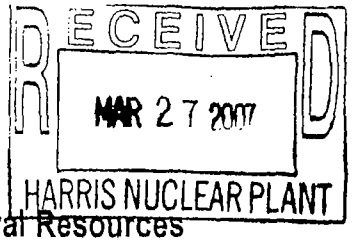
Response to RAI No. 1
Item 8



North Carolina Department of Environment and Natural Resources
DIVISION OF AIR QUALITY

Michael F. Easley, Governor

William G. Ross Jr., Secretary
B. Keith Overcash, P.E., Director

March 21, 2007

Mr. Eric McCartney
Plant Manager
CP&L - Harris Nuclear Plant
5413 Shearon Harris Road, HNP03
New Hill, NC 27562

Subject: Air Permit No. 08455R04
CP&L - Harris Nuclear Plant
New Hill, Wake County, North Carolina
Fee Class: Synthetic Minor
Site Number: 05/92/00599

Dear Mr. McCartney:

In accordance with your completed application received December 28, 2006, we are forwarding herewith Permit No. 08455R04 to CP&L - Harris Nuclear Plant, New Hill, Wake County, North Carolina for the construction and operation of air emissions sources or air cleaning devices and appurtenances. Additionally, any emissions activities determined from your air permit application as meeting the exemption requirements contained in 15A NCAC 2Q .0102 or 15A NCAC 2Q .0503 have been listed for information purposes as an "ATTACHMENT" to the enclosed air permit. Please note the records retention requirements are contained in General Condition 2 of the General Conditions and Limitations.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. Such a request will stay the effectiveness of the entire permit. This hearing request must be in the form of a written petition, conforming to G.S. 150B-23 of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Unless a request for a hearing is made pursuant to G.S. 150B-23, this air permit shall be final and binding.

You may request modification of your air permit through informal means pursuant to G.S. 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that the permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under G.S. 150B-23.

Unless exempted by a condition of this permit or the regulations, construction of new

air pollution sources or air cleaning devices, or modifications to the sources or air cleaning devices described in this permit must be covered under a permit issued by the Division of Air Quality prior to construction. Failure to do so is a violation of G.S. 143-215.108 and may subject the Permittee to civil or criminal penalties as described in G.S. 143-215.114A and 143-215.114B.

This permit shall be effective from March 21, 2007 until February 29, 2012, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Changes have been made to the permit stipulations. The Permittee is responsible for carefully reading the entire permit and evaluating the requirements of each permit stipulation. The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. Specific changes and additions are summarized below (note: this list may not include all changes and additions):

Added the following temporary sources to the permit:

- 1300 kW diesel fired generator (ID No. TEMP-GEN)
- 600 HP diesel fired firewater pump (ID No. TEMP-FP

Modified the fuel use restrictions currently listed in the permit to provide more operational flexibility under stipulation 2Q .0315.

- Previous fuel restrictions for the boilers (1,927,000 gallons/year) and diesel engine generators/compressors (349,000 gallons/year).
- Changed fuel usage restrictions to: Boilers (Boiler B and Temporary Boiler) limited to 1,045,000 gallons/year using No. 1/No. 2 fuel oil, large diesel engines (Generators A, B, and C, and the requested temporary standby generator) limited to 342,000 gallons/year using No.1/No. 2 fuel oil, and Small Diesel Engines (Compressors 1 through 4 and requested temporary firewater pump) limited to 43,000 gallons/year using No.1/No.2 fuel oil.

Should you have any questions concerning this matter, please contact Dena Pittman at (919) 791-4200.

