

**Municipal
Services**



**Engineering
Company, P.A.**

SITE PLANNING/SUBDIVISIONS

SUBSURFACE UTILITY ENGINEERING (SUE)

October 20, 2009

Patricia Backus
Environmental Engineer
NCDENR – Solid Waste Section
401 Oberlin Rd.
Raleigh, NC 27605

Re: Application for Permit to Continue Operation
Lenoir County C & D Landfill, Permit No. 5403-CDLF-1997

Dear Ms. Backus:

In response to your January 8, 2009 letter, we submit the following:



General Application Requirements and Processing for C&DLF Facilities (15A NCAC 13B .0533)

1. *The cover sheet for the application did not include the location (address) of the facility.*
2. *The cover sheet for the application did not include the applicant's address.*
3. *The application should include a statement of the purpose of the submittal signed and dated by the applicant.*
4. *The cover sheet for the drawings of the Operation and Closure Plan did not include the applicant's name. Please put "County of Lenoir" at the top of the sheet and above the names of the officials that you have listed on the left side of the sheet. It would also be helpful to include the permit number in the title.*

The cover sheet has been revised in the plans and the text. The statement of purpose signed by the applicant. The Statement of Purpose has been placed in Section 1.0 .

Application Requirements for C&CLF Facilities (15A NCAC 13B .0535)

15A NCAC 13B .0547(4) states the permit amendment should be prepared in accordance with Rule .0535(b). Rule .0535(b) specifies that a complete application must include an updated engineering plan prepared in accordance with Rule .0539, an updated construction quality assurance plan prepared in accordance with Rule .0541, an updated operation plan prepared in accordance with Rule .0542, an updated closure and post-closure plan prepared in accordance with Rule .0543, and an updated monitoring plan prepared in accordance with Rule .0544. Therefore, the sections were included in the review as appropriate.

This landfill is on top of a closed MSW landfill; consequently there are no engineering required other than closure which is covered under Rule .1627.

Fac/Perm/Co ID #	Date	Doc ID#
54-03 J. Otero	10/29/09	DIN 3844

Site Study for C&DLF Facilities (15A NCAC 13B .0536)

15A NCAC 13B .0547(4)(a) states that the application must contain local government approval in accordance with Rule .0536(c)(11).

5. *The information provided did not document that the required public notice of the public meeting was given. The ads provided were blurred or difficult to read. There was no indication of the newspapers in which they appear or the date of publication. Please obtain an affidavit of publication with a readable copy of the ad attached from the newspaper(s) that published the required advertisements.*

The affidavits have been forwarded to us as soon as we receive them we will forward them to you.

6. *The application did not contain information for us to verify that all property owners sharing a common border were sent registered letters or that the letters were sent to the appropriate property owners. Please include a parcel map with adjacent property owners and addresses.*

A parcel map has been included in Appendix B.

7. *The application did not provide documentation of the content of the letters sent to property owners. Please include a copy of the letter so that it can be verified that the required information was included.*

Copies of the letters sent and the return receipts have been included in Appendix B.

Engineering Plan for C&DLF Facilities (15A NCAC 13B .0539)

8. *The application should include an engineering report supporting the final cap design. Requirements are listed in .0539(d). The engineering report must include a discussion of the analytical methods used to evaluate the design, definition of the critical conditions evaluated and assumptions made, and a list of technical references used in the evaluation. The information and calculations should demonstrate that the proposed cover will be stable and safe during the post-closure period. The previously approved closure plan did contain a stability analysis. You may include a copy of any information from a previously approved plan to support your design if nothing has changed.*

This is on top of an existing MSW landfill; consequently, there was no evaluation necessary. The closure will be done under Rule .1627 and any change in slopes needs to be done at the time of closure to assure that the steepest slopes, which are steeper than the prescribed slopes, have been analyzed for stability.

9. *Drawing CL1 does not illustrate existing conditions (.0539(e)(1)). Please review the requirements for drawings shown in .0539(e) and revise.*

Drawing CL1 is in the Closure Plan, therefore Rule .0539(e) doesn't apply, however if you look at the revised Operation Plan Drawings, drawing CD1 shows existing conditions according to the rules.

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The affidavits have been acquired and have been included in Appendix B. We need this.

6. *The application did not contain information for us to verify that all property owners sharing a common border were sent registered letters or that the letters were sent to the appropriate property owners. Please include a parcel map with adjacent property owners and addresses.*

A parcel map has been included in Appendix B.

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Drawing CL1 is in the Closure Plan, therefore Rule .0539(e) doesn't apply, however if you look at the revised Operation Plan Drawings, drawing CD1 shows existing conditions according to the rules.

Construction Requirements for C&DLF Facilities (15A NCAC 13B .0540)

15A NCAC 13B .0543(b)(1) states standards must be established for the scheduling and documenting of the closure of all C&DLF unit and design or the cap system. Construction requirements for the cap system must incorporate requirements from Rules .0540 and .0541 of this section.

10. ***Please address the requirements for survey control and location coordinates which would be important for construction during closure.***

Two existing iron with NC State Plane coordinates were shown on sheet 3 of the Operation Plan drawings and one of them has a elevation provided.

11. ***Are there or will there be any erosion and sedimentation control measures? How does this meet the requirements listed in .0540(7)?***

The existing measures will remain in place and be maintained.

Construction Quality Assurance for C&DLF Facilities (15A NCAC 13B .0540)

15A NCAC 13B .0543(b)(1) states standards must be established for the scheduling and documenting of the closure of all C&DLF unit and design or the cap system. Construction requirements for the cap system must incorporate requirements from Rules .0540 and .0541 of this section.

12. ***Item 2.1 – 2.5 of the closure plan discuss the procedures and tests that will be used in the construction of the cap. The closure plan does not include a Construction Quality Assurance (CQA) plan as described in .0541(b). The requirements of a CQA plan go beyond listing the tests and results. The responsibilities and authorities, inspection activities, sampling strategies and documentation that should be addressed in a CQA plan are needed in order to ensure that the work is done properly and to provide the data for CQA report to finalize the closure. [.0541(a) – (b)]***

The text in Section 2.1 of the Closure Plan has been revised to address this issue.

13. ***There was no mention of a CQA report after cap construction is completed. The purpose and requirements for the CQA report are in .0541(c). The closure plan should state what information will be included in the report and the certification of the report.***

The text in Section 2.1 of the Closure Plan has been revised to address this issue.

Operation plan for C&DLF Facilities (15A NCAC 13B .0542)

14. ***Please add cross sections to the phasing plan drawings. Please include projected waste disposal rates, cover and airspace remaining.***

We have added the baseline to revised sheet 3 of 5 and the cross sections have been added to the set by the addition of sheet 5A.

15. ***These drawings are supposed to be consistent with the engineering plan. No engineering plan was provided with this submittal. When you revise your application, please insure they are consistent.***

There are no Engineering Plans because this landfill is on top of the closed MSW. There are 5 years of fill represented on the Operation Plan drawings as required by Rule .0547(4)(b).

16. ***In many places, your Operation Plan simply repeats the requirements word for word from the Solid Waste Rules. Knowing the rules is good, however, the Operation Plan should also describe how you will maintain and operate the facility such that you will meet the requirements. For example, 6.e. describes the need for signs with the hours of operation, permit, etc. is almost exactly word for word as stated in .0542(j)(5). Your operation plan should include your information on the days and times you are open to the public, etc.***

The written operation plan has been revised to reduce redundancy.

17. ***The Operation Plan is poorly organized and difficult to follow. Most of the 1.1 Introduction should be shown in existing or new sections. For example, it would seem more appropriate to list the types of waste you will receive in the waste acceptance section. I cannot review the plan in its current form. Please review the requirements and rewrite the operation plan in a useable format.***

The written operation plan has been revised to reduce redundancy.

Closure and Post-Closure Requirements for MSWLF Facilities (15A NCAC 13B .1627) and Closure and Post-Closure for C&DLF Facilities (15A NCAC 13B .0543)

18. ***The cap system must be designed and constructed to have a permeability less than or equal to the soils underlying the landfill, or the permeability specified for the final cover in the effective permit, or a permeability no greater than 1.0×10^{-5} cm/sec, whichever is less. Please include a discussion of the basis for your design assumptions in the engineering report.***

The assumption is that the landfill we built in the sand and the cap will be the prescribed cap.

19. ***Item 2.2 is exactly the same as the first paragraph of Item 2.3 which follows it.***

The text in Sections 2.2 and 2.3 has been revised.

20. ***Post-settlement surface slopes were not addressed.***

Maximum slopes will be 4:1 or 25% and minimum slopes will be 20:1 or 5%.

21. ***The plan states that native vegetation will be used as approved by the Erosion Control Plan. A plan was not included nor was any reference given to a plan.***

The text in Section 2.4 has been revised and seeding specifications have been added to the Closure drawings.

22. ***All closure activities must be with 180 days. The first sentence in the third paragraph agrees with this. The first sentence in the first paragraph could be misinterpreted.***

As stated, the cap closure will begin within 30 days of the notice of final waste received and will be completed within 180 days of the notice of final waste received.

23. ***The closure plan did not include an estimate of the maximum inventory of waste onsite over the active life of the landfill facility.***

The text has been revised in Section 2.1 to show the maximum inventory of waste.

24. **More detail is needed for the cost estimate of the closure activities. For example, in item 1 the unit cost for soil is \$9.00 per cubic yard versus \$4.00 in item 2. What makes the unit costs different? Provide the basis for all the costs assumed.**

In item 1 the soil is required to be 1.0×10^{-5} cm/sec soil which is more expensive than the erosive soil layer in item 3(not item 2).

25. **Please include the in the post-closure plan the use restrictions listed in .0543(f)(3) and the need for approval by the Division for a change in use.**

The text has been revised in Section 3.1 to address this issue.

26. **Do you plan to mow the grass? Are there gates, roads, signs, etc. that will need to be monitored and/or maintained? Please include in plan and estimate.**

The text has been revised in Section 3.1 to address this issue.

27. **The description of monitoring activities should provide details. For example, what are the locations that will be sampled? What analyses will be run? Have these locations and analyses been approved by the Division? If so, include that information. This supporting information is needed in order to evaluate the post-closure cost estimate.**

This information has been submitted with the Corrective Action Plan to Zinith Barbee.

28. **Please note that at the end of the post-closure care a professional engineer will need to certify that the post-closure care was completed in accordance with the post-closure plan. Unless he has been there the whole post-closure period, he will probably need documentation of the care to make his certification. Do you plan to keep records of the maintenance and monitoring activities in the landfill records? Will they be adequate for a PE certify? If so, please describe.**

Administration/Record keeping and Certification have been added to the Post-Closure cost estimate in Section 3.2.

29. **More detail is needed for the costs in the post-closure estimate similar to comment 24.**

The text has been revised in Section 3.2 to address this issue.

Please find enclosed two (2) copies of the revised plans and text. A CD with an electronic copy will be provided once the application has been finalized. If you have any questions or need additional information please don't hesitate to give us a call.

Sincerely,
MUNICIPAL ENGINEERING SERVICES CO., PA



Lisa C. Hampton
Designer

LCH:ich
Enclosures

cc: David Jones, Public Works Director

**PERMIT APPLICATION
FOR
CONTINUED OPERATION**

**Lenoir County
Construction and Demolition
Landfill Facility**

Permit Number: 5403-CDLF-1997

Site Location: 2949 Hodges Farm Road
La Grange, NC 28551

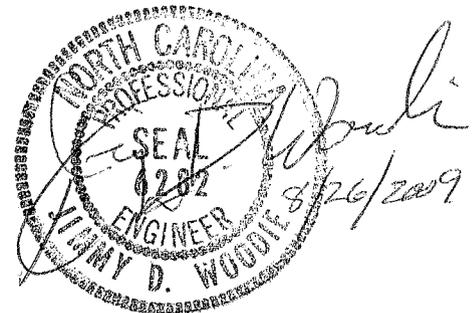
Applicant: County of Lenoir

Applicant's Address: 130 South Queen Street
Kinston, NC 28502



MESCO Project Number
G07062

Revised May 2009
June 2008



Submitted By:

Municipal Engineering Services Company, P.A.

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Fac/Perm/Co ID #	Date	Doc ID#
5403 Jahao	10/29/09	DIN 8844

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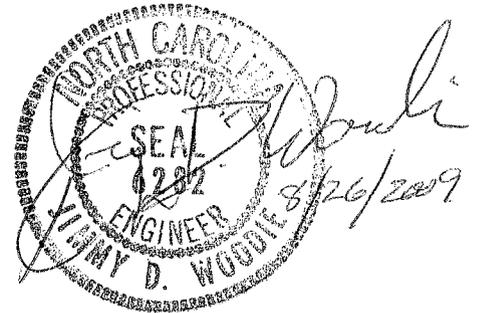


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SECTION 1.0

OPERATION PLAN





Lenoir County Solid Waste Management

Phone: (252) 566-4194 Fax: (252) 566-5690
2949 Hodges Farm Road • LaGrange NC 28551

Statement of Purpose

The purpose for this application is to continue the operation of our existing Construction and Demolition (C&D) Landfill which is on top of a Municipal Solid Waste (MSW) Landfill. The air space that is available on top of the old MSW Landfill for the disposal of the C&D waste is very valuable. Utilizing the space on top of the MSW Landfill prevents the need to develop another area within our landfill property or on other property. The landfill property can be used for additions to our MSW Landfill. Also, if we move to another site, we are creating another brown field that is not necessary. Furthermore, we do not have to use valuable MSW landfill space to dispose of C&D waste. The space on top of the closed landfill is available for several years, and we need to be able to continue to utilize this space.

1.1 Introduction

Lenoir County will continue to operate a Construction and Demolition Landfill (C&DLF) within the permitted boundaries and upon closed sections of the present municipal solid waste landfill. The section are limited to areas that stopped receiving waste prior to October 9, 1998 and have two feet of final cover.

The C&D Landfill will receive the following solid waste:

1. Land clearing debris as defined in G.S. 130A-290, specifically, solid waste which is generated solely from land clearing activities, such as stumps, trees, etc.;
2. Inert debris from any source that is defined as solid waste which consists solely of material that is virtually inert, such as brick, concrete, rock and clean soil;
3. Asphalt in accordance with G.S. 130-294(m);
4. Construction and demolition debris defined as solid waste resulting solely from construction, remodeling, repair or demolition operations on pavement, buildings or other structures (includes glass, vinyl, plastic, laminates, plumbing fixtures, etc.);
5. Construction materials, that could or would be part of any construction, remodeling, repair or demolition of pavement, buildings or other structures, from industrial and/or commercial sources within the County such as, but not limited to, shingles from shingle manufacturers, mobile home debris from mobile home manufacturers, lumber from lumber yards, scrap materials from cabinet manufacturing facilities and furniture, pre-fabricated building structure components such as joists and any other scrap materials; and,
6. Pallets from any source.

Yard Waste as defined in G.S. 130A-290, shall not be disposed in the landfill area. However, yard trash, along with land-clearing debris, may be accepted for processing in a permitted Yard Waste Composting Area.

Soil cover will be placed at least once a week. (See cover requirements under operational requirements).

The County will implement a program at the landfill for detecting and preventing the disposal of hazardous and liquid wastes. The program consists of random inspection of incoming loads at a minimum of 1% of the weekly traffic. Landfill personnel will be trained to recognize hazardous and liquid wastes. Records will be kept on the training and the inspections. See Appendix C for detailed plan.

The County will monitor for explosive gases at landfill structures and the perimeter of the landfill. The concentration of methane gases generated by the landfill cannot exceed 25 percent of the lower explosive limit for methane in the structures, and it cannot exceed 100 percent of the lower explosive limit for methane of the landfill property boundary. If methane gas is found to exceed the acceptable limits at either the property boundary or landfill structures, it is the County's responsibility to do the following:

1. Immediately take all necessary steps to ensure protection of human health, i.e. no smoking, temporarily abandon the structure and notify the Division of Solid Waste Management.

2. Within seven days of detection, place in the operating record the methane gas levels detected and a description of the steps taken to protect human health; and
3. Within 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the Division of Solid Waste management that the plan has been implemented. The plan will describe the nature and extent of the problem and the proposed remedy.

Off and on site erosion will be controlled through erosion control structures and devices. Provisions for a vegetative ground cover sufficient to restrain erosion will be accomplished within 30 working days or 120 calendar days upon completion of any phase of landfill development.

The County will record and retain at the landfill an operating record of the following information:

- (1) Inspection records, waste determination records, and training procedures;
- (2) Amounts by weight of solid waste received at the landfill;
- (3) Gas monitoring results and any remediation plans;
- (4) Any demonstration, certification, findings, monitoring, testing or analytical data required for surface and groundwater monitoring;
- (5) Any monitoring, testing or analytical data required for closure or post-closure;
- (6) Any cost estimates and financial assurance documentation.

All information contained in the operating record will be furnished upon request to the Division of Solid Waste Management or be made available at all reasonable times for inspection by the Division.

Ground and surface water will be sampled and analyzed according to Subtitle D Appendix I detection monitoring requirements. The monitoring frequency for all Appendix I detection monitoring constituents will be at least semiannual during the life of the facility (including closure) and the post-closure period. A minimum of four independent samples from each well (background and downgradient) will be collected and analyzed for the Appendix I constituents during the first semiannual sampling event. At least one sample from each well (background and downgradient) will be collected and analyzed during subsequent semiannual sampling events.

If the County determines that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I at any monitoring well at the relevant point of compliance, the County will, within 14 days of the finding, report to the Division of Solid Waste and place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels. The County will establish an assessment monitoring program within 90 days. The County may demonstrate that a source other than the landfill caused the contamination or that the statistically significant increase resulted from an error in sampling, analysis, statistical evaluation, or natural variation in ground-water quality. A report documenting these demonstrations will be certified by a Licensed Geologist or Professional Engineer and approved by the Division of Solid Waste. A copy of this report will be placed in the operating record. If a successful demonstration is made, documented, and approved by the Division, the County may continue detection monitoring. If after 90 days, a successful demonstration is not made, the County will initiate an assessment monitoring program.

