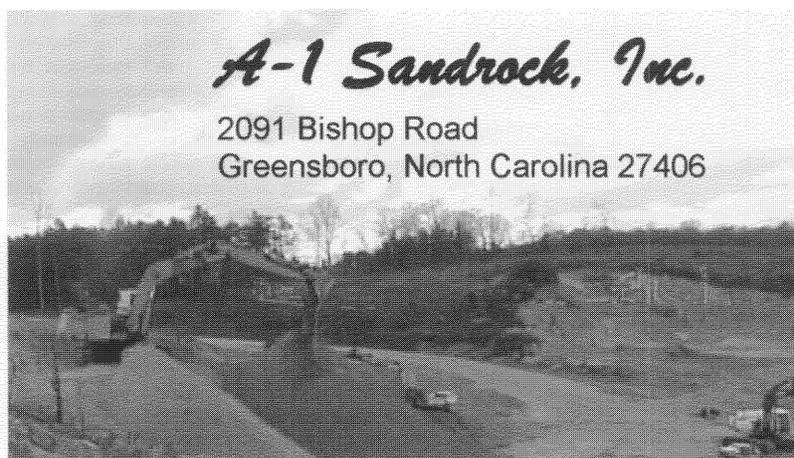


**OPERATIONS PLAN FOR
TREATMENT & PROCESSING FACILITY**

**A-1 Sandrock CDLF (South Mine Facility)
Guilford County, North Carolina
Solid Waste Permit No. 41-17 (pending)**

Permit Application Documents

Prepared for



September 2007

David Garrett, P.G., P.E.

Engineering and Geology

5105 Harbour Towne Drive, Raleigh, NC 27604

Telephone/Fax (919) 231-1818

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**Permit Application Documents
Revision 0.0**

Prepared for:

A-1 Sandrock, Inc.
2091 Bishop Road
Greensboro, North Carolina 27406

To the Attention of:

Mr. Ronald E. Petty, III


G. David Garrett, P.G., P.E.
Principal



10/2/2007

September 2007

David Garrett, P.G., P.E.
Engineering and Geology



**A-1 Sandrock, Inc.
T&P FACILITY (South Mine)
OPERATIONS PLAN**

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Revisions:	0	October 2, 2007	Initial NC DENR Application
	0.1	October 19, 2007	Revised NC DENR Application

SECTION 1.0 GENERAL FACILITY OPERATIONS

1.1 OVERVIEW

1.1.1 Summary of Operations

This Operations Plan was prepared for the A-1 Sandrock Treatment and Processing (T&P) Facility, i.e., the "Facility," located within an active mine permit boundary (NC DENR Mine Permit #41-22) and a permitted (but not operational) C&D Landfill (NC DENR Solid Waste Permit #41-17). The Facility intends to accept LCID (chiefly vegetative debris), clean construction wastes (generally not demolition materials, except clean wood and inert debris, e.g. brick, block, asphalt, soil and rock), and other permitted wastes, e.g. cardboard, pallets, and scrap metal (excluding salvaged automobiles). These materials will be stockpiled, sorted and ground or crushed (depending on the material), and redistributed either off-site (via sales to the public) or used in a beneficial way on-site (under the provisions of the mine reclamation plan). These activities will take place within the previously graded areas (i.e., Phase 1) and other portions of the site. The necessary Sedimentation and Erosion Control (S&EC) measures are already in place, built according to a S&EC Plan approved by NC DENR Division of Land Resources as part of the mining permit. Guilford County has acknowledged this facility and provided a zoning letter to the Division of Waste Management in support of this activity. A-1 Sandrock acknowledges that until a landfill Permit to Operate is issued by the NC DENR Division of Waste Management, no disposal of materials will occur at the facility.

1.1.2 Facility Description

The Facility entrance is located at 2091 Bishop Road, on the south side of Bishop Road (SR 1116), accessible from either Holden Road to the east or Groometown Road to the west (see Appendix 1). The scales and office are located just inside the gate, which is the only means of accessing the site by the public. After crossing the scales, incoming loads are directed to an appropriate stockpile or recycling area, depending on the material, that is, whether the materials are source-sorted or mixed. Processing activities will consist of sorting the materials into stockpiles or roll-off boxes; grinding, crushing, or baling (as appropriate); packaging (as needed) and loading or placement into finished goods stockpiles to await shipment to other destinations. Rejected materials (not caught at the gate) and/or "bypass" materials (with no recycling value) will be loaded into roll-off boxes and transported to an appropriate disposal facility (dependent on material type and source area). Some materials will be used in a beneficial way onsite, such as roadway surfacing (aggregates) and/or slope stabilization (mulch) – no stumps or unprocessed woody debris will be placed on the slopes. All activities at the site will be conducted under the supervision of a certified operator and trained staff. **The facility will be operated in such a manner as to process and redistribute 75% of the recyclable materials taken in by the facility within one year of receipt.**

1.1.3 Customer Base

The Facility will typically serve a customer base of various commercial contractors and industries, state and local governments, and the general public. A-1 Sandrock anticipates a majority of the waste stream will be derived from affiliated material hauling companies.

1.1.4 Geographic Service Area

The service area for the T&P facility will be a 50-mile radius from the property, consistent with the permitting for the future CDLF. The operator will be responsible for knowing his customer base and waste stream characteristics, such that the approved service areas of recipient landfills for non-recycled materials is observed. The site will not be operated intentionally as a C&D transfer facility.

1.1.5 Hours of Operation

The T&P facility will be open to the public for the receipt of wastes between 7 AM and 5 PM on Monday through Saturday, or within alternate hours as market conditions dictate. Processing activities within the facility make take place outside those hours, and affiliated container service trucks may be received outside those hours.

1.1.6 End-Use for Recycled Materials

This facility will promote traditional uses of the recycled materials, e.g., landscape mulch, soil amendments, and scrap metals, but the Owners intend to pursue innovative uses of certain materials, such as fuel sources, compost bulking material, erosion control applications. The specific applications under development is proprietary and confidential, as are the customers for end-use products. A tentative listing of potential customers for the end-use products is presented in **Appendix 8**.

1.2 CONTACT INFORMATION

For fire, police, or medical/accident emergencies dial 911. A partial listing Hazardous Waste responders and disposal contacts, if needed, is provided in **Appendix 2**. All correspondence and questions concerning the operation of the facility should be directed to the appropriate A-1 Sandrock staff and State personnel listed below.

1.2.1 A-1 Sandrock, Inc., Administrative Offices

Mr. R.E. 'Gene' Petty, Sr. – Owner
Mr. Ronnie E. Petty, III – Owner/Operator
A-1 Sandrock, Inc.
2091 Bishop Road
Greensboro, NC 27406

Tel. 336-855-8195

1.2.2 North Carolina Department of Environment and Natural Resources

Winston-Salem Regional Office
585 Waughtown Street
Winston-Salem, NC 27107
Phone: (336) 771-5000
Fax: (336) 771-4631

Division of Waste Management - Solid Waste Section

Western Area Supervisor:	Brent Rockett	Tel. 336-771-5000
Western Area Engineer:	Geof Little	Tel. 919-508-8400
Waste Management Specialist:	Hugh Jurnigan	Tel. 336-771-5000

Division of Land Resources - Land Quality Section

Regional Engineer:	Matthew Gantt, P.E.	Tel. 336-771-5000.
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1.3 ACCESS CONTROL

Limiting access to the Facility is required for the following reasons:

- Prevention of unauthorized and illegal dumping of waste materials,
- Trespassing, and possible injury resulting therefrom, is discouraged,
- The risk of equipment theft or vandalism is greatly reduced.

Access to the Facility will be controlled by a combination offences and natural barriers (creeks and vegetated buffers) and gates with strictly enforced operating hours. An attendant will be on duty at all times when the Facility is open to the public, to enforce access restrictions.

1.3.1 Physical Restraints – The main entrance is located on Bishop Road, where a scales and scale house with an attendant are provided. The gate will be securely locked during non-operating hours.

1.3.2 Security – Frequent inspections of gates and fences will be performed by landfill personnel. Evidence of trespassing, vandalism, or illegal dumping will be reported to local law enforcement.

1.4 SIGNAGE

A prominent sign containing the information required by DWM will be placed just inside the main gate. This sign will provide information on operating hours, operating procedures, and acceptable wastes. Additional signs will be provided to direct incoming traffic to appropriate stockpile areas. Restricted access roads (for staff use only) will be clearly marked and barricaded.

1.5 COMMUNICATIONS

Visual and/or radio communications will be maintained between the scale house and field operators. The scale house has telephones in case of emergency and for the conduct of day-to-day business. Emergency telephone numbers are displayed in the scale house.

1.6 FIRE AND SAFETY

1.6.1 Fire Control – The possibility of fire within a stockpile or a piece of equipment must be anticipated in the daily operation of the Facility. A combination of factory installed fire suppression systems and/or portable fire extinguishers shall be operational on all pieces of heavy equipment at all times. Portable fire extinguishers shall be kept in facility vehicles and in the scale house. Soil stockpiles shall be kept near the processing and stockpile areas. Small fires should be smothered with

soil, if combating the fire poses no danger to staff. The use of water to combat the fire is allowable, but soil is preferable. For larger fires, the local fire department should be contacted. In the event of any fire at the facility, NC DENR Division Waste Management personnel shall be contacted, and a "Fire Notification Form" (see **Appendix 3**) form shall be placed in the Operating Record.

1.6.2 Safety – All aspects of Facility operation were planned with the health and safety of the landfill's operating staff, customers, and neighbors in mind. Prior to commencing operations, a member of the management staff will be designated as Site Safety Officer. This individual, together with the Facility's management will modify the site safety and emergency response program as needed to comply with National Solid Waste Management Association and Occupational Safety and Health Administration (OSHA) guidance. Regular safety meetings with operating staff (minimum one per month) shall be conducted.

Safety equipment to be provided includes (at a minimum) equipment rollover protective cabs, seat belts, audible reverse warning devices, hard hats, safety shoes, and first aid kits. Field operators will be encouraged to complete the American Red Cross Basic First Aid Course with CPR. Safety for customers will be promoted by the Operator and his staff knowing where the equipment and customer vehicles are moving at all times. Radio communications between the scale house and the field staff will help keep track of the location and movement of customers.

1.7 EQUIPMENT REQUIREMENTS

The Facility will maintain on-site equipment in good working order. This is required to promote the safety of both workers and customers, and to avoid spills or leaks that might harm the environment. Periodic maintenance of all equipment, including repair work, shall be performed at designated areas located away from the general operations area and public access.

No specialized equipment is anticipated to be required, with the exception of a grinder (either a tub grinder or a lateral feed mill) and one or more power screens for separating dirt and fines from the ground products – these will be future purchase considerations. In the normal course of the current mining and former LCID operations, which was in operation for more than 20 years at a nearby site, A-1 Sandrock owns and maintains a variety of dozers and front-end loaders, screens, and dump trucks (too numerous to list), as well as a tub grinder, screen plants, and numerous roll-off boxes. The future sorting and loading operations for the inert wastes will be conducted with existing equipment, supplemented by future equipment purchases, and manual labor.

1.8 PERSONNEL TRAINING AND CERTIFICATION

The Facility will be operated under the supervision of a certified Operator. As many of the staff as practical will receive Operations Specialist training from a credible organization, such as the local chapter of SWANA. Certificates will be posted prominently in the scale house, and certifications will be kept up-to-date.

1.9 UTILITIES

Electrical power, water, telephone, and restrooms will be provided at the scale house.

1.10 RECORD KEEPING PROGRAM

The following records related to the T&P facility shall be maintained in an operating record:

- A Waste inspection records (on designated forms); fire notification forms, as needed;
- B Daily intake tonnage records - including material type and source;
- C Product distribution records (sales, on-site use, by material type and tonnage);
- D Reject material disposal (tonnages, where/when taken);
- E List of generators and haulers that have attempted to bring in restricted wastes;
- E Employee training procedures and records of training completed;
- F Storm Water Facilities Inspection and Maintenance Records

The operating record will be kept up to date by the Owner or his designee. Daily log books may be used for some items. Records shall be presented upon request to DWM for inspection. A copy of this Operations Plan be kept at the Facility and will be available for use at all times.

SECTION 2.0 WASTE ACCEPTANCE, RECYCLING AND DISPOSAL

2.1 OVERVIEW

This section describes the required waste handling operations for the facility. These protocols shall be followed, regardless of whether the material is source-sorted and delivered by affiliated waste transport vehicles or brought to the facility by private contractors or the general public.

2.2 ACCEPTABLE WASTES

The Facility will only accept the following wastes generated within approved areas of service:

- **Construction Debris:** Unpainted and untreated wood, plywood, particle board, hardboard, gypsum board, siding, flooring, shingles, etc., from new residential or commercial construction;
- **Demolition Debris:** Concrete, brick, block, asphalt, other inert materials, unpainted and untreated wood, roofing materials, from residential and commercial remodeling, repair, or demolition operations, including pavements;
- **Land Clearing and Inert Debris:** Yard waste, stumps, trees, limbs, brush, other vegetation, concrete, brick, concrete block, clean soils and rock, untreated and unpainted wood, etc.;
- **Other Wastes:** Pallets, cardboard packing materials, scrap metal (excluding salvaged autos). Approved waste products that originate from non-C&D or non-LCID sources will be handed separately and not co-mingled with the C&D or LCID waste streams (see **Section 2.4**).

2.3 PROHIBITED WASTES

No municipal solid waste (MSW), hazardous waste as defined by 15A NCAC 13A .0102, including hazardous waste from conditionally exempt small quantity generators (CESQG waste), or liquid waste will be accepted at this facility. In addition, no tires, batteries, polychlorinated biphenyl (PCB) waste, electronic devices (computer monitors), mercury switches, fluorescent lamps or asbestos containing materials (ACM) will be accepted. Animal carcasses will not be accepted. No oils, grease, solvents, or fluids of any kind will be accepted, nor will bagged wastes or any putrescible or household wastes. The Facility will implement a waste screening program, described in **Section 2.4**.

2.4 WASTE PROCESSING

In order to assure that no prohibited waste enters the Facility, screening programs will be implemented at the Facility. Waste received at the scale house will be inspected by trained personnel. These individuals will be trained to spot indications of suspicious wastes, including: hazardous placarding or markings, liquids, powders or dusts, sludges, bright or unusual colors, drums or commercial size containers, and "chemical" odors. Screening programs for visual and olfactory characteristics of prohibited wastes will be an ongoing part of the Facility operation.

2.4.1 Waste Receiving and Screening – All incoming vehicles must stop at the scale house located near the entrance of the facility, and visitors are required to sign-in. All waste transportation vehicles shall be uncovered prior to entering the scales to facilitate inspection; all incoming loads shall be weighed and the content of the load assessed. The scale attendant shall request from the driver of the vehicle a description of the waste it is carrying to ensure that unacceptable waste is not allowed into the Facility. Signs informing users of the acceptable and unacceptable types of waste shall be posted at the entrance near the scale house. The attendant shall visually check the vehicle as it crosses the scale. This activity may be facilitated by a camera mounted over the scales. Any suspicious loads will be pulled aside for a more detailed inspection prior to leaving the scale house area. Loads with unacceptable materials will be required to be covered (with a tarp) and turned away from the facility. Wastes generated from outside of the service area will be turned away.

Once passing the scales, incoming transport vehicles will be routed directly to a stockpile area (source-sorted loads) or the recycling area (mixed loads or privately hauled materials) for inspection, sorting and appropriate processing, depending on the nature of the load (**Section 2.4.2**). Non-C&D or non-LCID materials (e.g., cardboard, pallets, other materials derived from commercial, industrial sources) that are to be recycled shall be directed to dedicated stockpiles that are kept separate from the C&D and LCID waste streams. These materials shall be accounted for separately.

Incoming vehicles shall be selected at random for screening a minimum of three times per week. The selection of vehicles for screening might be based on unfamiliarity with the vehicle/driver or based on the driver's responses to interrogation about the load content. Vehicles selected for inspection shall be directed to an isolated area away from the stockpile of materials to be stockpiled, where the vehicle will be unloaded and the waste shall be carefully spread using suitable equipment. An attendant trained to identify wastes that are unacceptable at the landfill shall inspect the waste discharged at the screening site. The waste screening form (**Appendix 4**) will be used to document the waste screening activity.

- If no unacceptable waste is found, the load will be pushed to the active recycling area and processed with the remainder of the day's intake.
- If unacceptable materials are found, the entire load will be isolated and secured via soil berms or barricades, then loaded into roll-off boxes for disposal at a permitted facility, or
- Non-hazardous materials will be reloaded onto the delivery vehicle for removal from the facility – the hauler will be escorted to the nearby MSW Transfer Station on Bishop Road;
- If hazardous materials are detected, the Hazardous Waste Contingency Plan outlined in **Section 2.5** will be followed.

The hauler is responsible for removing unacceptable waste from the Facility. The rejection of the load shall be noted on the Waste Screening Form, along with the identification of the driver and vehicle. A responsible party to the load generator or hauler shall be notified that the load was rejected. The generator or hauler may be targeted for more frequent waste screening and/or banished from delivering to the facility, depending on the nature of the violation of the waste acceptance policy. State and County authorities may be notified of severe or repeat offenders.

2.4.2 Treatment and Processing Activities – Incoming materials shall be stockpiled after weighing and inspection. The following describes the processing operations and the nature of finished goods, with anticipated on-site material tonnages. See **Section 2.6** for information pertaining to anticipated financial assurance requirements. Also refer to the site plan (**Appendix 1**). This Operations Plan shall be reviewed periodically and updated as needed to reflect actual trends in the operation.

2.4.2.1 LCID Preprocessing – The Facility may receive LCID to make mulch, topsoil, boiler fuel, and beneficial fill. The T&P intake generally will consist of brush, limbs, tree trunks, stumps, leaves, dirt, inert debris, and other materials defined as LCID by the NC DENR Solid Waste rules. Depending on the nature of the incoming load, LCID materials may be sorted and stockpiled within the **LCID Processing Area**, separated from both the **C&D Processing Area** and the **Recycling Area** for non-C&D and non-LCID recyclable materials. Some LCID materials may be combined with similar C&D materials in either processing area, e.g., “high-grade” or “low-grade” wood wastes (relative to the type of resulting mulch), which are to be ground into mulch, or inert debris that can be processed into aggregates, may be co-mingled in the processing areas with the sorted C&D wastes. Non-LCID and non-C&D derived materials may not be co-mingled. A-1 Sandrock tentatively estimates an **LCID intake of 1000 tons/month (3000 tons/quarter)**.

2.4.2.2 C&D Preprocessing – The Facility may receive C&D wastes for recycling into mulch, topsoil, boiler fuel, and beneficial fill. Typically, C&D materials are anticipated to arrive source-sorted, having been transported by an affiliated hauler, but some private hauling will occur. Sorting will take place within a designated **C&D Processing Area**, with appropriate runoff controls and S&EC measures in place. The sorted materials will be redirected to appropriate stockpiles and/or roll-off boxes to await further processing, separated from the non-C&D and non-LCID recyclable material intake (cardboard, pallets, etc.). Co-mingling finished goods and/or interim stage processed materials from the C&D and LCID waste streams will be allowed, providing that all the materials can be accounted for, including those in various stages of processing, stockpiled finished goods, and those materials used on-site as beneficial materials and/or redistributed off-site (see **Section 1.10**). A-1 Sandrock tentatively estimates a **C&D intake of 1000 tons/month (3000 tons/quarter)**.

2.4.2.3 Disposal of Rejected Wastes – Attempts will be made to inspect waste as soon as it arrives, in order to reject inappropriate material before it is unloaded, or such that it can be reloaded onto the transport vehicle and sent to an appropriate facility. One or more roll-off boxes will be kept on-site for disposal of any non-recyclable “bypass” materials that are found in the waste during material sorting, e.g., small quantities of garbage (chiefly food containers), plastic packaging, paint cans, insulation, carpet, etc., for which recycling markets have yet to be identified – such “bypass” materials will be placed into the roll-off boxes and removed from the site for disposal at an approved facility. The destination will depend on the source and nature of the materials, e.g., C&D materials originating inside Guilford County may be taken to White Street Landfill or another C&D landfill with the correct service area. Non-C&D materials will be taken to the nearby Transfer Station on Bishop Road or another approved MSW facility. The roll-off boxes will be removed on a weekly basis (maximum). The number of roll-off boxes required will depend on the market trends; A-1 and affiliated businesses own an ample supply of roll-off boxes. The waste intake will be controlled by rejecting more waste at the scale house or adding more roll-off boxes, if the bypass quantities exceed 10 roll-off boxes per week. A-1 Sandrock tentatively estimates up to 25% of the waste intake may require off-site disposal, i.e., **bypass materials may be 250 tons per month (750 tons/quarter)**.