Sincerely,

Ernie Fuller
Regional Air Quality Supervisor

DLP
Enclosures

c: Central Files
Raleigh Regional Office

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NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF AIR QUALITY

AIR PERMIT NO. 08455R04

Issue Date: March 21, 2007
Expiration Date: February 29, 2012

Effective Date: March 21, 2007
Replaces Permit: 08455R03

To construct and operate air emission source(s) and/or air cleaning device(s), and for the discharge of the associated air contaminants into the atmosphere in accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina (NCGS) as amended, and other applicable Laws, Rules and Regulations,

CP&L - Harris Nuclear Plant
5413 Shearon Harris Road
New Hill, Wake County, North Carolina
Fee Class: Synthetic Minor
Site Number: 05/92/00599

(the Permittee) is hereby authorized to construct and operate the air emissions sources and/or air cleaning devices and appurtenances described below:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
Compressor 1	No. 2 fuel oil-fired emergency compressor (475 horsepower)	N/A	N/A
Compressor 2	No. 2 fuel oil-fired emergency compressor (475 horsepower)	N/A	N/A
Compressor 3	No. 2 fuel oil-fired emergency compressor (475 horsepower)	N/A	N/A
Compressor 4	No. 2 fuel oil-fired emergency compressor (475 horsepower)	N/A	N/A
Generator A	No. 2 fuel oil-fired emergency generator (9,074 horsepower output)	N/A	N/A
Generator B	No. 2 fuel oil-fired emergency generator (9,074 horsepower output)	N/A	N/A
Generator C	No. 1 fuel oil-fired emergency generator (650 kilowatt output)	N/A	N/A
Boiler B	No. 2 fuel oil-fired boiler (87.4 million Btu per hour heat input)	N/A	N/A
TEMP-BOILER (NSPS)	No. 2 fuel oil-fired temporary boiler (86 million Btu per hour heat input)	N/A	N/A
TEMP FP (NSPS)	No.2 fuel oil-fired firewater pump (up to 600 HP)	N/A	N/A
TEMP-GEN (NSPS)	No. 2 fuel oil-fired emergency generator (up to 1,300 kilowatt output)	N/A	N/A

in accordance with the completed application 9200599.07A received December 28, 2006 including any plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environment and Natural Resources, Division of Air Quality (DAQ) and are incorporated as part of this permit.

This permit is subject to the following specified conditions and limitations including any TESTING, REPORTING, OR MONITORING REQUIREMENTS:

A. SPECIFIC CONDITIONS AND LIMITATIONS

1. Any air emission sources or control devices authorized to construct and operate above must be operated and maintained in accordance with the provisions contained herein. The Permittee shall comply with applicable Environmental Management Commission Regulations, including Title 15A North Carolina Administrative Code (NCAC), Subchapter 2D .0202, 2D .0503, 2D .0516, 2D .0521, 2D .0524 (40 CFR 60, Subpart Dc), 2D .0530, 2D .0535, 2Q .0315 and 2Q .0317 (Avoidance).

2. EMISSION INVENTORY REQUIREMENT - At least 90 days prior to the expiration date of this permit, the Permittee shall submit the air pollution emission inventory report in accordance with 15A NCAC 2D .0202, pursuant to N.C. General Statute 143 215.65. The report shall be submitted to the Regional Supervisor, DAQ. The report shall document air pollutants emitted for the 2010 calendar year. The Regional Office will send information on how to submit the emissions inventory, along with a reminder to renew your permit, about six months prior to your permit expiration. If you do not receive this information, please contact the Regional Supervisor, DAQ.

3. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers," particulate matter emissions from the fuel burning indirect heat exchangers shall not exceed the allowable emission rates listed below:

Source	Emission Limit (lbs/million Btu)
No. 2 fuel oil-fired boiler (87.4 million Btu per hour heat input) (Boiler B)	0.29
No. 2 fuel oil-fired temporary boiler (86 million Btu per hour heat input) (TEMP-BOILER)	0.26

4. SULFUR DIOXIDE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0516 "Sulfur Dioxide Emissions from Combustion Sources," sulfur dioxide emissions from the combustion sources shall not exceed 2.3 pounds per million Btu heat input.

5. VISIBLE EMISSIONS CONTROL REQUIREMENT - As required by 15A NCAC 2D .0521 "Control of Visible Emissions," visible emissions from the emission sources, manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period, except that six-minute periods averaging not more than 87 percent

opacity may occur not more than once in any hour nor more than four times in any 24-hour period. However, sources which must comply with 15A NCAC 2D .0524 "New Source Performance Standards" or .1110 "National Emission Standards for Hazardous Air Pollutants" must comply with applicable visible emissions requirements contained therein.

6. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For No. 2 fuel oil-fired temporary boiler (86 million Btu per hour heat input) (ID No. TEMP-BOILER), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart Dc, including Subpart A "General Provisions."

   a. NSPS Reporting Requirements - In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to NOTIFY the Regional Supervisor, DAQ, in WRITING, of the following:

      i. The date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected source is commenced, postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form;

      ii. The actual date of initial start-up of an affected source, postmarked within 15 days after such date. If the affected source is permitted to burn multiple fuels, then the actual date of start-up, for each fuel, must be submitted and postmarked within 15 days after such date;

      iii. The sulfur content of the distillate oil combusted in an affected source shall not exceed 0.5 percent by weight. Within 30 days after each six-month period of the calendar year, the Permittee must submit in writing to the Regional Supervisor, DAQ, the sulfur content of the distillate oil combusted in an affected source. If fuel supplier certification is used to demonstrate compliance, fuel supplier certification shall include the following information:

         A. The name of the oil supplier;

         B. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR 60.41(c); and

         C. A certified statement signed by the owner or operator of an affected source that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period.

   b. NSPS Recordkeeping Requirements - In addition to any other recordkeeping requirements of the EPA, the Permittee is required to maintain records as follows:

      i. The amounts of each fuel combusted during each month; and

ii. All records required under this section shall be maintained for a period of two years following the date of such record.

c. NSPS Emissions Limitations - As required by 15A NCAC 2D .0524, the following permit limits shall not be exceeded:

Affected Source(s)	Pollutant	Emission Limit
No. 2 fuel oil-fired temporary boiler (86 million Btu per hour heat input) (TEMP-BOILER)	PM(TSP)	20% opacity
No. 2 fuel oil-fired temporary boiler (86 million Btu per hour heat input) (TEMP-BOILER)	SO2	0.5% by weight sulfur content

7. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the following equipment, The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart indicated below, and including Subpart A "General Provisions."

Emission Source(s)	Regulation
1. Generators for which construction* that commences after July 11, 2005 and are: (i) Manufactured after April 1, 2006 and are not fire pump engines, or (ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006. 2. Generators that are modified or reconstructed after July 11, 2005.	Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

*For the purposes of applicability to this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

8. NOTIFICATION REQUIREMENT - As required by 15A NCAC 2D .0535, the Permittee of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions, shall:

a. Notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern time of the Division's next business day of becoming aware of the occurrence and describe:

ii. the name and location of the facility,

iii. the nature and cause of the malfunction or breakdown,

iv. the time when the malfunction or breakdown is first observed,

v. the expected duration, and

vi. an estimated rate of emissions.

b. Notify the Director or his designee immediately when the corrective measures have been accomplished.

This reporting requirement does not allow the operation of the facility in excess of Environmental Management Commission Regulations.

9. LIMITATION TO AVOID 15A NCAC 2Q .0501 - Pursuant to 15A NCAC 2Q .0315 "Synthetic Minor Facilities," to avoid the applicability of 15A NCAC 2Q .0501 "Purpose of Section and Requirement for a Permit," as requested by the Permittee, facility-wide emissions shall be less than the following:

Pollutant	Emission Limit (Tons per consecutive 12-month period)
SO2	100
NOx	100

a. Operations Restrictions - To ensure emissions do not exceed the limitations above, the following restrictions shall apply:

i. the No. 2 fuel oil usage in the boilers shall be less than 1,045,000 gallons per consecutive 12-month period.

ii. the No. 2 fuel oil usage in the emergency generators shall be less than 342,000 gallons per consecutive 12-month period; and

iii. the No. 2 fuel oil usage in the compressors shall be less than 43,000 gallons per consecutive 12-month period.

b. Recordkeeping Requirements - The Permittee shall record monthly and total monthly (for the previous 12 months) the following:

i. the gallons of No. 2 fuel oil combusted by the boilers, generators, and compressors individually.

ii. Fuel supplier certification shall be kept on-site and made available to DAQ personnel upon request.

c. Reporting Requirements - Within 30 days after each calendar year quarter, regardless of the actual emissions, the Permittee shall submit the following:

i. emissions and/or operational data listed below. The data should include monthly and 12 month totals for the previous 14 months. The data must be calculated for each of the three 12 month periods over the previous 14 months.

