet bgs. The alluvium was unconformably underlain by the Eutaw Formation. The base of the alluvium generally consisted of fine to coarse sand with large gravel that was quite distinct in appearance from the generally greenish/yellowish gray fine micaceous, glauconitic sand of the underlying Eutaw Formation. The Eutaw remained generally sandy to silty with occasional minor clay layers and nodules from the base of the alluvium to depths ranging from 83 to 99½ feet bgs. The Eutaw Formation was then described as a medium to light gray clay. Thickness of the clay in not known as it was not fully penetrated in any of the listed borings. The clay was reported to be at least 3.2 feet thick in Monitoring Well #9 (Law, 1993).

Figure 3 illustrates the structural contour of the top of the Eutaw Formation. Based on the available stratigraphic data, the top of the Eutaw Formation dips generally to the northwest at a gradient of about 0.006. Based on the dip direction and gradient of the top of the Eutaw Formation and on the gradient and direction of groundwater flow, it is estimated that groundwater would be present within the alluvium at a location approximately 1,850 feet northwest of Monitoring Well #13.

Figure 4 illustrates the structural contour of the top of the Eutaw clay. Based on the available stratigraphic data, the top of the Eutaw clay appears to be a closed high, with the maximum elevation centered about midway between Monitoring Well No.'s 2 and 11. Based on the illustration of the top of the Eutaw clay and the illustration of the groundwater surface (head) elevations, portions of the Eutaw clay may be above the groundwater surface. The areas where the Eutaw clay may be unsaturated are noted on Figure 4 by a dotted pattern.

SECTION 7 GROUNDWATER QUALITY DATA

Groundwater samples were collected from Monitoring Well No.'s 2, 7, 9, 10, 11, 12 and 13 on September 26, 1995. Monitoring Well No.'s 4, 5, 6 and 8 are not a part of the monitoring program. Monitoring Well No.'s 1 and 3 were dry at the time of sample collection. The 3 springs were also dry at the time of sample collection.

Table 6 provides a summary of the VOC concentrations of the groundwater samples collected for the September, 1995, event. A copy of the laboratory report is included in Appendix C. Relatively low levels of Trichlorofluoromethane; 1,1-Dichloroethene; 1,1-Dichloroethane; Cis-1,2-Dichloroethene; 1,1,1-Trichloroethane; Benzene; Trichloroethene; Tetrachloroethene; and Chlorobenzene were present in various of the groundwater samples. Also included on Table 6 are the specific densities of the compounds determined to be present. Detected compounds are highlighted by bold text.

Each of the above listed compounds, except for benzene, has a specific density greater than water. Due to their specific densities (except for benzene), the compounds are more likely to migrate from the source area toward a structurally down-dip location of any underlying (or lower) confining or partially confining layer. It is known that a relatively dense clay layer exists beneath the locations of Monitoring Well No.'s 9, 10, 11, 12 and 13, and may exist beneath the entire landfill. The structural appearance of that clay layer was reviewed in conjunction with the relative concentrations of the contaminants in the groundwater samples collected to estimate the appearance and extent of the contaminant plumes (except for benzene). Figures 5, 6, 7 and 8 illustrate the distribution of 1,1-Dichloroethane; Cis-1,2-Dichloroethene; Trichloroethene; and Tetrachloroethene, respectively. The illustrated plumes are considered representative of the general appearances of the other plumes, except for benzene.

SECTION 8 CONCLUSIONS

Based on the appearance of the contaminant distribution as illustrated, the structural appearance of the top of the Eutaw clay, analyses of the permeability of the Eutaw clay in consideration of the likely relatively high permeability of the overlying Eutaw sand, and information concerning the history of the landfill, the source area and mechanism of contaminant distribution can be inferred.

It is known that disposal into a gully formerly located sub-parallel to County Road 4 was undertaken in the early life of the landfill. The gully was filled with waste and subsequently capped using clay materials excavated from the southern portion of the landfill. The gully did not extend to the groundwater surface. It was reported that compaction of the cap was most often by loader and dozer and not by equipment designed for compaction. The cap has subsided and water stands on the ground surface for extended periods of time after rainfall events. This is most apparent during the winter months. It is known that surface water penetrates the cap, as evidenced by the perched water often present in Monitoring Well #1 and by the perched water encountered in the initial boring for Monitoring Well #13.

It is therefore concluded that certain of the wastes placed into the gully contained VOC's. Rainfall enters into the filled gully through the ineffective cap. The VOC's are dissolved into the percolating water or are carried along with that water through the underlying alluvial column, through the upper sand portion of the Eutaw Formation, down to the Eutaw clay. The relatively dense contaminants then migrate downward along the unsaturated Eutaw clay high into the Eutaw aquifer. Migration likely continues down-gradient as the VOC's dissolve into the groundwater, at which time their migration may be influenced somewhat by the direction of groundwater flow.

Groundwater samples collected from Monitoring Well #11 historically have been determined to have some of the highest concentrations of the samples collected, and to have the most constituents present. This indicates that the contaminants are migrating along structure, and allows for the conclusion either that the dip gradient of the Eutaw clay is greatest in the direction of Monitoring Well #11, or that the concentrations are high because the well is so near the point at which groundwater contacts the Eutaw clay, or some combination of the 2.

It was previously stated that Heptachlor Epoxide was determined to be present in groundwater samples collected from Monitoring Well No.'s 12 and 13. Groundwater samples were collected from Monitoring Well #11 on June 28, 1995, for a single well monitoring event unrelated to other field activities. The samples were analyzed by Method 8141 to determine organophosphorus pesticide concentrations, by Method 8080 to determine Appendix 2 pesticide/PCB concentrations, by 8150 to determine Appendix 2 chlorinated herbicide concentrations and by Method 8260 to determine Appendix 1 volatiles concentrations. Each of the pesticide/herbicide/PCB compounds for which analyses were performed were determined to be present at concentrations below method detection limits, or ND. VOC's were present in the sample collected, as in other reported monitoring events. A copy of the laboratory reports is included in Appendix C. Data concerning the specific density of Heptachlor Epoxide could not be found. It is relatively insoluble, reported to be only 0.275 mg/l at 25° C (Montgomery, et.al., 1990). Auburn University-Prattville Experimental Field is located approximately 2,000 feet northwest of the landfill. The possibility exists that the presence of Heptachlor Epoxide is due to its use by the experimental station on fields located in the vicinity of the landfill.

SECTION 9 RECOMMENDATIONS

It is recommended that the cover that currently exists over the former gully be repaired. The surface vegetation and surficial soils that may contain decayed organic matter or which demonstrate relatively high permeability should be excavated from the area overlying the former gully. The recommended area of cover repair in the north/south direction is from south of County Road 4 to just north of Monitoring Well No.'s 3 and 7, being approximately 600 feet wide; and in the east/west direction is from just east of Monitoring Well No.'s 1, 8 and 12 to north of Monitoring Well #7, being approximately 2,000 feet long. The above described area consists of approximately 1,200,000 $ft.^2$, or approximately 27 acres.

A minimum of at least 2 feet of additional cover material, classified as CL or CH, with a minimum plasticity index of 16, should be placed in lifts of a maximum of 1 foot at 95% compaction. The cover material should be graded with a minimum slope of 5%, with open ditches at the base of each slope to divert water from the cover material and to limit or restrict ponding in the vicinity of the cover. An additional 6 inches to 1 foot of soils suitable to support vegetation should be placed over the cover. Suitable vegetation should be established to minimize erosion and to maximize evapotranspiration.