2.4.2.4 Processing and Finishing – Per NC DENR Solid Waste guidance, T&P activities shall be limited to grinding, shredding, or chipping land clearing debris, high carbon : nitrogen yard waste, unpainted/untreated wood waste (including pallets and new construction waste), and certain engineered wood products (plywood, particle board), which shall be used to make boiler fuel or mulch (but not compost) and/or topsoil (by mixing with native soil). Inert materials will be processed and recycled into aggregates. The operation of the T&P facility will include the following:

- Pre-processed LCID and select C&D (raw materials) will be stockpiled temporarily in the designated stockpile areas; products lines will include “high-grade” mulch, suitable for decorative applications, and “low-grade” mulch, suitable for soil stabilization or as a “manufactured topsoil” amendment.
- Woody materials suitable for making mulch and/or boiler fuel (including pallets) will be stockpiled and ground periodically into finished products. On a periodic basis, the woody LCID will be ground into mulch and sold off-site or used on-site for erosion control and/or soil stabilizer (to promote vegetation development).
- Quantities of raw materials and finished goods will vary with market conditions. The anticipated amount of stockpiled woody materials (either as raw, finished, or in transition materials), will be on the order of 12,000 tons at any time in a given quarter, but this could be higher. **Unprocessed C&D and LCID materials (subject to financial assurance requirements for removal) will not be allowed to exceed 6,000 tons at any given time.**
- Earthen inert materials (dirt, rocks, concrete debris) typically will be stockpiled for the Owner’s use as beneficial fill (either on-site or off-site) or for processing into “manufactured topsoil” or beneficial fill material, as may be appropriate. The Owner plans to use the inert debris as beneficial fill to reclaim the mine and/or for bringing mined or unmined portions of the site to usable final grades, such as the non-contiguous stockpile areas (see **Appendix 1**). Such materials would not be subject to removal (relative to financial assurance), but they may require redistribution on the site as beneficial fill or for soil stabilization.
- Metals, cardboard, and other recyclables will be placed in a roll-off box (or stockpiled) and kept on-site until a full load is reached. These materials will be kept clean and ready to haul to off-site recycling operations. A-1 Sandrock tentatively estimates **1000 tons per month (3000 tons/quarter) of metals and other non-C&D recyclables** will be handled. The metals to be handled will include ferrous and non-ferrous materials that are derived from the C&D waste stream and other non-C&D sources (excluding auto salvage).
- Finished goods will be placed in designated stockpiles located on the site plan (**Appendix 1**) and stored until they can be sold or redistributed in accordance with market demands. Plans are to move the finished materials off-site or use them in the mine reclamation activities on a quarterly (or more frequent) basis. If the stockpiles of finished products must remain on site for longer periods of time, these materials will be wetted and turned occasionally to prevent composting and/or fires (see **Section 1.6**). Such materials would not be subject to removal (relative to financial assurance), but they may require relocation.

2.5 CONTINGENCY PLAN

2.5.1 Fires in the Waste – Fires in raw material or finished goods stockpiles should be smothered with soil, if combating the fire poses no danger to the staff. The use of water to combat the fire is allowable, but soil is preferable. In the event of a fire, all other activities will be suspended and traffic diverted until the fire is under control. For larger fires involving a waste stockpile, any vehicle or structural fire, or any fire near the Colonial Pipeline right-of-way or near the public street or electrical lines, the local fire department should be contacted. Facility personnel should take charge of the situation until the fire department arrives to ensure the safety of staff and customers. All non-essential personnel should be accounted for and evacuated from the site, if it is safe to use the emergency access/egress routes (either the main gate or the rear staff-only entrance). If it is not safe to evacuate, all personnel should be removed to a safe location and accounted for. Any fire at the facility should be reported on to NC DENR Division Waste Management (see Section 1.2.2), and a “Fire Notification” form shall be placed in the Operating Record (see Appendix 3).

2.5.2 Hot Loads Contingency Plan – In the event of a “hot” load attempting to enter the Facility, the scale house staff will turn away all trucks containing waste that is suspected to be hot, unless there is imminent danger to the driver. The vehicle will be isolated away from structures and other traffic and the fire department will be called. If a hot load is detected in the Processing Area, then the load will be treated as a fire (see Section 2.5.1), whereas the load will be spread as thinly as possible and cover soil will be immediately placed on the waste to extinguish the fire, assuming there is no danger to personnel. If it is safe to do so, the transport vehicle shall be removed from the site of the fire and other traffic will be redirected away from the fire. All other activities shall be suspended until the fire is out. The area involved with the fire will be monitored for a period of time to ensure it does not reignite or spread. If the fire cannot be controlled, the fire department will be notified and the area cleared of non-essential personnel. Any fire at the facility should be reported on to NC DENR Division Waste Management (see Section 1.2.2), and a “Fire Notification” form shall be placed in the Operating Record (see Appendix 3).

2.5.3 Hazardous Waste Contingency Plan – In the event that identifiable hazardous waste or waste of questionable character is detected the within the Facility Operator shall err on the side of caution and take immediate steps to protect the staff and public. Hazardous waste identification may be based on (but not limited to) strong odors, fumes or vapors, unusual colors or appearance (e.g., liquids, smoke, flame, or excess dust). The fire department will be called immediately in the event a hazardous material is detected, and the Operator shall evacuate the vicinity of all personnel – in this case, personnel shall be taken to a point of safety (which may be on-site or off-site, depending on the nature of the problem) and detained until trained medical help arrives. An attempt may be made to isolate the wastes in a designated area where runoff is controlled, preferably prior to unloading, and the vicinity will be cleared of personnel until trained emergency personnel (fire or haz-mat) take control of the scene. Staff will act prudently to protect personnel, but no attempt will be made to remove the material until instructed to do so by trained personnel. Typically, responding to a hazardous substance requires specialized training and protective equipment that is not possessed by the Facility, so no attempt will be made to move the materials. A partial listing of Hazardous Waste responders and disposal firms is found in Appendix 2. These firms have the training and equipment to deal with a load of hazardous materials, as needed.

The operator will notify the Division of Waste Management(see **Section 1.2.2**) that an attempt was made to dispose of hazardous waste at the Facility. If the vehicle attempting disposal of such waste is identified, attempts will be made to prevent that vehicle from leaving the site or, if the vehicle does leave, local law enforcement shall be called and immediate notice will be served on the owner of the vehicle that hazardous waste (for which they have responsibility) has been deposited at the Facility. The staff will assist the Division as necessary and appropriate in the prosecution of responsible parties. If needed, the hazardous waste may be covered with soil, tarps, or other covering until such time when an appropriate method can be implemented to properly handle the waste. The cost of the removal and disposing of the hazardous waste may be charged to the owner of the vehicle involved. Any vehicle owner or operator who knowingly dumps hazardous waste in the Facility may be barred from the Facility in the future. The incident shall be documented by staff using the waste screening form provided in **Appendix 4**. Records of information gathered as part of the waste screening programs will be maintained throughout the operational life.

2.5.4 Severe Weather Contingency – Operations may be need to be suspended in the event of severe weather conditions. The Operator shall use discretion in determining if a threat exists. The following are guidelines for decision making and operational responses in this regard.

2.5.4.1 Storms – An ice storm or thunder storm (sometimes accompanied by violent winds) can hinder access to the Facility or jeopardize personal safety due to poor visibility, slick surfaces, lightning, or possible flying debris. Operations should be suspended until such events have abated. Customers shall be encouraged to leave the premises or take refuge, as appropriate. Staff should take refuge in buildings, vehicles, or protected low areas, as appropriate, if weather conditions change suddenly.

2.5.4.2 Heavy Rains – Erosion or slopes and/or excess siltation of sediment control measures could occur due to intense or prolonged rainfall (refer to the Sedimentation & Erosion Control Plan, presented in separate documents). During such events, movement on-site may be hindered or dangerous to personnel – roadways may be affected due to washing away of the aggregate surface, erosional rills, mud flows, etc. After the rain event, staff should make an inspection of the site to determine if repairs are needed. Such repairs should be implemented prior to the next rainfall event.

2.5.4.3 Windy Conditions – High winds can create windblown wastes, typically paper and plastic, but larger objects have been known to blow in extreme circumstances. In the event of high winds, staff should make an attempt to secure the working areas to prevent windblown debris. Operations should be suspended if blowing debris becomes a danger to staff. The layout of the facility is intended to minimize exposure of waste stockpiles and processing areas to prevailing winds. If this is not adequate during a particularly windy period, work may be shifted temporarily to a more sheltered area. Staff shall patrol the perimeter of the work areas periodically, especially on windy days, to remove windblown litter from tress and adjacent areas. NC DENR Division of Waste Management rules require that the site and surrounding properties be kept free of windblown litter. Windscreens of various sorts have been used with mixed success at other facilities in the region. Good planning is essential on the operator's part to be prepared for windy conditions.

2.6 ANNUAL REPORTING

The Treatment and Processing facility permit or notification has annual reporting requirements. Record keeping requirements for the Facility include an accounting of waste intake and disposition by material type, source, and tonnage (see **Section 1.10**). The facility shall file an annual report with the NC DENR Division of Waste Management by August 1 of each year, detailing the activities for the preceding July 1 through June 30. Records shall be kept pertaining to the types and amounts of wastes received, as well as the types and amounts of materials reused, recycled, and distributed; material quantities shall be reported annually in tons. This report also shall be furnished to the Guilford County Planning Department.

The mining permit for this facility has a requirement for annual reporting of reclamation activities; generally reclamation at this site includes all backfilling (with beneficial fill) and completion of slopes (with permanent vegetation). The annual reclamation report has map submission requirements, as well as an estimate of percentage of the disturbed area reclaimed.

In addition, the Storm Water General Permit, issued by NC DENR Division of Waste Quality, has an annual sampling and reporting requirement.

SECTION 3.0 ENVIRONMENTAL MANAGEMENT

3.1 OVERVIEW

This section reviews the basic environmental management tasks required for the compliant operation of the Facility. This is not a comprehensive summary of all environmental considerations, rather, this is an overview of objectives and systems designed to promote compliant operations.

3.2 EROSION AND SEDIMENTATION CONTROL

Protecting adjacent water bodies from sedimentation (siltation) is an integral part of the permitting and operational compliance for this facility. Sedimentation and Erosion Control rules, administered by the NC DENR Division of Land Resources, impose strict criteria for protecting surface waters by minimizing erosion (i.e., source reduction) and implementing/maintaining protective measures. A separate Sedimentation and Erosion Control (S&EC) plan is provided within the original mining permit application. The plan describes the engineered features and practices for preventing erosion and controlling sedimentation. The S&EC control system consists of the following components:

- Diversion Berms/Ditches
- Side Slope Benches
- Temporary Sediment Traps
- Down channels
- Sediment Basin.

Each of these structures requires periodic inspection and maintenance. At a minimum, these structures should be inspected weekly and after any rainfall event of a half inch or more, or if subjected to intense rainfall (one inch per hour, or more) regardless of depth. **A rain gauge is required at the site.** Records of inspections and required maintenance (**and rainfall**) should be placed in the operational record, e.g., in the operator's daily log book. Major repair work should be performed under the supervision of a qualified engineer and documented as a condition of various applicable permits. Any release of sediment into the streams must be reported to NC DENR.

Prevention of erosion along slopes and other disturbed areas, including berms, roadway embankments, and soil stockpiles, is essential. All disturbed areas should be vegetated or provided appropriate ground cover (e.g., wood mulch, erosion control mat) within 20 days following completion of grading work. Vegetation maintenance will be a key consideration throughout the life of this facility. The landfill side slopes are designed with maximum 3H:IV slopes and diversion berms or benches placed at slope breaks. These features are designed to keep water volumes and velocities low enough to minimize erosion of the landfill cover. Maintenance of the cover system will involve periodic mowing and repair of any erosion problems and bare spots. These features should be inspected at least once a month and after any significant rainfall events.

Down channels, pipes, and other conveyances are designed to carry concentrated flows of surface water from the drained surface. Each open channel has site specific liner requirements listed in the permit and construction documents. Inspection and maintenance of these structures is essential to

the long-term compliance of the facility. All conveyances shall be inspected at least once a month and after any significant rainfall event. Additional erosion control measures have been taken within the drainage channels and at points of storm water discharge. All final cover areas should be inspected regularly for erosion damage and promptly repaired. Storm water run-off from operational area is conveyed to a sedimentation basin located just outside (west of) the mine footprint. The basin and its outlet structure should be inspected regularly for sediment build-up or erosion damage. The basin should be cleaned out by excavating when sediments fill the lower half of the basin.

3.3 VECTOR CONTROL

Due to the nature of the waste processed in the T&P facility, vector control (e.g., rats, dogs, birds) is not expected to be of concern. The accompanying mining operations should be conducted to promote positive drainage, i.e., avoidance of standing water, to discourage mosquito larvae. No pesticides or herbicides should be applied within the facility boundary.

3.4 ODOR CONTROL

Due to the nature of the waste, odors should not be a problem. Hydrogen-sulfide gas has been observed at some T&P facilities due to the decomposition of sheet rock, imparting a "rotten egg" odor. Paper decomposition can produce foul odors, as well. The quantities of hydrogen sulfide and other non-methane organic compounds typically found in T&P facilities are typically believed to be non-hazardous to humans. If strong, pervasive odors prevail, e.g. if there are complaints from the community, it may become necessary to monitor these gas emissions and/or apply aerial deodorizers (used at some landfills in the State). Typically, frequent rotation of materials, i.e., not allowing stockpiles to stand more than a few weeks, will be effective in controlling odors.

3.5 DUST CONTROL

The entrance drive will be paved (or hard-surfaced) near Bishop Road to minimize fugitive airborne particulate matter. Dust related to traffic on the unpaved access roads will be minimized by using a water truck. Dust generated by excavation activities within the mine or the processing of wastes will be limited by applying water sprays, as needed.

3.6 GENERAL HOUSEKEEPING

A-1 Sandrock shall maintain its "good neighbor" policy with the surrounding community. The site and surrounding properties shall be kept free of excess trash, reject waste materials, and windblown debris. Crews should be dispatched at least weekly, more often if needed, to remove these materials.

3.7 GROUND WATER MONITORING

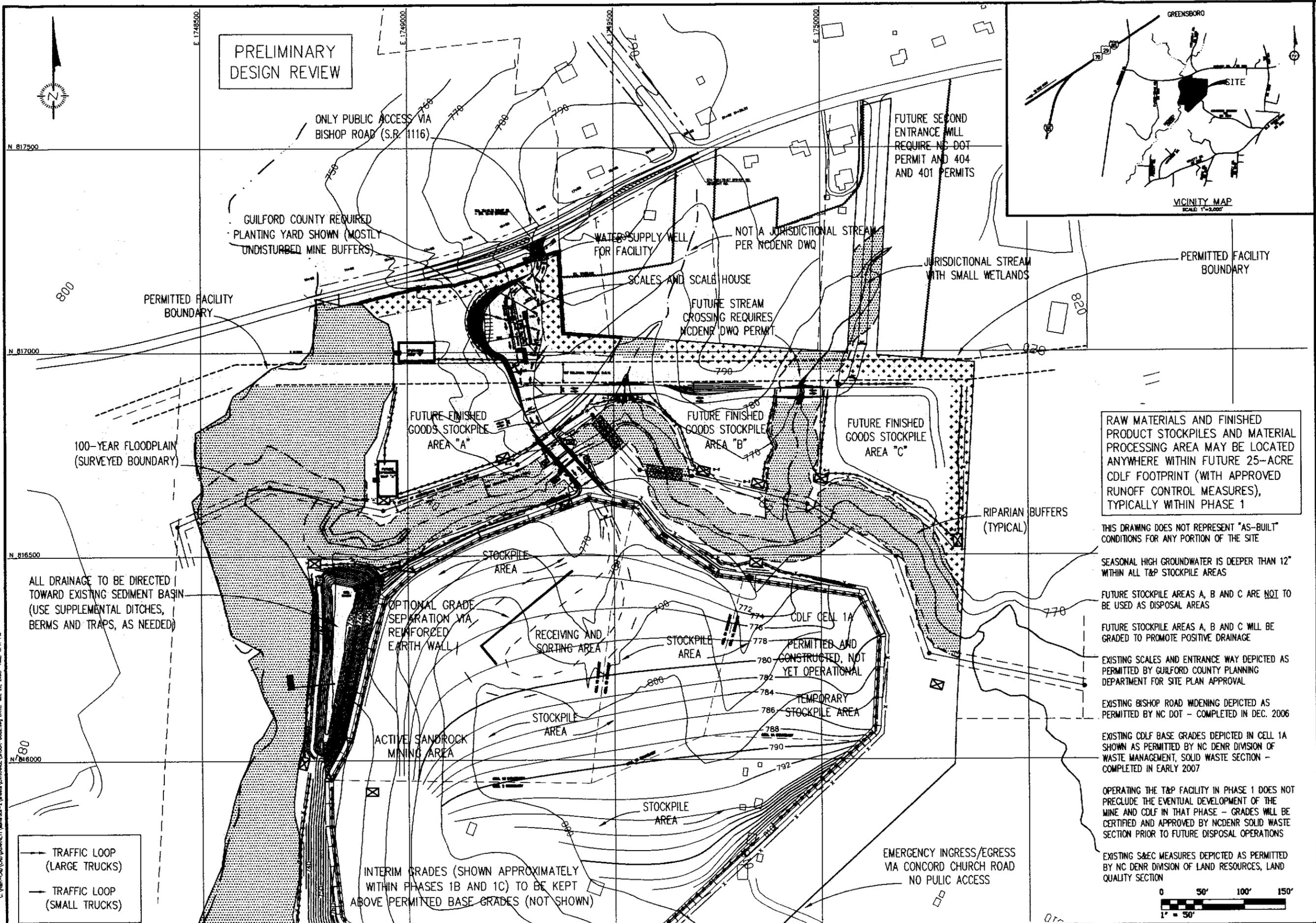
Ground water monitoring is not required for the T&P facility under the current NC DENR Solid Waste rules. However, it should be kept in mind that the site is earmarked to become a solid waste disposal facility at some future. Care should be taken to avoid practices or incidents that might affect the ground water at the site. Care should also be taken not to damage the existing monitoring system. The operator should be aware that, in the event of a detection of constituents in the ground or surface

water that cannot be explained by background conditions, the Facility operation may become suspect, perhaps requiring more stringent monitoring programs (or corrective action) and possibly jeopardizing future permitting or the Franchise renewal.

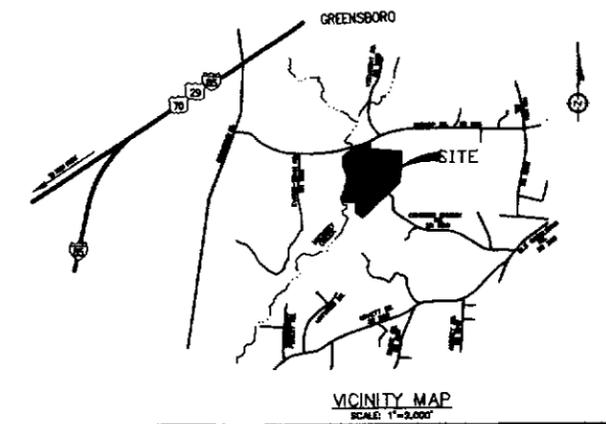
3.8 STORM WATER MONITORING

Periodic monitoring of storm water runoff (within the approved control measures) is required by the Storm Water permit, administered by NC DENR Division of Water Quality, as a provision of the mining permit. Storm water discharges are especially critical given the location of the facility in the Randleman Reservoir Watershed (though it is not in the watershed critical area). This site is covered under a General Permit, described in a separate document, which has specific sampling criteria appropriate to the nature of the operation, chiefly focused on whether on-site equipment maintenance and fuel storage occurs. A significant area of concern is sedimentation and the associated pollutants which become attached by transported by sediment. Both Division of Land Resources and Division of Water Quality officials indicate that sedimentation is the chief pollutant of concern for water bodies in North Carolina.

Analytical sampling is yearly (with an annual reporting requirement), but the monitoring of the storm water discharge requires periodic visual observation, which dovetails into the inspection of erosion and sedimentation control devices associated with the storm water discharge. Records of inspections and observations should be kept in the operator's log book. Care should be exercised to avoid spills or leaks of fluids (from equipment) and to follow the waste acceptance criteria to avoid problems with the storm water quality. Within the active C&D disposal area(s) and the Treatment and Processing Facility, precautions should be taken to ensure that the protective measures (permitted as "best management practices") are functional and well maintained.