1.2 Operational Requirements

1. Waste Acceptance and Disposal Requirements

- a. The Construction and Demolition Landfill (C&DLF) will only accept those solid wastes which it is permitted to receive. The County will notify the Division within 24 hours of attempted disposal of any waste the landfill is not permitted to receive.
- b. Asbestos waste will be managed in accordance with 40 CFR 61. The regulated asbestos waste will be covered immediately with soil in a manner that will not cause airborne conditions and will be disposed of separate and apart from other solid waste, as:
 - i. in a defined isolated area within the foot print of the landfill, or
 - ii. in an area not contiguous with other disposal areas. Separate areas will be designated so that asbestos will not be exposed by future land-disturbing activities.
- c. Wastewater treatment sludges may be accepted, with the approval of the Division, either as a soil conditioner incorporated into or applied onto vegetative growth layer. The wastewater treatment sludge will neither be applied at greater than agronomic rates nor to a depth greater than six inches.
- d. The following wastes are prohibited from disposal at the C&DLF:
 - i. Containers such as tubes, drums, barrels, tanks, cans, and bottles unless they are empty and perforated to ensure that no liquid, hazardous or municipal solid waste is contained therein.
 - ii. Garbage as defined in G.S. 130A-290(a)(7).
 - iii. Hazardous waste as defined in G.S. 130A-290(a)(8), to also include hazardous waste from conditionally exempt small quantity generators.
 - iv. Industrial solid waste unless a demonstration has been made and approved by the Division that the landfill meets the requirements of Rule .0503(2)(d)(ii)(A).
 - v. Liquid wastes.
 - vi. Medical waste as defined in G.S. 130A-290(a)(18)
 - vii. Municipal solid waste as defined in G.S. 130A-290(a)(18a)
 - viii. Polychlorinated biphenyls (PCB) wastes as defined in 40 CFR 761
 - ix. Radioactive waste as defined in G.S. 104E-5(14)
 - x. Septage as defined in G.S. 130A-290(a)(32)
 - xi. Sludge as defined in G.S. 130A-290(a)(34)
 - xii. Special waste as defined in G.S. 130A-290(a)(40)
 - xiii. White goods as defined in G.S. 130A-290(a)(44)

- xiv. Yard trash as defined in G.S. 130A-290(a)(45)
 - e. The following waste will not be received if separate from C&DLF waste: lamps or light bulbs including but not limited to halogen, incandescent, neon or fluorescent; lighting ballast or fixtures: thermostats and light switches; batteries including but not limited to those from exit and emergency lights and smoke detectors; lead pipes; lead roof flashing; transformers; capacitors; and copper chrome arsenate (CCA) and creosote treated woods.
 - f. Waste accepted for disposal in the C&DLF unit shall be readily identifiable as C&D waste and must not have been shredded, pulverized, or processed to such an extent that the composition of the original waste cannot be readily ascertained except in the case where the waste has come from a permitted recycling and reuse facility.
 - g. The County will not knowingly dispose any type or form of C&D waste that is generated within the boundaries of a unit of local government that by ordinance:
 - i. Prohibits generators or collectors of C&D waste from disposing that type or form of C&D waste.
 - ii. Requires generators or collectors of C&D waste to recycle that type or form of C&D waste.
2. Cover material requirements.
- a. Except as in Subparagraph (c), the County must cover the solid waste with six inches of earthen material when the waste disposal area exceeds one-half acre and at least once weekly. Cover must be placed at more frequent intervals if necessary to control disease vectors, fires, odors, blowing litter and scavenging. A notation of the date and time of the cover placement must be recorded in the operating record, as specified in Paragraph 10 in this section.
 - b. Except as in Subparagraph (c), areas which will not have additional wastes placed on them for three months or more, but where final termination of disposal operations has not occurred, will be covered and stabilized with vegetative ground cover or other stabilizing material.
 - c. Alternative material or an alternative thickness of cover may be used, if the County demonstrates that the alternative material or thickness controls disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment, and is approved by the Division.
3. Spreading and compacting requirements.
- a. C&DLF units will restrict solid waste to the smallest area feasible.
 - b. Solid waste will be compacted as densely as practical into cells.
 - c. Fencing and/or diking will be provided within the area to confine solid waste which is subject to be blown by the wind. At the conclusion of each operating day, all windblown material resulting from the operation will be collected and disposed of by the County.

4. Disease vector control
 - a. The County will prevent or control on-site populations of disease vectors using techniques appropriate for protection of human health and the environment.
 - b. "Disease vectors" means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.
5. Air Criteria and Fire Control
 - a. The County will ensure that the units do not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the U.S. EPA Administrator pursuant to Section 110 of the Clean Air Act, as amended.
 - b. Open burning of solid waste, except for the approved burning of land clearing debris generated on-site or debris from emergency clean-up operations, is prohibited at all C&DLF facilities. Prior to any burning a request will be sent to the Division for review. The Division will determine the burning to be approved if it is one of two types of burning previously referenced. A notation of the date of approval and the name of the Division personnel who approved the burning must be included in the operating record.
 - c. Equipment will be provided to control accidental fires and arrangements will be made with the local fire protection agency to immediately provide fire-fighting services when needed.
 - d. Fires and explosions that occur at the C&DLF require verbal notice to the Division within 24 hours and written notification within 15 days. Written notification must include the suspected cause of fire or explosion, the response taken to manage the incident, and the action(s) to be taken to prevent the future occurrence of fire or explosion.
6. Access and safety requirements
 - a. The C&DLF will be adequately secured by means of gates, chains, beams, fences and other security measures approved by the Division of Solid Waste Management to prevent unauthorized entry.
 - b. An attendant will be on duty at the site at all times while it is open for public use to ensure compliance with operational requirements.
 - c. The access road to the site will be of all-weather construction and maintained in good condition.
 - d. Dust control measures will be implemented when necessary. If dust problems should arise, the County will use any reasonable means necessary to reduce it. At a minimum the County will spray water on necessary areas.
 - e. Signs providing information on tipping or disposal procedures, the hours during which the site is open for public use, the permit number and other pertinent information will be posted at the site entrance.
 - f. Signs will be posted stating that no hazardous or liquid waste can be received.

- g. Traffic signs or markers will be provided as necessary to promote an orderly traffic pattern to and from the discharge area and to maintain efficient operating conditions.
 - h. The removal of solid waste from the C&DLF will be prohibited unless the County has included in it's operational plan a recycling program which has been approved by the Division. The general public is prohibited from removal activities on the working face.
7. Erosion and Sedimentation Control Requirements
- a. Adequate sediment control measures (structures or devices), will be utilized to prevent silt from leaving the landfill.
 - b. Adequate sediment control measures (structures or devices), will be utilized to prevent excessive on-site erosion.
 - c. Provisions for a vegetative ground cover sufficient to restrain erosion will be accomplished within **30 working days** or **120 calendar days** upon completion of any phase of landfill development.
8. Drainage Control and Water Protection Requirements
- a. Surface water will be diverted from the operational area and will not be impounded over waste.
 - b. Solid waste will not be disposed of in water.
 - c. Leachate will be contained on site and properly treated prior to discharge.
 - d. The landfill will not:
 - (i) Cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements pursuant to Section 402.
 - (ii) Cause the discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that violates any requirements of an area-wide or state-wide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act, as amended.
9. Survey for Compliance
- Within 60 days of a permittee's receipt of the Division's written request, the permittee will have a survey conducted of active and/or closed portions of the unit(s) at the facility in order to determine whether operations are being conducted in accordance with the approved design and operation plans. The permittee must report the results of the survey, including a map produced by the survey, to the Division within 90 days of receipt of the Division's request.
- a. A survey shall be required by the division:
 - (i) If there is reason to believe that the operations are being conducted in a manner that deviates from the plan listed in the effective permit, or

(ii) As verification that operations are being conducted in accordance with the plan listed in the effective permit.

b. Any survey pursuant to this Paragraph must be performed by a professional land surveyor duly authorized under North Carolina law to conduct such activities.

10. Record keeping Requirements

a. The County will record and retain at the facility, or an alternative location near the facility approved by the Division of Solid Waste Management, in an operating record the following information as it becomes available.

(i) Inspection records, waste determination records, and training procedures;

(ii) Amounts by weight of solid waste received at the landfill to include source of generation.

(iii) Any demonstration, certification, findings, monitoring, testing or analytical data required for surface, groundwater and gas monitoring;

(iv) Any monitoring, testing, or analytical data required for closure or post-closure;

(v) Any cost estimates and financial assurance documentation;

(vi) Notation of date and time of placement of cover material; and,

(vii) All audit records, compliance records and inspection reports.

b. All information contained in the operating record will be furnished to the Division of Solid Waste Management according to the permit or upon request, or be made available for inspection by the Division.

c. The operating record will also include a copy of the approved operation plan and all required permits.

SECTION 2.0

**CLOSURE
PLAN**



2.1 Introduction

The Division of Solid Waste Management requires that the Engineer certifies the constructed cap is built according to approved plans and specifications. The Engineer that will accomplish this task is the one who did the planning and has written the specifications.

Before construction can begin a pre-construction meeting will be held and the responsibilities and duties of each party will be discussed.

The Contractor is responsible for following and meeting the requirements set forth in the contract documents. The Contractor will provide to the Owner of the landfill and the Engineer a completed landfill constructed by Division of Solid Waste approved plans and specifications. The Contractor will give the Engineer a schedule for completion of the landfill including dates for expected construction of the cohesive soil test pad, cohesive soil cap, erosive layer, and estimated time for project completion. The contractor is responsible for providing a foreman to remain on site at all times during construction, provide qualified personnel to conduct quality control, scheduling and coordinating the subcontractors, provide progress reports and as-built drawings, and coordinating construction activities with the Engineer. The foreman is responsible for supervising and coordinating with his crew, subcontractors, quality control personnel, attending all meetings and notifying the Engineer's Construction Observer when any discrepancies occur. The Contractor will meet with the Construction Observer on a daily basis to discuss the days construction activities. The results of all tests and any change in schedule shall be given to the Construction Observer as soon they are known by the contractor. The Contractor must be registered in the state of North Carolina.

The Engineer is responsible for providing the engineering design, drawings and specifications, contract documents and CQA needed for construction of the landfill. The Engineer is responsible for conduction of the pre-construction meeting, which will lay out the foundation for the project. The engineer will approve any design changes and certify to the Division of Solid Waste Management that the cap was constructed according to the requirements of Rule .0541 Construction Quality Assurance Plan and .0540 Construction requirements for C&D Facilities, and Division approved plans and specifications. This will be accomplished by on site observation, independent laboratory soil testing to test site specific soil properties including permeability. The Engineer will be providing Quality Assurance by spot testing along side the contractor, who will be providing the Quality Control. The Engineer will certify that the construction was completed in accordance with the CQA manual. The Engineer must be a professional engineer registered in North Carolina.

The Construction Observer (CO) is the Engineer's representative on-site. It is the CO's responsibility to know and interpret the plans and specifications of the project. On a daily basis the CO will coordinate with the Foreman to help ensure a quality product for the Owner. The CO will keep a daily log on the activities of the Contractor, keep notes on all meetings, and handle all quality assurance activities indicated in this document. The CO will keep a log of all material delivered on site and ensure the materials meets or exceeds the specifications indicated in this report. If the need arises additional meetings will be scheduled as seen fit by the CO.

The estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility is 284,070 tons from FY 97-98 through FY 07-08.

Prior to beginning closure, the County shall notify the Division of Solid Waste that a notice of the intent to close the unit has been placed in the operating record. The County shall begin closure activities no later than thirty (30) days after the date on which the landfill receives the final wastes.

The County shall complete closure activities in accordance with the closure plan within 180 days following the final receipt of waste. Extensions of the closure period may be granted by the Division of Solid Waste if the County demonstrates that closure will, of necessity, take longer than

one hundred eighty (180) days and the County has taken and will continue to take all steps to prevent threats of human health and environment from the enclosed landfill.

Following closure of the landfill, the County shall notify the Division that a certification, signed by the project engineer verifying that closure has been completed in accordance with the closure plan, and has been placed in the operating record. The County shall record a notation on the deed to the landfill property and notify the Division of Solid Waste that the notation has been recorded and a copy has been placed in the operating record. The notation on the deed shall in perpetuity notify any potential purchaser of the property that the land has been used as a landfill and its use is restricted under the closure plan approved by the Division of Solid Waste. The County may request permission from the Division to remove the notation from the deed if all waste is removed from the landfill.

2.2 Cap System

The County will cap their landfill within 180 days after the final receipt of solid waste. The cap system will consist of 12 inches of intermediate cover, 18 inches of cohesive soil with a permeability no greater than 1.0×10^{-5} cm/sec, 18 inches of erosive layer. The cap contains gas venting system consisting of a series of washed stone trenches below the soil liner that will be vented through 10" diameter PVC pipes that penetrate the cap. The cap system will also include the proper seeding and mulching of the erosive layer and other erosion control devices. The largest area ever needing closure will be 18.0 acres.

2.3 Cohesive Soil Cap

All materials and equipment shall be furnished by an established and reputable manufacturer or supplier. All materials and equipment shall be new and shall be of first class ingredients and construction, designed and guaranteed to perform the service required and shall conform with the following standard specifications or shall be the product of the listed manufacturers or similar and equal thereto as approved by the Engineer.

Cohesive Soil Cap Borrow Material

Test Name	Test Method	Contractor/Engineer Frequency
Moisture/Density	ASTM D698/D1557	1 per 5000 c.y.
Remolded Permeability	ASTM D5084	1 per 5000 c.y.
Atterberg Limits	ASTM D4318	1 per 5000 c.y.
Visual Classification	ASTM D2488	1 per 5000 c.y.
Grain Size Distribution	ASTM D422	1 per 5000 c.y.

Cohesive Soil Cap Test Pad

Test Name	Test Method	Contractor/Engineer Frequency
Field Moisture/Density	ASTM D1556 (sand cone) ASTM D2922/D3017 (nuclear gauge) ASTM D2937 (drive cylinder)	3 per lift
Permeability	ASTM D5084	1 per lift
Remolded Permeability	ASTM D5084	1 per lift
Atterberg Limits	ASTM D4318	1 per lift
Visual Classification	ASTM D2488	1 per lift
Grain Size Distribution	ASTM D422	1 per lift

In-Place Cohesive Soil Cap

Test Name	Test Method	Contractor/Engineer Frequency
Field Moisture/Density	ASTM D1556 (sand cone) ASTM D2922/D3017 (nuclear gauge) ASTM D2937 (drive cylinder)	1 per lift per acre
Permeability	ASTM D5084	1 per lift per acre
Atterberg Limits	ASTM D4318	1 per lift per acre
Visual Classification	ASTM D2488	1 per lift per acre
Grain Size Distribution	ASTM D422	1 per lift per acre

(a) Suitable on-site and/or off-site soils may be used as cohesive soil cap if it can achieve an in-place permeability of 1.0×10^{-5} cm/sec or less and meets all testing requirements indicated in the material testing paragraph in this section. Wyoming bentonite or an approved equivalent may be blended with the soil to lower the soil's permeability.

(b) A permeability "window" shall be developed for each type of soil from the borrow material that will be used for construction of the cohesive soil cap. The window shall be plotted on a semi-log plot with moisture content versus density. Laboratory testing to develop the window shall include a series of remolded samples compacted to various dry densities and moisture contents utilizing the same compactive effort (ASTM D 698 or D 1557). The remolded samples shall be tested for permeability to determine whether or not the particular soil type will provide the maximum permeability (1.0×10^{-5} cm/sec) at various dry densities and moisture contents. The window is then developed from the accepted remolded samples and moisture contents from the semi-log plot. A straight line is typically drawn between the acceptable points on the moisture-density curve to indicate a range of probable acceptable permeability results. The window will be used in the construction of the test strip to verify the laboratory remolded permeability results.

(c) Atterberg limits and grain size distribution shall also be conducted on the bulk samples used to prepare the permeability window ASTM D2488, D4318, D422. These tests can be used as indices on random samples collected from the borrow site during construction to verify the soil type is the same as was used to develop the "window". As a minimum, sufficient visual classifications and Atterberg limits shall be conducted in association with each permeability test to verify that the construction materials meet specifications.

(d) A test strip of compacted cohesive soil cap shall be prepared to verify the permeability "window" prior to general installation of the cohesive soil cap. The test strip will be used to verify the results from the remolded permeabilities from the borrow site utilizing the permeability window(s) for each soil type that is going to be used for construction of the cohesive soil cap. At a minimum, the verification will consist of three moisture density tests, one Atterberg limits test, one grain size distribution test (ASTM D2488, D4318, and D422), and one Shelby Tube sample for each lift constructed in the test pad. Laboratory permeability tests shall be performed on tube (Shelby or drive tubes) samples of the cohesive soil cap after placement and compaction. The permeability must be a maximum of 1.0×10^{-5} cm/sec. Tests shall be performed in accordance with the ASTM D5084. The test strip shall be approximately 2,500 sq. ft. in surface area and constructed to conform geometrically to the site topography with a minimum lateral dimension in any direction of 25 ft. The test strip shall consist of at least three compacted 6 inch lifts of cohesive soil cap. Placement and testing of the test strip shall be in conformance with the construction specifications and requirements for general installation of the cohesive soil cap. Test results from the test strip shall be used to guide placement and achievement of the required maximum permeability of 1.0×10^{-5} cm/sec of the cohesive soil

cap. The test strip may be used as an integral part of the overall cohesive soil cap if it meets the required specification for the cap. All results shall be given to the Construction Observer.

(e) The soils shall be placed to the total thickness shown on the plans in maximum 8-inch thick loose lifts with a maximum 6" compacted lift compacted preferably at a moisture content between 0 to 3% above optimum moisture content to 95% standard Proctor maximum dry density (ASTM Test Designation D698). A sheepsfoot roller or approved alternative may be used to compact the soil cap provided the compaction and permeability requirements can be achieved. Each lift shall be tested for permeability, moisture content, particle size distribution analysis, Atterberg limits, moisture-density-permeability relation, and if needed percent bentonite admixed with soil, prior to the placement of the succeeding lift and visually inspected to confirm that all soil clods have been broken and that the surface is sufficiently scarified so that adequate bonding can be achieved. Soils for cohesive soil cap shall be screened, disked, or prepared using any other approved method as necessary to obtain a homogeneous cohesive soil with clod sizes in a soil matrix no larger than about 1.5 inches in maximum diameter. After each lift, the surface shall be scarified prior to the placement of the next lift to provide good bonding from one lift to the next.