It is recommended that any additional assessment activities, with the exception of semi-annual groundwater monitoring, be temporarily suspended for a period of 2 years pending an assessment of the effects of cover repair over time. It is hoped that the cover repair will greatly limit the amount of rainfall which percolates through the wastes within the former gully, thereby reducing the volume of leachate created. A reduction in leachate may affect a reduction in the concentrations of contaminants present within the Eutaw aquifer.

It is recommended that semi-annual monitoring reports be submitted to the Department which include a brief summary of field activities, a table of groundwater level and elevation data, a table of historic groundwater elevations beginning from the September, 1995, monitoring event, a groundwater surface (head) elevation contour map of the current monitoring event, a table of constituent concentrations which includes each of the parameters currently monitored, a table of historic VOC concentrations beginning from the September, 1995, monitoring event, and discussions of developing trends or notable changes which have occurred since the September, 1995, monitoring event.

SECTION 10 TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS

Well Number	Well Depth	Depth of Surface Casing	Screen Interval	Depth to Sand	Depth to Bentonite
MW12	100'	40'	98.0' - 83.0'	79.8'	76.9'
MW13	85'	49'	84.7' - 69.7'	65.6'	60.4'

NOTES:
Measured depths in feet beneath ground surface.

TABLE 2
GROUNDWATER SAMPLE PESTICIDES/PCB ANALYSES
MONITORING WELL NO.'S 12 AND 13
JULY 5, 1995

Parameter	MW12	MW13
Aldrin	ND	ND
Alpha-BHC	ND	ND
Beta-BHC	ND	ND
Delta-BHC	ND	ND
Gamma-BHC	ND	ND
Alpha-Chlordane	ND	ND
4,4'-DDD	ND	ND
4,4'-DDE	ND	ND
4,4'-DDT	ND	ND
Dieldrin	ND	ND
Endosulfan I	ND	ND
Endosulfan II	ND	ND
Endosulfan Sulfate	ND	ND
Endrin	ND	ND
Endrin Aldehyde	ND	ND
Gamma-Chlordane	ND	ND
Heptachlor	ND	ND
Heptachlor Epoxide	0.11	0.14
Methoxychlor	ND	ND
Arochlor-1016	ND	ND
Arochlor-1221	ND	ND
Arochlor-1232	ND	ND
Arochlor-1242	ND	ND
Arochlor-1248	ND	ND
Arochlor-1254	ND	ND
Arochlor-1260	ND	ND
Toxaphene	ND	ND

NOTES:

Units - µg/l, or parts per billion (ppb).
ND - Not detected within method reporting limit.

TABLE 3
GROUNDWATER SAMPLE VOC ANALYSES
MONITORING WELL NO.'S 12 AND 13
JULY 5, 1995

Parameter	MW12	MW13
Acetone	ND	ND
Benzene	3	2
Acrylonitrile	ND	ND
Bromochloromethane	ND	ND
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon Tetrachloride	ND	ND
Carbon Disulfide	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
Cis 1,2 Dichloroethylene	14	5
Chlorodibromomethane	ND	ND
Dibromomethane	ND	ND
1,2-Dibromo-3-Chloropropane	ND	ND
1,2 Dibromoethane	ND	ND
1,4-Dichlorobenzene	ND	ND
1,2-Dichlorobenzene	ND	ND
1,1-Dichloroethane	32	ND
1,2-Dichloropropane	ND	ND
Trans-1,4-Dichloro-2-Butene	ND	ND
Cis-1,3-Dichloropropene	ND	ND
Ethyl Benzene	ND	ND
2-Hexanone	ND	ND
Iodomethane	ND	ND
Methyl Isobutyl Ketone	ND	ND
Methyl Ethyl Ketone	ND	ND
Methylene Chloride	ND	ND
Styrene	23	ND
1,1,1,2-Tetrachloroethane	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND

Parameter	MW12	MW13
Tetrachloroethene	8	ND
Toluene	ND	ND
Trans 1,2 Dichloroethylene	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane	ND	ND
1,2,3 Trichloropropane	ND	ND
Vinyl Chloride	ND	ND
Vinyl Acetate	ND	ND
M,P-Xylene	ND	ND
O-Xylene	ND	ND

NOTES:

Units - µg/l, or parts per billion (ppb).
ND - Not detected above method reporting limits.

TABLE 4
GROUNDWATER LEVEL AND ELEVATION DATA
SEPTEMBER 26, 1995

Well Number	Well Depth	Elevation Ground	Elevation Top of PVC	Groundwater Level	Elevation Groundwater
MW1	29.8	272.09	275.17	Dry	—
MW2	77.0	254.41	257.41	58.13	199.28
MW3	59.2	257.84	260.84	Dry	—
MW4	91.8	279.63	282.55	NM	—
MW5	93.2	277.26	280.26	NM	—
MW6	71.0	265.34	268.42	NM	—
MW7	218	267.29	270.21	NM	—
MW8	60.8	273.03	275.61	NM	—
MW9	100.1	279.74	282.32	91.80	190.52
MW10	98.2	277.06	280.31	90.16	190.15
MW11	93.1	279.10	282.10	87.01	195.09
MW12	98.0	272.47	274.97	85.62	189.35
MW13	84.7	271.85	274.15	73.10	201.05

NOTES:

"Well Depth" - Measured distance from top of PVC riser to bottom of well casing, in feet.

"Elevation Ground" - elevation of ground surface adjacent to well as calculated by subtracting height of PVC riser above ground surface from elevation of top of PVC riser.

"Elevation Top of PVC" - elevation of the top of the PVC casing as surveyed, in feet above Mean Sea Level.

"Groundwater Level" - Distance from top of PVC riser to "static" groundwater level in well casing, in feet.

Groundwater level measured on September 26, 1995.

"Elevation Groundwater" - Elevation Top of PVC minus Groundwater Level, in feet above Mean Sea Level.

TABLE 5
STRATIGRAPHIC LEVEL AND ELEVATION DATA
MONITORING WELL NO.'S 8 - 13

Well Number	Well Depth	Elevation Ground	Depth to Eutaw	Elevation Eutaw	Depth to Eutaw Clay	Elevation Eutaw Clay
MW8	60.8	273.03	37½	235.5	Well Abandoned	
MW9	100.1	279.74	40½	239.25	94½	185.25
MW10	98.2	277.06	34½	242.5	95½	181.5
MW11	93.1	279.10	46	233.0	90	189.0
MW12	98.0	272.47	35	237.5	99½	173.0
MW13	84.7	271.85	46	225.75	83	188.75

Notes: "Well Depth" - Measured distance from top of PVC riser to bottom of well casing, in feet.

"Elevation Ground" - elevation of ground surface adjacent to well as calculated by subtracting height of PVC riser above ground surface from elevation of top of PVC riser.

"Depth to Eutaw" - Depth to the top of the Eutaw Formation as reported in Logs of Borings, in feet beneath ground surface, rounded to nearest ½ foot.

"Elevation Eutaw" - Difference between the elevation of the ground surface, rounded to the nearest ¼ foot and the reported depth of the top of the Eutaw Formation, in feet above Mean Sea Level.