PRELIMINARY
DESIGN REVIEW



RAW MATERIALS AND FINISHED PRODUCT STOCKPILES AND MATERIAL PROCESSING AREA MAY BE LOCATED ANYWHERE WITHIN FUTURE 25-ACRE CDLF FOOTPRINT (WITH APPROVED RUNOFF CONTROL MEASURES), TYPICALLY WITHIN PHASE 1

THIS DRAWING DOES NOT REPRESENT "AS-BUILT" CONDITIONS FOR ANY PORTION OF THE SITE

SEASONAL HIGH GROUNDWATER IS DEEPER THAN 12" WITHIN ALL T&P STOCKPILE AREAS

FUTURE STOCKPILE AREAS A, B AND C ARE NOT TO BE USED AS DISPOSAL AREAS

FUTURE STOCKPILE AREAS A, B AND C WILL BE GRADED TO PROMOTE POSITIVE DRAINAGE

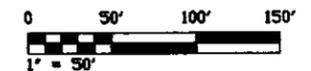
EXISTING SCALES AND ENTRANCE WAY DEPICTED AS PERMITTED BY GUILFORD COUNTY PLANNING DEPARTMENT FOR SITE PLAN APPROVAL

EXISTING BISHOP ROAD WIDENING DEPICTED AS PERMITTED BY NC DOT - COMPLETED IN DEC. 2006

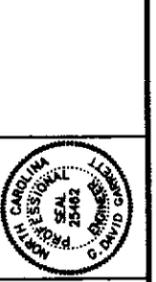
EXISTING CDLF BASE GRADES DEPICTED IN CELL 1A SHOWN AS PERMITTED BY NC DENR DIVISION OF WASTE MANAGEMENT, SOLID WASTE SECTION - COMPLETED IN EARLY 2007

OPERATING THE T&P FACILITY IN PHASE 1 DOES NOT PRECLUDE THE EVENTUAL DEVELOPMENT OF THE MINE AND CDLF IN THAT PHASE - GRADES WILL BE CERTIFIED AND APPROVED BY NCDENR SOLID WASTE SECTION PRIOR TO FUTURE DISPOSAL OPERATIONS

EXISTING S&EC MEASURES DEPICTED AS PERMITTED BY NC DENR DIVISION OF LAND RESOURCES, LAND QUALITY SECTION



David Garrett, P.G., P.E.
Engineering and Geology
2800 Industrial Lane, Suite 100, Greensboro, NC 27409
Phone: 336-785-1111 Fax: 336-785-1112



A-1 SANDROCK C.D.L.F.
GUILFORD COUNTY, N.C.

TREATMENT & PROCESSING
FACILITY PLAN

DESIGNED BY: G.D.G.	DRAWN BY: A.M.H.
CHECKED BY: G.D.G.	PROJECT NO.: SANDROCK-2
SCALE: 1" = 100'	DATE: OCT 2007
FILE NAME: SROCK-00084A	DRAWING NO.:
SHEET NO.:	1A
DRAWING NO.:	S1A

C:\NWP-CAD\CAD\DWG\ENTRANCES\SROCK-0002.dwg DATE: JUL 22, 2003 TIME: 8:47 PM

HAZARDOUS WASTE CONTACTS

The following contacts were taken from the NC DENR Division of Waste Management web site in early 2007; the availability and local phone numbers should be verified before a emergency. For more information see <http://www.wastenot.org/hwhome>.

EMERGENCY RESPONSE

Clean Harbours	Reidsville, NC	336-342-6106
GARCO, Inc.	Asheboro, NC	336-683-0911
Safety-Kleen	Reidsville, NC	800-334-5953

TRANSPORTERS

ECOFLO	Greensboro, NC	336-855-7925
GARCO, Inc.	Asheboro, NC	336-683-0911
Zebra Environmental Services	High Point, NC	336-841-5276

DISPOSAL AND LANDFILLS

ECOFLO	Greensboro, NC	336-855-7925
Safety-Kleen	Reidsville, NC	800-334-5953
Zebra Environmental Services	High Point, NC	336-841-5276

USED OIL AND ANTIFREEZE

3RC Resource Recovery	Winston-Salem, NC	336-784-4300
Carolina Environmental Associates	Burlington, NC	336-299-0058
Environmental Recycling Alternatives	High Point, NC	336-869-8785

FLUORESCENT HANDLERS

3RC Resource Recovery	Winston-Salem, NC	336-784-4300
Carolina Environmental Associates	Burlington, NC	336-299-0058
ECOFLO	Greensboro, NC	336-855-7925
GARCO, Inc.	Asheboro, NC	336-683-0911
Safety-Kleen	Reidsville, NC	800-334-5953

PCB DISPOSAL

ECOFLO	Greensboro, NC	336-855-7925
GARCO, Inc.	Asheboro, NC	336-683-0911
Zebra Environmental Services	High Point, NC	336-841-5276

FIRE OCCURRENCE NOTIFICATION

NC DENR Division of Waste Management Solid Waste Section



Some Solid Waste Rules [15A NCAC 13B, Section 1626(5)(d) and Section .0505(10)(c)] require verbal notification within 24 hours and submission of a written notification within 15 days of the occurrence. The completion of this form shall satisfy that requirement. (If additional space is needed, use back of this form)

NAME OF FACILITY: _____ PERMIT # _____

DATE AND TIME OF FIRE ____/____/____ @ ____:____ AM / PM (circle one)

HOW WAS THE FIRE REPORTED AND BY WHOM _____

LIST ACTIONS TAKEN _____

WHAT WAS THE CAUSE OF THE FIRE _____

DESCRIBE AREA, TYPE, AND AMOUNT OF WASTE INVOLVED _____

WHAT COULD HAVE BEEN DONE TO PREVENT THIS FIRE _____

CURRENT STATUS OF FIRE _____

DESCRIBE PLAN OF ACTIONS TO PREVENT FUTURE INCIDENTS: _____

NAME	TITLE	DATE
------	-------	------

THIS SECTION TO BE COMPLETED BY SOLID WASTE SECTION REGIONAL STAFF

DATE RECEIVED _____

List any factors not listed that might have contributed to the fire or that might prevent occurrence of future fires:

FOLLOW-UP REQUIRED:						
<input type="checkbox"/> NO	<input type="checkbox"/> PHONE CALL	<input type="checkbox"/> SUBMITTAL	<input type="checkbox"/> MEETING	<input type="checkbox"/> RETURN VISIT	BY: _____	(DATE)
ACTIONS TAKEN OR REQUIRED:						

**A-1 Sandrock, Inc., T&P Facility
Permit No. 41-17TP (pending)**

WASTE SCREENING FORM

Day / Date: _____ Time Weighed in: _____
Truck Owner: _____ Driver Name: _____
Truck Type: _____ Vehicle ID/Tag No: _____
Weight: _____ Tare: _____
Waste Generator / Source: _____

Reason Load Inspected: Random Inspection _____ Staff Initials _____
Detained at Scales _____ Staff Initials _____
Detained by Operating Staff _____ Staff Initials _____

Inspection Location: _____

Approved Waste Determination Form Present? (Check one) Yes _____ No _____ N/A _____

Description of Load: _____

Load Accepted (signature) _____ Date _____
Load Not Accepted (signature) _____ Date _____

Reason Load Not Accepted (complete below only if load not accepted) _____

Description of Suspicious Contents: Color _____ Haz. Waste Markings _____
Texture _____
Drums Present _____
Est. Cu. Yds. Present in Load _____ Smell _____
Est. Tons Present in Load _____

Guilford County Emergency Management Authority Contacted? Yes _____ No _____

Generator Authority Contacted? _____

Hazardous Materials Present: _____

Hauler Notified (if waste not accepted) _____ Phone _____ Time Contacted _____

Other Observations _____

Final Disposition _____

Signed _____ Date _____
Waste Screening Inspector or Solid Waste Director

Attach related correspondence to this form.
File completed form in Operating Record.



GUILFORD COUNTY
PLANNING AND DEVELOPMENT DEPARTMENT

ZONING VERIFICATION

The parcel(s) of land located at 2091 Birch Road
further identified as Tax Map 3-183 Block(s) 799-1 Parcel(s) 7
is zoned CU-17 & CU-17-SP

Permitted Uses include the following or see attached :

Maple C&D and Maple CCU

If the property is zoned Conditional Use (CU) the following use restrictions and conditions apply or see attached :

If the property has an approved Special Use Permit (SP) the following use is permitted and conditions apply or see attached :

The property is located in the jurisdiction indicated below and subject to the rules and regulations found within the Development Ordinance adopted by that jurisdiction:

- Guilford County
- Town of Pleasant Garden
- Town of Oak Ridge
- Town of Stokesdale
- Town of Summerfield
- Town of Sedalia

The property is located in the following Overlay District(s) and additional development restrictions may apply (see attached):

- General Watershed Area District
- Watershed Critical Area District
- Tier I ___ II ___ III ___ IV ___
- Flood Hazard District
- Historic District
- Scenic Corridor District
- Airport District
- Height Restriction ___ Noise Cons ___
- In compliance Yes ___ No ___ Unknown ___
- Manufactured Housing District

Based on the records contain in the Planning and Development Department, the current use of the property complies with the current zoning and there are no known violations against the property.

Yes No No Certification Made - see attached

The current use of the property is a legal nonconforming use and subject to provisions governing nonconforming uses contained in the Development Ordinance, see attached

A copy of the zoning map and tax map is attached.

Signature Randy Stanley Title Planner Date 10-9-07

Note: This information is based on information available on the date shown. It is the responsibility of the land owner to comply with all requirements of the Development Ordinance for the jurisdiction where the property is located and the signor hereof does not have authority to waive the requirements of the Development Ordinance or other applicable laws. If it is discovered that information on this form is in conflict with the Development Ordinance, the requirements of the Development Ordinance govern.



GUILFORD COUNTY
PLANNING AND DEVELOPMENT DEPARTMENT

June 14, 2001

Ronald Eugene Petty
2142 Bishop Road
Greensboro, NC 27406

RE: REZONING CASE #30-01

Dear Mr. Petty:

Following a public hearing on June 13, 2001 requesting a conditional use rezoning of your property, the Guilford County Planning Board approved the request to rezone the following property from AG and RS-40 to CU-HI:

Located on the south side of Bishop Road (SR 1116) approximately 800 feet west of Viewmont Road (SR 1125) in Sumner Township. Being Guilford County Tax Map 3-185, Block 739-W, Parcel 7, approximately 70.2 acres. Lower Randleman Lake Watershed.

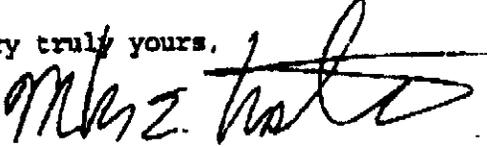
USE(S): Major Construction and Demolition Debris (C&D) Landfill, Major Land Clearing and Inert Debris (LDIC) Landfill, and Sandrock Mining Operation.

CONDITION(S):

1. To be developed with submitted zoning sketch plan.
2. Access from Concord Church Road shall be for emergency access only (not for day-to-day operations) and this access will be gated and locked.

This decision is final unless it is appealed in writing to the Clerk to the Board of County Commissioners within fifteen (15) days of the June 13, 2001 Planning Board public hearing. If appealed, you will be notified by the Clerk to the Board of County Commissioners of the place, date, and time of the public hearing.

Very truly yours,


Mark E. Kirstner, Secretary
Guilford County Planning Board

/1

cc: Effie Varitimidis, Clerk to Board of County Commissioners



GUILFORD COUNTY
PLANNING AND DEVELOPMENT DEPARTMENT

June 14, 2001

Ronald Eugene Petty
 2142 Bishop Road
 Greensboro, NC 27406

Dave Southard
 Evans Engineering
 P.O. Box 10285
 Greensboro, NC 27407

Charles L. White
 221 Commerce Place
 Greensboro, NC 27401

RE: CASE #31-01-SP

Gentlemen:

Following a public hearing on June 13, 2001 and after carefully considering all the evidence presented regarding the application for a Special Use Permit for a Major Land Clearing and Inert Debris (LCID) Landfill, a Major Construction and Demolition Debris (C&D) Landfill, and Sandrock Mining Operation, the Guilford County Planning Board found from the credible evidence that the Special Use Permit should be approved for the following property:

Located on the south side of Bishop Road (SR 1116) approximately 800 feet west of Viewmont Road (SR 1125) in Sumner Township. Being Guilford County Tax Map 3-185, Block 739-W, Parcel 7, approximately 70.2 acres. Lower Randleman Lake Watershed.

The approval of the Special Use Permit is subject to the following conditions:

1. The height of landfill not to exceed 150 feet above existing grade.
2. Access from Concord Church Road limited to police/fire/EMT/ambulance vehicles only.
3. The Newman Log Cabin shall be buffered or protected from landfill operations.
4. A site access study must be completed prior to final site plan approval with recommendations from the study incorporated into the site plan.

This decision is final unless it is appealed in writing to the Clerk to the Board of County Commissioners within fifteen (15) days of the June 13, 2001 Planning Board public hearing. If appealed, you will be notified by the Clerk to the Board of County Commissioners of the place, date, and time of the public hearing.

Very truly yours,

Mark E. Kirstner, Secretary
 Guilford County Planning Board

/s/

cc: Effie Varitimidis, Clerk to Board of County Commissioners
 Post Office Box 3427 • Greensboro, North Carolina 27402
 Telephone: (336) 373-3334

**DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF LAND RESOURCES
LAND QUALITY SECTION**

P E R M I T

for the operation of a mining activity

In accordance with the provisions of G.S. 74-46 through 68, "The Mining Act of 1971," Mining Permit Rule 15A NCAC 5 B, and other applicable laws, rules and regulations

Permission is hereby granted to:

A-1 Sandrock Company, Inc. and R. Eugene Petty

A-1 Sandrock CDLF South Facility Mine

Guilford County - Permit No. 41-22

for the operation of a

Sandrock Mine

which shall provide that the usefulness, productivity and scenic values of all lands and waters affected by this mining operation will receive the greatest practical degree of protection and restoration.

MINING PERMIT EXPIRATION DATE: November 25, 2012



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

FACILITY PERMIT NO: 41-17
DATE ISSUED (PTC): 24 FEBRUARY 2004

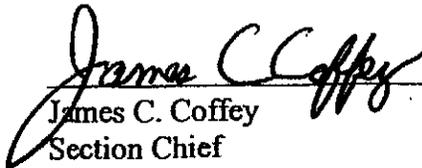
SOLID WASTE PERMIT

A-1 SANDROCK, INC.

is hereby issued a PERMIT TO CONSTRUCT a

CONSTRUCTION AND DEMOLITION LANDFILL

located on the south side of Bishop Road (SR 1116) between the intersection of Bishop Road with Groomtown Road and Viewmont Road, south of the City of Greensboro, in the Sumner Township, Guilford County, North Carolina in accordance with Article 9, Chapter 130A of the General Statutes of North Carolina and all rules promulgated thereunder and subject to the conditions set forth in this permit. The facility is located and described by the construction plan submitted, the property deeds, and the permit application narrative.


James C. Coffey
Section Chief
Solid Waste Section

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone 919-733-4996 \ FAX 919-715-3605 \ Internet <http://wastenolnc.org>

An Equal Opportunity / Affirmative Action Employer - Printed on Dual Purpose Recycled Paper



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

GUILFORD COUNTY,
NORTH CAROLINA
(UNINCORPORATED AREAS)

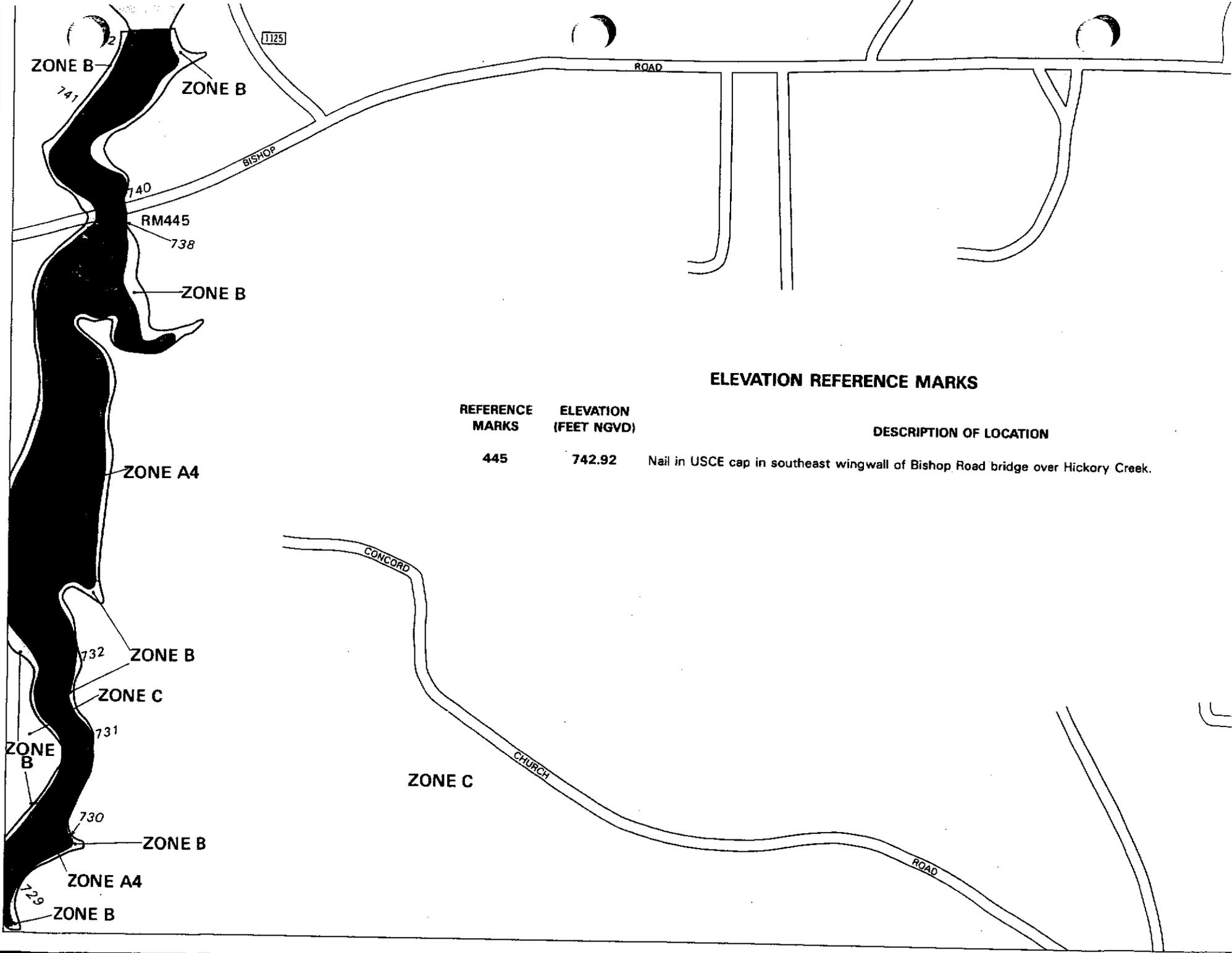
PANEL 181 OF 220
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
370111 0181 C

MAP REVISED:
NOVEMBER 18, 1988



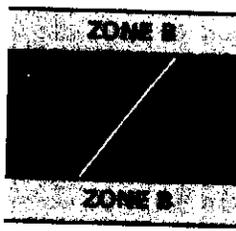
Federal Emergency Management Agency



ELEVATION REFERENCE MARKS

REFERENCE MARKS	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
445	742.92	Nail in USCE cap in southeast wingwall of Bishop Road bridge over Hickory Creek.

KEY TO MAP

500-Year Flood Boundary	—————	
100-Year Flood Boundary	—————	
Zone Designations*		
100-Year Flood Boundary	—————	
500-Year Flood Boundary	—————	
Base Flood Elevation Line With Elevation In Feet**	~~~~~	513
Base Flood Elevation in Feet Where Uniform Within Zone**		(EL 987)
Elevation Reference Mark		RM7x
Zone D Boundary	—————	
River Mile		•M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

*Certain areas not in the Special Flood Hazard Areas may be protected by flood control structures.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For adjoining panels, see separately printed Map Index.



David Garrett, P.G., P.E.

Engineering and Geology

February 14, 2002

Mr. Harry LeGrand, Jr., Zoologist
NC DENR Division of Parks and Recreation
Natural Heritage Program
1615 Mail Service Center
Raleigh, North Carolina 27699-1615

RE: Request for Information
Proposed Mine and Landfill Development Site
Guilford County, North Carolina

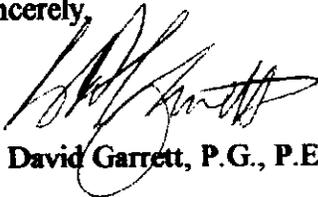
Dear Mr. LeGrand:

I respectfully request information pertaining to endangered species and/or State Park and Recreation Areas that may affect plans to develop a new mine and a Land Clearing/Inert Debris (LCID) landfill on the referenced site. The site is located on the Pleasant Garden USGS 7.5 minute quadrangle map. Please refer to the attached maps for the location and approximate boundary of the subject property.

The site is located approximately 6 miles south of Greensboro on Bishop Road, just off U.S. Hwy. I-85, at the Groometown exit. The site covers approximately 70 acres of wooded and partly cleared land. The site has been farmed in recent history, but a majority is now overgrown with mature timber. There are two drainage features which contain seasonal streams. A large stream (Hickory Creek) and an associated floodplain exist to the west of the site, but no disturbance is planned within this area.