1. the gallons of No. 2 fuel oil combusted by the boilers, generators, and compressors.

2. the sulfur dioxide and nitrogen oxide emissions.

10. LIMITATION TO AVOID 15A NCAC 2D .0530 "PREVENTION OF SIGNIFICANT DETERIORATION" - In accordance with 15A NCAC 2Q .0317, to comply with this permit and avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, emissions shall be limited as follows:

Affected Source(s)	Pollutant	Emission Limit (Tons Per Consecutive 12-month Period)
Facility Wide	SO2	250

B. GENERAL CONDITIONS AND LIMITATIONS

1. TWO COPIES OF ALL DOCUMENTS, REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, REQUESTS FOR RENEWAL, AND ANY OTHER INFORMATION REQUIRED BY THIS PERMIT shall be submitted to the:

   Regional Air Quality Supervisor
   North Carolina Division of Air Quality
   Raleigh Regional Office
   3800 Barrett Drive
   Raleigh, NC 27609
   (919) 791-4200

2. RECORDS RETENTION REQUIREMENT - Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.

3. PERMIT RENEWAL REQUIREMENT - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 2Q .0304(d) and (f). Pursuant to 15A NCAC 2Q .0203(i), no permit application fee is required for renewal of an existing air permit. The renewal request should be submitted to the Regional Supervisor, DAQ.

4. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 2Q .0203(a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.

5. EQUIPMENT RELOCATION - A new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.

6. This permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning device(s) and appurtenances.

7. REPORTING REQUIREMENT - Any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:

    a. changes in the information submitted in the application regarding facility emissions;

    b. changes that modify equipment or processes of existing permitted facilities; or

    c. changes in the quantity or quality of materials processed.

    If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

8. This permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.

9. This issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.

10. This permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.

11. Reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.

12. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.

13. Pursuant to North Carolina General Statute 143-215.3(a)(2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

14. The Permittee must comply with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.

15. PERMIT RETENTION REQUIREMENT - The Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.

16. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 40 CFR Part 68 "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

17. PREVENTION OF ACCIDENTAL RELEASES - GENERAL DUTY - Pursuant to Title I Part A Section 112(r)(1) of the Clean Air Act "Hazardous Air Pollutants - Prevention of Accidental Releases - Purpose and General Duty," although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release. **This condition is federally-enforceable only.**

Permit issued this the 21st of March, 2007.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

Ernie Fuller
Regional Air Quality Supervisor
By Authority of the Environmental Management Commission

Insignificant / Exempt Activities

Source	Date of Application	Exemption Regulation	Source of TAPs?	Source of Title V Pollutants?
IS-HEEC Firewater - 208 HP diesel firewater pump located at HE&E Center	12/28/2006	2Q .0102 (c)(2)(B)(iv)(III)	Yes	Yes
IS-HNP fuel tank 1 - No. 1 fuel oil storage for Generator C (1,000 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HEEC Generator - Diesel fired Emergency generator (266 HP output) for HE&E Center	12/28/2006	2Q .0102 (c)(2)(B)(iv)(III)	Yes	Yes
IS-HEEC Sewage - 75 kW Emergency diesel generator for sewage lift station located at HE&E	12/28/2006	2Q .0102 (c)(2)(B)(iv)(III)	Yes	Yes
IS-HEEC fuel tank 1 - No. 1/No. 2 fuel oil storage for emergency generator (1,000 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HEEC fuel tank 2 - No. 1/No. 2 fuel oil storage for firewater pump (265 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HEEC fuel tank 3 - No. 1/No. 2 fuel oil storage for emergency lift station engine (148 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HNP Firewater - Diesel-fired Firewater pump (380 HP), NT-380-IF	12/28/2006	2Q .0102 (c)(2)(B)(iv)(III)	Yes	Yes
IS-HNP Propane Gen - Propane emergency generator, 25 kW (40 HP), Generac Model 04725	12/28/2006	2Q .0102 (c)(2)(B)(iv)(II)	Yes	Yes
IS-HNP fuel tank 2 - No. 1/No. 2 fuel oil storage for firewater pump (550 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HNP fuel tank 3 - No. 1/No. 2 fuel oil storage for Boiler B (110,000 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HNP fuel tank 4 - No. 1/No. 2 fuel oil storage for Boiler B (110,000 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes

IS-HNP fuel tank 5 - No. 1/No. 2 fuel oil storage for Generators A and B (175,000 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HNP fuel tank 6 - No. 1/No. 2 fuel oil storage for Generators A and B (175,000 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HNP fuel tank 7 - Underground gasoline storage tank (10,000 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes
IS-HNP fuel tank 8 - Underground diesel storage tank (10,000 gal)	12/28/2006	2Q .0102 (c)(1)(D)(i)	Yes	Yes

1. Because an activity is exempted from being required to have a permit or permit modification does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.

2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 2D .1100 "Control of Toxic Air Pollutants" or 2Q .0711 "Emission Rates Requiring a Permit."

PART VI
ANNUAL ADMINISTERING AND COMPLIANCE MONITORING FEE REQUIREMENTS

1. Fee Requirements

The permittee must pay the annual administering and compliance monitoring fee within 30 (thirty) days after being billed by the Division. Failure to pay the fee in a timely manner in accordance with 15A NCAC 2H .0105(b)(4) may cause this Division to initiate action to revoke the permit.

Response to RAI No. 1
Item 9

North Carolina Hazardous Waste Section
Division of Waste Management
North Carolina Department of Environment and Natural Resources

2003 NORTH CAROLINA HAZARDOUS WASTE MINIMIZATION QUESTIONNAIRE

As a Small Quantity Generator who is required to pay a fee, you are also required to submit a written description of any program to minimize or reduce the volume and quantity or toxicity of such waste. This questionnaire is required by G.S. 130A-294(k).

Facility Name	EPA ID Number
Harris Nuclear Plant	NCD 991278284

1. Has your facility (company) implemented and/or continued waste minimization strategies on hazardous waste produced between January 1, 2003 and December 31, 2003. (Circle one)

(YES) NO

If your answer to question 1 is YES, then continue. If your answer is NO, then skip to question 3.

2. Circle a waste minimization strategy(s) that best describes your effort in minimizing your hazardous waste streams. (circle a letter)

	STRATEGY	EXAMPLES
(A.)	Chemical Substitution	Replacing hazardous materials with non, or less hazardous items
B.	Volume Reduction	Using a filter press, reduce amount of sludge/waste
C.	On-site Recycling	Using a still to recover solvents
(D.)	Good Housekeeping	Monitoring processes for leaks or spills
(E.)	Off-site Recycling	Contracting with a service company to recycle
F.	Other	Describe below

3. Circle the primary one obstacle that prevented you from minimizing your waste between January 1, 2003 and December 31, 2003. (circle a letter)

A. Insufficient capital to install new equipment
B. Lack of technical information on waste reduction
(C.) Not economically feasible
D. Concern that product quality may decline
E. Technical limitations of production process
F. Regulatory burdens inhibit recycling
G. Other (explain below) _____

4. **Who provides you with the MOST information you need concerning hazardous waste management and minimization? (circle a letter)**

   A. NC Hazardous Waste Section (HWS)

   B. Division of Pollution Prevention and Environmental Assistant (DPPEA)

   C. My corporate office

   D. My hazardous waste vendor or service pick-up company

   E. Environmental consultant

   F. Internet resource on the web (specify: _____)

   G. No one, I do it on my own

   H. Other resource (explain below)

_____

_____

5. **How can the Hazardous Waste Section assist you in complying with the NC hazardous waste management rules? (circle a letter)**