"Depth to Eutaw Clay" - Depth to the first significant and apparently contiguous clay layer within the Eutaw Formation as reported in Logs of Borings, in feet beneath the ground surface, rounded to the nearest ½ foot.

"Elevation Eutaw Clay" - Difference between the elevation of the ground surface, rounded to the nearest ¼ foot and the reported depth of the first significant clay layer within the Eutaw Formation.

TABLE 6
GROUNDWATER SAMPLE VOC ANALYSES
SEPTEMBER 26, 1995

COMPOUND	Density	MW2	MW7	MW9	MW10	MW11	MW12	MW13
Trichlorofluoromethane	**1.476**	**BDL**	**BDL**	**11**	**BDL**	**BDL**	**3.4**	**BDL**
1,1-Dichloroethene	**1.218**	**BDL**	**BDL**	**16**	**BDL**	**11**	**2.8**	**BDL**
Methylene Chloride	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
trans-1,2-Dichloroethene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1-Dichloroethane	**1.1757**	**BDL**	**BDL**	**46**	**BDL**	**190**	**32**	**BDL**
Cis-1,2-Dichloroethene	**1.2565**	**47**	**1.2**	**11**	**BDL**	**130**	**17**	**11**
Chloroform	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,1-Trichloroethane	**1.3390**	**BDL**	**BDL**	**9.4**	**BDL**	**8**	**BDL**	**BDL**
1,2-Dichloroethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene	**0.8765**	**3.3**	**BDL**	**4.1**	**BDL**	**6.1**	**2.1**	**1.7**
Trichloroethene	**1.4642**	**3.4**	**BDL**	**11**	**BDL**	**3.0**	**1.7**	**BDL**
Carbon Tetrachloride	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2-Trichloroethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	**1.6227**	**15**	**1.3**	**55**	**BDL**	**21**	**5**	**BDL**
Chlorobenzene	**1.1058**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**2.2**	**BDL**
Ethylbenzene	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Bromoform	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,2,2-Tetrachloroethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2-Cloroethylvinyl ether	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dibromochloromethane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-Dichloropropane	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL

NOTES:

Units - µg/l, or parts per billion (ppb).
BDL - Below method detection limits.
NA - Not applicable.