(f) The cohesive soil cap shall be tested to evaluate the coefficient of permeability. The coefficient of permeability of the soil cap shall be equal to or less than 1.0×10^{-5} cm/sec after placement and compaction. The soil cap must be a minimum of 1.5 feet thick.

(g) Laboratory permeability tests shall be performed on tube (Shelby or drive tubes) samples of the cohesive soil cap after placement and compaction. The permeability must be a maximum of 1.0×10^{-5} cm/sec. Tests shall be performed in accordance with ASTM D5084.

(h) The soil cap shall be tested a minimum of one soil sample per lift per acre for laboratory permeability. All permeability testing will be on random samples judged by the Engineer to be representative of the most permeable soil conditions for the area being tested. The project engineer shall certify that the materials used in construction were tested according to the Division approved plans. If after placement of the soil cap it fails the required tests, the material will either be reworked or replaced. The soil cap must remain moist at all times, if any section becomes dry, rework the dry area and moisten.

(i) A minimum of two (2) inches of soil shall be removed prior to securing each sample for permeability testing. The sampling tube shall be advanced vertically into the soil with as little soil disturbance as possible and should be pushed using a uniform pressure. The sampling tube (Shelby tube), when extracted, shall be free of dents, and the ends shall not be distorted. A backhoe or approved alternative should be used to advance the sampling tube (Shelby tube) as long as disturbance is minimized. Drive tube samples of the cap may be obtained for permeability testings. If the Engineer judges the sample to be too disturbed, another sample shall be taken. Once an acceptable sample has been secured and properly prepared, all sample excavations shall be backfilled to grade with a 50% mixture of bentonite and similar soils in maximum 3-inch loose lifts and hand tamped with a blunt tool to achieve a tight seal equivalent to the original density.

(j) No additional construction shall proceed on the soil layers at the area being tested until the Engineer has reviewed the results of the tests and judged the desired permeability is being achieved.

(k) As a minimum, sufficient visual classifications (ASTM Test Designation D2488), analyses (ASTM Test Designation D422) and Atterberg limits (ASTM Test Designation D4318) shall be conducted in association with each permeability test to verify that the construction materials meet specifications. The minimum number of tests will be 1 per lift per acre.

(l) If the soil for the cohesive soil cap is incapable of achieving the required permeability when compacted, bentonite or approved alternative may be mixed with the soils to decrease the permeability. The amount of additive required must be determined in the laboratory. Where additives are required, the soil shall be placed in maximum 8-inch thick loose lifts and compacted preferably between 0 to +3% optimum moisture content to 95% standard Proctor maximum dry density (ASTM Test Designation D698) for the soil-additive mixture. All other compaction procedures for the soil apply.

(m) The Contractor shall protect the cohesive soil cap from desiccation, flooding and freezing. Protection, if required, may consists of a thin plastic protective cover, (or other material as approved by the engineer) installed over the completed cohesive soil cap until such time as the placement of flexible membrane liner begins. Areas found to have any desiccation cracks or which exhibit swelling, heaving or other similar conditions shall be replaced or reworked by the contractor to remove these defects.

(n) The thickness and grade of the soil cap will be verified by the surveyor. The soil cap will be surveyed at 100' grid points where the elevations of the top of landfill will be checked with the top of soil cap to verify 1.5 feet of soil cap. The grade will then be verified with the surveyed information. The survey will be performed by NC licensed surveyors.

2.4 Erosive Layer

The soil for the erosive layer shall consist of any soils suitable of supporting vegetative growth.

(a) Native vegetation will be used as recommended in the NC Erosion and Sediment Control Planning and Design Manual and as shown in the Closure Plan drawings in Appendix A.

2.5 Methane Venting System

Gas Venting System

NC.D.O.T. No.5 stone, Geotextile fabric, and 8" and 10" plastic pipes will be used in the construction of the Gas venting system.

(1) Stone in Trenches and Surrounding Perforated Collection Piping

Stone for methane collection system shall meet the requirements of NC DOT aggregate, standard size No. 5 and shall contain no fines. Stone must pass the sieve analysis test for No. 5 stone performed at the quarry.

(2) Geotextile Fabric

Geotextile fabric surrounding the stone/piping shall be non-woven needle punched fabric with the following minimum properties:

1) Weight	8.0 oz/yd ²	ASTM D-3776
2) Grab Strength	205 lbs.	ASTM D-4632
3) Grab Elongation	50%	ASTM D-4632
4) Trapezoidal Tear Strength	85 lbs.	ASTM D-4533
5) Puncture Strength	100 lbs.	ASTM D-4833
6) Mullen Burst Strength	320 psi	ASTM D-3786
7) Permittivity	1.4 sec ⁻¹	ASTM D-4491

Geotextile fabric shall be manufactured by Polyfelt , TNS Advanced Technologies, or approved equal.

(3) Plastic Pipe

Plastic gravity sewer pipe and fittings used for methane vent shall be unplasticized polyvinyl chloride (PVC) and conform to the requirements of ASTM Designation D-3034 on ASTM F679, Type PSM, Class 12454-B, SDR-35 with elastomeric gasket joints. PVC pipe and fittings shall be as manufactured by J-M Pipe, Certainfeed, H&W Industries or equal. The methane riser pipe shall be a 10 inch solid wall PVC pipe.

The methane gas venting system on top of the landfill will be constructed after all phases of filling have been completed.

2.6 Closure Costs

The largest area to be closed within the permitted life will be 18 Ac. Post Closure will be 30 years after closure.

Closure Costs:

Closure will consist of the following which costs are estimated as being done by a third party.

1. 18" of 1×10^{-5} cm/sec. soil cover, surface preparation;
2. Erosion Control Devices;
3. 18" Erosive layer;
4. Seeding and Mulching;
5. Mobilization/Demobilization, machine /equipment costs, and fuel costs;
6. Labor Costs;
7. Stone for methane gas collection.
8. Geotextile for methane gas collection.
9. Vent pipes for methane gas collection, and
10. Engineering Costs and QA/QC of the Composite liner and certification of closure, including CQA field monitoring and lab testing, CQA reporting and certification, construction administration and bidding, Survey as-builts and recordation fees.

Estimate of Probable Costs:

1. 18" of 1×10^{-5} cm/sec. soil cover for 18 acres:
(including surface preparation)

Total yardage + 15% = 50,094 yd³ @ a cost of \$9.00/yd³
∴ Cost = \$450,846

2. Erosion Control devices

Estimated costs @ \$75,000
∴ Cost = \$75,000

3. 18" Erosive soil layer for 18 acres.

Total yardage + 15% = 50,094 yd³ @ a cost of \$4.00/yd³
∴ Cost = \$200,376

4. Seeding and Mulching for 18 acres.

Estimated cost of \$2,000/acre
∴ Cost = \$36,000

5. Mobilization/Demobilization.
(including Machine/Equipment costs and fuel costs)

Estimated cost of \$175,000

6. Labor Costs.

Estimated cost of \$200,000
∴ Cost = \$200,000

7. Stone for methane gas collection.

Total estimated linear feet =1,978 ft.

Total estimated volume for a 2'x1' trench = 3,956 ft³

with a density of 120 lbs/ft³ total weight =238 tons @ a cost of \$25.00/ton

∴ Cost = \$5,950

8. Geotextile for methane gas collection.

Total estimated linear feet = 1,978 ft.

Total estimated perimeter for a 2'x1' trench =

(1978 ft × 6 ft)=11,868 ft² @ a cost of \$0.20/ ft²

∴ Cost = \$2,374

9. Vent pipes for methane gas collection.

Estimated cost @ \$600.00 each (10vents).

∴ Cost = \$6,000

10. Engineering Costs and QA/QC of the Composite liner and certification of closure.
(including CQA field monitoring and lab testing, CQA reporting and certification,
construction administration, construction documentation and bidding, Survey as-builts
and recordation fees)

Estimated cost = \$200,000

∴ Cost = \$200,000

Total of Estimated Closure Costs:

1.	\$	450,846
2.	\$	75,000
3.	\$	200,376
4.	\$	36,000
5.	\$	175,000
6.	\$	200,000
7.	\$	5,950
8.	\$	2,374
9.	\$	6,000
10.	\$	<u>200,000</u>

Total: \$ 1,351,546

SECTION 3.0

POST-CLOSURE PLAN



3.1 Introduction

CONTACTS:

Name:	Tom Miller
Title:	Solid Waste Director
Phone No.:	(252) 566-4194
Address:	2949 Hodges Farm Rd. Kinston, NC 28501

DESCRIPTION OF USE:

The County has no future use planned for their landfill at this time. However, any future use of the landfill shall not disturb the integrity of the cap system, base line system or any other components of the containment system or the functioning of the monitoring systems.

DESCRIPTION OF MAINTENANCE ACTIVITIES:

The County Landfill will be monitored quarterly for evidence of settlement, subsidence and ponding in the cap system. The entire site will be monitored quarterly for evidence and effects of erosion. The erosion control plan will be preserved. All gates, fencing, access roads, and signs shall be maintained appropriately. Annually in the Spring, the vegetative cover will be monitored to assure a good stand of vegetation, and where needed, it will be reseeded. The vegetative cover will be mowed twice a year, once in mid-summer and again in early fall. These maintenance activities will take place over the entire post closure period of thirty years.

DESCRIPTION OF MONITORING ACTIVITIES:

The County Landfill will monitor and analyze ground and surface water semi-annually for Subtitle D Appendix I constituents for a period of thirty years. The County will also monitor methane gas at landfill structures and the boundary quarterly for the thirty-year period.

COMPLETION OF POST-CLOSURE CARE

Following completion of the post-closure care period for each unit, the owner or operator will notify the Division of Solid Waste that a certification, signed by a registered professional engineer, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.

3.2 Post Closure Costs

The largest closed area to be monitored within the post closure life will 18 acres.

Post Closure Costs:

Methane gas, ground water and surface water will be monitored for 30 years after closure. The cap will also have to be monitored for the 30 year period. All costs include reports, data analysis, and certifications.

1. Ground and Surface Water monitoring semiannually for 30 years for appendix I constituents and statistical analysis.
Estimated cost/sample = \$840.00/sample
Total annual samples = 2(5 wells + 2 surface) = 14 samples/year
Estimated cost = 30 years x 14 samples/year x \$840.00/sample =

∴ Cost = \$352,800
2. Methane Gas monitoring quarterly for 30 years.
Estimate \$600.00/quarter = \$2,400.00/year
Estimated cost = 30 year x \$2,400.00 = \$72,000.00

∴ Cost = \$72,000.00
3. Cap Monitoring and repairing (including maintenance of all gates, fencing, access roads and signs, mowing and revegetation)

Estimate \$100,000 for the 30 years.

∴ Cost = \$100,000
4. Closure of sedimentation and erosion control devices.
Estimate \$24,000.00 for closure

∴ Cost = \$24,000
5. Maintenance of gas vents, monitoring wells, etc.
Estimate \$60,000
6. Administration/Record keeping/Certification
Estimate \$4,000.00/year for 30 years

∴ Cost = \$120,000

Total of Estimated Post Closure Costs:

1.	\$	352,800
2.	\$	72,000
3.	\$	100,000
4.	\$	24,000
5.	\$	60,000
6.	\$	120,000
Total:	\$	728,800

SECTION 4.0

FINANCIAL RESPONSIBILITIES



APPENDIX A

**ENGINEERING/
OPERATION DRAWINGS
AND
CLOSURE DRAWINGS**



LENOIR COUNTY CONSTRUCTION AND DEMOLITION LANDFILL FACILITY

CLOSURE PLAN

Permit Number: 54-03

Site Location: 2949 Hodges Farm Road
La Grange, NC 28551

Applicant: Lenoir County

Applicant's Address: 130 South Queen Street
Kinston, NC 28502

BOARD OF COMMISSIONERS

Paul Taylor, Jr. - Chairman

George W. Graham, Jr. - Vice Chairman

Jackie Brown

Claude Davis

Earl Harper

Chris Humphrey

Claude Stroud

COUNTY MANAGER

Michael W. Jarman

SOLID WASTE DIRECTOR

Tom Miller

Engineer

Municipal Engineering Services Company, P.A.
Garner, NC - Morehead City, NC - Boone, NC

by  *[Signature]*
Professional Engineer
(Garner Office)



LICENSE NUMBER: C-0281

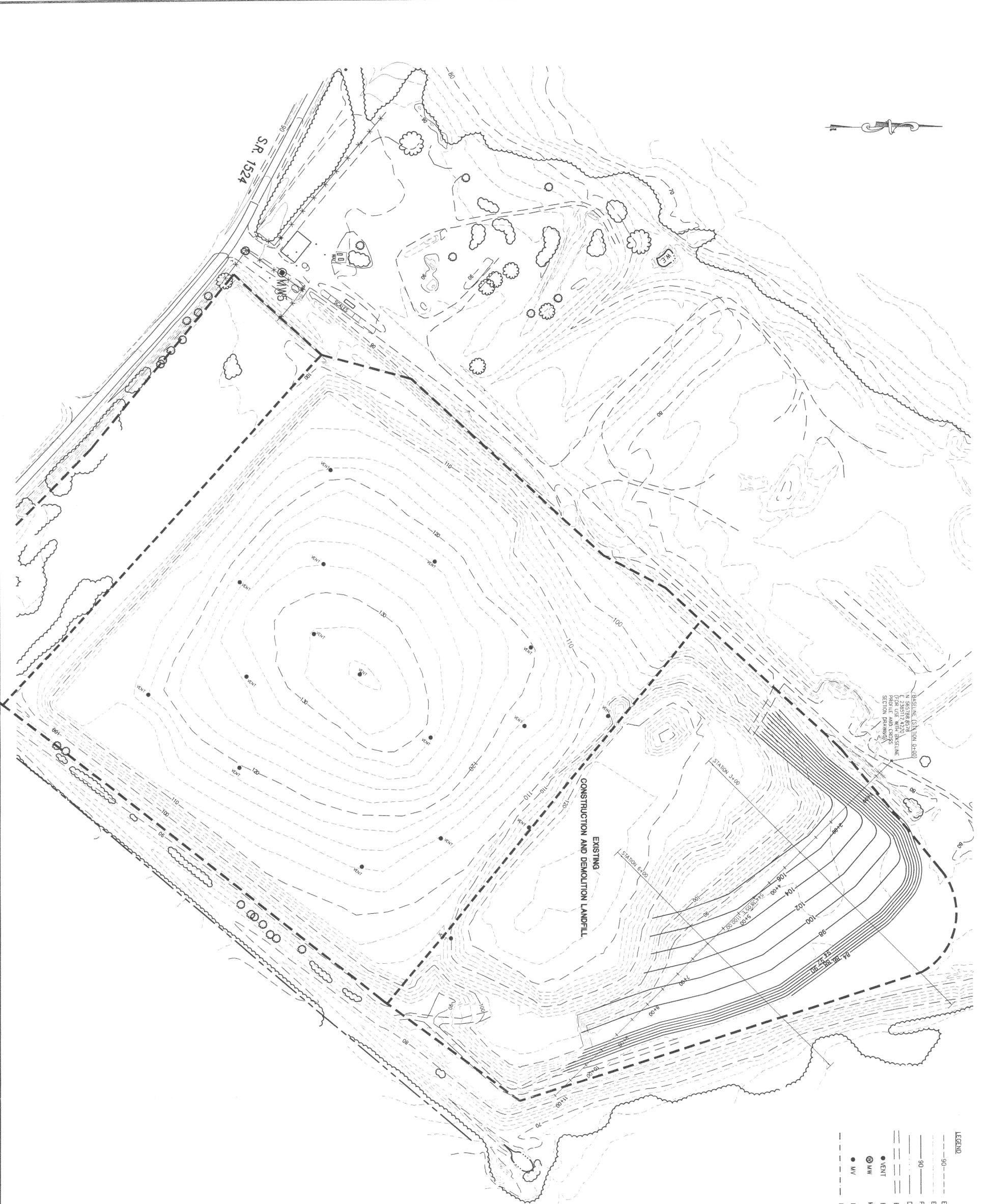
Municipal Services  **Engineering Company, P.A.**

P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 828 MOREHEAD CITY, N.C. 28557 (252) 726-9481

P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767

DATE	BY	REV.	DESCRIPTION
2/23/09	LCH	1	REVISED PER DENR LETTER DATED 12/23/08.