A qualified biologist will be visiting the site, if needed, to field verify the presence of habitats for species listed in your information. I look forward to receiving this information at your earliest convenience. Please contact me at one of the numbers listed below if you need further clarification.

Sincerely,



G. David Garrett, P.G., P.E.

cc: Mr. Gene Petty



North Carolina Department of Environment and Natural Resources
Division of Parks and Recreation

Michael F. Easley, Governor

William G. Ross, Jr., Secretary

Dr. Philip K. McKnelly, Director

March 4, 2002

Mr. G. David Garrett
1408 Rock Drive
Raleigh, NC 27610

Subject: Proposed Mine and Landfill Development Site, Guilford County

Dear Mr. Garrett:

The Natural Heritage Program has no record of rare species, significant natural communities, or priority natural areas at the site nor within a mile of the site.

You may wish to check the Natural Heritage Program database website at www.ncsparks.net/nhp/search.html for a listing of rare plants and animals and significant natural communities in the county and on the topographic quad map. Please do not hesitate to contact me at 919-715-8687 if you have questions or need further information.

Sincerely,

Harry E. LeGrand, Jr., Zoologist
Natural Heritage Program

HEL/hel

**FEDERALLY PROTECTED SPECIES SURVEY, NON-EPHEMERAL STREAM
SURVEY, AND WETLANDS DELINEATION**

PROJECT:
A-1 Sandrock C&D Site, Guilford County, NC

BY:
Christopher R. Wilson, *Consulting Biologist*

SUBMITTED TO:
David Garrett, P.G., P.E.
1408 Rock Drive
Raleigh, NC 27610

Version 2
6 April 2002

Christopher R. Wilson, M.S.
Consulting Biologist
425 Roxanna St., Boone, NC 28607
828.264.0928 critterfro@boone.net <http://users.boone.net/critterfro/>



**Objective: FEDERALLY PROTECTED SPECIES SURVEY, NON-EPHEMERAL
STREAM SURVEY, AND WETLANDS DELINEATION**

Report Date: 6 April 2002

Client(s):

David Garrett, P.G., P.E.
1408 Rock Drive
Raleigh, NC 27610

Project: A-1 Sandrock C&D Site, Guilford County, NC

Site Location / Directions: Immediately southwest of Greensboro, NC. Exit 120 off I-85, Groometown Road heading south, east on Bishop Rd. Site is south of Bishop Road and east of Hickory Creek (See Map 1)

Site inventory dates: 26 & 27 February 2002; 7 March 2002

Proposed Activities: New construction, demolition, land clearing, stream crossings, inert debris landfill

Site Description

The project area consist of approximately 70 acres of forested land bordered to the west by Hickory Creek. Two unnamed tributaries cross the northern and southern sections of the property, flowing from east to west (see Map 2). Topography consists of mild slopes.

Soils

Hydric Soils in Guilford County: Wh, Wehadkee

Mapping units with inclusions of hydric soils: Ch, EnB, EnC

The project area contains the following mapped soils (1977 Guilford County Soil Survey, pg 39, see Map 3):

- Ch, Chewacla sandy loam
- WkC, Wilkes sandy loam, 6-10% slopes
- WkE, Wilkes sandy loam, 15-45% slopes
- EnB, Enon fine sandy loam, 2-6% slopes
- EnC, Enon fine sandy loam, 6-10% slopes

Vegetation / Plant and Animal Species

Upland forest are best classified as Dry-Mesic Oak-Hickory Forest. Lowland areas (drainage-way borders) are best classified as a combination, or variation, of "Piedmont(/Mountain) Bottomland Forest" and/or "Piedmont(/Low Mountain) Alluvial Forest" (Schafale and Weakley, NCNHP, 1990). Observed plant and animal species are listed in Table 1 and Table 2.

Federally Protected Species

The North Carolina Natural Heritage Program Element Occurrence Database was reviewed to determine Federally listed species known to occur in Guilford County (<http://www.ils.unc.edu/parkproject/nhp/index.html>). These species are listed in Table 3. Field visits surveyed all natural areas, observable plant and animal species, and potential habitats for Federally listed species. If potential habitats for such species were observed, field surveys targeted the detection of such species within the potential habitats.

Summary of Findings

- Records exist for 15 State Rare species within Guilford County, one of which (the Bald Eagle) is Federal Listed.
- No Federally listed species were observed within the project area.
- No Habitat for Federally listed species was observed within the project area.

Non-Ephemeral Stream Survey

According to the Pleasant Garden USGS topographic quad (Map 2) and Guilford County Soil Survey (Map 3), the project area contains one perennial stream, Hickory Creek, on the western border. Two unnamed intermittent tributaries to Hickory Creek cross the northern and southern sections of the property, flowing from east to west.

The project area was surveyed for additional non-ephemeral streams not shown on the USGS quad or soil survey maps. Potential non-ephemeral streams were evaluated using the current NCDWQ Stream Classification Form and accompanying guidance manual (19 January 1999). If the total score was greater than 19 points, then the stream section was classified as non-ephemeral. Stream sections with a score of less than 19 points were classified as ephemeral.

One stream section not indicated on the USGS or Soil Survey maps was found to be non-ephemeral (Stream A). This stream section is indicated on Map 4. The point at which this stream transitions from non-ephemeral (intermittent) to ephemeral was flagged in the field as SA1. The Corresponding NCDWQ Stream Classification Forms were completed for the channel sections below and above the breakpoint and are attached as Appendix 1 (SA/Int, SA/Ephem).

Additional channel sections (potential non-ephemeral streams) were evaluated and are indicated in Map 5 (C1 - C4). Corresponding NCDWQ Stream Classification Forms are not attached but are available upon request. (Note: channel section C4 was previously SBI)

Wetland Determination and Delineation

The project area was surveyed for the presence of wetlands according to the criteria indicated in the 1987 US Army Corps of Engineers Wetland Delineation Manual. One isolated wetland (Wetland A) was determined on site and is located south of Concord Church Road in the southeast section of the project area (see Map 4). The wetland boundary was delineated and flagged (WA1 - WA16, clockwise) in the field. The Routine Wetland Determination Data Form, included in the 1987 manual, was used to evaluate the wetland. Completed data forms corresponding to the wetland basin (WA/basin) and the adjacent upland (WA/upland) are included as Attachment 2. A data form was also completed to characterize the bottomlands throughout the site and is also included in Attachment 2 (drainageway borders).

An additional wetland (Wetland B) occurs just north of the gas pipe line and is bisected by Stream A. According to Todd Tugwell, USACE, this wetland is jurisdictional. It was not delineated in field because it was apparently not on the property of Al Sandrock. At the suggestion of Mr. Tugwell, this wetland should be delineated and surveyed in order to verify its location.

Other than Wetlands A&B, no other Special Aquatic Sites (including riffle pool complexes) were observed in the project area.

Notable Un-delineated Features

David Garrett met with Ms. Jenny Rankin of the NCDWQ on March 15, 2002 and Todd Tugwell of the USACE on March 21, 2002. According to Mr. Garrett, Ms. Rankin concurred that Stream A was the only non-ephemeral stream not indicated on USGS or Soil Survey maps. However, Mr. Tugwell classified the channel at point C2 as "jurisdictional but not important". He also noted an isolated channel upstream of point SA1 with a steady flow that ran underground some 100 feet or more above that point and felt this feature should simply be noted for future reference. Mr. Tugwell concurred that Wetland A was isolated and non-jurisdictional, however he did note that Wetland B was jurisdictional and should be delineated and surveyed to verify whether occurs on the project property. The above features noted by Mr. Tugwell are illustrated on Map 6. These features have not been delineated or flagged in the field.

Table 1

Observed Plant Species

Upland areas

Trees:

**Quercus alba* (White Oak), **Q. falcata* (S. Red Oak), **Q. velutina* (Black Oak), **Q. coccinea*, (Scarlet Oak), **Q. stellata* (Post Oak), *Liquidambar styraciflua* (Sweetgum), *Liriodendron tulipifera* (Tulip Poplar), *Acer rubrum* (Red Maple), *Cornus florida* (Flowering Dogwood), **Carya glabra* (Pignut Hickory), **Pinus echinata* (Shortleaf pine), *P. taeda* (Loblolly Pine), *Prunus serotina* (Black Cherry), **Oxydendron arboreum* (Sourwood), *Fagus grandifolia* (Beech), *Ilex opaca* (American Holly), **Ulmus alata* (Winged Elm), *Fraxinus americana* (White Ash), *Nyssa sylvatica* (Blackgum).

Shrubs/Lianas:

Ligustrum sinense (Chinese Privet), *Euonymus americana* (Hearts-a-Bustin'); *Vitis rotundifolia* (Muscadine Grape); *Toxicodendron radicans* (Poison Ivy), *Smilax spp.* (Greenbriar species).

Herbs:

Polystichum acrostichoides (Christmas Fern), *Hexastylis arifolia var. arifolia* (Wild Ginger), *Claytonia caroliniana* (Carolina Spring Beauty), *Hepatica americana* (Round-lobed Hepatica), *Asplenium platyneuron* (Ebony Spleenwort), *Aplectrum hyemale* (Putty Root), *Goodyera pubescens* (Rattlesnake Plantain), *Lonicera japonica* (Japanese Honeysuckle),

Lowlands / Moist Areas / Drainageway Borders

Trees:

Liquidambar styraciflua (Sweetgum), *Liriodendron tulipifera* (Tulip Poplar), *Acer rubrum* (Red Maple), *Cornus florida* (Flowering Dogwood), *Fagus grandifolia* (Beech), *Ilex opaca* (American Holly), #*Carya ovata* (Shagbark Hickory), #*Platanus occidentalis* (Sycamore), #*Acer floridanum* (Southern Sugar Maple, Florida Maple), #*Asimina triloba* (Pawpaw), #*Ulmus americana* (American Elm).

Shrubs/Lianas:

#*Alnus serrulata* (Tag Alder), #*Lindera benzoin* (Spicebush), *Ligustrum sinense* (Chinese Privet), *Toxicodendron radicans* (Poison Ivy)

Herbs:

Polystichum acrostichoides (Christmas Fern), *Hexastylis arifolia var. arifolia* (Wild Ginger), *Claytonia caroliniana* (Carolina Spring Beauty), *Hepatica americana* (Round-lobed Hepatica), *Aplectrum hyemale* (Putty Root), *Goodyera pubescens* (Rattlesnake Plantain), *Lonicera japonica* (Japanese Honeysuckle), #*Microstegium viminium* (Japanese Grass), #*Carex spp.* (Sedge species)

(* = Dryer soils; # = wetter soils)

Table 2

Observed Animal Species

Amphibian	Upland chorus frog	<i>Pseudacris triseriata (feriarum)</i>
Bird	American Crow	<i>Corvus brachyrhynchos</i>
Bird	American Goldfinch	<i>Carduelis tristis</i>
Bird	American Robin	<i>Turdus migratorius</i>
Bird	Blue Jay	<i>Cyanocitta cristata</i>
Bird	Carolina Chickadee	<i>Poecile carolinensis</i>
Bird	Carolina Wren	<i>Thryothorus ludovicianus</i>
Bird	Eastern Bluebird	<i>Sialia sialis</i>
Bird	Golden-crowned Kinglet	<i>Regulus satrapa</i>
Bird	Great Blue Heron	<i>Ardea herodias</i>
Bird	Hairy Woodpecker	<i>Picoides villosus</i>
Bird	Mourning Dove	<i>Zenaida macroura</i>
Bird	Northern Cardinal	<i>Cardinalis cardinalis</i>
Bird	Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Bird	Red-tailed Hawk	<i>Buteo jamaicensis</i>
Bird	Sharp-shinned Hawk	<i>Accipiter striatus</i>
Bird	Song Sparrow	<i>Melospiza melodia</i>
Bird	Tufted Titmouse	<i>Baeolophus bicolor</i>
Bird	Turkey Vulture	<i>Cathartes aura</i>
Bird	White-breasted Nuthatch	<i>Sitta carolinensis</i>
Mammal	Bobcat	<i>Lynx rufus</i>
Mammal	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>
Mammal	Raccoon	<i>Procyon lotor</i>
Mammal	Virginia opossum	<i>Didelphis virginiana</i>
Mammal	White-tailed Deer	<i>Odocoileus virginianus</i>

Table 3

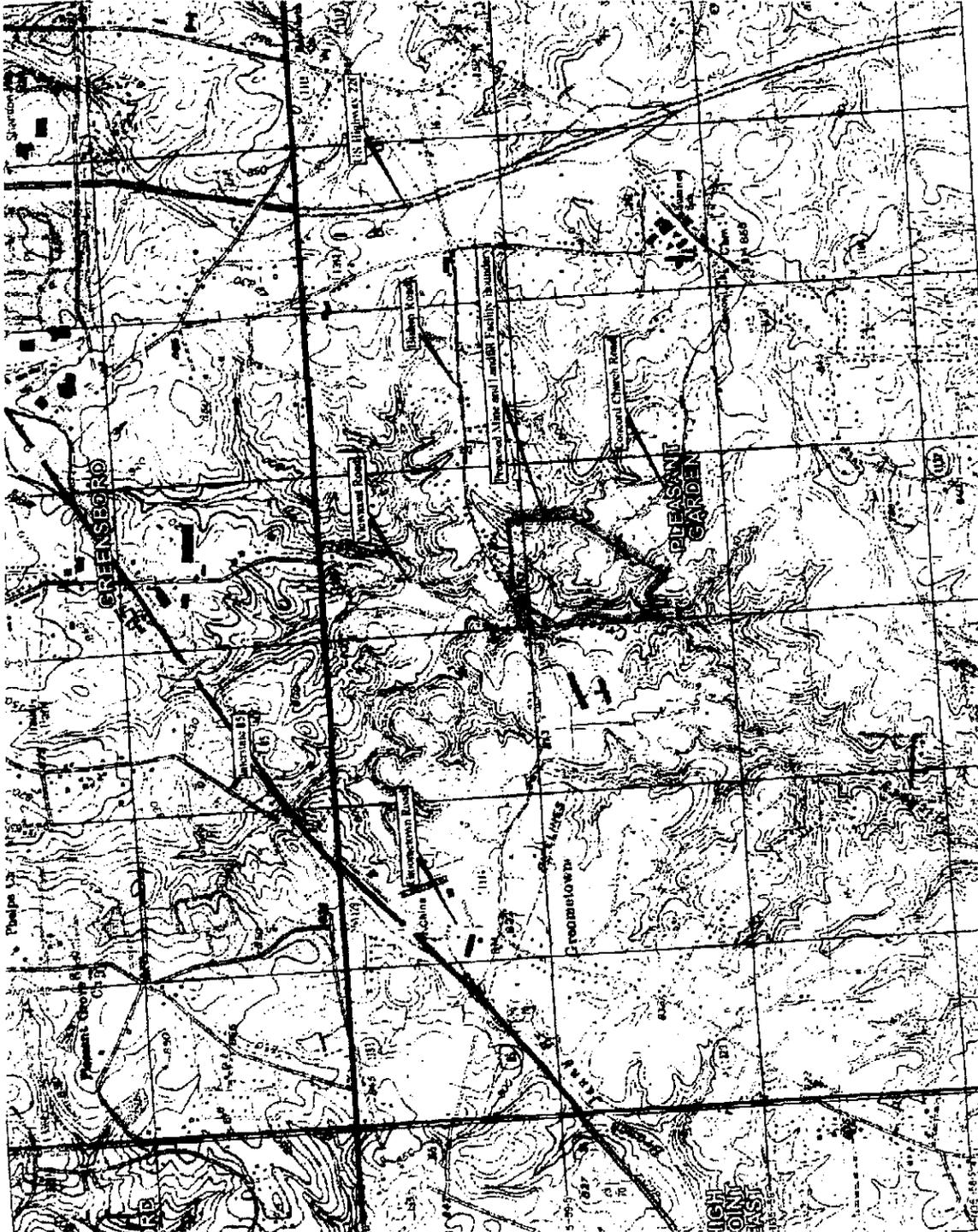
NCNHP EO List for Guilford County

Form	Latin Name	Common Name	State	Federal	Habitat
Amphibian	<i>Ambystoma talpoideum</i>	Mole Salamander	SC	-	MP: breeds in fish-free semipermanent woodland ponds; forages in adjacent woodlands
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	E	T	PCT: mature forests near large bodies of water (for nesting); lakes and sounds [nesting sites; regular non-breeding sites]
Bird	<i>Lanius ludovicianus ludovicianus</i>	Loggerhead Shrike	SC	-	PSC: fields and pastures [breeding season only]
Crustacean	<i>Cambarus catagius</i>	Greensboro Burrowing Crayfish	SR	-	P: Greensboro area to Uwharries (endemic to North Carolina)
Fish	<i>Etheostoma collis pop 2</i>	Carolina Darter	SC	FSC	P: streams in the Roanoke, Tar, Neuse, and Cape Fear drainages
Mammal	<i>Sciurus niger</i>	Eastern Fox Squirrel	SR	-	MPSC: open forests, mainly longleaf pine/scrub oak
Vascular Plant	<i>Berberis canadensis</i>	American Barberry	SR	-	PM: open forests and glades on basic soils
Vascular Plant	<i>Cardamine dissecta</i>	Dissected Toothwort	C	-	PM: rich woods, cove forests, bottomlands
Vascular Plant	<i>Collinsonia tuberosa</i>	Piedmont Horsebalm	C	-	PM: rich hardwood forests
Vascular Plant	<i>Gnaphalium helleri var helleri</i>	Heller's Rabbit Tobacco	SR	-	PS: dry woodlands, openings, and glades, especially over mafic rocks
Vascular Plant	<i>Parthenium auriculatum</i>	Glade Wild Quinine	C	-	PM: glades and openings over mafic rocks
Vascular Plant	<i>Platanthera peramoena</i>	Purple Fringeless Orchid	C	-	MP: bogs, forests
Vascular Plant	<i>Quercus prinoides</i>	Dwarf Chinquapin Oak	C	-	PM: dry, rocky slopes
Vascular Plant	<i>Smilax lasioneura</i>	a carrion-flower	C	-	M: oak-hickory forests over mafic rocks
Vascular Plant	<i>Thermopsis mollis sensu stricto</i>	Appalachian Golden-banner	SR	-	PM: dry ridges and open woodlands

Map 1

Vicinity Map

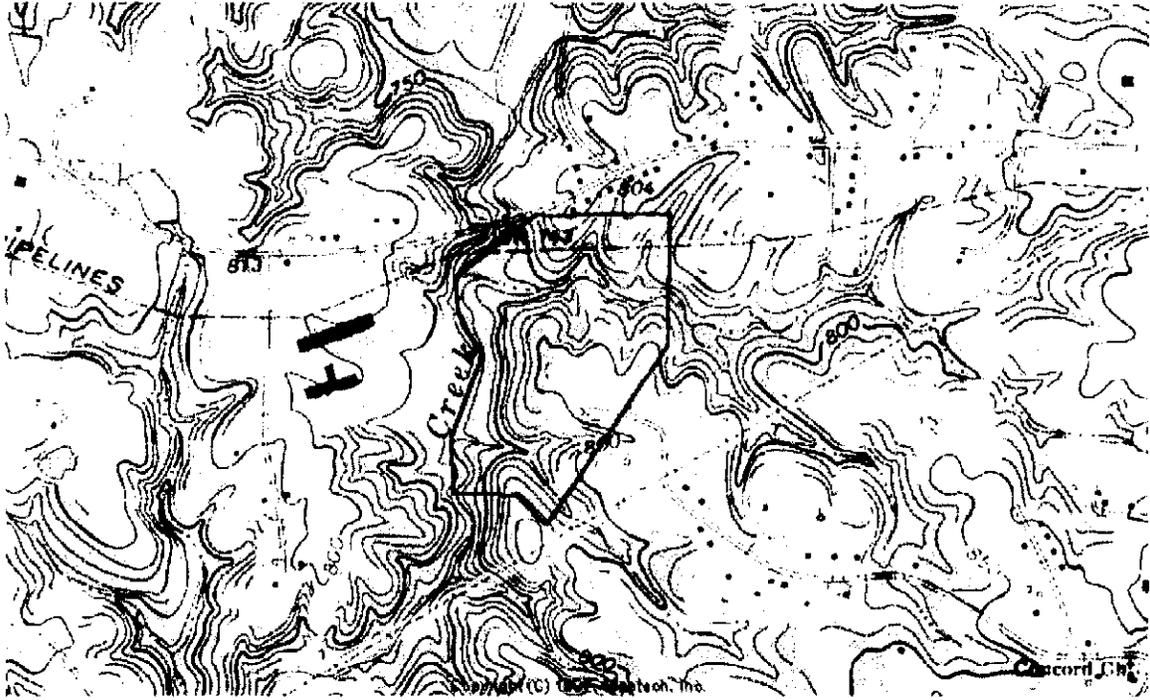
Note: approximate project boundary shown