SECTION 11 FIGURES

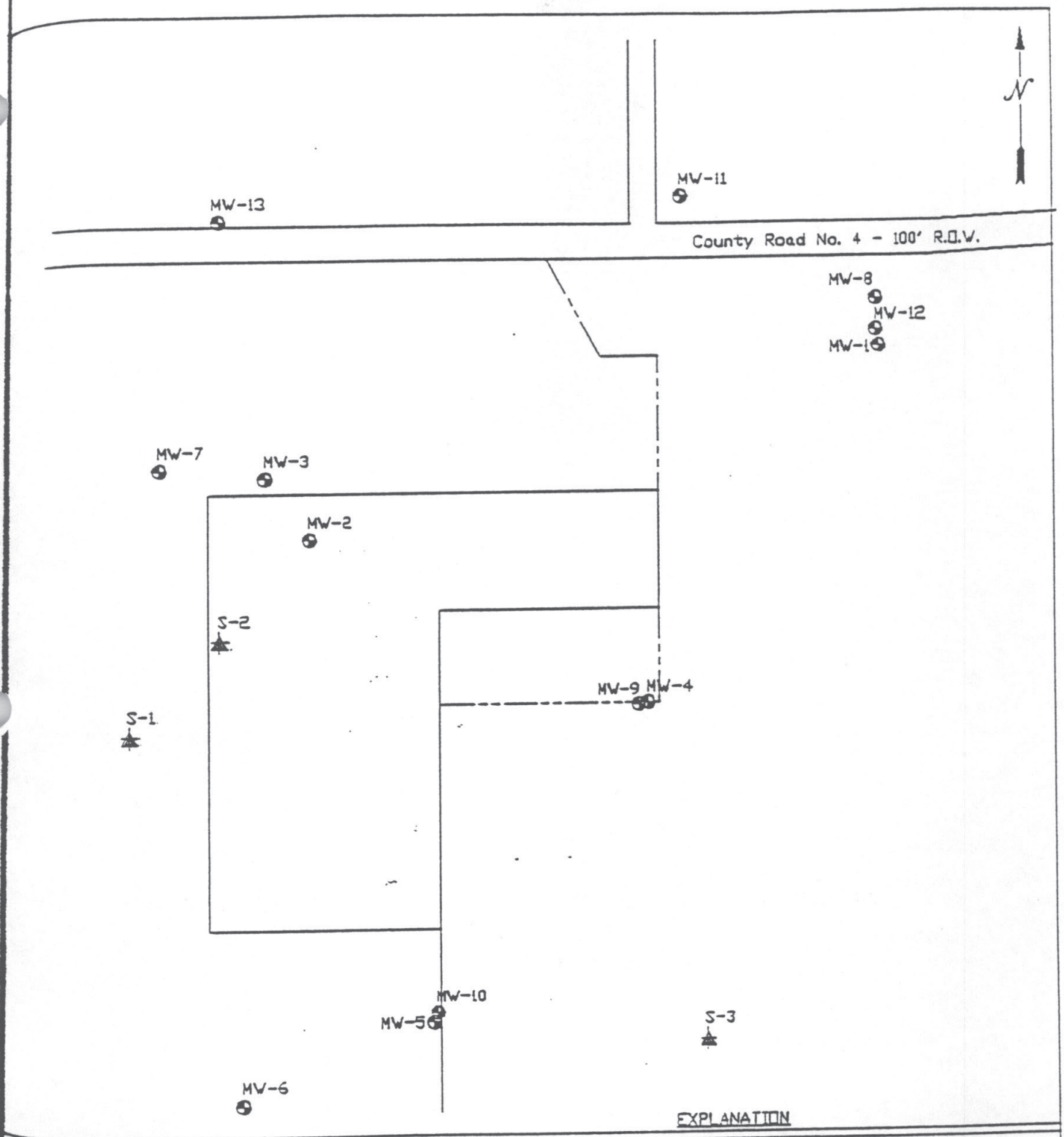


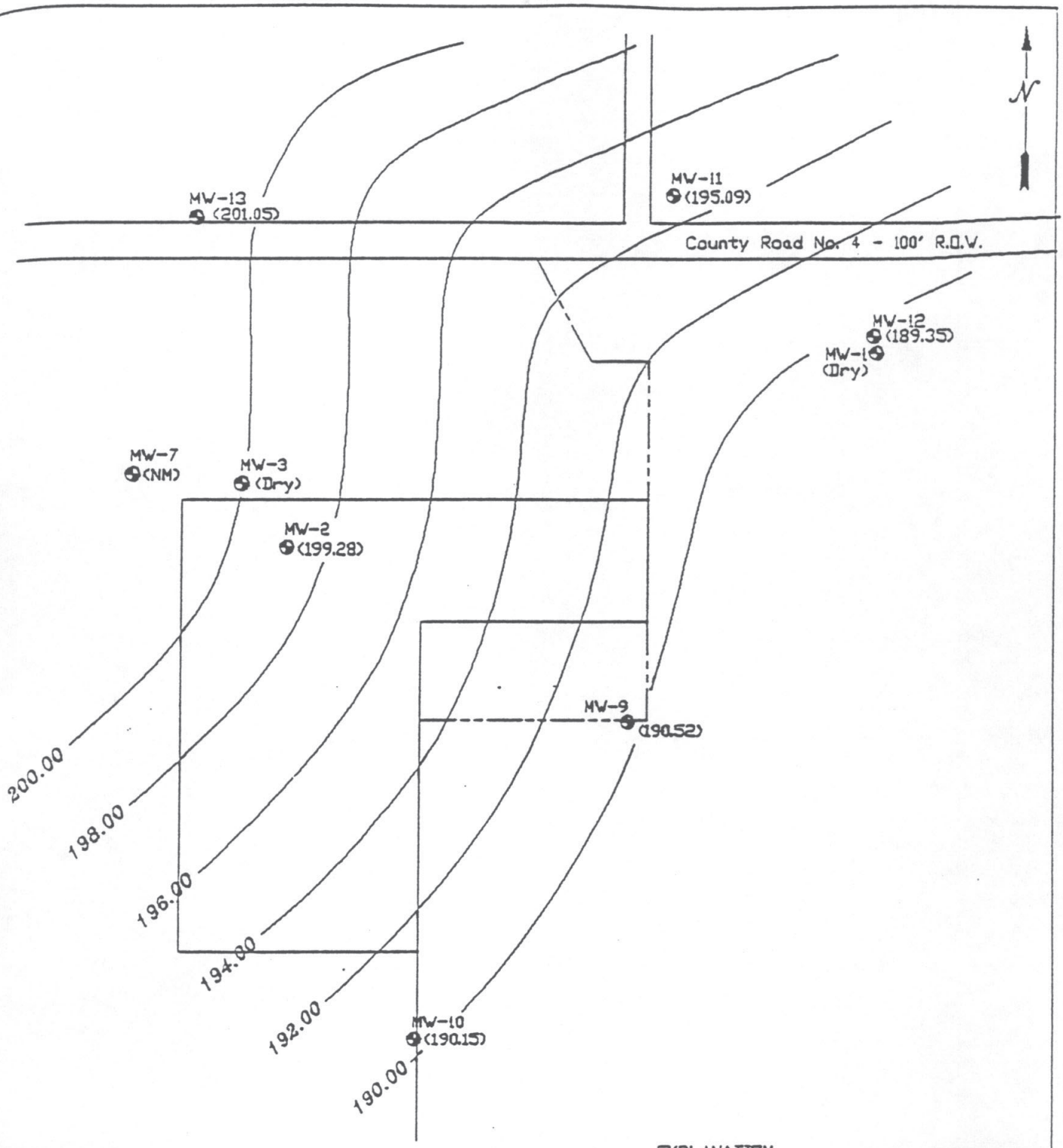
Figure 1

SITE PLAT

CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (190.52) Location of Monitoring Well #9 Groundwater (head) elevation (ft.)

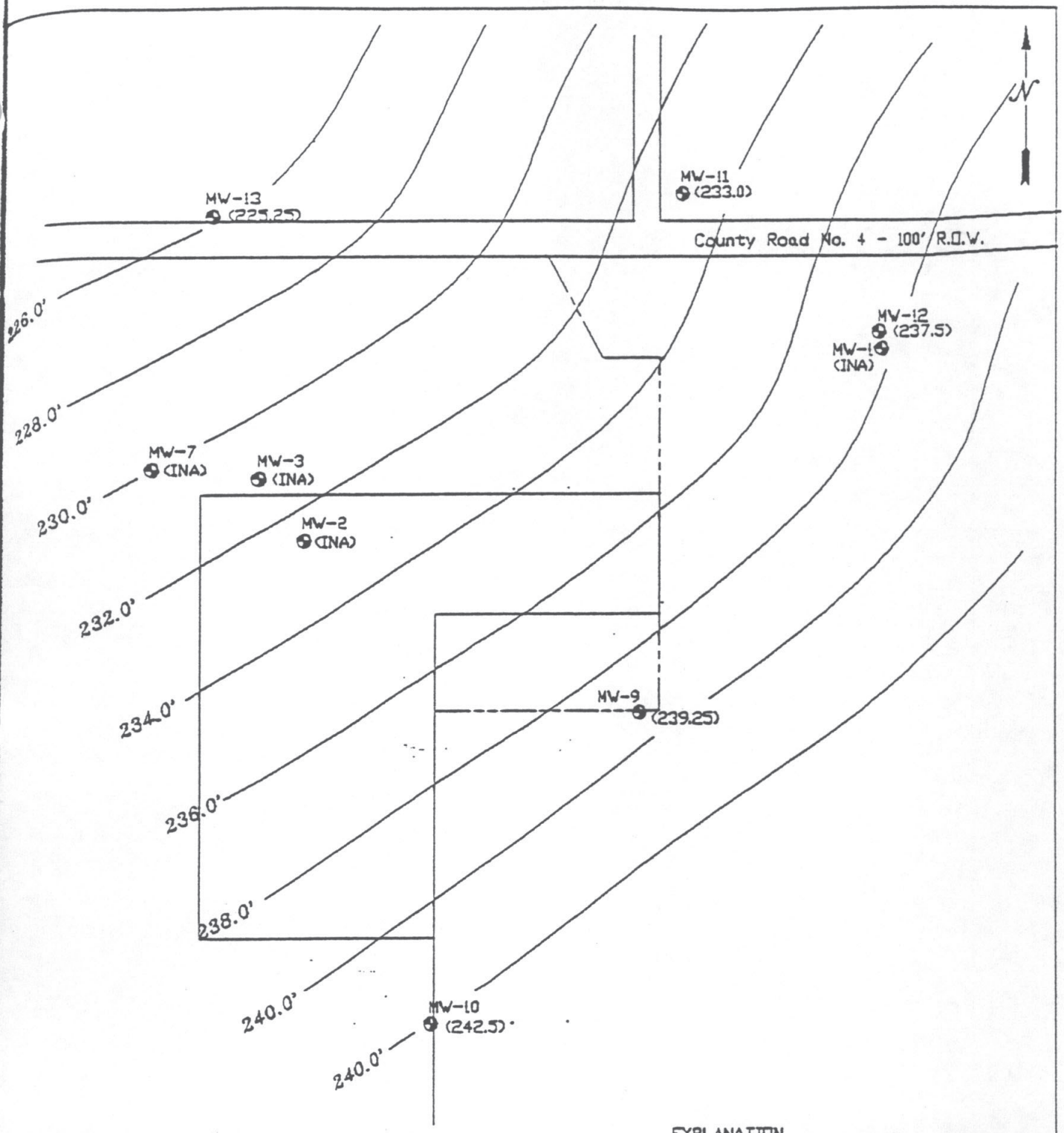
Contour Interval: 2.0 ft.

Figure 2

POTENTIOMETRIC (HEAD) ELEVATION MAP
EUTAW AQUIFER (09/26/95)
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
VJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (239.25) Location of Monitoring Well #9 Elevation Top of Eutaw Formation (ft.), rounded to nearest 0.25 ft.