SCALE: 1:1
DATE: 5/27/08
DRAWN BY: L. HARRISON
CHKD. BY: J. WOODIE
PROJECT NUMBER: G07062
DRAWING NO. 71
SHEET NO. 1 OF 5



- LEGEND**
- 90 --- EXISTING CONTOURS (MAJOR)
 - 90 --- EXISTING CONTOURS (MINOR)
 - 90 --- PROPOSED CONTOURS
 - DIVERSION DITCHES
 - EXISTING UN-PAVED ROAD
 - VENT
 - ⊙ MW
 - MW
 - PROPOSED METHANE VENT
 - PROPOSED METHANE TRENCH



DATE	BY	REV.	DESCRIPTION
2/23/09	LCH	1	REVISED FILL SLOPES AND ADDED BASELINE

SCALE: 1" = 100'

DATE: 5/21/08

DRAWN BY: L. HAMILTON

CHD. BY: J. WOODIE

PROJECT NUMBER: 007062

CLOSURE PLAN
EXISTING CONDITIONS WITH FINAL FILL

**CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

LICENSE NUMBER: C-0281

Municipal Services

P.O. BOX 97 GARNER, N.C. 27529
(919) 772-5393

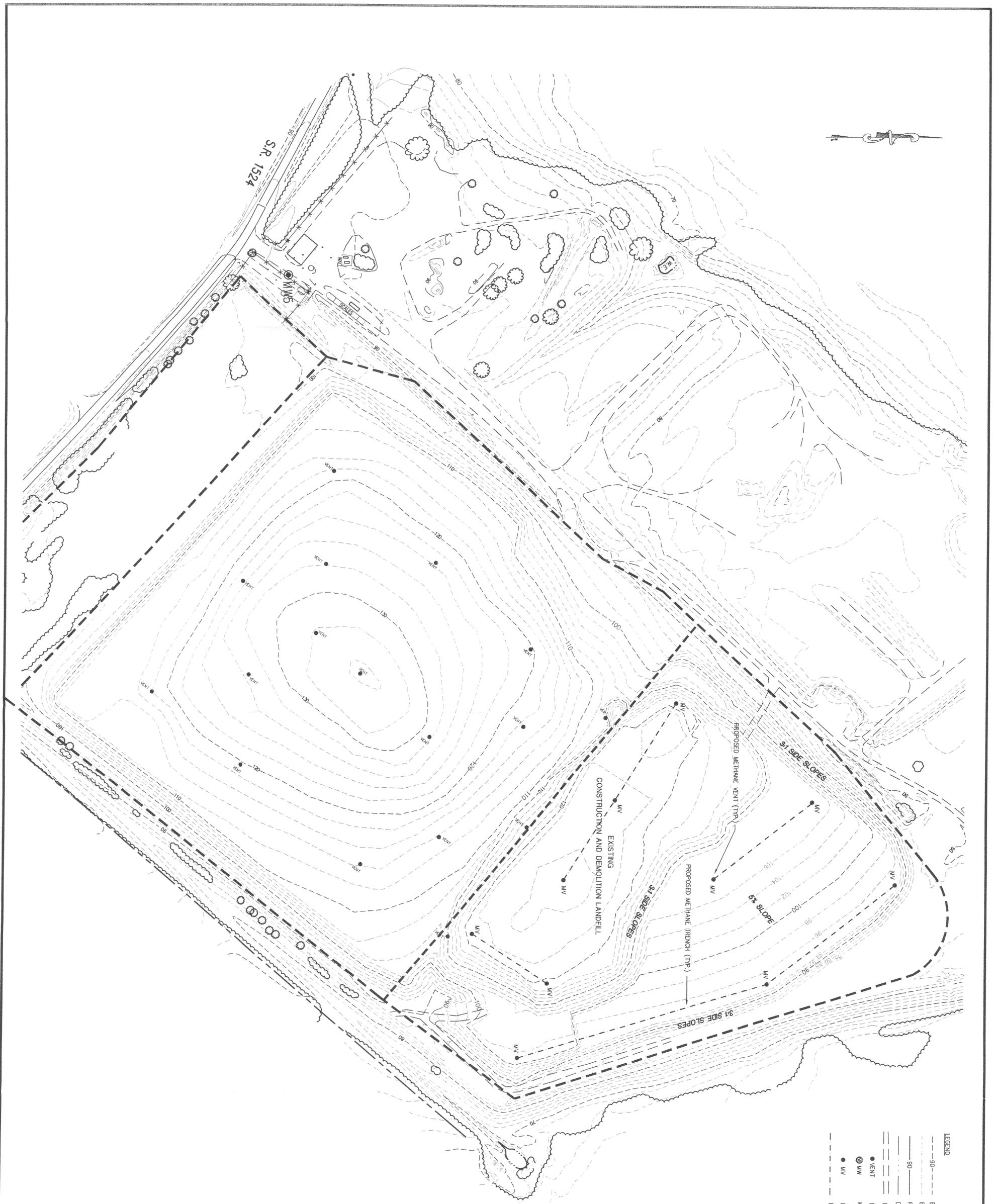
ME Engineering Company, P.A.

P.O. BOX 349 BOONE, N.C. 28607
(828) 282-1787

P.O. BOX 828 MOREHEAD CITY, N.C. 28567
(252) 728-9481

DRAWING NO. CL1

SHEET NO. 3 OF 5



LEGEND

- 90--- EXISTING CONTOURS (MAJOR)
- 90--- EXISTING CONTOURS (MINOR)
- 90--- PROPOSED CONTOURS
- DIVERSION DITCHES
- EXISTING UN-PAVED ROAD
- VENT
- ⊙ MV MONITORING WELL
- MV PROPOSED METHANE VENT
- PROPOSED METHANE TRENCH



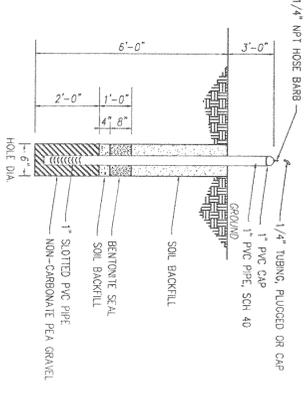
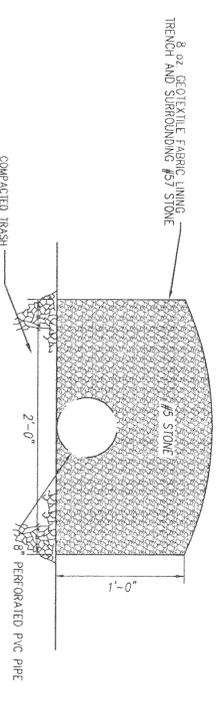
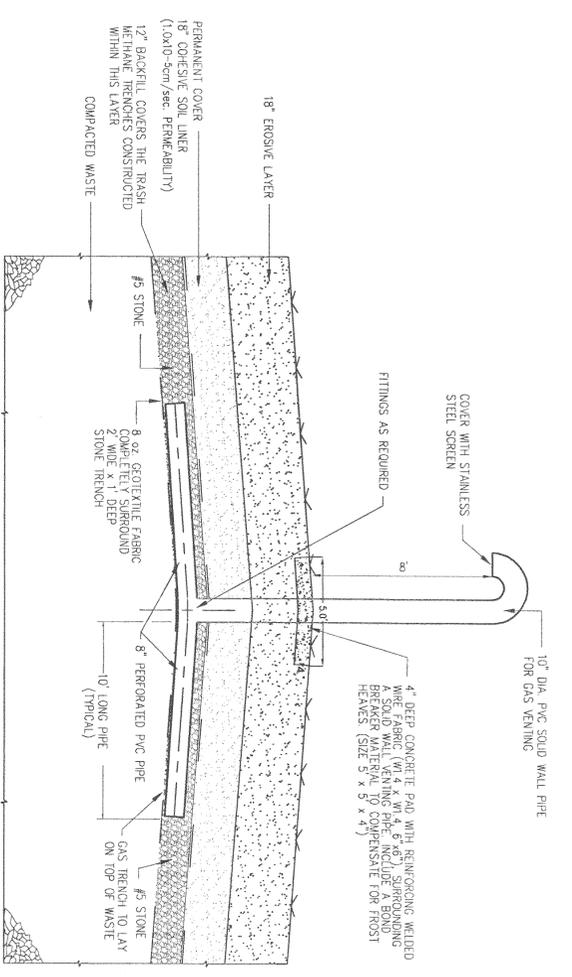
DRAWING NO.	CL2
SHEET NO.	4 OF 5
PROJECT NUMBER	007062
DATE	2/23/09
SCALE	1" = 100'
DATE	5/21/09
DRAWN BY	L. HAMPTON
CHECKED BY	J. WOODIE
DESCRIPTION	REVISD FILL SLOPES
DATE	
BY	
REV.	1
LCH	

**CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

**CLOSURE PLAN
METHANE VENTING PLAN**

LICENSE NUMBER: C-0281

Municipal Services Engineering Company, P.A.
 P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
 P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1787
 P.O. BOX 828 MOREHEAD CITY, N.C. 28557 (252) 728-9481



SEEDBED PREPARATION (SP)

- SP-1 FILL SLOPES 3:1 OR STEEPER TO BE SEED BY A HYDRAULIC SEEDER (PERMANENT SEEDING)**
- 1) Leave the last 4-6 inches of fill loose and uncompact, allowing for seed to be placed in the loose soil.
 - 2) Roughen slope faces by making grooves 2-3 inches deep, perpendicular to the slope.
 - 3) Spread fine evenly over slope at rates recommended by soil tests.
- SP-2 Fill slopes 3:1 or steeper (Temporary seedings)**
- 1) Loose a loose, uncompact surface. Remove large clods, rocks, and debris which might hold seedling above the surface.
 - 2) Spread lime and fertilizer evenly at rates recommended by soil tests.
 - 3) Break up large clods and rake into a loose, uniform seedbed.
 - 4) Rake to loosen surface just prior to applying seed.
- SP-4 Gentle or flat slopes where topsoil is not used:**
- 1) Remove rocks and debris.
 - 2) Apply lime and fertilizer at rates recommended by soil tests, spread evenly and incorporate into the top 6" with a disk, chisel plow or similar implement.
 - 3) Broadcast or apply fertilizer.
 - 4) Rake to loosen surface just prior to applying seed.

SEEDING MIXTURES (SM)

- SM-1 Fill slopes steeper than 3:1 (Permanent seedings)**
- 100% Ryegrass, 100% Fescue, 100% Clover, 100% Annual Ryegrass, 100% Annual Fescue, 100% Annual Clover, 100% Annual Ryegrass, 100% Annual Fescue, 100% Annual Clover
- SM-2 Gentle to flat slopes or temporary seedings**
- 1) Broadcast seed at the recommended rate with a cyclone seeder, drop spreader, or calibrator seeder.
 - 2) Rake seed into the soil and lightly pack to establish good contact.

- MULCH (ML)**
- ML-1 Steep slopes (3:1 or greater)**
- In mid-summer, late fall or winter, apply 100 to 1,000 s.f. grain straw, 100 to 1,000 s.f. wood chips, 100 to 1,000 s.f. or early fall straw, 100 to 1,000 s.f. wood chips or a herbaceous slurry.
- ML-2 High-moisture vegetation and temporary seedings**
- Apply 50 to 1,000 s.f. (4,000 to 40,000 lb./acre) grain straw and topsoil with 0.1 gal./sq. ft. (11 gal./1,000 sq. ft.).
- ML-3 Grass-lined channels**
- Install tractor mat in the channel, extend up the channel banks to the top of the channel. Apply 100 to 1,000 s.f. grain straw and topsoil with 0.1 gal./sq. ft. (11 gal./1,000 sq. ft.).

- MAINTENANCE (MA)**
- MA-1** Fertilize in late winter or early spring the following year. How as directed.
- MA-2** Inspect and repair mat and string. Fertilize in late winter of the following year with 150 lb./acre (10-10-10) (3.5 lb./1,000 s.f.). How as directed.
- MA-3** Inspect and repair mat and string. Fertilize in late winter of the following year with 150 lb./acre (10-10-10) (3.5 lb./1,000 s.f.). How as directed.
- MA-4** Topdress with 50 lb./acre (1 lb./1,000 s.f.) nitrogen in March. If cover is needed through the following summer, overseed with 50 lb./acre Koaie depending.

TEMPORARY SEEDING SPECIFICATIONS

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

Seeding Mixture species	Rate (lb./acre)
Rye (grain)	120
Annual lespedeza (Kobe and Korean) (Mountain)	50

Planting dates: Feb. 15 - May 15
Piedmont - Jan. 1 - May 1
Coastal Plain - Dec. 1 - Apr. 15

Soil amendments: Follow recommendations of soil tests or apply 2,000 lb./acre ground agricultural limestone and 750 lb./acre 10-10-10 fertilizer.

Mulch: Apply 4,000 lb./acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulching tool.

Maintenance: Refer to maintenance specifications for details.

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

Seeding Mixture species	Rate (lb./acre)
German millet	40

Planting dates: May 15 - Aug. 15
Piedmont - May 1 - Aug. 15
Coastal Plain - Apr. 15 - Aug. 15

Soil amendments: Follow recommendations of soil tests or apply 2,000 lb./acre ground agricultural limestone and 750 lb./acre 10-10-10 fertilizer.

Mulch: Apply 4,000 lb./acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulching tool.

Maintenance: Refer to maintenance specifications for details.

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

Seeding Mixture species	Rate (lb./acre)
Rye (grain)	120

Planting dates: Aug. 15 - Dec. 15
Piedmont - Aug. 15 - Dec. 15
Coastal Plain and Piedmont - Aug. 15 - Dec. 30

Soil amendments: Follow recommendations of soil tests or apply 2,000 lb./acre ground agricultural limestone and 1,000 lb./acre 10-10-10 fertilizer.

Mulch: Apply 4,000 lb./acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulching tool.

Maintenance: Refer to maintenance specifications for details.

PERMANENT SEEDING SPECIFICATIONS

PERMANENT SEEDING REQUIREMENTS (N.C. NO. 10P)

Species	Rate (lb./acre)
Tall fescue	50
Pennsylvania Balinggrass	30
Perennial lespedeza	10
Kobe lespedeza	10

SEEDING NOTES

1. From Sept. 1-Mar. 1, use uncorroded surface seed.
2. On poorly drained sites omit service and increase Koaie to 30 lb./acre.
3. Where a frost occurrence is desired, omit service and increase Koaie to 40 lb./acre.

NURSE PLANTS

Between Apr. 15 and Aug. 15, add 100 lb./acre German millet or 15 lb./acre Sudan grass. Prior to May 1 or after Aug. 15, add 50 lb./acre ryegrass (grain).

SEEDING DATES

Best	Essential
Apr. 20 - Sept. 15	Aug. 20 - Oct. 15
Sept. 1 - Sept. 15	Sept. 1 - Oct. 15

SOIL AMENDMENTS

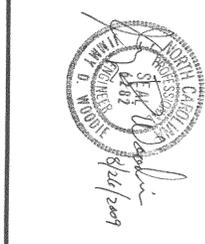
Apply lime and fertilizer according to soil tests, or apply 3,000-5,000 lb./acre ground agricultural limestone (use the lower rate on sandy soils) and 1,000 lb./acre 10-10-10 fertilizer.

MULCH

Apply 4,000 lb./acre small grain straw or equivalent cover of another suitable mulch. Anchor straw by tacking with asphalt, netting, or roving or striping with common anchoring tool. A disk with blades set nearly straight can be used as a mulching tool.

MAINTENANCE

If growth is less than fully adequate, refer to the second year, according to maintenance specifications for details.



DATE	BY	REV.	DESCRIPTION
4/28/09	LCH	1	ADDED SEEDING SPECIFICATIONS

SCALE: 1:1
DATE: 5/27/08
DRAWN BY: L. HARRISON
CHECKED BY: J. WOODIE
PROJECT NUMBER: G07062
DRAWING NO.: CL3
SHEET NO.: 5 OF 5

**CONSTRUCTION & DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

LICENSE NUMBER: C-0281

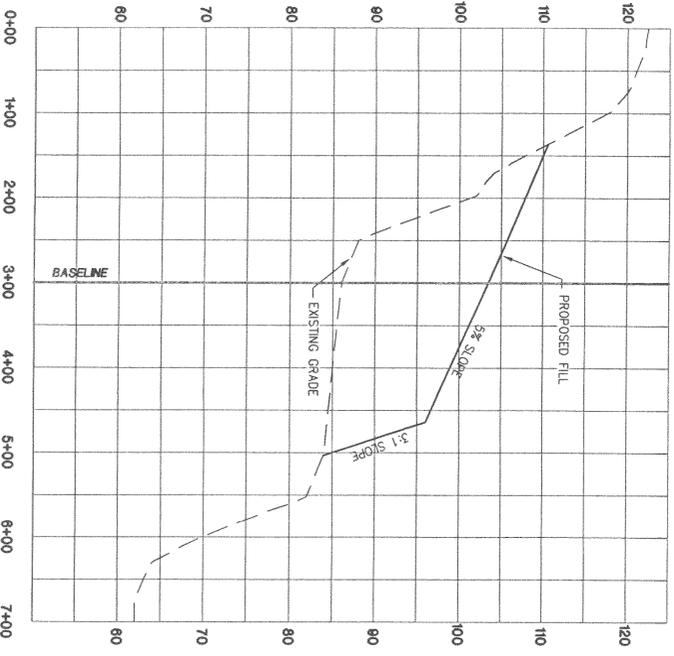
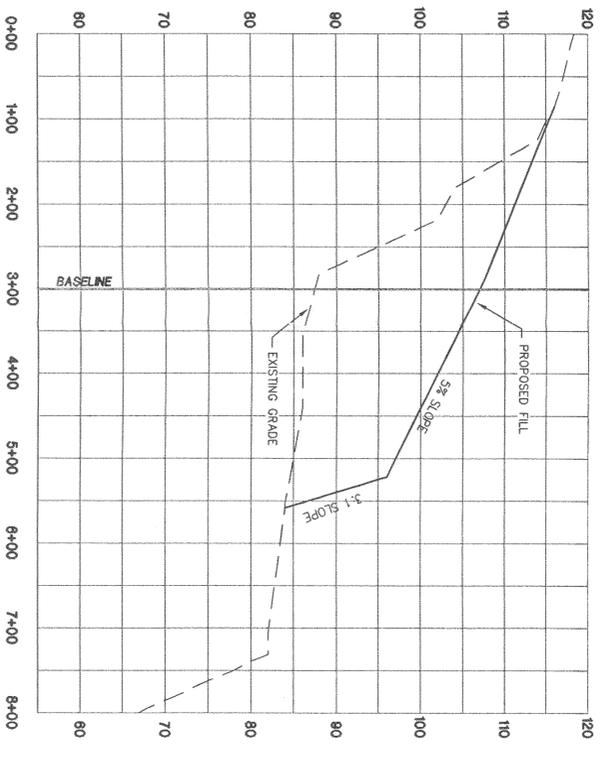
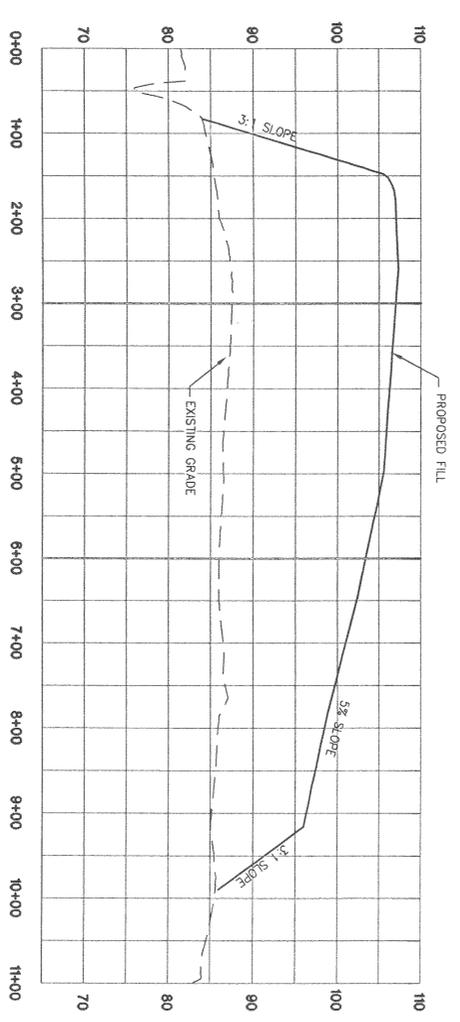
Municipal Services

P.O. BOX 97 GARNER, N.C. 27529
(919) 772-5393

Engineering Company, P.A.