Map 2

USGS Pleasant Garden Topographic Quad (1:24k)

Note: approximate project boundary shown



Map 3

Soil Map
Soil Survey of Guilford County, NC (1977)
Page 39

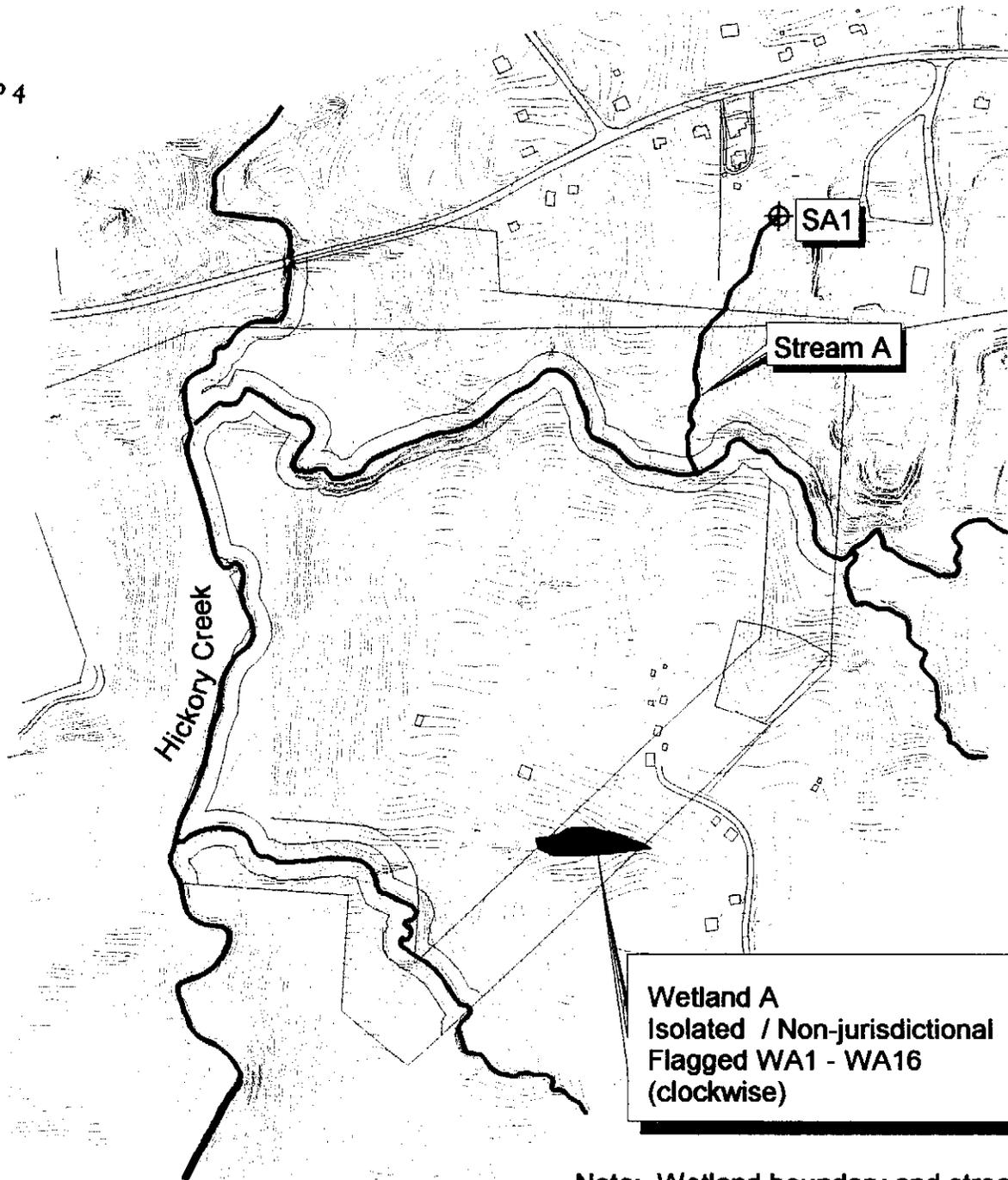
PAGE 31
Soil Survey
Guilford

GUILFORD COUNTY, NORTH CAROLINA



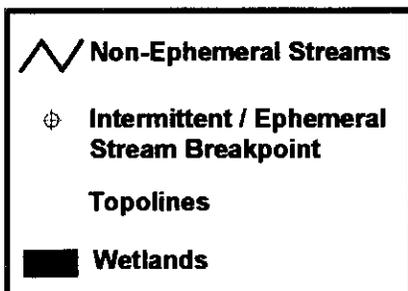
A-1 Sandrock C&D Site, Guilford County, NC Delineated Wetlands and Non-Ephemeral Streams

MAP 4



Note: Wetland boundary and stream breakpoint positions are approximated.

6 April 2002



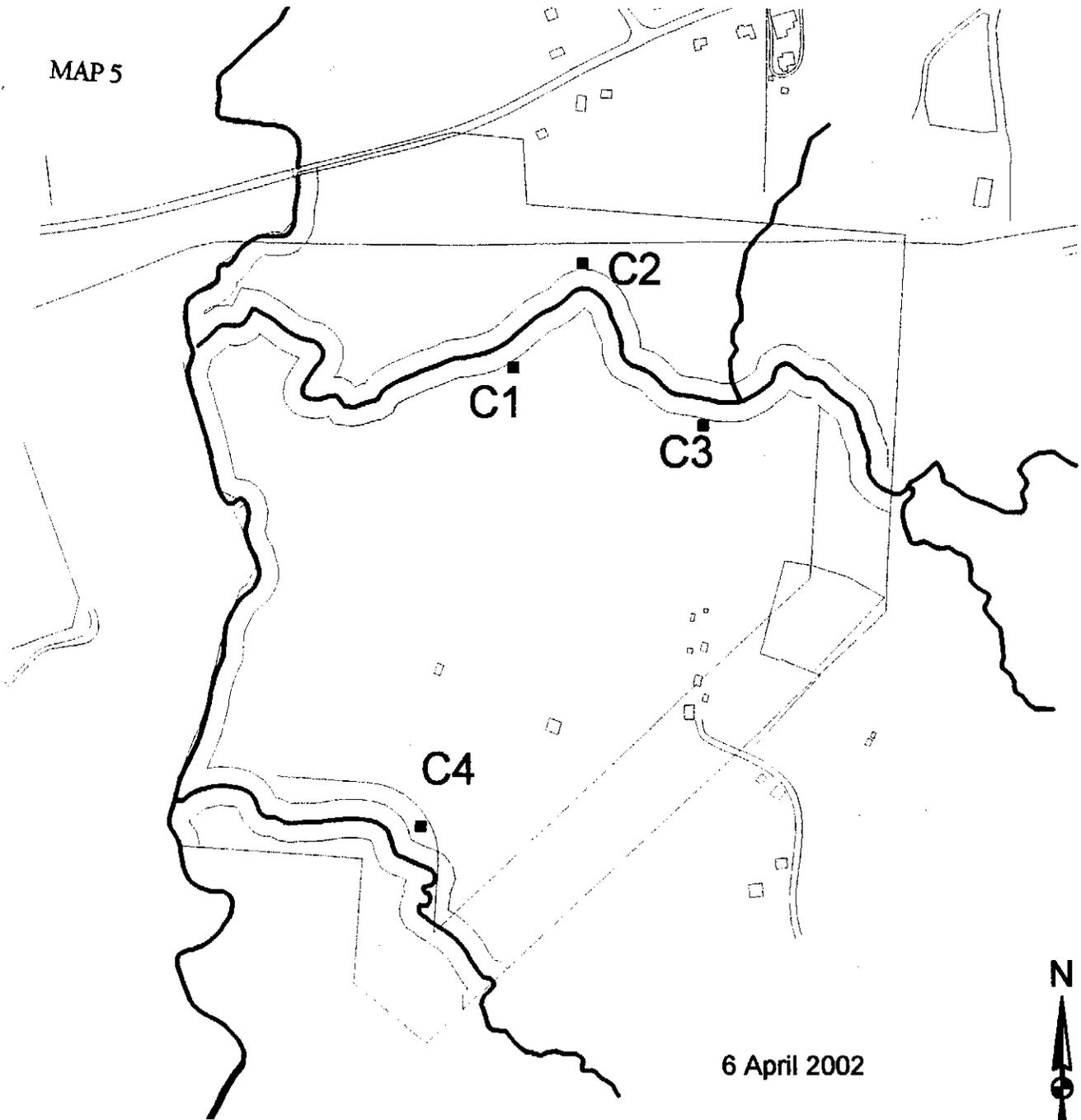
Christopher R. Wilson, M.S.
Consulting Biologist
425 Roxanna St., Boone, NC 28607
828.264.0928 crtterfro@boone.net <http://users.boone.net/crtterfro/>



A-1 Sandrock C&D Site, Guilford County, NC

Additional Channel Evaluation Locations

MAP 5



6 April 2002



■ Additional Channel Evaluation Locations
(C1 - C4)

— Non-Ephemeral Streams

--- Topolines

Christopher R. Wilson, M.S.

Consulting Biologist

425 Roxanna St., Boone, NC 28607

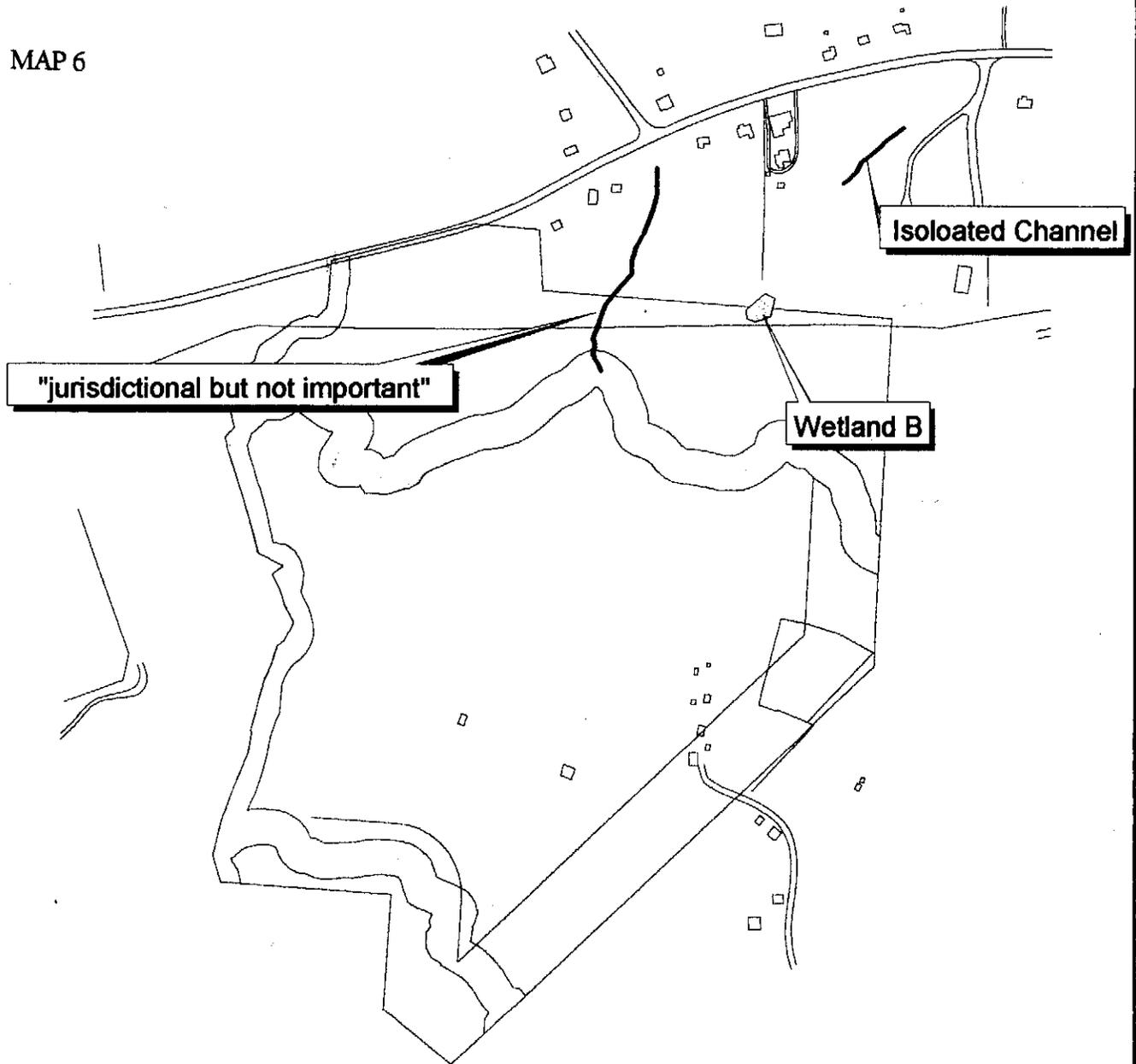
828.264.0928 critterfro@boone.net <http://users.boone.net/critterfro/>



A-1 Sandrock C&D Site, Guilford County, NC

Notable Non-delineated Features

MAP 6



6 April 2002

 **Wetland B**
Marginal Intermittent Channels
Topolines



Christopher R. Wilson, M.S.
Consulting Biologist
425 Roxanna St., Boone, NC 28607
828.264.0928 critterfro@boone.net <http://users.boone.net/critterfro/>



Appendix 1

Completed NCDWQ Stream Classification Forms

SECONDARY HYDROLOGY INDICATOR POINTS: 4/5

SA/INT

III. Biology

	Absent	Weak	Moderate	Strong		
1) Are Fish Present?	0	.5	1	1.5		
2) Are Amphibians Present?	0	.5	1	1.5		
3) Are Aquatic Turtles Present?	0	.5	1	1.5		
4) Are Crayfish Present?	0	.5	1	1.5		
5) Are Macroinvertebrates Present?	0	.5	1	1.5		
6) Are Iron Oxidizing Bacteria/Fungus Present?	0	.5	1	1.5		
7) Is Filamentous Algae Present?	0	.5	1	1.5		
8) Are Wetland Plants In Streambed?	SAV 2	Mostly OBL 1	Mostly FACW .75	Mostly FAC .5	Mostly FACU 0	Mostly UPL 0

SECONDARY BIOLOGY INDICATOR POINTS: 2.5

TOTAL POINTS (Primary + Secondary) = 24 Intermittent
 (If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

NCDWO Stream Classification Form

A-1 Sandrock

SA/Ephem

Project Name: _____ River Basin: _____ County: _____ USGS QUAD: _____
 DWQ Project Number: _____ Nearest Named Stream: _____ Latitude: _____ Longitude: _____
 Evaluator: _____ Signature: _____ Date: 3/7/02
 Location/Directions: _____

PLEASE NOTE: If evaluator and landowner agree that the feature is a man-made ditch, then use of this form is not necessary. Also, if in the best professional judgement of the evaluator, the feature is a man-made ditch and not a modified natural stream—this rating system should not be used

Primary Field Indicators: (Circle One Number Per Line)

I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Riffle-Pool Sequence?	0	1	2	3
2) Is The USDA Texture In Streambed Different From Surrounding Terrain?	0	1	2	3
3) Are Natural Levees Present?	0	1	2	3
4) Is The Channel Sinuous?	0	1	2	3
5) Is There An Active (Or Relic) Floodplain Present?	0	1	2	3
6) Is The Channel Braided?	0	1	2	3
7) Are Recent Alluvial Deposits Present?	0	1	2	3
8) Is There A Bankfull Bench Present?	0	1	2	3
9) Is A Continuous Bed & Bank Present?	0	1	2	3
NOTE: If Bed & Bank Caused By Ditching And WITHOUT Sinuosity Than Score = 0				
10) Is A 2 nd Order Or Greater Channel (As Indicated On Topo Map And/Or In Field) Present?	Yes=3	No=0		

PRIMARY GEOMORPHOLOGY INDICATOR POINTS: 0

I. Hydrology	Absent	Weak	Moderate	Strong
1) Is There A Groundwater Flow/Discharge Present?	0	1	2	3

PRIMARY HYDROLOGY INDICATOR POINTS: 1

III. Biology	Absent	Weak	Moderate	Strong
1) Are Fibrous Roots Present In Streambed?	3	2	1	0
2) Are Rooted Plants Present In Streambed?	3	2	1	0
3) Is Periphyton Present?	0	1	2	3
4) Are Bivalves Present?	0	1	2	3

PRIMARY BIOLOGY INDICATOR POINTS: 1

Secondary Field Indicators: (Circle One Number Per Line)

I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Head Cut Present In Channel?	0	.5	1	1.5
2) Is There A Grade Control Point In Channel?	0	.5	1	1.5
3) Does Topography Indicate A Natural Drainage Way?	0	.5	1	1.5

SECONDARY GEOMORPHOLOGY INDICATOR POINTS: .5

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is This Year's (Or Last's) Leaf Litter Present In Streambed?	1.5	1	.5	0
2) Is Sediment On Plants (Or Debris) Present?	0	.5	1	1.5
3) Are Wrack Lines Present?	0	.5	1	1.5
4) Is Water In Channel And >48 Hrs. Since Last Known Rain? (*NOTE: If Ditch Indicated In #9 Above Skip This Step And #5 Below*)	0	.5	1	1.5
5) Is There Water In Channel During Dry Conditions Or In Growing Season?	0	.5	1	1.5
6) Are Hydric Soils Present In Sides Of Channel (Or In Headcut)?	Yes=1.5	No=0		

SECONDARY HYDROLOGY INDICATOR POINTS: 3

SA/Ephem

III. Biology

	Absent	Weak	Moderate	Strong		
1) Are Fish Present?	0	.5	1	1.5		
2) Are Amphibians Present?	0	.5	1	1.5		
3) Are Aquatic Turtles Present?	0	.5	1	1.5		
4) Are Crayfish Present?	0	.5	1	1.5		
5) Are Macroinvertebrates Present?	0	.5	1	1.5		
6) Are Iron Oxidizing Bacteria/Fungus Present?	0	.5	1	1.5		
7) Is Filamentous Algae Present?	0	.5	1	1.5		
8) Are Wetland Plants In Streambed?	SAV 2	Mostly OBL 1	Mostly FACW .75	Mostly FAC .5	Mostly FACU 0	Mostly UPL 0

SECONDARY BIOLOGY INDICATOR POINTS: .5

TOTAL POINTS (Primary + Secondary) = 12

(If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

Ephemeral

NCDWO Stream Classification Form

A1 Sandrock

SB/INT

Project Name: _____ River Basin: _____ County: _____ USGS QUAD: _____
 DWQ Project Number: _____ Nearest Named Stream: _____ Latitude: _____ Longitude: _____
 Evaluator: _____ Signature: _____ Date: 2/26/02
 Location/Directions: _____

35°59'14.59"N
 79°50'53.81"W

PLEASE NOTE: If evaluator and landowner agree that the feature is a man-made ditch, then use of this form is not necessary. Also, if in the best professional judgement of the evaluator, the feature is a man-made ditch and not a modified natural stream—this rating system should not be used

Primary Field Indicators: (Circle One Number Per Line)

I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Riffle-Pool Sequence?	0	1	2	3
2) Is The USDA Texture In Streambed Different From Surrounding Terrain?	0	1	2	3
3) Are Natural Levees Present?	0	1	2	3
4) Is The Channel Sinuous?	0	1	2	3
5) Is There An Active (Or Relic) Floodplain Present?	0	1	2	3
6) Is The Channel Braided?	0	1	2	3
7) Are Recent Alluvial Deposits Present?	0	1	2	3
8) Is There A Bankfull Bench Present?	0	1	2	3
9) Is A Continuous Bed & Bank Present?	0	1	2	3
<small>(NOTE: If Bed & Bank Caused By Ditching And WITHOUT Similarity Then Score = 0)</small>				
10) Is A 2 nd Order Or Greater Channel (As Indicated On Topo Map And/Or In Field) Present?		Yes=3	No=0	

PRIMARY GEOMORPHOLOGY INDICATOR POINTS: 8

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is There A Groundwater Flow/Discharge Present?	0	1	2	3

PRIMARY HYDROLOGY INDICATOR POINTS: 1

III. Biology	Absent	Weak	Moderate	Strong
1) Are Fibrous Roots Present In Streambed?	0	2	1	0
2) Are Rooted Plants Present In Streambed?	3	2	1	0
3) Is Periphyton Present?	0	1	2	3
4) Are Bivalves Present?	0	1	2	3

PRIMARY BIOLOGY INDICATOR POINTS: 1

Secondary Field Indicators: (Circle One Number Per Line)

I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Head Cut Present In Channel?	0	.5	1	1.5
2) Is There A Grade Control Point In Channel?	0	.5	1	1.5
3) Does Topography Indicate A Natural Drainage Way?	0	.5	1	1.5