INA Information not available

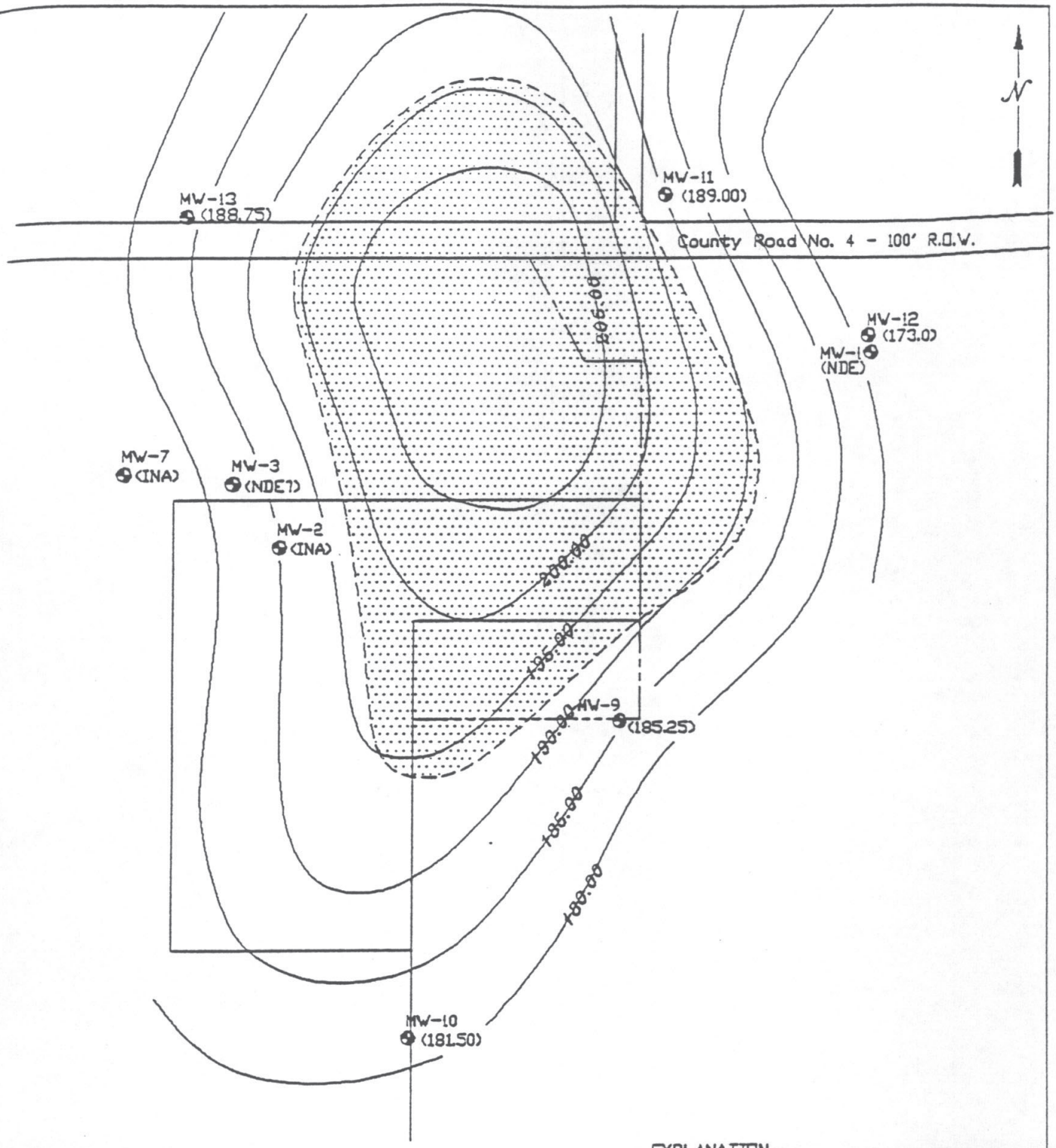
Contour Interval: 2.0 ft.

Figure 3

STRUCTURAL CONTOUR MAP
TOP OF EUTAW FORMATION
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (185.25)	Location of Monitoring Well #9 Elevation First Eutaw Clay, rounded to nearest 0.25 feet.
INA	Information not available
NDE	Not Deep Enough
	Indicates area where First Eutaw Clay is above current groundwater (head) elevation.

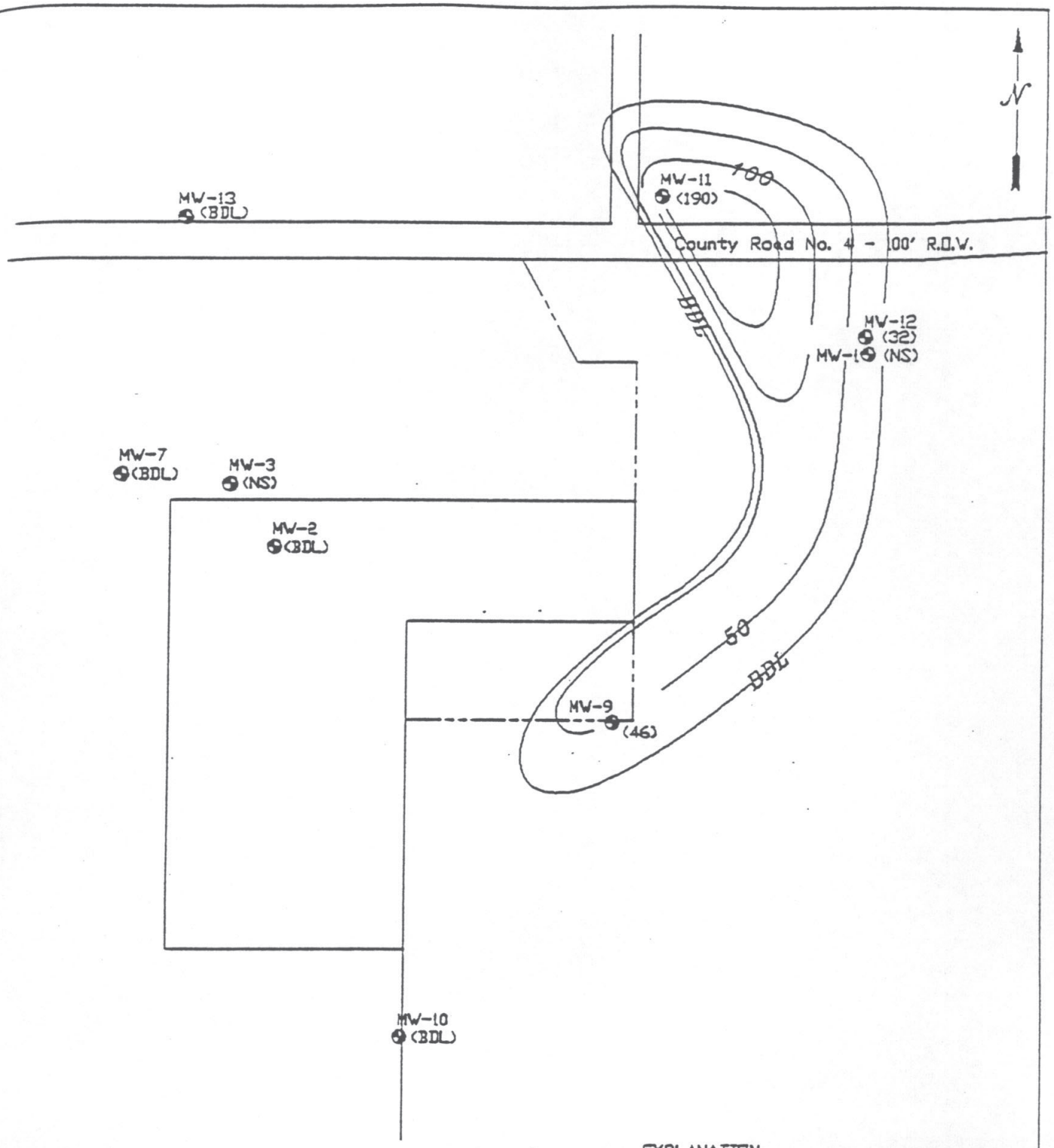
Contour Interval: 5.0 ft.