P.O. BOX 349 BOONE, N.C. 28607
(828) 262-1787

P.O. BOX 828 MOREHEAD CITY, N.C. 28557
(252) 726-9481



NOTE
THESE CROSS SECTIONS ARE INTENDED TO SHOW THE CROSS SECTIONS AT SPECIFIC POINTS AS DEFINED BY THE BASELINE GRID ON SHEET 3 OF 5.



SCALE: 1" = 100'	DATE: 8/27/09	DRAWN BY: L. HAWKINS	PROJECT NUMBER: 007062
CHECKED BY: J. WOODIE	DRAWING NO. PROF1 SHEET NO. 5A		

**CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

CLOSURE PLAN
BASELINE PROFILE AND CROSS SECTIONS

LICENSE NUMBER: C-0281

Municipal Services

P.O. BOX 97 GARNER, N.C. 27529
(919) 772-5393

ME Engineering Company, P.A.

P.O. BOX 349 BOONE, N.C. 28607
(828) 262-1767

P.O. BOX 828 MOREHEAD CITY, N.C. 28557
(252) 726-9451

**LENOIR COUNTY
CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY**

ENGINEERING/OPERATION PLAN

Permit Number: 54-03

**Site Location: 2949 Hodges Farm Road
La Grange, NC 28551**

Applicant: Lenoir County

**Applicant's Address: 130 South Queen Street
Kinston, NC 28502**

BOARD OF COMMISSIONERS

Paul Taylor, Jr. - Chairman
George W. Graham, Jr. - Vice Chairman
Jackie Brown
Claude Davis
Earl Harper
Chris Humphrey
Claude Stroud

COUNTY MANAGER

Michael W. Jarman

SOLID WASTE DIRECTOR

Tom Miller

Engineer

**Municipal Engineering Services Company, P.A.
Garner, NC - Morehead City, NC - Boone, NC**

by  Professional Engineer
(Garner Office)



LICENSE NUMBER: C-0281

Municipal Services  **Engineering Company, P.A.**

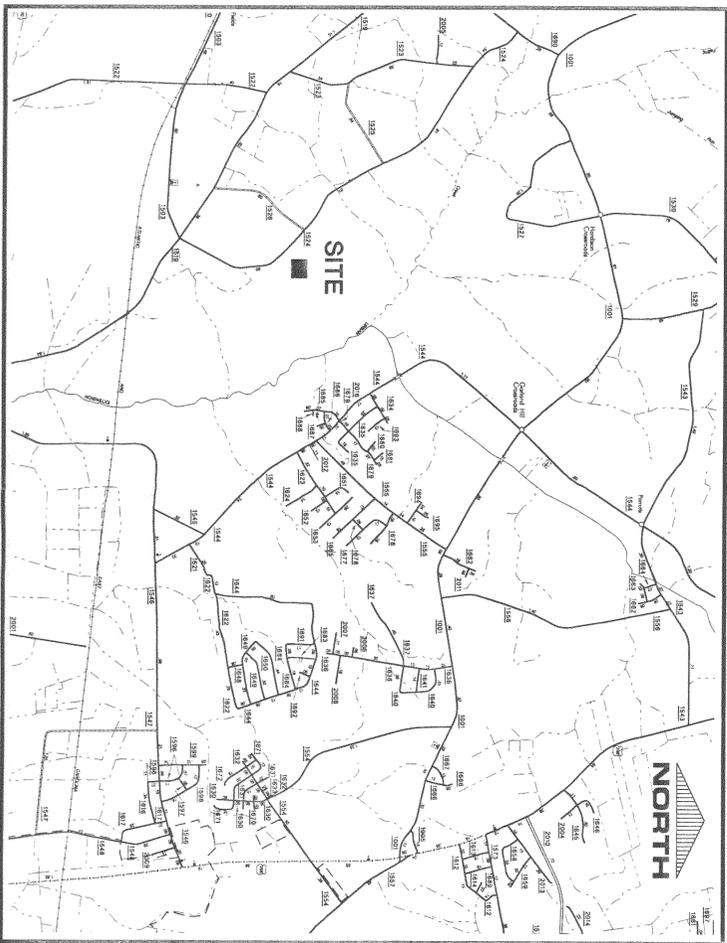
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 828 MOREHEAD CITY, N.C. 28557 (252) 726-9481

DATE	BY	REV.	DESCRIPTION
2/23/09	LCH	1	REVISED PER DENR LETTER DATED 12/23/08.

SCALE	1:1
DATE	5/27/08
DRAWN BY:	L. HAWKTON
CHKD. BY:	J. MOORE
PROJECT NUMBER	007062
DRAWING NO.	71
SHEET NO.	1 OF 8

INDEX

SHEET NO.	DRAWING NO.	TITLE SHEET	DESCRIPTION
1	T1	INDEX AND VICINITY MAP	
2	CD1	FACILITY PLAN AND EXISTING CONDITIONS AS OF 11/19/07	
3	CD2	1st YEAR FILL PLAN	
4	CD3	2nd YEAR FILL PLAN	
5	CD4	3rd YEAR FILL PLAN	
6	CD5	4th YEAR FILL PLAN	
7	CD6	5th YEAR FILL PLAN	
8			



VICINITY MAP



DATE	BY	REV.	DESCRIPTION

SCALE: 1" = 1/4"

DATE: 5/21/08

DRAWN BY: L. HAMPTON

CHKD BY: J. WOODIE

PROJECT NUMBER: C07062

DRAWING NO. T2 SHEET NO. 2 OF 8

**CONSTRUCTION & DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

Municipal Services  **Engineering Company, P.A.**

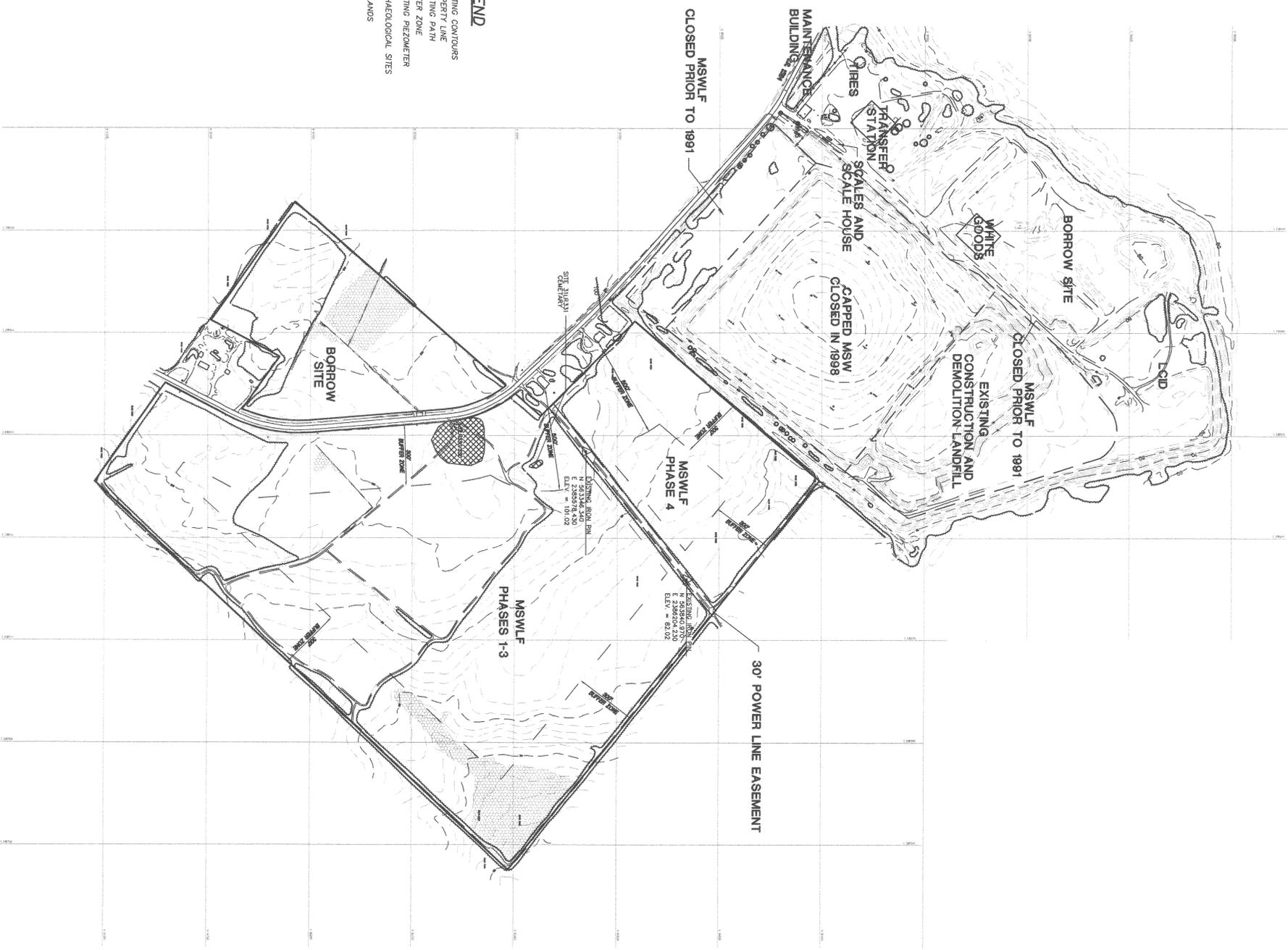
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393

P.O. BOX 348 BOONE, N.C. 28607 (828) 262-1767

P.O. BOX 828 MOREHEAD CITY, N.C. 28557 (252) 726-9481

LEGEND

- EXISTING CONTOURS
- PROPERTY LINE
- EXISTING PATH
- BUFFER ZONE
- EXISTING PERIMETER
- ARCHAEOLOGICAL SITES
- WETLANDS



Professional Engineer Seal for J. Woodie, License No. 4282, State of North Carolina.

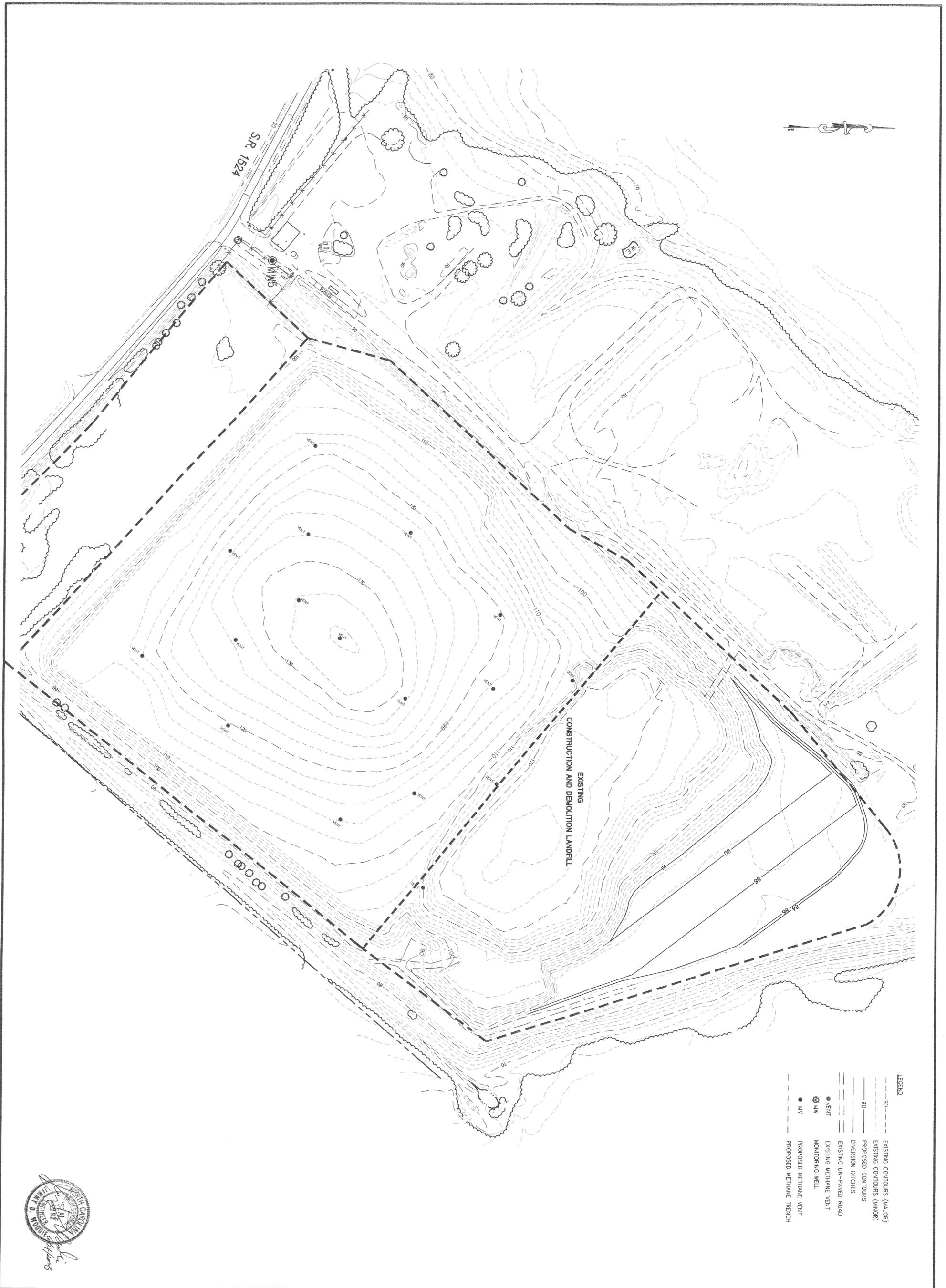
RECEIVED
MAY 12 2009
SECTION

SCALE: 1" = 30'	DATE: 8/26/09	BY: LCH	REV: 1	DESCRIPTION: ADDED SURVEY CONTROL
DRAWN BY: L. HAMPTON	DATE: 5/21/08	BY:	REV:	DESCRIPTION:
CHECKED BY: J. WOODIE	DATE:	BY:	REV:	DESCRIPTION:
PROJECT NUMBER: G07062	FACILITY PLAN AND EXISTING CONDITIONS AS OF 12/05/07			
DRAWING NO. C01	SHEET NO. 3 OF 8			

**CONSTRUCTION & DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

Municipal Services  **Engineering Company, P.A.**

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 P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
 P.O. BOX 828 MOREHEAD CITY, N.C. 28557 (252) 726-9481



- LEGEND**
- 90 --- EXISTING CONTOURS (MAJOR)
 - 90 --- EXISTING CONTOURS (MINOR)
 - 90 --- PROPOSED CONTOURS
 - DIVERSION DITCHES
 - EXISTING UN-PAVED ROAD
 - EXISTING METHANE VENT
 - MW MONITORING WELL
 - MW PROPOSED METHANE VENT
 - PROPOSED METHANE TRENCH



DATE	BY	REV.	DESCRIPTION

OPERATION PLAN
1st YEAR FILL PLAN

SCALE: 1" = 100'

DATE: 5/21/08

DRAWN BY: L. HAMPTON

CHD. BY: J. WOODIE

PROJECT NUMBER: G07062

DRAWING NO. C02 SHEET NO. 4 OF 8

**CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

Municipal Services

P.O. BOX 97 GARNER, N.C. 27529
(919) 772-5393

Engineering Company, P.A.