SECONDARY GEOMORPHOLOGY INDICATOR POINTS: 4.5

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is This Year's (Or Last's) Leaf litter Present In Streambed?	1.5	1	0.5	0
2) Is Sediment On Plants (Or Debris) Present?	0	0.5	1	1.5
3) Are Wrack Lines Present?	0	0.5	1	1.5
4) Is Water In Channel And >48 Hrs. Since Last Known Rain? <small>(NOTE: If Ditch Indicated In #9 Above Skip This Step And #3 Below)</small>	0	0.5	1	1.5
5) Is There Water In Channel During Dry Conditions Or In Growing Season?	0	0.5	1	1.5
6) Are Hydric Soils Present In Sides Of Channel (Or In Headcut)?		Yes=1.5	No=0	

SECONDARY HYDROLOGY INDICATOR POINTS: 4

SB INT

III. Biology

	Absent	Weak	Moderate	Strong		
1) Are Fish Present?	0	.5	1	1.5		
2) Are Amphibians Present?	0	.5	1	1.5		
3) Are Aquatic Turtles Present?	0	.5	1	1.5		
4) Are Crayfish Present?	0	.5	1	1.5		
5) Are Macroinvertebrates Present?	0	.5	1	1.5		
6) Are Iron Oxidizing Bacteria/Fungus Present?	0	.5	1	1.5		
7) Is Filamentous Algae Present?	0	.5	1	1.5		
8) Are Wetland Plants In Streambed?	SAV 2	Mostly OBL 1	Mostly FACW .75	Mostly FAC .5	Mostly FACU 0	Mostly UPL 0

(* NOTE: If Total Absence Of All Plants In Streambed As Noted Above Skip This Step UNLESS SAV Present*)

SECONDARY BIOLOGY INDICATOR POINTS: 0

TOTAL POINTS (Primary + Secondary) = 23.5

INT

(If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

NCDWO Stream Classification Form

A-1 Senebaco

SB/Ephraim

Project Name: _____ River Basin: _____ County: _____ USGS QUAD: _____
 DWQ Project Number: _____ Nearest Named Stream: _____ Latitude: _____ Longitude: _____
 Evaluator: _____ Signature: _____ Date: 2/26/02
 Location/Directions: _____

PLEASE NOTE: If evaluator and landowner agree that the feature is a man-made ditch, then use of this form is not necessary. Also, if in the best professional judgement of the evaluator, the feature is a man-made ditch and not a modified natural stream—this rating system should not be used

Primary Field Indicators: (Circle One Number Per Line)

I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Riffle-Pool Sequence?	0	1	2	3
2) Is The USDA Texture In Streambed Different From Surrounding Terrain?	0	1	2	3
3) Are Natural Levees Present?	0	1	2	3
4) Is The Channel Sinuous?	0	1	2	3
5) Is There An Active (Or Relic) Floodplain Present?	0	1	2	3
6) Is The Channel Braided?	0	1	2	3
7) Are Recent Alluvial Deposits Present?	0	1	2	3
8) Is There A Bankfull Bench Present?	0	1	2	3
9) Is A Continuous Bed & Bank Present?	0	1	2	3
<i>(NOTE: If Bed & Bank Caused By Ditching And WITHOUT Sinuosity Then Score = 0)</i>				
10) Is A 2 nd Order Or Greater Channel (As Indicated On Topo Map And/Or In Field) Present?	Yes=3	No=0		

PRIMARY GEOMORPHOLOGY INDICATOR POINTS: 4

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is There A Groundwater Flow/Discharge Present?	0	1	2	3

PRIMARY HYDROLOGY INDICATOR POINTS: 1

III. Biology	Absent	Weak	Moderate	Strong
1) Are Fibrous Roots Present In Streambed?	3	2	1	0
2) Are Rooted Plants Present In Streambed?	3	2	1	0
3) Is Periphyton Present?	0	1	2	3
4) Are Bivalves Present?	0	1	2	3

PRIMARY BIOLOGY INDICATOR POINTS: 2

Secondary Field Indicators: (Circle One Number Per Line)

I. Geomorphology	Absent	Weak	Moderate	Strong
1) Is There A Head Cut Present In Channel?	0	.5	1	1.5
2) Is There A Grade Control Point In Channel?	0	.5	1	1.5
3) Does Topography Indicate A Natural Drainage Way?	0	.5	1	1.5

SECONDARY GEOMORPHOLOGY INDICATOR POINTS: 3

II. Hydrology	Absent	Weak	Moderate	Strong
1) Is This Year's (Or Last's) Leaf litter Present In Streambed?	1.5	1	.5	0
2) Is Sediment On Plants (Or Debris) Present?	0	1	1	1.5
3) Are Wrack Lines Present?	0	1	1	1.5
4) Is Water In Channel And >48 Hrs. Since Last Known Rain? (NOTE: If Ditch Indicated In #9 Above Skip This Step And #5 Below)	0	1	1	1.5
5) Is There Water In Channel During Dry Conditions Or In Growing Season?	0	.5	1	1.5

6) Are Hydric Soils Present In Sides Of Channel (Or In Headcut)? Yes=1.5 No=0

SECONDARY HYDROLOGY INDICATOR POINTS: 3

SB / Ephem

III. Biology

	Absent	Weak	Moderate	Strong		
1) Are Fish Present?	0	.5	1	1.5		
2) Are Amphibians Present?	0	.5	1	1.5		
3) Are Aquatic Turtles Present?	0	.5	1	1.5		
4) Are Crayfish Present?	0	.5	1	1.5		
5) Are Macroinvertebrates Present?	0	.5	1	1.5		
6) Are Iron Oxidizing Bacteria/Fungus Present?	0	.5	1	1.5		
7) Is Filamentous Algae Present?	0	.5	1	1.5		
8) Are Wetland Plants In Streambed?	SAV 2	Mostly OBL 1	Mostly FACW .75	Mostly FAC .5	Mostly FACU 0	Mostly UPL 0

(* NOTE: If Total Absence Of All Plants In Streambed As Noted Above Skip This Step UNLESS SAV Present *)

SECONDARY BIOLOGY INDICATOR POINTS: ~~0~~ 0

TOTAL POINTS (Primary + Secondary) = 13

(If Greater Than Or Equal To 19 Points The Stream Is At Least Intermittent)

Ephemeral

Appendix 2

Completed Routine Wetland Determination Data Forms
(1987 US Army Corps of Engineers Wetland Delineation Manual)

DATA FORM
 ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

WA / Upland

Project/Site: <u>South of Bishop Rd / Wetland A Upland</u>		Date: <u>3/7/02</u>
Applicant/Owner: <u>A-1 Sandrock</u>		County: <u>Currituck</u>
Investigator: <u>Christopher R. Wilson</u>		State: <u>NC</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)		<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No Community ID: _____ Transect ID: _____ Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Liriodendron tulipifera</u>	<u>T</u>	<u>FAC</u>	9. _____	_____	_____
2. <u>Bigelovia styriifolia</u>	<u>T</u>	<u>FAC+</u>	10. _____	_____	_____
3. <u>Juniperus virginiana</u>	<u>S/S</u>	<u>FACU-</u>	11. _____	_____	_____
4. <u>Cornus florida</u>	<u>S/S</u>	<u>FACU</u>	12. _____	_____	_____
5. <u>Lonicera japonica</u>	<u>H</u>	<u>FAC-</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 2/5 = 40%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> (in.) Depth to Free Water in Pit: <u>None</u> (in.) Depth to Saturated Soil: <u>None</u> (in.)	Remarks:

DATA FORM
 ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

WA/Basin

Project/Site: <u>Southern Bishop Rd. / Wetland A (WA)</u>	Date: <u>3/7/02</u>
Applicant/Owner: <u>A. J. Sandrock</u>	County: <u>Guilford</u>
Investigator: <u>Christopher B. Wilson</u>	State: <u>NC</u>
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a Potential Problem Area? (If needed, explain on reverse.)	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No
	Community ID: _____ Transect ID: _____ Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Acer rubrum</u>	<u>T</u>	<u>FAC</u>	9. _____		
2. <u>Liriodendron tulipifera</u>	<u>T</u>	<u>FAC</u>	10. _____		
3. <u>Alnus incana</u>	<u>S/S</u>	<u>FACW+</u>	11. _____		
4. <u>Carex sp.</u>	<u>H</u>	<u>FAC-OBL</u>	12. _____		
5. _____			13. _____		
6. _____			14. _____		
7. _____			15. _____		
8. _____			16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC): 100%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> (in.) Depth to Free Water in Pit: <u>18</u> (in.) Depth to Saturated Soil: <u>9</u> (in.)	
Remarks:	

DATA FORM
 ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Drainage way
 Borders

Project/Site: South of Bishop Ad. / Drainage way Borders
 Applicant/Owner: A-1 Sandrock
 Investigator: Christopher R. Wilson
 Date: 3/70
 County: Cecil
 State: NC

Do Normal Circumstances exist on the site?
 Is the site significantly disturbed (Atypical Situation)?
 Is the area a Potential Problem Area?
 (If needed, explain on reverse.)

Yes No
 Yes No
 Yes No

Community ID: _____
 Transect ID: _____
 Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Plantago occidentalis</u>	<u>T</u>	<u>EACW</u>	9. _____	_____	_____
2. <u>Asimina triloba</u>	<u>S/S</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Liquidambar styraciflua</u>	<u>S/S</u>	<u>FAC</u>	11. _____	_____	_____
4. <u>Lonicera japonica</u>	<u>H</u>	<u>FAC</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC): 34 = 75%

Remarks: _____

HYDROLOGY

Recorded Data (Describe in Remarks):
 Stream, Lake, or Tide Gauge
 Aerial Photographs
 Other
 No Recorded Data Available

Field Observations:
 Depth of Surface Water: None (in.)
 Depth to Free Water in Pit: None (in.)
 Depth to Saturated Soil: None (in.)

Wetland Hydrology Indicators:
 Primary Indicators:
 Inundated
 Saturated in Upper 12 Inches
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetlands
 Secondary Indicators (2 or more required):
 Oxidized Root Channels in Upper 12 Inches
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test
 Other (Explain in Remarks)

Remarks: Does not pass hydrology

Christopher R. Wilson, M.S.
Consulting Biologist
425 Roxanna St., Boone, NC 28607
828.264.0928 critterfro@boone.net <http://users.boone.net/critterfro/>



David Garrett, P.G., P.E.
1408 Rock Drive
Raleigh, NC 27610

10 May 2002

RE: A-1 Sandrock C&D Site, Guilford County, NC

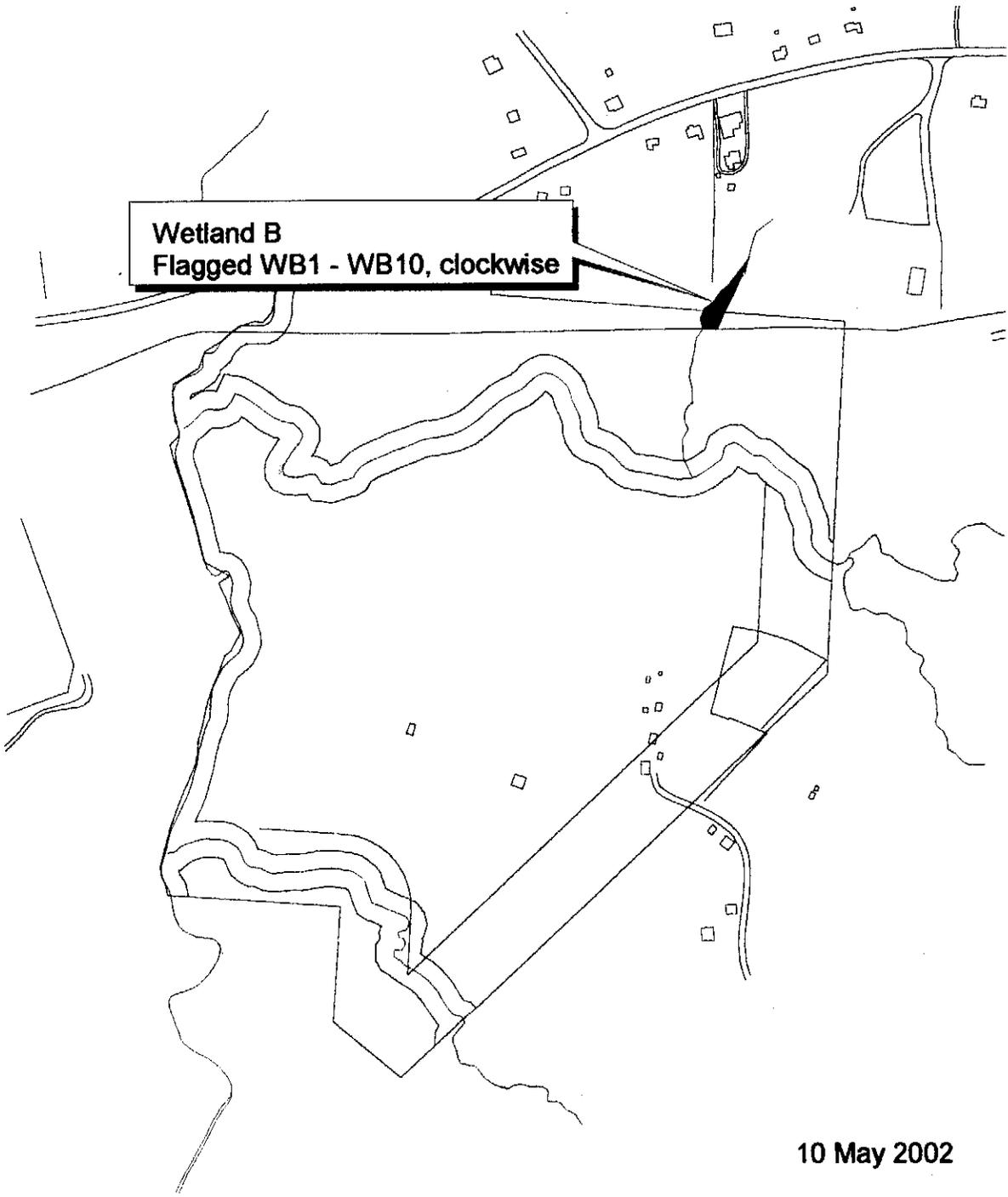
At your request, I completed a field delineation of "Wetland B" on May 9, 2002. This wetland lies on the intermittent channel "Stream A" just to the north of the gas pipeline. Wetland B is flagged WBI - WB10, in a clockwise direction, starting at the downstream end (on the gas pipeline right-of-way). I have attached the COE wetland data forms and a map showing the location of Wetland B. It appears that only a portion of this wetland lies on A-1 Sandrock property.

Let me know if you have further questions.

Sincerely,

Christopher R. Wilson

A-1 Sandrock C&D Site, Guilford County, NC Wetland B



Wetland B
Flagged WB1 - WB10, clockwise

10 May 2002

Note: Wetland boundary approximated on map

 **Wetland B**
Jurisdictional Channels
Topolines



Christopher R. Wilson, M.S.
Consulting Biologist
425 Roxanna St., Boone, NC 28607
828.264.0928 critterfro@boone.net <http://users.boone.net/critterfro/>



**DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Wetland B/Basin

Project/Site: <u>Stream A" north of Pipeline/Wetland B Basin</u> Applicant/Owner: <u>A-1 Sandrock</u> Investigator: <u>Christopher R. Wilson</u>	Date: <u>5/9/02</u> County: <u>Guilford</u> State: <u>NC</u>						
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><input checked="" type="radio"/> Yes</td> <td style="text-align: center;"><input type="radio"/> No</td> </tr> <tr> <td style="text-align: center;"><input type="radio"/> Yes</td> <td style="text-align: center;"><input checked="" type="radio"/> No</td> </tr> <tr> <td style="text-align: center;"><input type="radio"/> Yes</td> <td style="text-align: center;"><input type="radio"/> No</td> </tr> </table>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No
<input checked="" type="radio"/> Yes	<input type="radio"/> No						
<input type="radio"/> Yes	<input checked="" type="radio"/> No						
<input type="radio"/> Yes	<input type="radio"/> No						
Community ID: _____ Transect ID: _____ Plot ID: _____							

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Liquidambar styraciflua</u>	<u>T</u>	<u>FACT</u>	9. _____		
2. <u>Acer rubrum</u>	<u>S/S</u>	<u>FAC</u>	10. _____		
3. <u>Cornus amomum</u>	<u>S/S</u>	<u>FACW+</u>	11. _____		
4. <u>Carpinus caroliniana</u>	<u>S/S</u>	<u>FAC</u>	12. _____		
5. <u>Carex spp.</u>	<u>H</u>	<u>FAC-OBL</u>	13. _____		
6. <u>Platanus occidentalis</u>	<u>S/S</u>	<u>FACW-</u>	14. _____		
7. _____			15. _____		
8. _____			16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC). 100%

Remarks: _____

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream, Lake, or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>none</u> (in.)</p> <p>Depth to Free Water in Pit: <u>3</u> (in.)</p> <p>Depth to Saturated Soil: <u>0</u> (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input checked="" type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input checked="" type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks: _____	

DATA FORM
 ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Wetland B/Upland

Project/Site: <u>Stream at North of Pipeline / Wetland B/Upland</u>		Date: <u>5/9/02</u>
Applicant/Owner: <u>A-I Soudruck</u>		County: <u>Guilford</u>
Investigator: <u>Christopher R. Wilson</u>		State: <u>NC</u>
Do Normal Circumstances exist on the site?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Community ID: _____ Transect ID: _____ Plot ID: _____
Is the site significantly disturbed (Atypical Situation)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Is the area a potential Problem Area? (If needed, explain on reverse.)	<input type="radio"/> Yes <input checked="" type="radio"/> No	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Liriodendron tulipifera</u>	<u>T</u>	<u>FAC</u>	9. _____		
2. <u>Quercus alba</u>	<u>S/S</u>	<u>FACU</u>	10. _____		
3. <u>Cornus florida</u>	<u>S/S</u>	<u>FACU</u>	11. _____		
4. _____			12. _____		
5. _____			13. _____		
6. <u>Ostrya virginiana</u>	<u>S/S</u>	<u>FACU</u>	14. _____		
7. _____			15. _____		
8. _____			16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 20%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>None</u> (in.) Depth to Free Water in Pit: <u>None</u> (in.) Depth to Saturated Soil: <u>None</u> (in.)	Remarks:



David Garrett, P.G., P.E.

Engineering and Geology

February 14, 2002

Mr. David Brook
Deputy State Historic Preservation Officer
NC Department of Cultural Resources
State Historic Preservation Office
4617 Mail Service Center
Raleigh, North Carolina 27699-4617

RE: Request for Information
Proposed Mine and Landfill Development Site
Guilford County, North Carolina

Dear Mr. Brook:

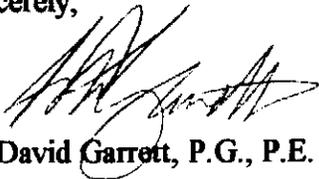
I respectfully request information pertaining to sites of cultural and/or archaeological significance, which may affect plans to develop a new mine and a Land Clearing/Inert Debris (LCID) landfill on the referenced site. The site is located on the Pleasant Garden USGS 7.5 minute quadrangle map. Please refer to the attached maps for the location and approximate boundary of the subject property.

The site is located approximately 6 miles south of Greensboro on Bishop Road, just off U.S. Hwy. I-85, at the Groometown exit. The site covers approximately 70 acres of wooded and partly cleared land. The site has been farmed in recent history, but a majority is now overgrown with mature timber. There are two drainage features which contain seasonal streams. A large stream (Hickory Creek) and an associated floodplain exist to the west of the site, but no disturbance is planned within this area.

The only structures remaining on the property from the past agricultural activities are an occupied house and several abandoned outbuildings. The house and most of the outbuildings are outside the proposed ground disturbing activities area. Ground disturbing activities will affect approximately 50 acres within areas shown on the site map.

I look forward to receiving this information at your earliest convenience. Please contact me at one of the numbers listed below if you need further clarification.

Sincerely,



G. David Garrett, P.G., P.E.

cc: Mr. Gene Petty

1408 Rock Drive, Raleigh, North Carolina 27610

E-mail: david_garrett_pg@mindspring.com

919-231-1818 (Office and Fax)

919-418-4375 (Mobile)



**North Carolina Department of Cultural Resources
State Historic Preservation Office**

David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary
Office of Archives and History

Division of Historical Resources
David J. Olson, Director

March 12, 2002

G David Garrett
David Garrett Engineering
1408 Rock Drive
Raleigh NC 27610

Re: Proposed Mine and Landfill Development Site, Pleasant Garden, Guilford County, ER 02-9080

Dear Mr. Garrett:

Thank you for your letter of February 14, 2002, concerning the above project.

We have conducted a review of the proposed undertaking and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the undertaking as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

David Brook

DB:kgc



U.S. ARMY CORPS OF ENGINEERS
Wilmington District

COPY

Action ID: 200220692

County: Guilford

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Property

Owner A-1 Sandrock, Inc.