Figure 4

STRUCTURAL CONTOUR MAP
FIRST EUTAW CLAY
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJL		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (46)	Location of Monitoring Well #9 1,1 Dichloroethane Concentration (ppb)
BDL	Below detection limit

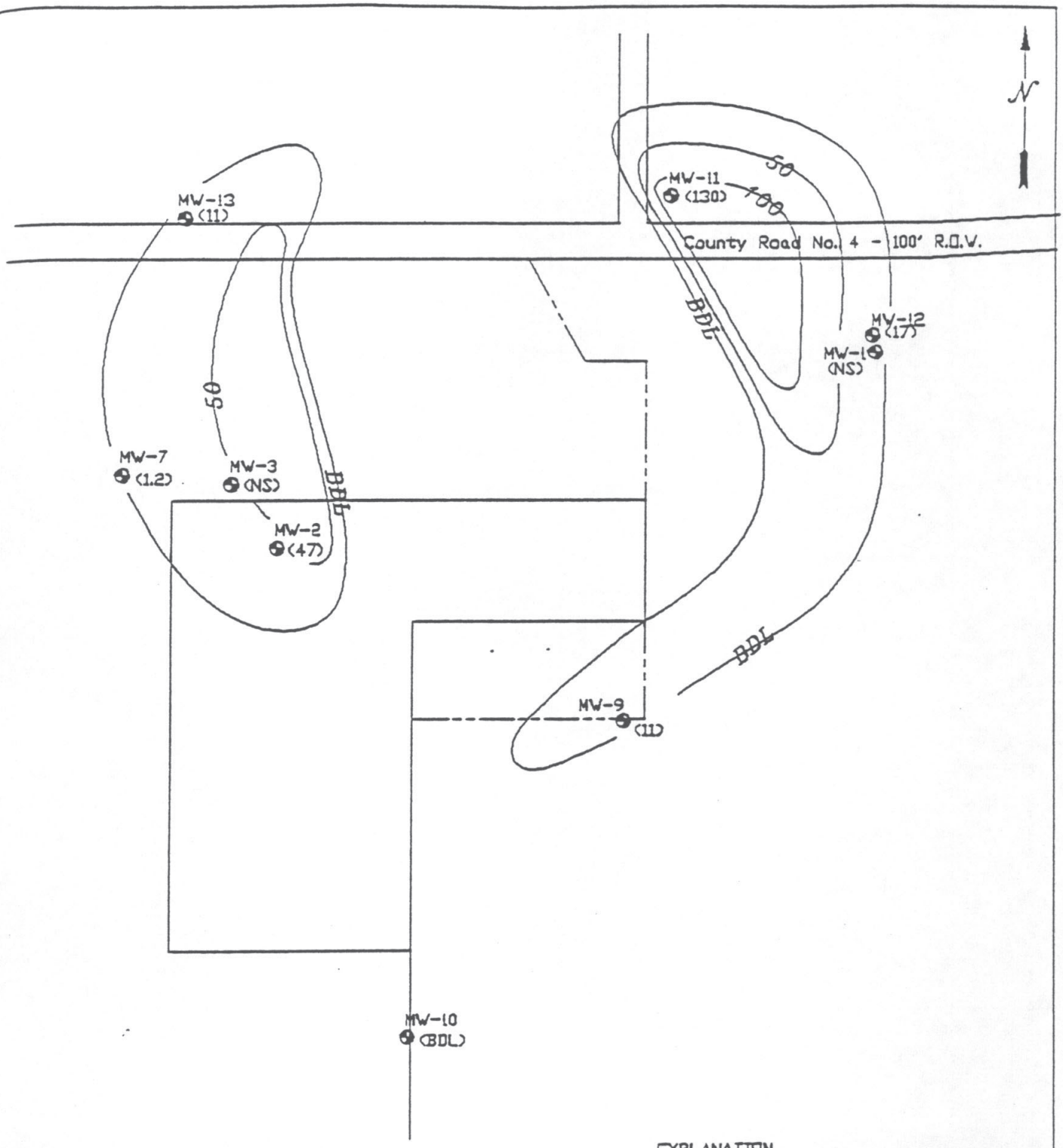
Contour Interval: 50 ppb.

Figure 5

1,1 DICHLOROETHANE DISTRIBUTION MAP
FIRST EUTAW AQUIFER
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9. (11)	Location of Monitoring Well #9 Cis 1,2 Dichloroethene Concentration (ppb.)
BDL	Below detection limit
NS	Not Sampled

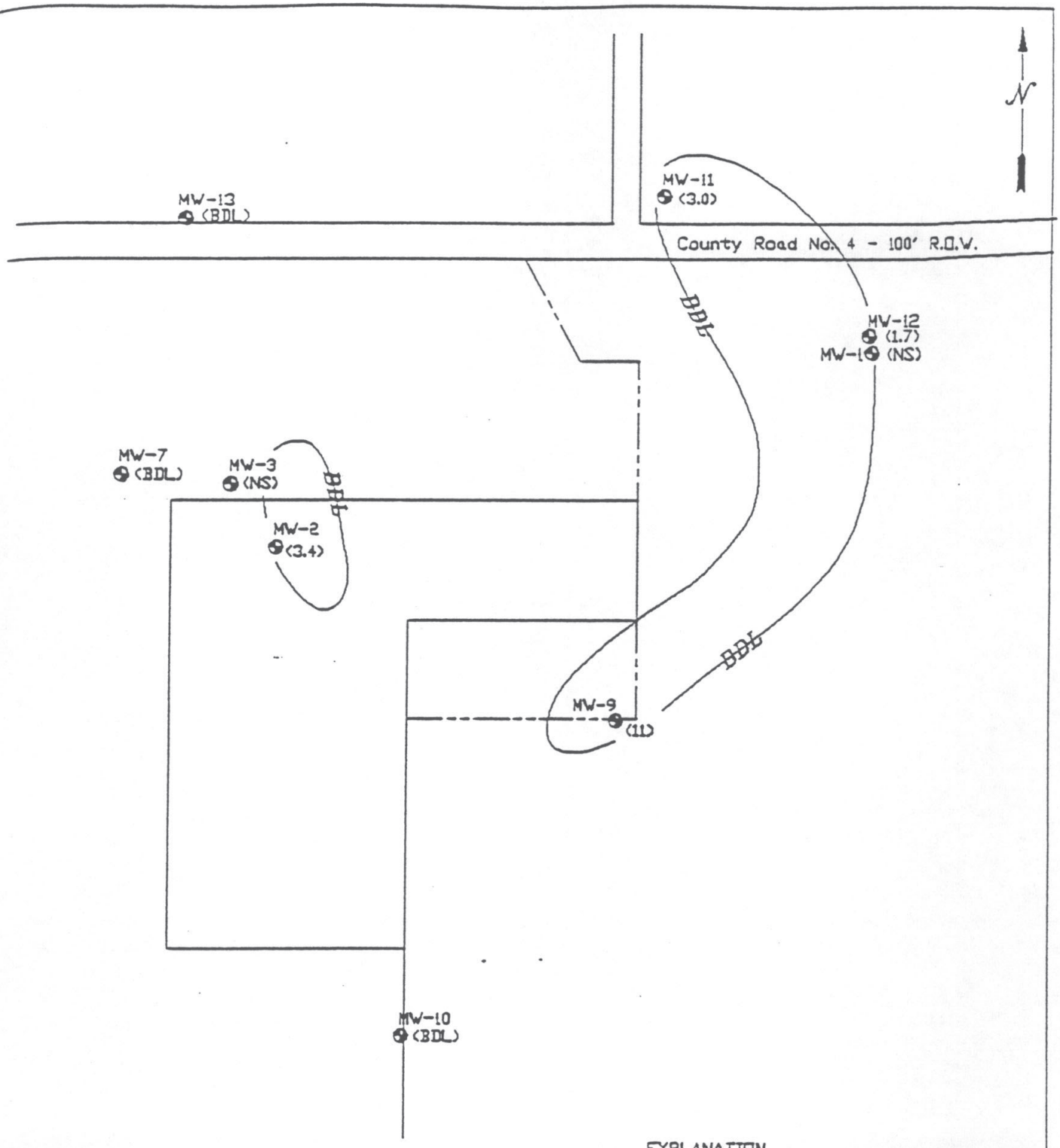
Contour Interval: 50 ppb.