P.O. BOX 349 BOONE, N.C. 28607
(828) 262-1767

P.O. BOX 828 MOREHEAD CITY, N.C. 28557
(252) 726-9481



- LEGEND**
- 90 --- EXISTING CONTOURS (MAJOR)
 - 90 --- EXISTING CONTOURS (MINOR)
 - 90 --- PROPOSED CONTOURS
 - 90 --- DIVERSION DITCHES
 - 90 --- EXISTING UN-PAVED ROAD
 - VENT
 - ⊙ MW
 - MW
 - PROPOSED METHANE VENT
 - PROPOSED METHANE TRENCH



DATE	BY	REV.	DESCRIPTION
OPERATION PLAN 2nd YEAR FILL PLAN			
SCALE: 1" = 100'			
DATE: 5/21/08			
DRAWN BY: L. HAMPTON			
CHECKED BY: J. WOODRIF			
PROJECT NUMBER: G07062			
DRAWING NO. CD3			
SHEET NO. 5 OF 8			

**CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

Municipal Services

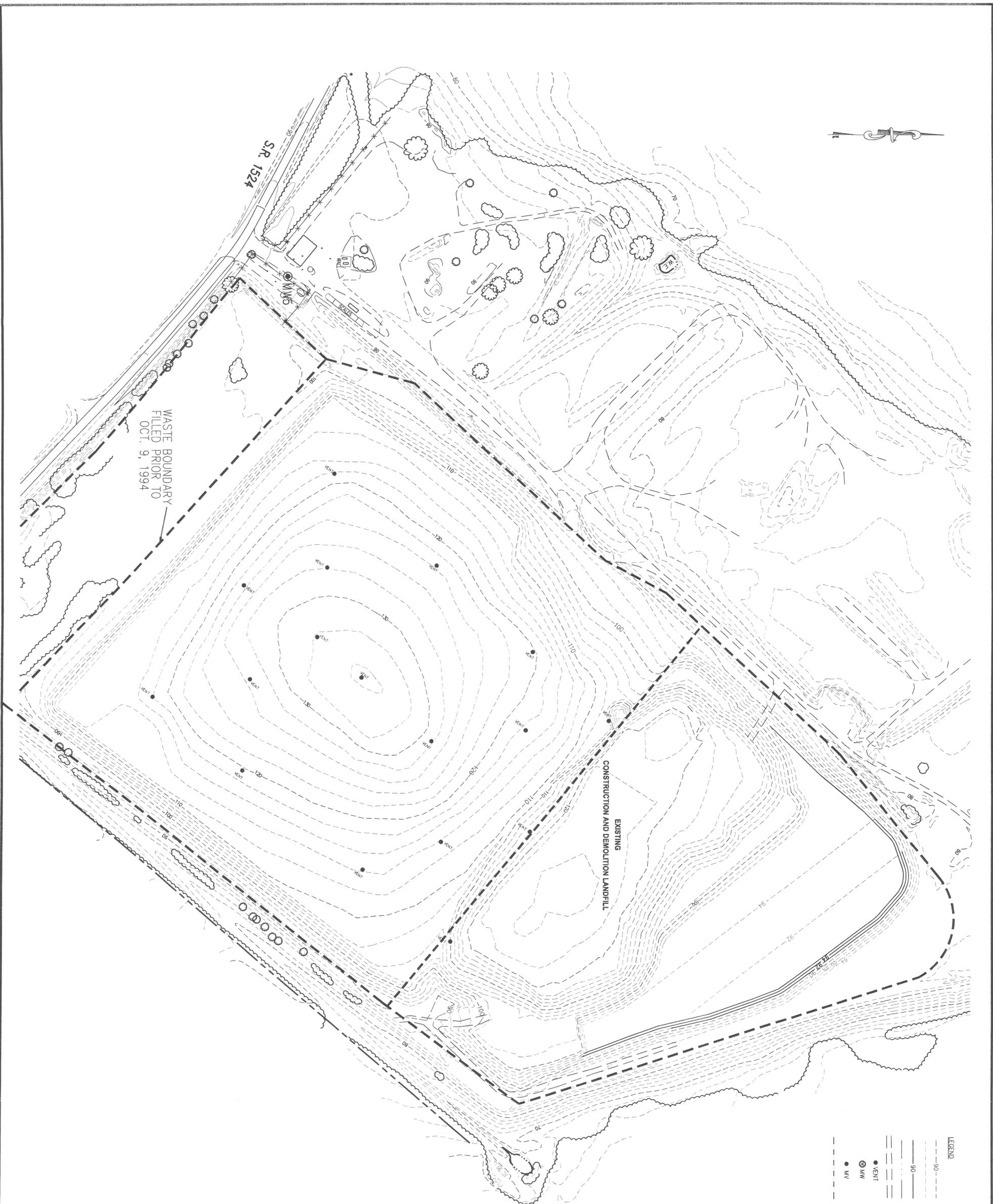
P.O. BOX 97 GARNER, N.C. 27529
(919) 772-5393



Engineering Company, P.A.

P.O. BOX 349 BOONE, N.C. 28607
(828) 262-1767

P.O. BOX B28 MOREHEAD CITY, N.C. 28557
(252) 726-9481



- LEGEND**
- EXISTING CONTOURS (MAJOR)
 - EXISTING CONTOURS (MINOR)
 - 90' PROPOSED CONTOURS
 - DIVERSION DITCHES
 - EXISTING UN-PAVED ROAD
 - VENT
 - EXISTING METHANE VENT
 - MW
 - MONITORING WELL
 - MV
 - PROPOSED METHANE VENT
 - PROPOSED METHANE TRENCH



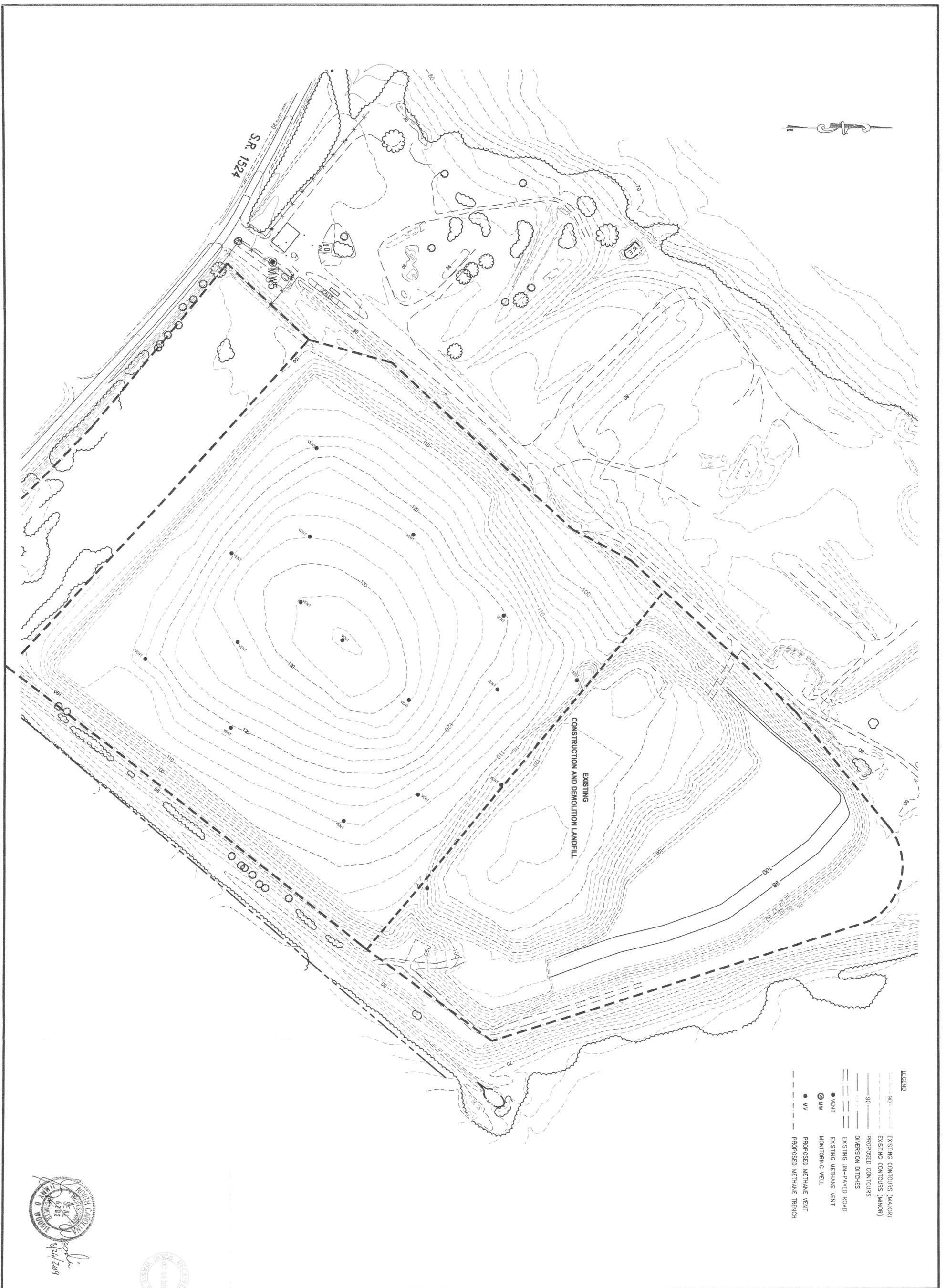
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DATE	5/21/08	BY	L. HAMPTON	REV			
PROJECT NUMBER	G07062						
DRAWING NO.	CD4						
SHEET NO.	6 OF 8						

**CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

OPERATION PLAN
3rd YEAR FILL PLAN

LICENSE NUMBER: C-0281

Engineering Company, P.A.
 P.O. BOX 97 GARNER, N.C. 27529
 (919) 772-5393
 P.O. BOX 349 BOONE, N.C. 28607
 (828) 262-1767
 P.O. BOX 828 MOREHEAD CITY, N.C. 28557
 (252) 726-9481



- LEGEND**
- 90 --- EXISTING CONTOURS (MAJOR)
 - 90 --- EXISTING CONTOURS (MINOR)
 - 90 --- PROPOSED CONTOURS
 - DIVERSION DITCHES
 - EXISTING UN-PAVED ROAD
 - VENT
 - ⊗ MW
 - MW
 - MONITORING WELL
 - PROPOSED METHANE VENT
 - PROPOSED METHANE TRENCH



DRAWING NO.	CDS
SHEET NO.	7 OF 8
PROJECT NUMBER	G07062
DATE	2/23/09
BY	LCH
REV.	1
DESCRIPTION	REVISED FILL SLOPES
SCALE	1" = 100'
DATE	5/21/08
DRAWN BY	L. HARRISON
CHECKED BY	J. WOODIE

**OPERATION PLAN
4th YEAR FILL PLAN**

**CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

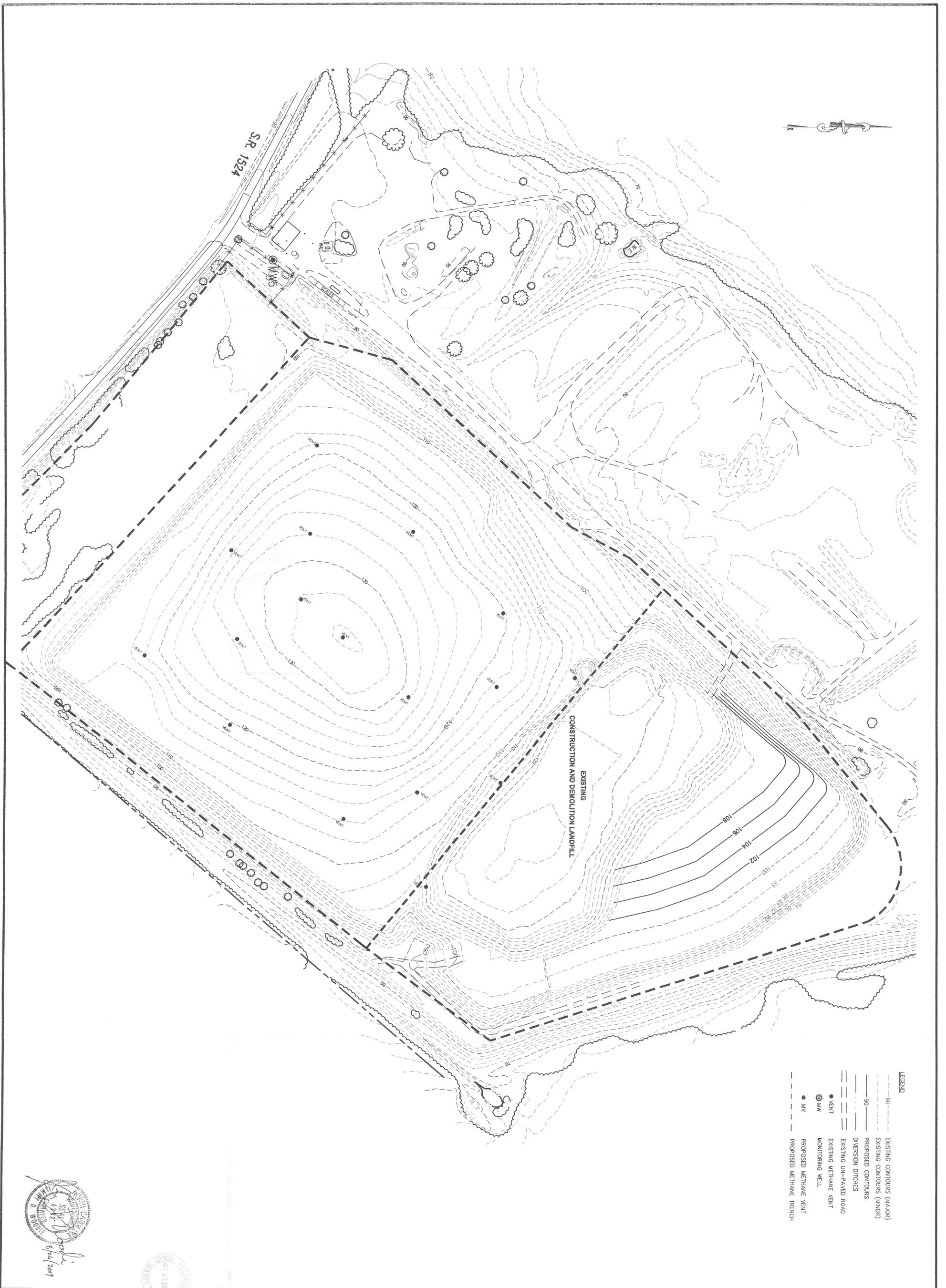
LICENSE NUMBER: C-0281

Municipal Services  **Engineering Company, P.A.**

P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393

P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767

P.O. BOX 828 MOREHEAD CITY, N.C. 28557 (252) 726-9481



- LEGEND**
- EXISTING CONTOURS (MAJOR)
 - EXISTING CONTOURS (MINOR)
 - PROPOSED CONTOURS
 - DIVERSION DITCHES
 - EXISTING UNPAVED ROAD
 - EXISTING METHANE VENT
 - MONITORING WELL
 - MW
 - MV
 - PROPOSED METHANE TRENCH



DATE	2/23/09	LCH	1	REVISED FILL SLOPES
DATE		BY		DESCRIPTION
SCALE	1" = 100'			
DATE	5/21/08			
DRAWN BY	L. HARRISON			
CHECKED BY	L. WOODIE			
PROJECT NUMBER	G07062			
DRAWING NO.	CD6			
SHEET NO.	8 OF 8			

**CONSTRUCTION AND DEMOLITION
LANDFILL FACILITY
LENOIR COUNTY
NORTH CAROLINA**

LICENSE NUMBER: C-0281

Municipal Services

P.O. BOX 97 GARNER, N.C. 27529
(919) 772-5393

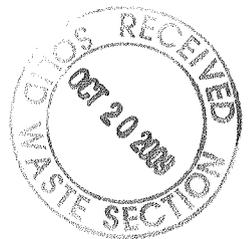
ME Engineering Company, P.A.

P.O. BOX 349 BOONE, N.C. 28607
(628) 262-1767

P.O. BOX 828 MOREHEAD CITY, N.C. 28557
(252) 726-9481

APPENDIX B

LOCAL GOVERNMENT APPROVALS

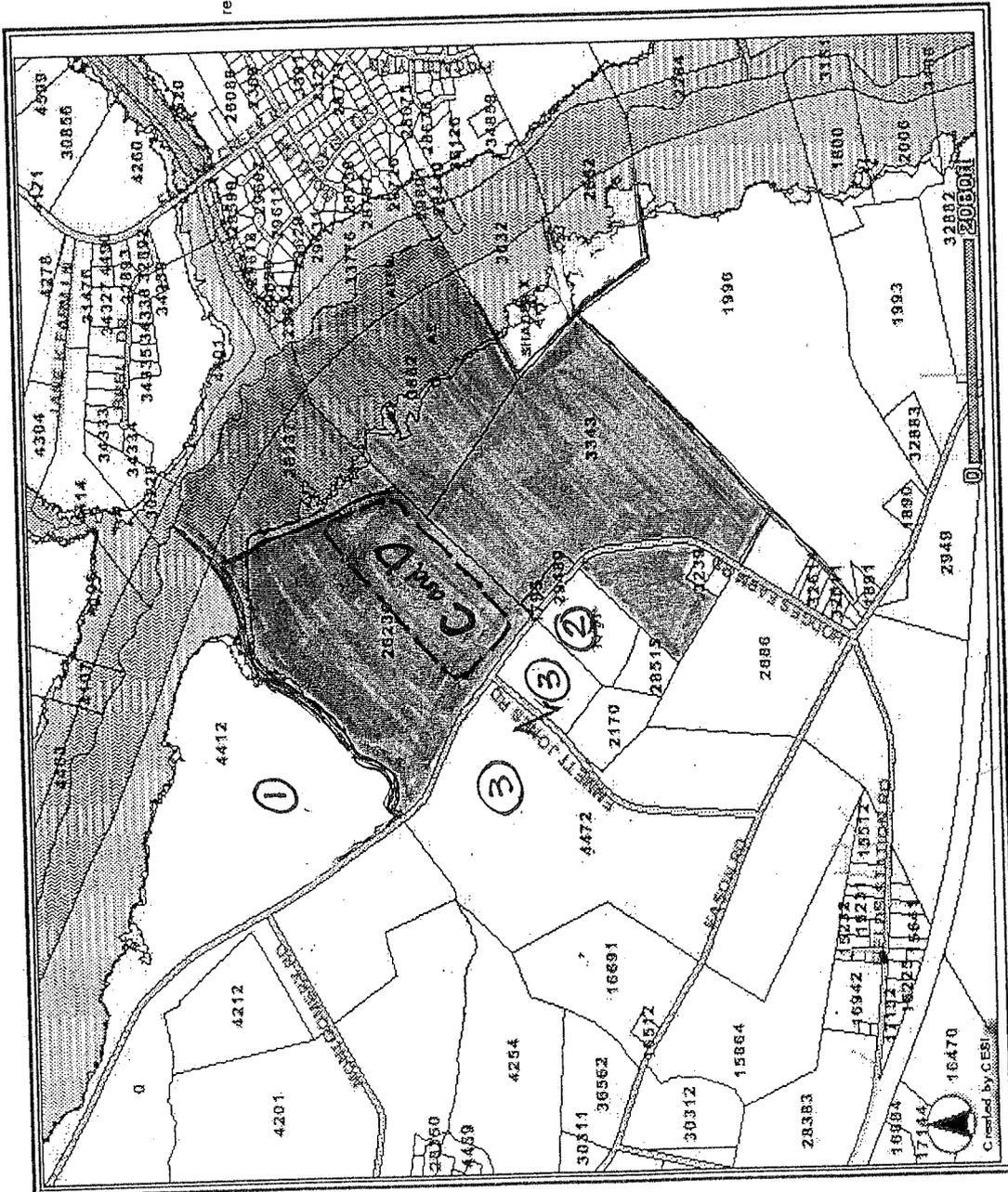
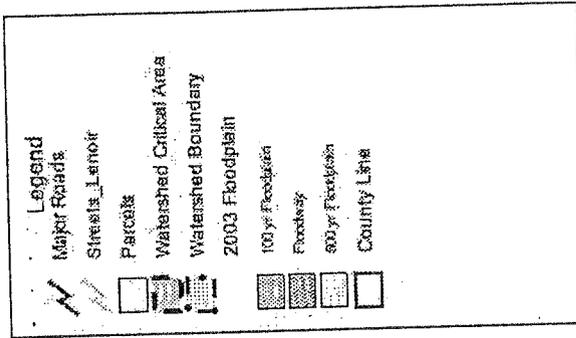




Lenoir County and its mapping contractors assume no legal responsibility for the information contained on this map. This map is not to be used for land conveyance. Map is based on State Plane Coordinate System 1983 NAD.