   A. Request a technical assistance site visit to my facility

   B. Consultation via telephone with the Section (tel. 919-733-2178)

   C. Information provided on the Section's Web (http://wastenot.enr.state.nc.us/)

   D. Via letter requesting clarifications of certain aspects of the rules

   E. Access to publications or updates about the rules

   F. I confidently know the rules, I do not need any assistance

   G. Other (explain below)

_____

_____

- Questions about the Questionnaire contact the Technical Resource Unit:
  Ann Preston at 919-733-2178, extension 230
  Ann.preston@ncmail.net, or
  Doug Roberts at 919-733-2178, extension 233
  Doug.roberts@ncmail.net, or
  Lebeed Kady at 919-733-2178, extension 217
  Lebeed.kady@ncmail.net

- Send Questionnaire To:

NC Hazardous Waste Section
Attn: Larry Wlson
1646 Mail Service Center
Raleigh, NC 27699-1646

NCDENR

INVOICE

North Carolina Hazardous Waste Section
Division of Waste Management
North Carolina Department of Environment and Natural Resources

Office Phone Number	Invoice Date	Your EPA ID #	Amount Due	Due Date	Show Amount Paid Here
919-733-2178	11/12/2004	**NCD991278284**	**$ 125.00**	**12/17/2004**	$ 125.04

Make checks payable to N.C. Hazardous Waste Section. Include your *facility name and EPA ID number* on your check.

Attn.: ROBERT WILSON JR
or Current Facility Hazardous Waste Contact
HARRIS NUCLEAR PLT PROGRESS ENERGY
5413 SHEARON HARRIS RD
NEW HILL, NC 27562

REMIT To: N.C. Hazardous Waste Section
Attn: Larry Wilson
1646 Mail Service Center
Raleigh, NC 27699-1646

PLEASE RETURN THIS PORTION WITH PAYMENT

A. Fee Requirements: Pursuant to North Carolina General Statutes 130A-294.1 you are required to pay fees based on your hazardous waste management activities. These fees are used to support government programs that ensure the safe management of hazardous waste. Failure to pay the required hazardous waste fee by **December 17, 2004** could result in an enforcement action with additional penalties.

B. Explanation of Invoice Amount:

CATEGORY	FEE	FACILITY STATUS	AMOUNT DUE
Generator Fee	$ 125.00	SQG	$ 125.00
Treater	$ 1,200.00	-	$ 0.00
Storer	$ 1,200.00	-	$ 0.00
Land Disposal	$ 1,200.00	-	$ 0.00
Transporter	$ 600.00	-	$ 0.00
Amount Past Due			$ 0.00
Waste Generation	$ 0.50/Ton	0 tons	$ 0.00
TOTAL AMOUNT DUE			**$ 125.00**

C. Who is Required to Pay?

The following are required to pay fees associated with hazardous waste management.

1. Large Quantity Generator ($1,000.00): A person who generates one kilogram or more of acute hazardous waste or 1,000 kilogram or more of hazardous waste in any calendar month during the year beginning July 1 and ending June 30. (Note: Large Quantity Generators are also required to pay an additional fee of $0.50 per ton, or any part thereof, for hazardous waste generated during the period January 1 to December 31, up to a maximum of 25,000 tons.)
2. Small Quantity Generator ($125.00): A person who generates 100 kilogram or more of hazardous waste in any calendar month during the year beginning July 1 and ending June 30 but less than 1,000 kilogram of hazardous waste in each calendar month during that year.
3. Transporter ($600.00): A person who transports hazardous waste shall pay an annual fee.
4. Treater, Storer or Disposer ($1,200.00): A treatment, storage, or disposal facility shall pay an annual activity fee for each activity. (Note: A commercial hazardous waste storage, treatment, or disposal facility also required to pay an additional fee of $1.75 per ton, or any part thereof of hazardous waste stored, treated, or disposed of at the facility.)