Figure 6

CIS 1,2 DICHLOROETHENE DISTRIBUTION MAP
FIRST EUTAW AQUIFER
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJR		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (11)	Location of Monitoring Well #9 Trichloroethene Concentration (ppb)
BDL	Below detection limit

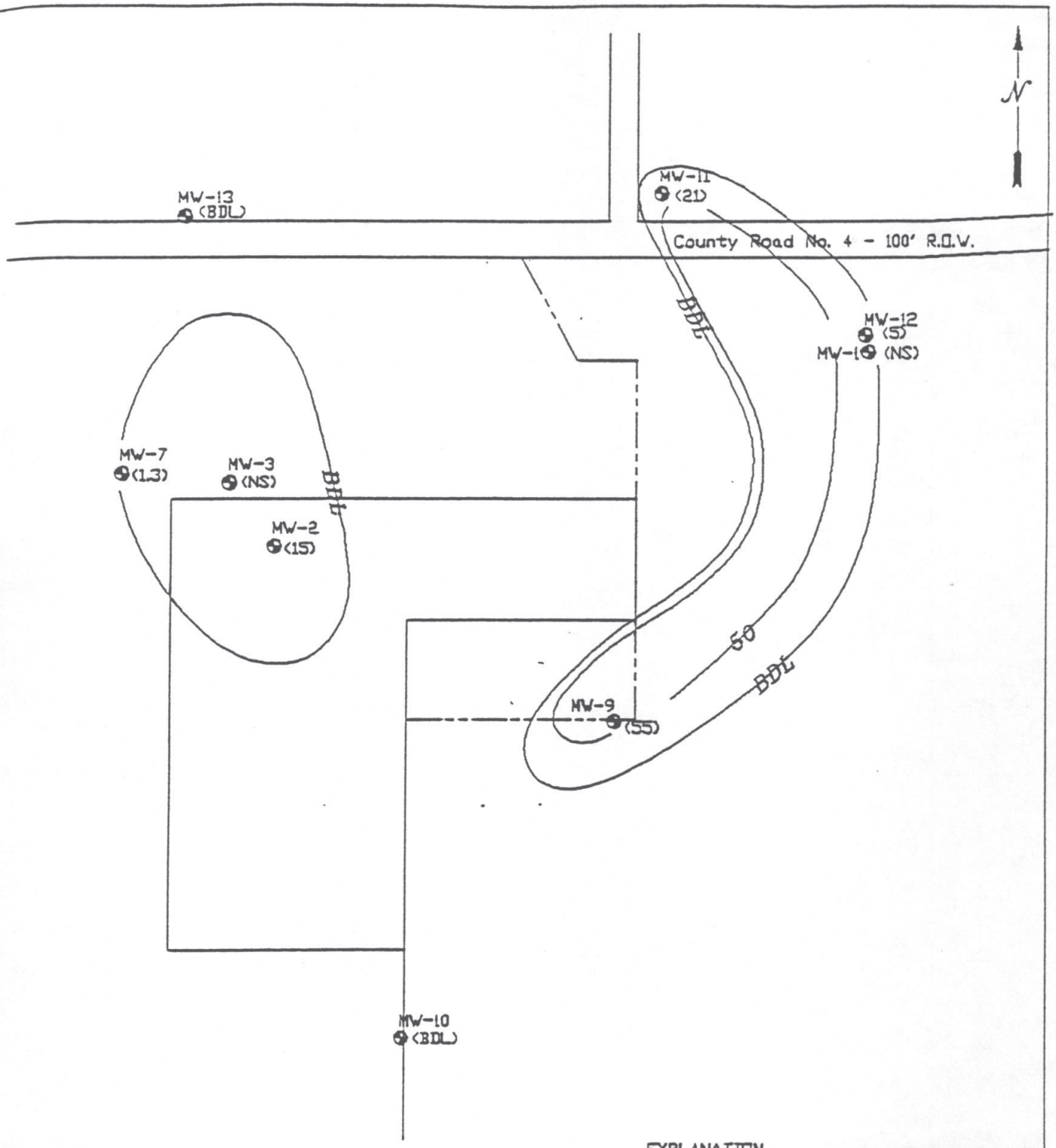
Contour Interval: 50 ppb.

Figure 7

TRICHLOROETHENE DISTRIBUTION MAP
FIRST EUTAW AQUIFER
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJL		11/22/95



EXPLANATION

Note: Locations of existing monitoring wells that are not currently utilized and locations of the springs are not illustrated.

200' 0 400'

SCALE 1:4,800

MW-9 (55)	Location of Monitoring Well #9 Tetrachloroethane Concentration (ppb)
BDL	Below detection limit

Contour Interval: 50 ppb.

Figure 8

TETRACHLOROETHENE DISTRIBUTION MAP
FIRST EUTAW AQUIFER
CITY OF PRATTVILLE LANDFILL
PERMIT NO. 01-01A
SW 1/4 SEC. 27, T17N, R16E
PRATTVILLE, AUTAUGA COUNTY, ALABAMA