Lenoir County NC

Lenoir County



Adjoining Property Owners:

1. Charlotte H. Maxwell P.O Box 10009, Goldsboro, NC 27530
2. John D. Sparrow 107 E. North Street, Kinston, NC 27501
3. Rouse Warren Properties Inc. 109 Meadowlark Road, Goldsboro, NC 27534

Note: All shaded property is owned by Lenoir County.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

John D. Sparrow
107 E. North Street
Kinston, NC 28501

2. Article Number

(Transfer from service label)

7003 1680 0001 9719 4554

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X John Sparrow Agent
 Addressee

B. Received by (Printed Name)

John Sparrow

C. Date of Delivery

2-15-08

D. Is delivery address different from item 1? YesIf YES, enter delivery address below: No

3. Service Type

- Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee)

 Yes**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Rouse Warren Properties Inc
109 Meadowlark Rd.
Goldstboro, NC 28501

2. Article Number

(Transfer from service label)

7003 1680 0001 9719 4578

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Lucy Rouse Warren Agent
 Addressee

B. Received by (Printed Name)

Lucy Rouse Warren

C. Date of Delivery

2-15-8

D. Is delivery address different from item 1? YesIf YES, enter delivery address below: No

3. Service Type

- Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee)

 Yes**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Charlotte H. Maxwell
P.O. Box 10009
Goldstboro, NC 27530

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Cheryl Casey Agent
 Addressee

B. Received by (Printed Name)

Cheryl Casey

C. Date of Delivery

2-15-8

D. Is delivery address different from item 1? YesIf YES, enter delivery address below: No

3. Service Type

- Certified Mail Express Mail
 Registered Return Receipt for Merchandise
 Insured Mail C.O.D.

4. Restricted Delivery? (Extra Fee)

 Yes

**Municipal
Services**

SITE PLANNING/SUBDIVISIONS

**Engineering
Company, P.A.**

SUBSURFACE UTILITY ENGINEERING (SUE)

February 14, 2008

Charlotte H. Maxwell
P.O. Box 10009
Goldsboro, NC 27530

Re: Notice to Adjoining Lenoir County Landfill Property Owners

Dear Property Owner:

In compliance with the North Carolina Department of Environment and Natural Resources (NCDENR), new Construction and Demolition Landfill Rules require notification to adjoining Cleveland County Landfill property owners of our intent to continue operating a Construction and Demolition Landfill (C&DLF) at our current Solid Waste Facility.

The C&DLF is part of the existing facility which consists of the Municipal Solid Waste Landfill (MSWLF), White Goods Recovery and Recycling site, Tire disposal, and Yard Waste disposal areas.

The C&DLF debris is presently being disposed on top of a closed Municipal Solid Waste Landfill. New Solid Waste rules that regulate the disposal of C&D waste require that we obtain local government approval (County Commissioners) for the continuing operation of the C&DLF. This letter and subsequent public meeting are part of this process.

The proposed finish elevation for the C&DLF is 282' and the waste that is being disposed of is from the demolition, remodeling, and/or construction of structure. This landfill operates on top of the closed MSWLF and also accepts land clearing and inert debris along with C&D like waste or inert material. The entrance to the facility will not change.

The public meeting is scheduled for Thursday, March 27, 2008 at 2:00 p.m. and will be held at the County's landfill scale house located at 2949 Hodges Farm Road, La Grange, NC 28551. Application documents may be viewed at the County Landfill offices located at 2949 Hodges Farm Road, La Grange, NC 28551, between the hours of 8:00 a.m. – 4:00 p.m. Monday through Friday.

For further information, you may contact Tom Miller at the County Solid waste Department at (252) 566-4194.

Sincerely,
Municipal Engineering Services Co., PA

Lisa C. Hampton
Senior CADD Designer

**Municipal
Services**

SITE PLANNING/SUBDIVISIONS



**Engineering
Company, P.A.**

SUBSURFACE UTILITY ENGINEERING (SUE)

February 14, 2008

John D. Sparrow
107 E. North Street
Kinston, NC 27501



Re: Notice to Adjoining Lenoir County Landfill Property Owners

Dear Property Owner:

In compliance with the North Carolina Department of Environment and Natural Resources (NCDENR), new Construction and Demolition Landfill Rules require notification to adjoining Cleveland County Landfill property owners of our intent to continue operating a Construction and Demolition Landfill (C&DLF) at our current Solid Waste Facility.

The C&DLF is part of the existing facility which consists of the Municipal Solid Waste Landfill (MSWLF), White Goods Recovery and Recycling site, Tire disposal, and Yard Waste disposal areas.

The C&DLF debris is presently being disposed on top of a closed Municipal Solid Waste Landfill. New Solid Waste rules that regulate the disposal of C&D waste require that we obtain local government approval (County Commissioners) for the continuing operation of the C&DLF. This letter and subsequent public meeting are part of this process.

The proposed finish elevation for the C&DLF is 282' and the waste that is being disposed of is from the demolition, remodeling, and/or construction of structure. This landfill operates on top of the closed MSWLF and also accepts land clearing and inert debris along with C&D like waste or inert material. The entrance to the facility will not change.

The public meeting is scheduled for Thursday, March 27, 2008 at 2:00 p.m. and will be held at the County's landfill scale house located at 2949 Hodges Farm Road, La Grange, NC 28551. Application documents may be viewed at the County Landfill offices located at 2949 Hodges Farm Road, La Grange, NC 28551, between the hours of 8:00 a.m. – 4:00 p.m. Monday through Friday.

For further information, you may contact Tom Miller at the County Solid waste Department at (252) 566-4194.

Sincerely,
Municipal Engineering Services Co., PA

Lisa C. Hampton
Senior CADD Designer

**Municipal
Services**

SITE PLANNING/SUBDIVISIONS

**Engineering
Company, P.A.**

SUBSURFACE UTILITY ENGINEERING (SUE)

February 14, 2008

Rouse Warren Properties Inc.
109 Meadowlark Road
Goldsboro, NC 27534

Re: Notice to Adjoining Lenoir County Landfill Property Owners

Dear Property Owner:

In compliance with the North Carolina Department of Environment and Natural Resources (NCDENR), new Construction and Demolition Landfill Rules require notification to adjoining Cleveland County Landfill property owners of our intent to continue operating a Construction and Demolition Landfill (C&DLF) at our current Solid Waste Facility.

The C&DLF is part of the existing facility which consists of the Municipal Solid Waste Landfill (MSWLF), White Goods Recovery and Recycling site, Tire disposal, and Yard Waste disposal areas.

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Sincerely,
Municipal Engineering Services Co., PA

Lisa C. Hampton
Senior CADD Designer

7003 1680 0001 9719 4578

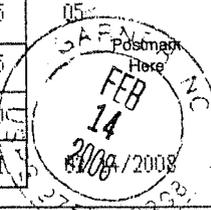
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GOLESBORO NC 27534

OFFICIAL USE

Postage	\$	\$0.41	0511
Certified Fee		\$2.65	05
Return Receipt Fee (Endorsement Required)		\$2.15	
Restricted Delivery Fee (Endorsement Required)		\$0.00	
Total Postage & Fees	\$	\$5.21	



Sent To Rouse Warren Properties Inc.
 Street, Apt. No.;
 or PO Box No. 109 Meadowlark Rd.
 City, State, ZIP+4 Goldsboro NC 27534

PS Form 3800, June 2002

See Reverse for Instructions

7003 1680 0001 9719 4554

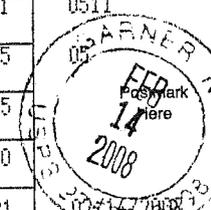
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KINSTON NC 28501

OFFICIAL USE

Postage	\$	\$0.41	0511
Certified Fee		\$2.65	05
Return Receipt Fee (Endorsement Required)		\$2.15	
Restricted Delivery Fee (Endorsement Required)		\$0.00	
Total Postage & Fees	\$	\$5.21	



Sent To John D. Sparrow
 Street, Apt. No.;
 or PO Box No. 107 E. North St.
 City, State, ZIP+4 Kinston, NC 28501

PS Form 3800, June 2002

See Reverse for Instructions

7003 1680 0001 9719 4547

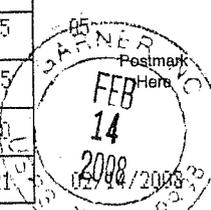
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GOLESBORO NC 27534

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Restricted Delivery Fee (Endorsement Required)		\$0.00	
Total Postage & Fees	\$	\$5.21	



Sent To Charlotte H. Maxwell
 Street, Apt. No.;
 or PO Box No. P.O. Box 10009
 City, State, ZIP+4 Goldsboro, NC 27530

PS Form 3800, June 2002

See Reverse for Instructions

NOTICE OF PUBLIC MEETING

In compliance with the North Carolina Department of Environment and Natural Resources (NCDENR) New Construction and Demolition Landfill Rules 15A NCAC 13B.0531-.0547, the County of Lenoir has scheduled a public meeting for Thursday, the 27th of March at 2:00 p.m. It is the intent of the County to continue operating a Construction and Demolition Landfill (C&DLF). This meeting is to inform the public of the proposed waste management activities as described in the proposed facility plan. All interested parties should attend. The public meeting will be held at the County's landfill scale house located at 2949 Hodges Farm Road, LaGrange, NC 28551. Application documents may be viewed at the County Landfill offices located at 2949 Hodges Farm Road, LaGrange, NC 28551 between the hours of 8:00 am - 4:00 pm Monday through Friday. For further information concerning this meeting, contact the County Solid waste Department at (252) 566-4194.

County of Lenoir
2949 Hodges Farm Road
LaGrange, NC 28551

Publish One Time February 18, 2008

Public Meeting Notice

In compliance with North Carolina Solid Waste Management Rule § .1635 (d) Lenoir County will hold a public meeting to discuss the results of the Assessment of Corrective Measures (ACM) completed for the Lenoir County Construction and Demolition Landfill. This meeting will take place on March the 26th of 2008 at 10:00am. The public meeting will be held at the Lenoir County Landfill Scale House located at 2949 Hodges Farm Road in LaGrange, North Carolina 28551. This meeting will be used as an open forum to inform and discuss any concerns associated with the proposed remediation/corrective measures at the Lenoir County Construction and Demolition Landfill. All interested parties should attend. The ACM report is available for review at the Lenoir County Landfill Scale House between the hours of 8:00am and 4:00pm Monday through Friday from February 18, 2008 through March 26, 2008 at 2049 Hodges Farm Road in LaGrange, North Carolina 28551.

F
DR
7A

MON
NOV

1

Special
Alert

Alert



In compliance with state and federal laws, the County of Essex, North Carolina, is required to provide a public hearing on the proposed amendments to the Comprehensive Zoning Ordinance. The proposed amendments are being held on Monday, November 24, 2008, at 4:00 PM in the Board Room of the County Administration Center, 200 North Main Street, Raleigh, NC 27601. The amendments are being held in order to provide an opportunity for the public to be heard on the proposed amendments. The amendments are being held in order to provide an opportunity for the public to be heard on the proposed amendments. The amendments are being held in order to provide an opportunity for the public to be heard on the proposed amendments.

County of Essex
200 North Main Street
Raleigh, NC 27601

ESSEX COUNTY

COMPREHENSIVE ZONING ORDINANCE

AMENDMENTS

NOVEMBER 24, 2008

4:00 PM

BOARD ROOM

200 NORTH MAIN STREET

RALEIGH, NC 27601

organized by Deahorne. He says across the county at their annual meeting. He says the meeting will be held in South Carolina. The meeting will be held in South Carolina. The meeting will be held in South Carolina.

Paul Reed Company, a sports of Washington, was specifically recognized for achieving more than \$1 million in sales and profits. Reed says he has a 10 percent share in the company. In the region, North Carolina is the region for the 2007-2008 season.

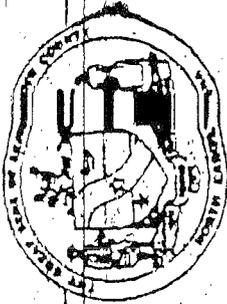
Park Hotel Company, a sports of Washington, was specifically recognized for achieving more than \$1 million in sales and profits. Reed says he has a 10 percent share in the company. In the region, North Carolina is the region for the 2007-2008 season.

As a general dealer for over 40 years, Park Hotel Company has consistently achieved outstanding sales and service results for clients around the world. These results are a testament to the company's commitment to excellence in the sporting business. Mike Munnich, chairman and CEO of Park Hotel Company, says the company is proud to be a leader in the industry.

The state would be a big step up for Point, based in Charlotte. The company now has a total of 10 franchise units in 10 states and is looking for more. The company is currently in the process of raising capital to expand its operations. The company is currently in the process of raising capital to expand its operations.



In compliance with the North Carolina Solid Waste Management Act, the results of the assessment for the year 2007-2008 will be published in the public domain. The assessment will be published in the public domain. The assessment will be published in the public domain.

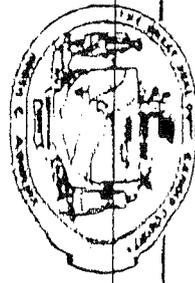


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County of Lenoir
2949 Hodges Farm Road
LaGrange, NC 28551

...tion, please call Rev. Room- degree programs was 96
O. Warren with First Baptist seven Whitehead, Jr. at 252- percent. The pass rate for all
of Kingston, Liberty Grove 527-5320. BSN programs nationally

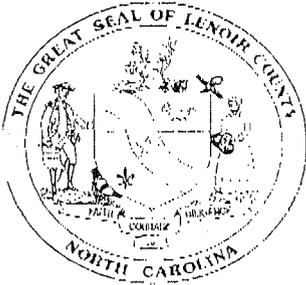


Notice of Public Hearing

In compliance with North Carolina Solid Waste Management Rule §.16355 (d) Lenoir County will hold a public meeting to discuss the results of the Assessment of Corrective Measures (ACM) completed for the Lenoir County Construction and Demolition Landfill. This meeting will take place on March the 26th of 2008 at 10:00 am. The public meeting will be held at the Lenoir County Landfill Scale House located at 2949 Hodges Farm Road in La Grange, North Carolina 28551. This meeting will be used as an open forum to inform and discuss any concerns associated with the proposed remediation/corrective measures at the Lenoir County Construction and Demolition Landfill. All interested parties should attend. The ACM report is available for review at the Lenoir County Landfill Scale House between the hours of 8:00 am and 4:00 pm Monday through Friday from February 18, 2008 through March 26, 2008 at 2049 Hodges Farm Road in La Grange, North Carolina 28551.

Minutes from Public Meeting
for the Continuing Operation of the
Lenoir County Construction and Demolition Landfill

The meeting was held in the Lenoir County Scale House Conference Room on March 27, 2008 at 2:00 PM. The meeting was advertised 30 days prior to having it and no one other than Lenoir County and Municipal Engineering Representatives were present. The meeting was adjourned after a short discussion amongst the attendees concerning the requirements of local government approval.



County of Lenoir

OFFICE OF THE
FINANCE OFFICER

P.O. BOX 3289
KINSTON, N.C. 28502

PHONE (252) 559-6460
FAX (252) 559-6454

DATE: 6/27/2008

TIME: 10:30 AM

TO:

FIRM MUNICIPAL ENGINEERING

NAME WAYNE SULLIVAN

FAX # 919 772 1176

NUMBER OF PAGES (INCLUDING COVER) 3

FROM:

LENOIR COUNTY FINANCE OFFICE
THOMAS L. HOLLOWELL
P.O. BOX 3289, 130 SOUTH QUEEN STREET
KINSTON, N.C. 28502

E-MAIL thollowe@co.lenoir.nc.us

MESSAGE:

COPY OF CD RESOLUTION FOLLOWS

IF YOU HAVE NOT RECEIVED ALL OF THE PAGES, OR FIND THAT ANY OF THEM ARE ILLLEGIBLE, PLEASE CALL (252) 559-6460

INTRODUCED BY: Michael Jarman, County Manager **DATE:** 06/16/08 **ITEM NO.:** 8A.

Resolution Approving the Continuing Use of the Construction and Demolition Landfill

SUBJECT AREA: Administrative

ACTION REQUESTED:

The Board is requested to approve the continuing use of the Construction and Demolition Landfill.

HISTORY/BACKGROUND:

The Lenoir County Solid Waste Facility is located entirely within Lenoir County and will only accept waste from Lenoir County residences and businesses. The Lenoir County Solid Waste Facility does not lie within any incorporated city or town or within the extra-territorial zoning jurisdiction of any city or town. The Lenoir County Solid Waste Facility operates on top of the closed MSWLF. The Lenoir County Solid Waste Facility consists of the Municipal Solid Waste Landfill Facility (MSWLF), Land Clearing and Inert Debris Landfill (LCD), White Goods Recovery and Recycling site, Tire Disposal area and Yard Waste disposal area. The Construction and Demolition Landfill (C&DLF) is part of the Lenoir County Solid Waste Facility. The Construction and Demolition Landfill accepts construction and demolition waste and inert material. In compliance with the North Carolina Department of Environment and Natural Resources' (NCDENR) New Construction and Demolition Landfill Rules 15A NCAC 13B.0531-.0547, Lenoir County held a public meeting on March 27, 2008 at the County landfill. The purpose of this public meeting was to inform the public of the proposed waste management activities as described in the landfill facility plan. As required by the new regulations of the NCDENR, the facility plan expresses the County's intent to continue operating a Construction and Demolition Landfill (C&DLF). Board approval of this resolution expressing the County's intent to continue to operate a C&DLF is required by these new regulations, specifically .0547 (4)(a) Rule .0536 (c)(11).