Authorized

Agent David Garrett

Address 2132 Bishop Road
Greensboro, NC 27406

Address 1408 Rock Drive
Raleigh, NC 27610

Telephone Number _____

Telephone Number 919-231-1818

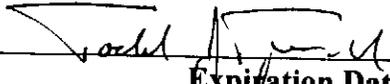
Size and Location of Property (waterbody, Highway name/number, town, etc.): The property is located on the south side of Bishop Road (SR 1116), east of Hickory Creek, in Greensboro, Guilford County, North Carolina.

Basis for Determination: The site contains wetlands and stream channels with indicators of ordinary high water marks, located adjacent to Hickory Creek, above headwaters, in the Cape Fear River Basin.

Indicate Which of the Following Apply:

- There are waters of the U.S., to include wetlands, on the above described property which we strongly suggest should be delineated and surveyed. The surveyed wetland lines must be verified by our staff before the Corps will make a final jurisdictional determination on your property.
- Because of the size of your property and our present workload, our identification and delineation of your wetlands cannot be accomplished in a timely manner. You may wish to obtain a consultant to obtain a more timely delineation of the wetlands. Once the consultant has flagged a wetland line on the property, Corps staff will review it, and, if it is accurate, we strongly recommend that you have the line surveyed for final approval by the Corps. The Corps will not make a final jurisdictional determination on your property without an approved survey.
- The waters of the U.S., to include wetlands, on your lot have been delineated, and the limits of the Corps jurisdiction have been explained to you. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

Placement of dredged or fill material in wetlands on this property without a Department of the Army Permit is in most cases a violation of Section 301 of the Clean Water Act (33 USC 1311). A permit is not required for work on the property restricted entirely to existing high ground. If you have any questions regarding the Corps of Engineers regulatory program, please contact Todd Tugwell at telephone number (919) 876 - 8441 extension 26.

Project Manager Signature 
Date May 2, 2002 Expiration Date May 2, 2007

SURVEY PLAT OR FIELD SKETCH OF THE DESCRIBED PROPERTY AND THE WETLAND DELINEATION FORM MUST BE ATTACHED TO THE YELLOW (FILE) COPY OF THIS FORM.

Applicant: A-1 Sandrock, Inc.

File Number: 200220692

Date: 05/02/2002

Attached is:

See Section below

	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL OR OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

CONTACT INFORMATION FOR QUESTIONS REGARDING THIS DECISION

<p>If you have questions regarding this decision and/or the appeal process you may contact: Mr. Todd Tugwell, Regulatory Specialist Raleigh Regulatory Field Office 6508 Falls of the Neuse Road, Suite 120 Raleigh, North Carolina 27615</p>	<p>If you only have questions regarding the appeal process you may also contact: Mr. Arthur Middleton, Administrative Appeal Review Officer CESAD-ET-CO-R U.S. Army Corps of Engineers, South Atlantic Division 60 Forsyth Street, Room 9M15 Atlanta, Georgia 30303-8801</p>
---	--

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:
----------------------------------	-------	-------------------

DIVISION ENGINEER:
Commander
U.S. Army Engineer Division, South Atlantic
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-3490

David Garrett, P.G., P.E.

Engineering and Geology

June 22, 2002

Mr. Todd Tugwell
Raleigh Regional Field Office
US Army Corps of Engineers
6508 Fall of the Neuse Road
Suite 120
Raleigh, North Carolina 27615

RE: Request for Stream and Wetlands Map Verification
Proposed A-1 Sandrock Mine and Landfill Site
Guilford County, North Carolina

Dear Mr. Tugwell:

Thank you for your letter of May 2, 2002, indicating the need for a complete delineation of wetlands on the subject property. I also appreciate your meeting me at the site 11 AM on March 21, 2002. At this time, our consulting biologist, Mr. Chris Wilson, has completed a field survey in accordance with Section 404 guidelines. The wetlands delineation he performed has been field surveyed by a licensed surveyor, Mr. Dennis Lee, RLS.

Please find enclosed one 24" x 26" map, prepared by Mr. Dennis' office on my behalf, and three 11" x 17" copies. The maps indicate two wetlands areas reviewed during your site visit, including the northern wetlands area (depicted as Area "A") that had not been flagged prior to your visit. I had Mr. Wilson revisit the site and delineate this area after your visit. We have also shown the streams that require buffering.

These maps are presented for your verification and signature. I have also enclosed a copy of Mr. Wilson's report for your inspection. I trust that this submittal is satisfactory. Please contact me if you require further information or additional copies of the maps. I look forward to your response.

Cordially,

G. David Garrett, P.G., P.E.
Consulting Engineer

PLEASE NOTE MY NEW ADDRESS BELOW

5105 Harbour Towne Drive, Raleigh, North Carolina 27604
E-mail: david_garrett_pg@mindspring.com 919-231-1818 (Office and Fax) 919-418-4375 (Mobile)

U.S. ARMY CORPS OF ENGINEERS
Wilmington District

COPY

Action ID: 200220692 County: Guilford

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Property Owner <u>A-1 Sandrock, Inc.</u>	Authorized Agent <u>David Garrett</u>
Address <u>2132 Bishop Road</u> <u>Greensboro, NC 27406</u>	Address <u>1408 Rock Drive</u> <u>Raleigh, NC 27610</u>
Telephone Number _____	Telephone Number <u>919-231-1818</u>

Size and Location of Property (waterbody, Highway name/number, town, etc.): The property is located on the south side of Bishop Road (SR 1116), east of Hickory Creek, in Greensboro, Guilford County, North Carolina.

Basis for Determination: The site contains wetlands and stream channels with indicators of ordinary high water marks, located adjacent to Hickory Creek, above headwaters, in the Cape Fear River Basin.

Indicate Which of the Following Apply:

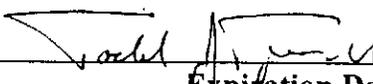
There are waters of the U.S., to include wetlands, on the above described property which we strongly suggest should be delineated and surveyed. The surveyed wetland lines must be verified by our staff before the Corps will make a final jurisdictional determination on your property.

Because of the size of your property and our present workload, our identification and delineation of your wetlands cannot be accomplished in a timely manner. You may wish to obtain a consultant to obtain a more timely delineation of the wetlands. Once the consultant has flagged a wetland line on the property, Corps staff will review it, and, if it is accurate, we strongly recommend that you have the line surveyed for final approval by the Corps. The Corps will not make a final jurisdictional determination on your property without an approved survey.

The waters of the U.S., to include wetlands, on your lot have been delineated, and the limits of the Corps jurisdiction have been explained to you. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

Placement of dredged or fill material in wetlands on this property without a Department of the Army Permit is in most cases a violation of Section 301 of the Clean Water Act (33 USC 1311). A permit is not required for work on the property restricted entirely to existing high ground. If you have any questions regarding the Corps of Engineers regulatory program, please contact Todd Tugwell at telephone number (919) 876 - 8441 extension 26.

Project Manager Signature 
Date May 2, 2002 Expiration Date May 2, 2007

SURVEY PLAT OR FIELD SKETCH OF THE DESCRIBED PROPERTY AND THE WETLAND DELINEATION FORM MUST BE ATTACHED TO THE YELLOW (FILE) COPY OF THIS FORM.

**NOTICE OF YOUR ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUESTOR SURVEIL**

Applicant: A-1 Sandrock, Inc.	File Number: 200220692	Date: 05/02/2002
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input checked="" type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I: The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/mer/functions/cwr/cwrchap01/cwrregsregulationsat38CFRPart389>.

- A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.
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POINT OF CONTACT FOR QUESTIONS OR INFORMATION

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Raleigh Regulatory Field Office
6508 Falls of the Neuse Road, Suite 120
Raleigh, North Carolina 27615

If you only have questions regarding the appeal process you may also contact:

Mr. Arthur Middleton, Administrative Appeal Review Officer
CESAD-ET-CO-R
U.S. Army Corps of Engineers, South Atlantic Division
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-8801

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Signature of appellant or agent.

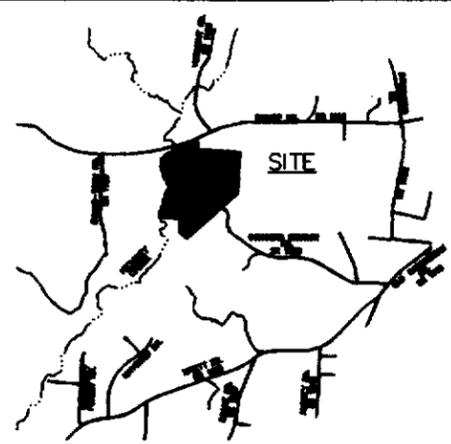
Date:

Telephone number:

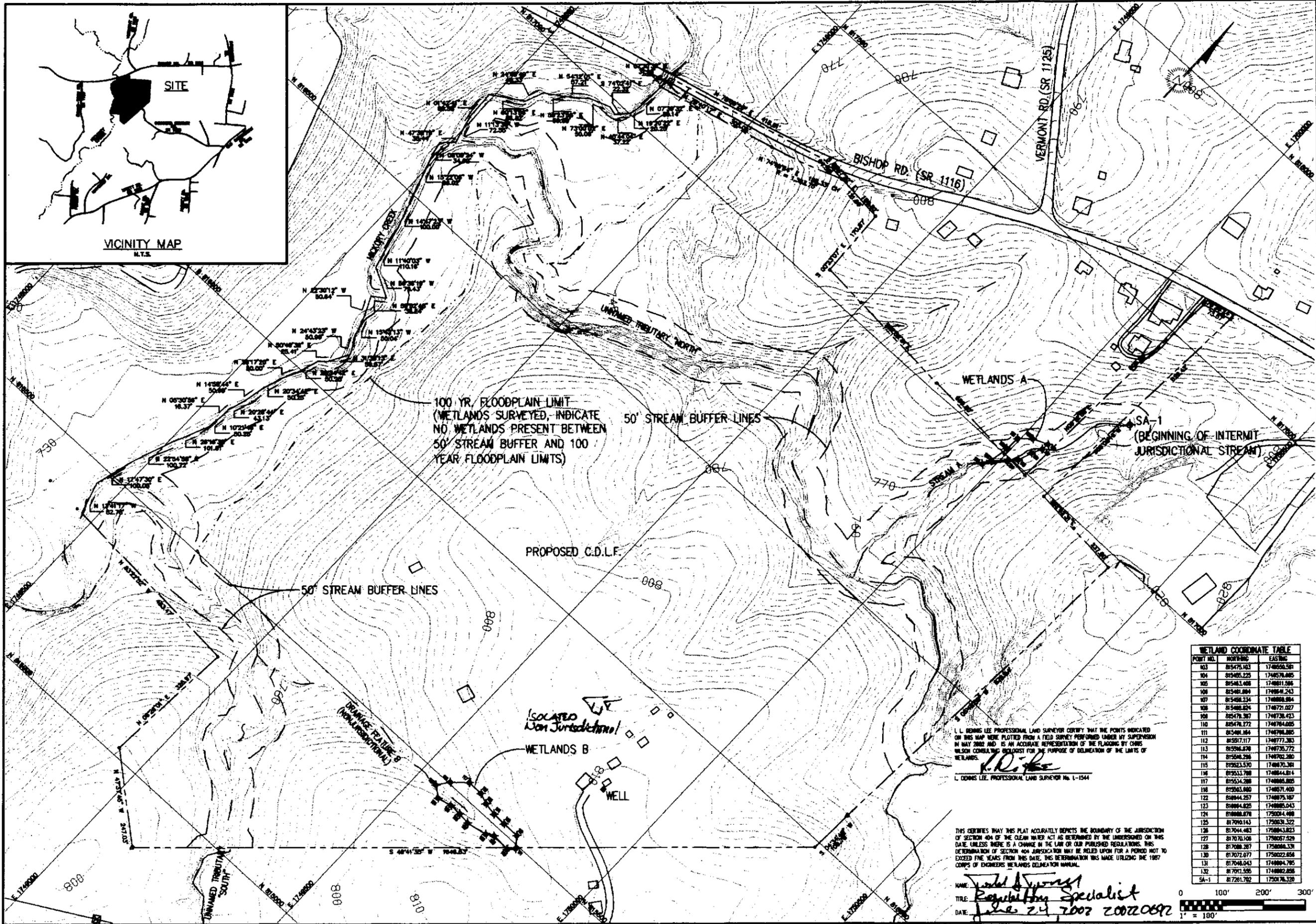
DIVISION ENGINEER:

Commander

U.S. Army Engineer Division, South Atlantic
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-3490



VICINITY MAP
N.T.S.



100 YR. FLOODPLAIN LIMIT
(WETLANDS SURVEYED, INDICATE
NO WETLANDS PRESENT BETWEEN
50' STREAM BUFFER AND 100
YEAR FLOODPLAIN LIMITS)

50' STREAM BUFFER LINES

PROPOSED C.D.L.F.

50' STREAM BUFFER LINES

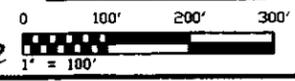
I, L. DENNIS LEE, PROFESSIONAL LAND SURVEYOR CERTIFY THAT THE POINTS INDICATED ON THIS MAP WERE PLOTTED FROM A FIELD SURVEY PERFORMED UNDER MY SUPERVISION IN MAY 2002 AND IS AN ACCURATE REPRESENTATION OF THE PLACING BY CURVE WILSON COMBIA TWO INCHES FOR THE PURPOSE OF DELINEATION OF THE LIMITS OF WETLANDS.

L. Dennis Lee
L. DENNIS LEE, PROFESSIONAL LAND SURVEYOR No. 1-1544

POINT NO.	NORTHING	EASTING
103	815475.103	1740050.581
104	815405.225	1740070.005
105	815481.468	1740011.586
106	815481.004	1740041.243
107	815488.234	1740008.984
108	815488.024	1740721.027
109	815478.367	1740736.423
110	815478.272	1740784.005
111	815491.184	1740784.005
112	815217.117	1740777.303
113	815206.878	1740735.772
114	815206.298	1740702.380
115	815233.570	1740670.381
116	815233.788	1740644.814
117	815234.288	1740686.805
118	815203.000	1740571.400
122	816844.257	1740075.187
123	816844.825	1740085.043
124	816888.878	1750004.488
125	817093.143	1750031.322
126	817044.483	1750043.823
127	817070.106	1750027.529
128	817088.287	1750008.378
130	817072.077	1750022.858
131	817048.043	1740004.785
132	817071.555	1740002.858
SA-1	817261.702	1750078.328

THIS CERTIFIES THAT THIS PLAN ACCURATELY DEPICTS THE BOUNDARY OF THE JURISDICTION OF SECTION 404 OF THE CLEAN WATER ACT AS DETERMINED BY THE UNDERSIGNED ON THIS DATE, UNLESS THERE IS A CHANGE IN THE LAW OR OUR PUBLISHED REGULATIONS. THIS DETERMINATION OF SECTION 404 JURISDICTION MAY BE RELIED UPON FOR A PERIOD NOT TO EXCEED FIVE YEARS FROM THIS DATE. THIS DETERMINATION WAS MADE UTILIZING THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL.

NAME: *L. Dennis Lee*
TITLE: *Professional Land Surveyor*
DATE: *June 24, 2002*



David Garrett, P.G., P.E.
Engineering and Geology
2905 Lenoir Lane, Raleigh, North Carolina 27604
E-mail: david.garrett@earthlink.net 919-418-4375 (mobile)



PERMIT APPLICATION
A-1 SANDROCK C.D.L.F.
GUILFORD COUNTY, N.C.

WETLANDS
DETERMINATION MAP

DESIGNED BY: G.D.L. DRAWN BY: A.N.E.
CHECKED BY: G.D.L. PROJECT NO.: SANDROCK-2
SCALE: 1" = 100' DATE: JUNE, 2002
FILE NAME: SANDROCK-003
SHEET NO.: DRAWING NO.:



March 25, 2002

CERTIFIED MAIL 7001 2510 0005 4812 2992
RETURN RECEIPT REQUESTED

Mr. Gene Petty
A-1 Sandrock
2132 Bishop Road
Greensboro, NC 27406

**SUBJECT: Randleman Lake Water Supply Watershed Regulations
A-1 Sandrock Proposed Construction and Demolition Landfill on Bishop Road
GFD 02
Guilford County**

Dear Mr. Petty:

This letter is written in response to a request from David Garrett for the Division's determination of the applicability of the Randleman Lake Water Supply Watershed Regulations, 15A NCAC2B .0250-.0251, to the subject property. A site visit was conducted on March 15, 2002. Jenny Rankin with the Division of Water Quality (DWQ) in the Winston-Salem Regional Office as well as David Garrett were present.

Based on the site visit, this Office has determined that the upper portion of Feature B (see enclosed property survey map) is NOT SUBJECT to the Randleman Lake Water Supply Watershed Regulations, including both the Protection and Maintenance of Riparian Areas and Stormwater Requirements. However, the same drainage Feature B is SUBJECT to the above stated Regulations from an approximate point as indicated on the property survey map to the UT to Hickory Creek, Class WS-IV waters in the Cape Fear River Basin. This point on the property survey map was agreed upon in the field and the field flagging was marked "SA1". Features A, C, D, and E (as indicated on the property survey map) are NOT SUBJECT to the Randleman Lake Water Supply Watershed Regulations. This site determination only assessed Features A, B, C, D, and E. Please keep in mind that there may be additional waters on your property that may be subject to the Randleman Lake Water Supply Watershed Regulations, 15A NCAC 2B .0250-.0251.

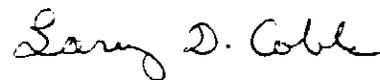
The property survey map and additional site maps supplied by Mr. Garrett depict only the general location of the Feature. Once the site has been surveyed, please submit at least three legible copied of a surveyed plat map to this Office for plat confirmation. Please refer to the enclosed Standard Buffer Confirmation sheet for further instructions.



GFD 02
March 25, 2002
Page #2

This letter only addressed the applicability of the Randleman Lake Water Supply Watershed Regulations. Please keep in mind that there may be additional Federal, State, and Local Requirements for the proposed activities at the subject property. If you have any questions regarding this matter, please contact Jenny Rankin at (336) 771-4608 ext. 268.

Sincerely,



Larry D. Coble
Water Quality Supervisor

Enclosures

CC: David Garrett, 1408 Rock Drive, Raleigh, NC 27610 (w/enclosures)
Warren Simmons, Guilford County Planning Department, P.O. Box 3427, Greensboro, NC 27402 (w/enclosures)
Bob Zarzecki, 401/Wetlands Unit, Central Office
Central Files
WSRO (w/enclosures)

C:\Users\GAD\Documents\Projects\2\A-1 SANDROCK-001.dwg DATE: MAR 23 2002 TIME: 11:55 AM



RECEIVED
N.C. Dept. of ENVR
MAR 23 2002
Winston-Salem
Regional Office

DESIGNED BY: G.D.G.	DRAWN BY: A.W.J.
CHECKED BY: G.D.G.	PROJECT NO.: SANDROCK-2
SCALE: 1" = 200'	DATE: MAR 2002
FILE NAME: SROCK-0017	SHEET NO. / DRAWING NO.

A-1 SANDROCK C.D.L.F.
GUILFORD COUNTY, N.C.

For
Plan
Review

David Garrett, P.G., P.E.
Engineering and Geology
1408 Root Drive, Raleigh, North Carolina
Telephone/Fax (919) 231-1918

NO.	DATE	BY	REVISION

PROPOSED FACILITY PLAN

At Sandrock
Seulk

APPLICATION FOR A MINING PERMIT

E. DETERMINATION OF AFFECTED ACREAGE AND BOND

The following bond calculation worksheet is to be used to establish an appropriate bond (based upon a range of \$500 to \$5,000 per affected acre) for each permitted mine site based upon the acreage approved by the Department to be affected during the life of the mining permit. Please insert the approximate acreage for each aspect of the mining operation that you intend to affect during the life of this mining permit (in addition, please insert the appropriate reclamation cost/acre for each category from the Schedule of Reclamation Costs provided with this application form) OR you can defer to the Department to calculate your bond for you based upon your maps and standard reclamation costs:

CATEGORY	AFFECTED ACREAGE		RECLAMATION COST/ACRE*	RECLAMATION COST
Tailings/Sediment Ponds:	<u>2.90</u> Ac.	X	\$ <u>1500⁰⁰</u> /Ac.	= \$ <u>4,350⁰⁰</u>
Stockpiles:	<u>5.87</u> Ac.	X	\$ <u>1800⁰⁰</u> /Ac.	= \$ <u>10,566⁰⁰</u>
Wastepiles:	_____ Ac.	X	\$ _____ /Ac.	= \$ _____
Processing Area/Haul Roads: <i>1.41 + 2.0</i>	<u>3.41</u> Ac.	X	\$ <u>1800⁰⁰</u> /Ac.	= \$ <u>6,138⁰⁰</u>
Mine Excavation:	<u>25.53</u> Ac.	X	\$ <u>2000⁰⁰</u> /Ac.	= \$ <u>51,060⁰⁰</u>
Other: <i>Burned</i>	<u>.95</u> Ac.	X	\$ <u>1600⁰⁰</u> /Ac.	= \$ <u>1,530⁰⁰</u>
TOTAL AFFECTED AC.:	<u>38.56</u> Ac.			
(TOTAL PERMITTED AC.:	<u>70.16</u> Ac.)			