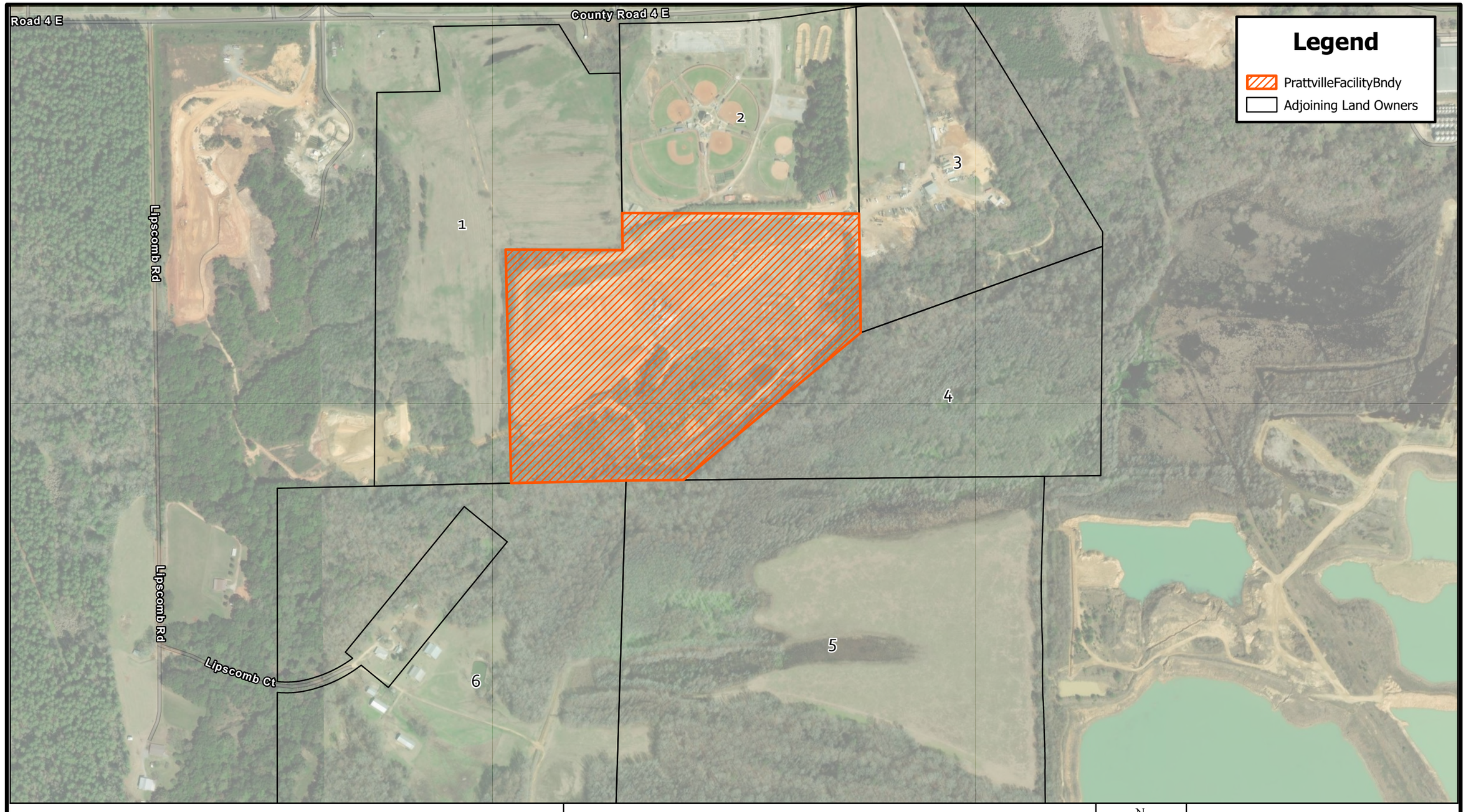
THE CWA GROUP, INC.
2623 LOWER WETUMPKA ROAD
MONTGOMERY, ALABAMA 36110

Designed by:	Checked by:	Date:
WJH		11/22/95

PRATTVILLE C/D LANDFILL

Permit No. 01-06

Land Owners Adjacent to Landfill				
Number	**Name**	**Address**	**Parcel Number**	**Date Checked**
1	THE CITY OF PRATTVILLE	101 W MAIN ST PRATTVILLE, AL 36067	19 08 27 4 000 002.000	4/25/2024
2	THE CITY OF PRATTVILLE	102 W MAIN ST PRATTVILLE, AL 36067	19 07 26 0 000 004.000	4/25/2024
3	JETTISON ENVIRONMENTAL, LLC	812 COUNTY ROAD 4 E PRATTVILLE, AL 36067	19 07 26 0 000 001.003	4/25/2024
4	LIPSCOMB WILLIAM F	1153 LIPSCOMB ROAD PRATTVILLE, AL 36067	19 07 26 0 000 005.000	4/25/2024
5	LIPSCOMB WILLIAM F & ETALS	1154 LIPSCOMB ROAD PRATTVILLE, AL 36067	19 07 35 0 000 002.000	4/25/2024
6	LIPSCOMB WILLIAM F & ETALS	1155 LIPSCOMB ROAD PRATTVILLE, AL 36067	19 08 34 0 000 003.001	4/25/2024



ADJOINING LAND OWNER MAP 2024

PRATTVILLE C/D LANDFILL

PRATTVILLE, AL

CDG

N

Sheet No. 1

Drawn By:	JRA
Checked by:	JRA
Date:	APRIL 2024

PARCEL #:	**19 08 27 4 000 002.000**
OWNER:	THE CITY OF PRATTVILLE
ADDRESS:	101 W MAIN ST PRATTVILLE AL 36067
LOCATION:	COUNTY RD 4 PRATTVILLE AL 36067

	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CAB1**
Land: **384,000**	Imp: **0**	Total: **384,000**
Acres: **60.000**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY **LAND** BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 07 26 0 000 004.000**
OWNER:	THE CITY OF PRATTVILLE
ADDRESS:	101 W MAIN PRATTVILLE AL 36067
LOCATION:	0

	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CAB1**
Land: **211,200**	Imp: **0**	Total: **211,200**
Acres: **33.000**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 07 26 0 000 001.003**
OWNER:	JETTISON ENVIRONMENTAL, LLC
ADDRESS:	812 COUNTY ROAD 4 E PRATTVILLE AL 36..
LOCATION:	812 COUNTY RD 4 PRATTVILLE AL 36067

[MISCIMP-NONE]	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CAC1**
Land: **219,700**	Imp: **25,300**	Total: **245,000**
Acres: **36.000**	Sales Info: **04/17/2017**	**$235,000**

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 07 26 0 000 005.000**
OWNER:	LIPSCOMB WILLIAM F
ADDRESS:	1153 LIPSCOMB ROAD PRATTVILLE AL 36067
LOCATION:	LIPSCOMB CT PRATTVILLE AL 36067

	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CBC3**
Land: **72,400**	Imp: **0**	Total: **72,400**
Acres: **37.700**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 07 35 0 000 002.000**
OWNER:	LIPSCOMB WILLIAM F & ETALS
ADDRESS:	1153 LIPCOMB RD PRATTVILLE AL 36067
LOCATION:	LIPSCOMB CT PRATTVILLE AL 36067

	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CBC2**
Land: **711,900**	Imp: **0**	Total: **711,900**
Acres: **282.000**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS

PARCEL #:	**19 08 34 0 000 003.001**
OWNER:	LIPSCOMB WILLIAM F & ETALS
ADDRESS:	1153 LIPSCOMB RD PRATTVILLE AL 36067
LOCATION:	LIPSCOMB RD PRATTVILLE AL 36067

[MISCIMP-NONE]	Baths: **0.0**	H/C Sqft: **0**
PRES0093	Bed Rooms: **0**	Land Sch: **LT/CBC2**
Land: **670,300**	Imp: **52,400**	Total: **722,700**
Acres: **245.000**	Sales Info: **$0**	

<< Prev Next >> [1 / 0 Records]

Tax Year : 2023

SUMMARY LAND BUILDINGS SALES PHOTOGRAPHS MAPS