Service
Area

EVALUATION:

The County currently operates a CD&LF at the Lenoir County Solid Waste Facility and wishes to continue to operate this CD&LF. In compliance with new NCDENR construction and demolition landfill rules that became effective January 1, 2007, Lenoir County held a public hearing on March 27, 2008 to inform the public of the County's intent to continue operation of the CD&LF at the Lenoir County Solid Waste Facility. Board approval of this resolution is a requirement of the new NCDENR construction and demolition landfill rules (.0547 (4)(a) Rule .0536 (c)(11)) and will allow the County to continue to operate the CD&LF at the Lenoir County Solid Waste Facility.

MANAGER'S RECOMMENDATION:

Respectfully Request Approval.

MW
Initials

RESOLUTION: NOW THEREFORE BE IT RESOLVED that the Board of Commissioners hereby grants approval for the continuing operation of the existing construction and demolition landfill (C&D.L.F) at the current Solid Waste Facility.

AMENDMENTS:

MOVED Brown SECOND Stroud

APPROVED DENIED UNANIMOUS

YEA VOTES: Brown Davis Graham Harper
Humphrey Stroud Taylor

Paul H. Taylor, Jr.
Paul H. Taylor, Jr., Chairman 06/16/08
Date

MW/arn
ATTEST 06/16/08
Date

APPENDIX C

WASTE SCREENING PLAN



APPENDIX C

A. INTRODUCTION

The municipal solid waste stream is made up of wastes from all sectors of society. The waste is often categorized by its source or its characteristics. Terms used include commercial, industrial, residential, biomedical, hazardous, household, solid, liquid, demolition/construction, sludge, etc. Regardless of how one classifies wastes, the bottom line is that wastes are delivered to the landfill and a management decision must be made to either reject or accept them. This responsibility rests with the manager of the landfill. Wastes which are not authorized to be accepted at the landfill create a number of potential problems including: (1) liability due to future releases of contaminants; (2) bad publicity if media learns of unacceptable waste entering the landfill; (3) potential for worker injury; (4) exposure to civil or criminal penalties; (5) damage to landfill environmental control systems.

B. HAZARDOUS WASTE REGULATIONS AND MANAGEMENT

In the United States, hazardous waste is regulated under RCRA, Subtitle C. A waste is hazardous if it is listed as a hazardous waste by the Administrator of the Environmental Protection Agency (EPA) in the Code of Federal Regulations, Title 40, Part 261, or if it meets one or more of the hazardous waste criteria as defined by EPA. These criteria are:

- Ignitability
- Corrosivity
- Reactivity
- Toxicity

1. Ignitability

Ignitable waste is a waste that burns readily, causes a fire by friction under normal circumstances, or is an oxidizer. Any waste having a flash point of <140F falls in this category. Flash point is that temperature at which a liquid gives off vapors that will ignite when an open flame is applied. Under Department of Transportation (DOT) definitions, a flammable liquid has a flash point of >100 F. A combustible liquid has a flash point between 100 and 200 F. Therefore, a flammable liquid is always hazardous while a combustible liquid may or may not be hazardous depending upon its flash point.

2. Corrosivity

A corrosive waste is one having a very high or a very low pH. The pH of a liquid is a measure of how acidic or basic (alkaline) the material is. The pH scale ranges from 0 to 14. High numbers are basic and low numbers are acidic. A substance having a pH ≤ 2.0 or ≥ 12.5 is defined as hazardous under RCRA.

3. Reactivity

A waste is reactive if it is normally unstable: reacts violently with water; forms an explosive mixture with water; contains quantities of cyanide or sulfur that could be released to the air; or can easily be detonated or exploded. These wastes may fall into any one of several DOT categories.

4. Toxicity Characteristic Leaching Procedure (TCLP)

A waste is TCLP toxic if the concentration of any constituent in Table 1 exceeds the standard assigned to that substance. The TCLP is a methodology which attempts to simulate the conditions within a landfill. An acidic solution is passed through a sample of waste and the resultant "leachate" is analyzed for contaminants. The TCLP is designed to detect heavy metals, pesticides and a few other organic and inorganic compounds. The purpose of the test is to prevent groundwater contamination by highly toxic materials. TCLP tests the mobility of 40 different elements and compounds.

Except in certain specified circumstances, regulated quantities of hazardous waste must be disposed of at a permitted hazardous waste disposal facility. In accordance with 40 CFR Part 261.3, **any material contaminated by a hazardous waste is also deemed to be a hazardous waste and must be managed as such.** Hazardous waste from conditionally exempt small quantity generators are to be disposed of in a Hazardous waste disposal facility. RCRA permits are also required to store, transport, and treat hazardous waste.

C. POLYCHLORINATED BIPHENYL'S (PCBs)

1. Introduction

PCBs are nonflammable and conduct heat without conducting electricity. These compounds were most frequently used as an additive to oil or other liquids in situations where heat was involved. The PCBs enhance the heat conducting properties of the liquid and thereby increase the heat dissipation or cooling effect obtained. They have also been used in lubricants and paint. In the United States one of the most common applications was in electric transformers. The only effective method for destroying PCBs is high Temperature incineration which is relatively expensive due to a shortage of PCB incineration capacity.

TABLE 1

T.C.L.P. CONSTITUENTS & REGULATORY LEVELS (mg/L)			
CONSTITUENT	REG LEVEL	CONSTITUENT	REG LEVEL
Arsenic	5.0	Hexachlorobenzene	0.13
Barium	100	Hexachloro-1,3-butadiene	0.5
Benzene	0.5	Hexachloroethane	3.0
Cadmium	1.0	Lead	5.0
Carbon Tetrachloride	0.5	Lindane	0.4
Chlordane	0.03	Mercury	0.2
Chlorobenzene	100	Methoxychlor	10.0
Chloroform	6.0	Methyl ethyl ketone	200
Chromium	5.0	Nitrobenzene	2.0
m-Cresol	200	Pentachlorophenol	100
o-Cresol	200	Pyridine	5.0
p-Cresol	200	Selenium	1.0
Cresol	200	Silver	5.0
1,4-Dichlorobenzene	10.0	Tetrachloroethylene	0.7
1,2-Dichloroethane	0.7	Toxaphene	0.5
1,1-Dichloroethylene	0.5	Trichloroethylene	0.5
2,4-Dichlorophenoxyacetic acid	0.7	2,4,5-Trichlorophenol	400
2,4-Dinitrotoluene	0.13	2,4,6-Trichlorophenol	2.0
Endrin	0.02	2,4,5-TP (Silvex)	1.0
Heptachlor (and its hydroxide)	0.008	Vinyl Chloride	0.2

By law PCB's are no longer used as dielectrics in transformers and capacitors manufactured after 1979. There are many millions of pounds of PCBs still in use or in storage. One example is the ballasts used in fluorescent light fixtures. It has been estimated that there are between 0.5 million and 1.5 billion ballasts currently in use in this country. Due to the long life of these units, about half of these may be of pre-1979 manufacture and contain PCBs. Since each ballast contains about one ounce of nearly pure PCB fluid, there are about **20 to 30 million pounds** of PCBs in existing lighting fixtures. These items are not the subject to RCRA Subtitle D Waste Screening!

Commercial or industrial sources of PCB wastes that should be addressed by the program include:

- Mineral oil and dielectric fluids containing PCBs;
- Contaminated soil, dredged material, sewage sludge, rags, and other debris from a release of PCBs;
- Transformers and other electrical equipment containing dielectric fluids; and
- Hydraulic machines.

2. PCB Regulatory Requirements

As contrasted to hazardous wastes, the Toxic Substance Control Act regulates PCBs based on the concentration of PCBs in the waste rather than the source or characteristic of the waste. The regulations concerning PCB disposal are spelled out in 40 CFR Part 761. Subtitle D of RCRA merely requires that PCB waste not be disposed in a MSW landfill. PCB management requirements include:

Waste containing more than 500 ppm of PCBs must be incinerated. Waste containing from 50 to 500 ppm must be disposed of by incineration, approved burning, or in chemical waste landfill permitted to receive such wastes. The regulations are silent concerning wastes containing less than 50 ppm of PCBs; however, the regulations cannot be circumvented by diluting stronger wastes.

D. FUNDAMENTALS OF WASTE SCREENING

1. Know Your Generators and Haulers

Since the level of sophistication of your waste screening program will be a reflection of the likelihood of hazardous waste and PCB waste being in your incoming waste, **knowledge of the commercial industrial base of your service area is critical.** Some examples are the automotive industry, which generates solvents, paint wastes, lead acid batteries, grease and oil; the dry cleaning industry, which may generate filters containing dry cleaning solvents; metal platers which generate heavy metal wastes; and other industries which generate a variety of undesirable wastes; e.g. chemical and related products, petroleum refining, primary metals, electrical and electronic machinery, etc.

Landfill managers should also know the haulers and trucks serving the businesses in their community which are likely to carry unacceptable wastes.

Some local governments and solid waste management agencies have enacted legislation requiring haulers to provide a manifest showing the customers whose wastes make up that particular load. Such a manifest is an extremely useful tool when a load is found to contain prohibited wastes. It is unwise to accept wastes from unknown, unlicensed, or otherwise questionable haulers.

2. Inspections

An inspection is typically a visual observation of the incoming waste loads by an individual who is trained to identify regulated hazardous or PCB wastes that would not be acceptable for disposal at the MSWLF unit. The training of landfill personnel will be conducted by a local EMS official or a SWANA certification. An inspection is considered satisfactory if the inspector knows the nature of all materials received in the load and is able to discern whether the materials are potentially regulated hazardous wastes or PCB wastes.

Ideally, all loads should be screened; however, it is generally not practical to inspect in detail all incoming loads. Random inspections, therefore, can be used to provide a reasonable means to adequately control the receipt of inappropriate wastes. Random inspections are simply inspections made on less than every load. At a minimum the inspection frequency will not be less than one percent of the waste stream.

The frequency of random inspections may be based on the type and quantity of wastes received daily, and the accuracy and confidence desired in conclusions drawn from inspection observations. Because statistical parameters are not provided in the regulation, a reasoned, knowledge-based approach may be taken. A random inspection program may take many forms such as inspecting every incoming load one day out of every month or inspecting one or more loads from transporters of wastes of unidentifiable nature each day. If these inspections indicate that unauthorized wastes are being brought to the MSWLF site, the random inspection program should be modified to increase the frequency of inspections.

Inspection priority also can be given to haulers with unknown service areas, to loads brought to the facility in vehicles not typically used for disposal of municipal solid waste, and to loads transported by previous would-be offenders. For wastes of unidentifiable nature received from sources other than households (e.g., industrial or commercial establishments), the inspector should question the transporter about the source/composition of the materials.

An inspection flow chart to identify, accept, or refuse solid waste is provided as Figure 1.

Inspections of materials may be accomplished by discharging the vehicle load in an area designed to contain potentially hazardous wastes that may arrive at the facility. The waste should be carefully spread for observation using a front end loader or other piece of equipment. The Division of Solid Waste recommends that waste should be hand raked to spread the load. Personnel should be trained to identify suspicious wastes. Some indications of suspicious wastes are:

- Hazardous placards or markings;
- Liquids;
- Powders or dusts;
- Sludges;
- Bright or unusual colors;
- Drums or commercial size containers; or
- Chemical odors.

The City of Albemarle will follow these procedures when suspicious wastes are discovered.

- Segregate the wastes;
- Question the driver;
- Review the manifest (if applicable);

- Contact possible source;
- Call the State Solid Waste Management Department;
- Use appropriate protective equipment;
- Contact laboratory support if required; and
- Notify the local Hazardous Material Response Team.

Containers with contents that are not easily identifiable, such as unmarked 55-gallon drums, should be opened only by properly trained personnel. Because these drums could contain hazardous waste, they should be refused whenever possible. Upon verifying that the solid waste is acceptable, it may then be transferred to the working face for disposal.

Testing typically would include the Toxicity Characteristic Leaching Procedure (TCLP) and other tests for characteristics of hazardous wastes including corrosivity, ignitability, and reactivity. Wastes that are suspected of being hazardous should be handled and stored as a hazardous waste until a determination is made.

If the wastes temporarily stored at the site are determined to be hazardous, City of Albemarle is responsible for the management of the waste. If the wastes are to be transported from the facility, the waste must be: (1) stored at the MSWLF facility in accordance with requirements of a hazardous waste generator, (2) manifested, (3) transported by a licensed Treatment, Storage, or Disposal (TSD) facility for disposal.

E. RECORD KEEPING AND NOTIFICATION REQUIREMENTS

Records must be kept pursuant to an incident where regulated hazardous waste or prohibited waste is found at the landfill. It is also recommended that records be kept of all screening activities and incidents, whether or not, regulated or prohibited wastes are found. This will help prove that the landfill owner/operator has acted in a prudent and reasonable manner.

The best way to prove compliance with this requirement is to document each inspection including:

- Date and time of waste detection
- Hauler name (company and driver)
- Waste(s) detected
- Waste generator(s) if able to identify
- Action(s) taken to manage or return material(s)
- Efforts taken if extreme toxicity or hazard was discovered
- Landfill employee in responsible charge

40 CFR Part 258 requires that records should be maintained at or near the landfill site during its active life and as long after as may be required by the appropriate state or local regulations.

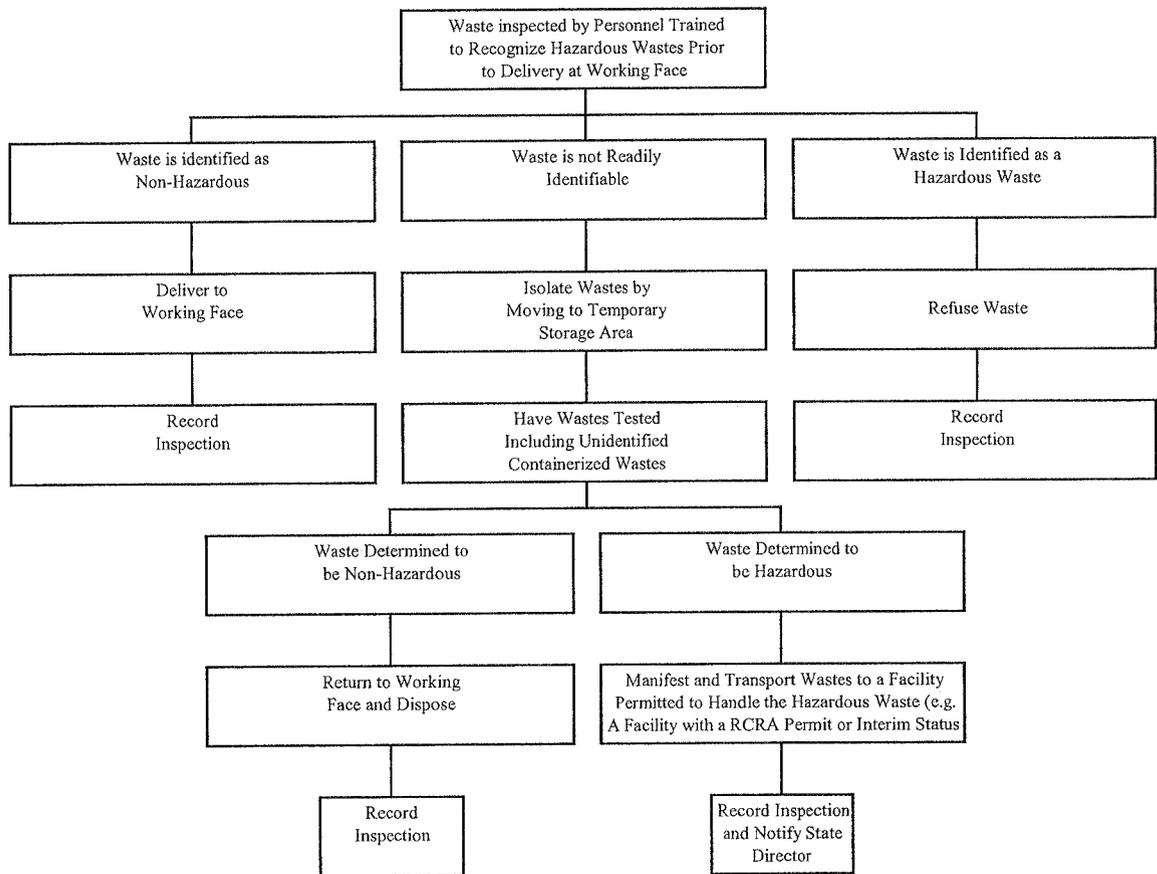


FIGURE 1
Hazardous Waste Inspection Decision Tree
Inspection Prior to Working Face

WASTE SCREENING CHECK LIST

CONTAINERS	YES	NO
FULL.....	_____	_____
PARTIALLY FULL.....	_____	_____
EMPTY.....	_____	_____
CRUSHED.....	_____	_____
PUNCTURED.....	_____	_____
POWDERS/DUSTS		
IDENTIFIED.....	_____	_____
UNKNOWN.....	_____	_____
SATURATION.....	_____	_____
LABEL/HAZARDOUS.....	_____	_____
ODOR/FUMES		
STRONG.....	_____	_____
FAINT.....	_____	_____
HEAT.....	_____	_____
ITEMS FOUND		
BATTERIES.....	_____	_____
OIL.....	_____	_____
BIOMEDICAL.....	_____	_____
RADIOACTIVE.....	_____	_____
ASHES/RESIDUE.....	_____	_____
SOD/SOIL.....	_____	_____
LIQUID.....	_____	_____
HAZARDOUS.....	_____	_____
PCB'S.....	_____	_____

CHECK ALL THAT APPLY

DETAILED SCREENING REPORT

WASTE SOURCE _____
ADDRESS _____

PROBABLE [] SUSPECTED [] CONFIRMED []

WASTE
HAULER _____
ADDRESS _____

DRIVER'S NAME _____
DETAIL _____

NOTIFIED:

WASTE SOURCE [] HAULING MANAGEMENT [] SITE MANAGEMENT []
STATE [] FEDERAL []

NAME _____
WITNESS (IF ANY) _____
DATE _____ TIME _____ AM PM

ACTION REQUIRED