Temporary & Permanent Sedimentation & Erosion Control Measures:
Divide the TOTAL AFFECTED AC. above into the following two categories: a) affected acres that drain into proposed/existing excavation and/or b) affected acres that will be graded for positive drainage where measures will be needed to prevent offsite sedimentation and sedimentation to onsite watercourses and wetlands.

a) Internal Drainage	<u>0</u> Ac.			
b) Positive Drainage	<u>38.56</u> Ac.	X	\$1,500.00	= \$ <u>57,840⁰⁰</u>
SUBTOTAL COST:				\$ <u>131,484⁰⁰</u>

Inflation Factor:
0.02 X SUBTOTAL COST: \$ 131,484⁰⁰ X Permit Life (1 to 10 years): 10
INFLATION COST: \$ 26,296.80

TOTAL COST = SUBTOTAL COST + INFLATION COST = \$ 157,780.8

Total Reclamation Bond Cost: \$ <u>157,700⁰⁰</u> (round down to the nearest \$100.00)

98,700⁰⁰ needed

223,000⁰⁰ on file
169,000⁰⁰ required for 41-13

59,000⁰⁰ excess

**STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES**

Land Quality Section

Bond Pursuant to "The Mining Act of 1971"
(G.S. 74-46 through G.S. 74-58)

KNOW ALL MEN BY THESE PRESENTS, That A-1 Sandrock Company, Inc.
and R. Eugene Petty

a Greensboro North Carolina Corporation and having its principal
office at 2132 Bishop Road, Greensboro, NC 27406
in the State of North Carolina, as principal, and

Pennsylvania National Mutual Casualty Insurance Co.
a corporation organized under the laws of the State of Pennsylvania
and duly authorized by the Insurance Commissioner of North Carolina to
do business in North Carolina, with an office located at 1703 East
Wendover Ave., in the City of Greensboro, North

Carolina, as surety, are held and firmly bound unto the State of North
Carolina in the sum of \$157,700 Bond No. SB308884
lawful money of the United States of America, to the payment of which
will and truly be made, we bind ourselves, our heirs, administrators and
successors jointly and severally, firmly by these presents.

Signed, sealed and delivered this 19th day of November

NR 2002.

THE CONDITIONS OF THIS BOND ARE SUCH, That Whereas, the said

A-1 Sandrock Company, Inc. and R. Eugene Petty
conducts or will conduct mining operations in North Carolina as
described in the application for an operating permit which includes a
Reclamation Plan as provided in C.S. 74-53 and has obtained approval of
this application on the 19th day of November, NR 2002,
from the Department of Environment, Health, and Natural Resources.

NOW THEREFORE, if the said A-1 Sandrock Company, Inc. and R. Eugene

Petty

shall comply with

the requirements set forth in "The Mining Act of 1971" (G.S. 74-46 through 74-68) and with the rules and regulations adopted pursuant thereto and faithfully perform all obligations under his approved Reclamation Plan then this obligation shall be null and void; otherwise to be and remain in full force and effect until released by the Department of Environment, Health, and Natural Resources in accordance with G.S. 74-56 or canceled by the surety. Cancellation by the surety shall be effectuated only upon 60 days written notice thereof to the Department of Environment, Health, and Natural Resources and the operator as provided in G.S. 74-54.

ATTEST:

Betty B. Petty

Secretary or
Assistant Secretary

A-1 SANDROCK INC.

Principal

(Attach
Corporate Seal
(here of Corporation))

By Ronald E. Petty
President, Vice President,
Partners, or Owner

Pennsylvania National Mutual Casualty Insurance Company
Surety

Countersigned at Greensboro, North Carolina

[Signature]
Resident Agent of N.C.

By Cynthia P. Cagle
Agent and Attorney in Fact
Cynthia P. Cagle

PENNSYLVANIA NATIONAL MUTUAL CASUALTY INSURANCE COMPANY

Harrisburg, Pennsylvania

POWER OF ATTORNEY

Know All Men By these Presents, That PENNSYLVANIA NATIONAL MUTUAL CASUALTY INSURANCE COMPANY, a corporation of the Commonwealth of Pennsylvania, does hereby make, constitute and appoint GARY A. STURGILL, RHONDA W. LANG, STANLEY S. BITTNER, MARY ELLEN THOMAS, JUDITH H. HANCOCK, JANET T. MCMILLION, FRANK R. POOLE III, CYNTHIA P. CAGLE AND LINDA A. BALLANCE, ALL OF GREENSBORO, NORTH CAROLINA

its true and lawful Attorney(s)-in-Fact to make, execute, seal and deliver for and on its behalf as surety as its act and deed: ANY AND ALL BONDS AND UNDERTAKINGS PROVIDED THE AMOUNT OF NO ONE BOND OR UNDERTAKING EXCEEDS THE SUM OF ONE MILLION DOLLARS (\$1,000,000.00)

ALL POWER AND AUTHORITY HEREBY CONFERRED SHALL HEREBY EXPIRE AND TERMINATE WITHOUT NOTICE AT MIDNIGHT OF THE 30TH DAY OF JUNE, 2004, AS RESPECTS EXECUTION SUBSEQUENT THERETO.

and the execution of such bonds in pursuance of these presents shall be as binding upon said Company as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Harrisburg Pennsylvania, in their own proper persons.

This appointment is made by and under the authorization of a resolution adopted by the Board of Directors of the Company on October 24, 1973 at Harrisburg, Pennsylvania, which resolution is shown on the reverse side hereof and is now in full force and effect.

In Witness Whereof: PENNSYLVANIA NATIONAL MUTUAL CASUALTY INSURANCE COMPANY has caused these presents to be signed and its corporate seal to be affixed on JUNE 8, 2001



PENNSYLVANIA NATIONAL MUTUAL CASUALTY INSURANCE COMPANY

By Kenneth R. Shutts
Kenneth R. Shutts-Secretary

Commonwealth of Pennsylvania, County of Dauphin - ss:

On JUNE 8, 2001, before me appeared Kenneth R. Shutts to me personally known, who being by me duly sworn, did say that he resides in the Commonwealth of Pennsylvania, that he is Secretary of PENNSYLVANIA NATIONAL MUTUAL CASUALTY INSURANCE COMPANY, that he is the individual described in and who executed the preceding instrument, and that the seal affixed on said instrument is the corporate seal of said Company, and that said instrument was signed and sealed on behalf of said Company by authority and direction of said Company, and the said officer acknowledged said instrument to be the free act and deed of said Company.



Anna Shaska
Notary Public
Harrisburg, PA
My Commission Expires 06/06/2004

Commonwealth of Pennsylvania, County of Dauphin - ss:

I, Thomas L. Vehar, Vice President, Surety of the PENNSYLVANIA NATIONAL MUTUAL CASUALTY INSURANCE COMPANY, a corporation of the Commonwealth of Pennsylvania, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by the said Company, which is still in full force and effect.

In Witness Whereof, I have herunto set my hand and affixed the corporate seal of said Company on 11/19/2002
Thomas L. Vehar
Vice President, Surety

IMPORTANT NOTICE: This border must be RED in color. If it is not RED, this is not a certified copy. Telephone us at Area Code 717-255-6870.



**PENN NATIONAL
INSURANCE**

Pennsylvania National Mutual Casualty Insurance Company
Penn National Security Insurance Company
Founders Insurance Company
P.O. Box 2267 • Harrisburg PA 17105

INVOICE

AGENT: BB&T INS SERVS-TRIAD
AGENT NUMBER: 21-6389
TELEPHONE: 336-605-2020
ACCOUNT NUMBER: 7SB0122376 001 00001
INVOICE DATE: 07/17/2007
DUE DATE: 08/06/2007
BUS DESC: RECLAMATION

MAIL TO:

A-1 SANDROCK CO INC
2132 BISHOP ROAD
GREENSBORO NC 27406

ACCOUNT NAME:

A-1 SANDROCK CO INC
2132 BISHOP ROAD
GREENSBORO NC 27406

\$2,788.00	\$2,788.00-	\$2,788.00	\$2,788.00	\$2,788.00
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PREVIOUS BALANCE			2,788.00	
08/07/2006 PAYMENT - THANK YOU			2,788.00-	
06/11/2007 RENEWAL	SB0122376 09 SURETY	1	2,788.00	2,788.00
		TOTALS	2,788.00	2,788.00

Pack #12203

SEE REVERSE SIDE FOR IMPORTANT CLAIM HISTORY INFORMATION

YOU CAN ALSO MAKE A PAYMENT OR INQUIRE ABOUT RECURRING PAYMENTS AT

POTENTIAL CUSTOMER BASE FOR FINISHED GOODS

Several innovative uses of the recycled products are under development, which are proprietary and confidential. However, traditional uses of the materials also under consideration have a large potential customer base (not all have been contacted but some of whom are repeat customers). As stated in the application, some use of mulches, aggregates, beneficial fill, and soil stabilization materials will be conducted on the premises as part of the permitted mine reclamation process.

Landscape Mulch and Erosion Control

EcoLogic Construction Inc.
4321 A. South Elm-Eugene Street
Greensboro, NC 27406
336-335-1108 (phone)

Eco Turf, Inc.
P.O. Box 91505
Raleigh, NC 27675
919-881-8424

COVINGTON LANDSCAPE & DESIGN
2227 W Lee St
Greensboro, NC 27403
336-852-1185

AAA WHITESIDE LANDSCAPE SERVICE
2317 Hubbard St
Greensboro, NC 27405
336-375-6474

SEDFIELD LANDSCAPES
2001 Thayer Cir
Greensboro, NC 27407
336-299-9279

CAROLINA LANDSCAPE CONSTR INC
23 Wheaton Cir
Greensboro, NC 27406
336-299-6588

J KYLE MORGAN LANDSCAPE
4417 S Elm Eugene St
Greensboro, NC 27406
336-275-7010

NEW EARTH DESIGNS INC
1008 Cleburne St
Greensboro, NC 27408
336-272-6559

J & B HAYES CORP
201 State St
Greensboro, NC 27408
336-274-4747

SOUTHERN LAWNS
3200 Northline Ave # 130
Greensboro, NC 27408
336-808-1309

WILLIAMS FAMILY ENTERPRISE
1303 Bluford St
Greensboro, NC 27401
336-574-1401

GRASS MASTERS INC
1609 Fairview St
Greensboro, NC 27405
336-273-1300

SOUTHERN SEEDING SERVICE INC
4535 W Market St
Greensboro, NC 27407
336-292-2917

AMERICAN LANDSCAPING ENTS INC
4341 Brandy Rd
Greensboro, NC 27407
336-294-0116

BANKS PROPERTY CO
2910 Manufacturers Rd
Greensboro, NC 27406
336-230-0800

REEDER LANDSCAPING & LAWN CARE
505 Corliss St
Greensboro, NC 27406
336-271-2879

BUDD LANDSCAPING
218 Industrial Ave
Greensboro, NC 27406
336-272-4300

KALLAM LANDSCAPING CO
5902 Davis Mill Rd
Greensboro, NC 27406
336-674-5437

GROUNDS MASTER INC
921 Antiqua Ln
Greensboro, NC 27406
336-674-8166

COHORTS SPECIALTY GARDENS
3 Kitly Ct
Greensboro, NC 27455
336-706-8475

SOUTHEASTERN LANDSCAPING
4007 Primrose Ave
Greensboro, NC 27455
336-545-9900

Scrap Metal Dealers

Atlantic Scrap Inc
Kernersville, NC
336-996-2350

STATE Line Metal Inc
5401 York Hwy
Gastonia, NC , 28052-7703
Phone: 704-864-9001
FAX: 704-864-9863

D.H. Griffin Inc
4700 Hilltop Road
Greensboro, NC 27407
Tel: 336-855-7030

Wood-Fired Boilers and Biomass Composting Operations (throughout the region)

Craven County Wood Energy
New Bern, NC

DuPont Alternate Fuels Boiler
Brevard NC

COASTAL CAROLINA CLEAN POWER LLC
Kenansville, NC

Camp Lejeune Energy from Wood (CLEW) biomass plant
Camp Lejeune, NC

Cumberland Cogeneration, LLC
Texfi Fayette Finishing Plant
Fayetteville, NC

Corn Products International Inc.
Winston-Salem, NC

Biomass Energy Company
Asheboro, NC

Multitrade, LP
Ridgeway, VA

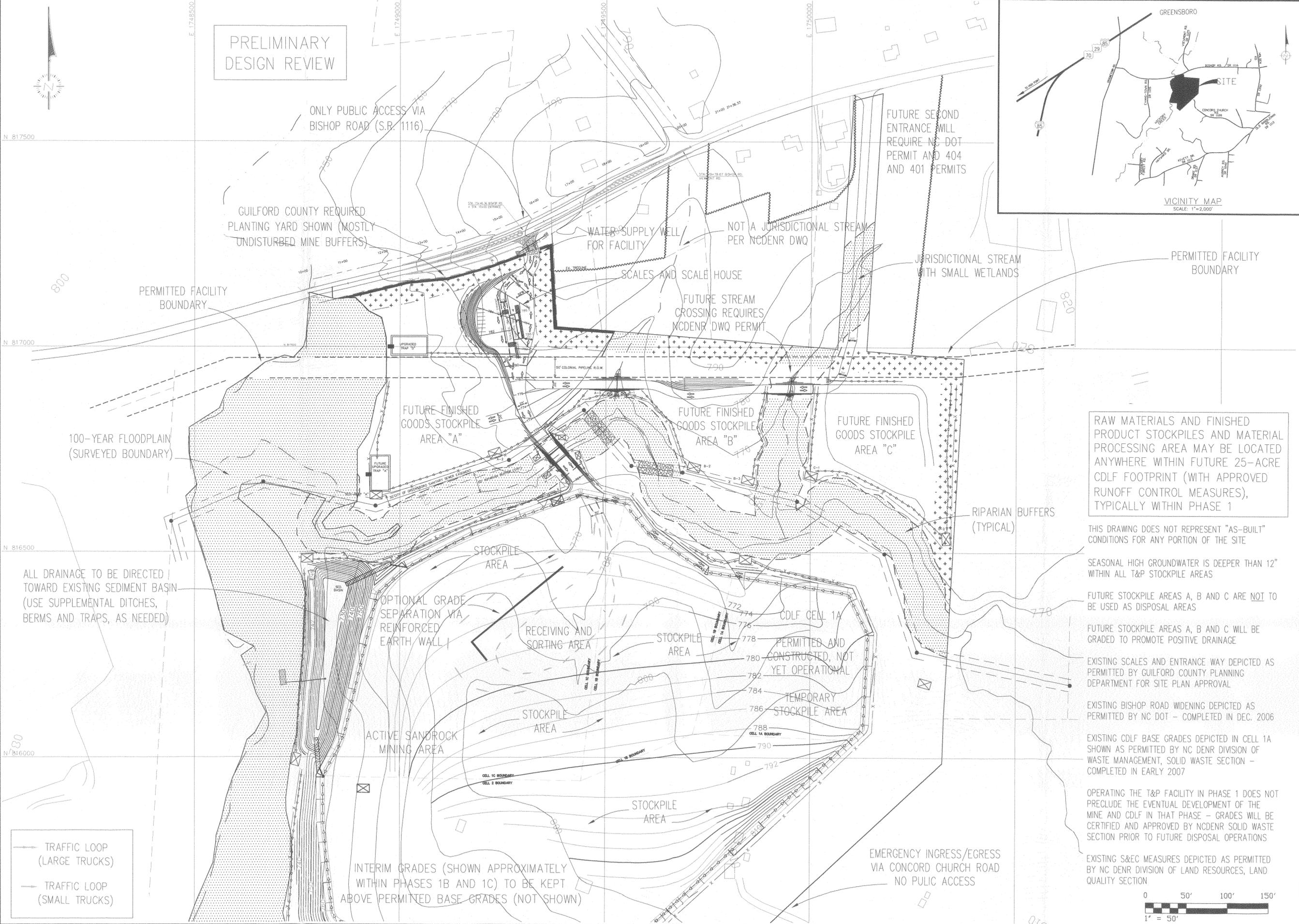
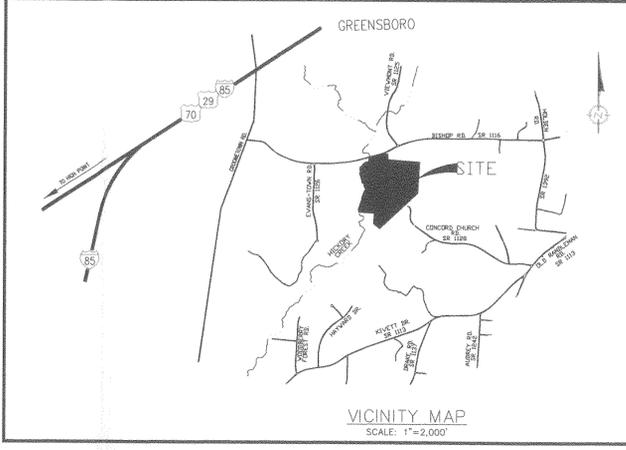
Primary Energy of North Carolina LLC
Roxboro, NC

Dan River Mills
Danville, VA

McGill Environmental Systems
Harrells, NC



PRELIMINARY
DESIGN REVIEW



RAW MATERIALS AND FINISHED PRODUCT STOCKPILES AND MATERIAL PROCESSING AREA MAY BE LOCATED ANYWHERE WITHIN FUTURE 25-ACRE CDFL FOOTPRINT (WITH APPROVED RUNOFF CONTROL MEASURES), TYPICALLY WITHIN PHASE 1

THIS DRAWING DOES NOT REPRESENT "AS-BUILT" CONDITIONS FOR ANY PORTION OF THE SITE

SEASONAL HIGH GROUNDWATER IS DEEPER THAN 12" WITHIN ALL T&P STOCKPILE AREAS

FUTURE STOCKPILE AREAS A, B AND C ARE NOT TO BE USED AS DISPOSAL AREAS

FUTURE STOCKPILE AREAS A, B AND C WILL BE GRADED TO PROMOTE POSITIVE DRAINAGE

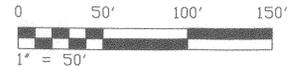
EXISTING SCALES AND ENTRANCE WAY DEPICTED AS PERMITTED BY GUILFORD COUNTY PLANNING DEPARTMENT FOR SITE PLAN APPROVAL

EXISTING BISHOP ROAD WIDENING DEPICTED AS PERMITTED BY NC DOT - COMPLETED IN DEC. 2006

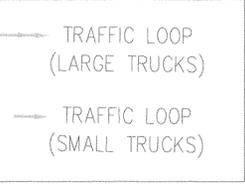
EXISTING CDFL BASE GRADES DEPICTED IN CELL 1A SHOWN AS PERMITTED BY NC DENR DIVISION OF WASTE MANAGEMENT, SOLID WASTE SECTION - COMPLETED IN EARLY 2007

OPERATING THE T&P FACILITY IN PHASE 1 DOES NOT PRECLUDE THE EVENTUAL DEVELOPMENT OF THE MINE AND CDFL IN THAT PHASE - GRADES WILL BE CERTIFIED AND APPROVED BY NC DENR SOLID WASTE SECTION PRIOR TO FUTURE DISPOSAL OPERATIONS

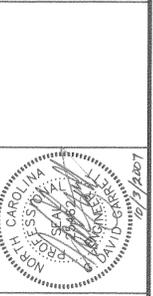
EXISTING S&EC MEASURES DEPICTED AS PERMITTED BY NC DENR DIVISION OF LAND RESOURCES, LAND QUALITY SECTION



ALL DRAINAGE TO BE DIRECTED TOWARD EXISTING SEDIMENT BASIN (USE SUPPLEMENTAL DITCHES, BERMS AND TRAPS, AS NEEDED)



David Garrett, P.G., P.E.
Engineering and Geology
5105 Harbour Towne Drive, Raleigh, North Carolina 27604
E-mail: david.garrett@pennings.com 919-231-1818 (Office and Fax) 919-418-4375 (mobile)



A-1 SANDROCK C.D.L.F.
GUILFORD COUNTY, N.C.

TREATMENT & PROCESSING
FACILITY PLAN

DESIGNED BY: G.D.G.	DRAWN BY: A.W.H.
CHECKED BY: G.D.G.	PROJECT NO: SANDROCK-2
SCALE: 1" = 100'	DATE: OCT 2007
FILE NAME: SROCK-D0084A	DRAWING NO: S1A
SHEET NO: 2A	

C:\16841-CAD\CAD\GARRETT\proj\rock-2\plans\T&P\FACILITY PLAN\SROCK-D0084A.dwg DATE: JUL 22, 2003 TIME: 8:47 PM

41-17
A-1 Sandrock C.D.L.F.
Facility Plan
10-2-2003