D. **Verify Contact Information:** Please verify Company's information below, make any corrections and sign below.

	Company's Current Status @ DENR	Corrections
Contact	ROBERT WILSON JR	
Company Name	HARRIS NUCLEAR PLT PROGRESS ENERGY	
Mailing Address	5413 SHEARON HARRIS RD	
City, State & Zip	NEW HILL, NC 27562	
Location Address	5413 SHEARON HARRIS RD	
City, State & Zip	NEW HILL, NC 27562	
Generator Status	Small Quantity Generator	
Transporter	No	
Treater	No	
Storer	No	
Land Disposal	No	

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

Signature of Authorized Person	Name and Title	Date
BCWP	B. C. Waldrep - Plant General Manager	11-19-04

E. **Whom Can I Contact?**

1. Questions about my fees: Larry Wilson at 919-733-2178, extension 210
   larry.wilson@ncmail.net

2. Questions about the Regulations and Technical Assistance:
   Ann Preston at 919-733-2178, extension 230
   Ann.preston@ncmail.net or
   Doug Roberts at 919-733-2178, extension 233
   Doug.roberts@ncmail.net
   Lebeed Kady at 919-733-2178, extension 217
   Lebeed.kady@ncmail.net

F. **Where Can I obtain?**

1. Rules, Regulations and the General Statues at the NC Hazardous Waste Rules web page:
   http://www.wastenotnc.org/HWHOME/WEBRules/NCHWRule.html

2. EPA Hazardous Waste notification of regulated waste activity (form 8700-12):
   http://www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm

G. **Useful Publications on the Internet:**

1. Hazardous Waste Requirements for Large Quantity Generators (EPA: 530-F-96-032)
   http://www.epa.gov/epaoswer/hazwaste/gener/lqgpdf.pdf

2. Managing Your Hazardous Waste: A Guide for Small Businesses (EPA: 530-K-01-001)
   http://www.epa.gov/epaoswer/hazwaste/sqg/handbook/k01005.pdf

Response to RAI No. 1
Item 10

Progress Energy

Waste Minimization Report Form

Facility: Harris Nuclear Plant

Reporting Period: 2004

Facility Contact: Bob Wilson

Voicenet: 751-2444

A. Solid Waste Disposal Costs

Most facilities contract with a waste hauler for the lease of one or more dumpsters and the service of hauling the dumpster to the local landfill. The facility may also be charged tipping fees by the landfill. Disposal costs can be reduced by reducing the number of dumpsters, reducing the size of the dumpster, reducing the number of times the dumpster is hauled to the landfill, and by reducing the volume of material that is discarded.

Number of dumpsters on site: Varries

Waste Hauler: Waste Industries

Telephone: 919-662-7100

Container Capacity[1]	Monthly Lease Charge[1]	Hauling Fees[2] (Trips/Month)	Landfill Tipping Fee[3]	Total Monthly Cost
1. 8 CY	$ 415	$ 85 ( )	$ 0	$ 500
2. 30 CY	$ 415	$ 148 ( )	$ 150	$ 713
3. 40 CY	$ 415	$ 148 ( )	$ 150	$ 713
4.	$	$ ( )	$	$
5.	$	$ ( )	$	$

1. Typical containers are the 8 yd^3 dumpster, which is emptied into the waste hauler's truck, and the 30 yd^3 container (either open top or compactor), which is hauled directly to the landfill. More frequent emptying of the smaller container may be more cost effective than the larger container.
2. Waste haulers charge each time a dumpster is emptied. Regularly scheduled service of a partially filled container will cost more than calling the contractor for service when the container is nearly full. Discarding bulky items, such as empty cardboard boxes, will increase disposal costs. Recycling or reusing discarded items will decrease disposal costs.
3. Waste haulers pay a tipping fee to dispose of trash at the landfill. Recycling discarded items or using other waste reduction techniques to eliminate waste generation can reduce the volume of waste generated each month.

B. Hazardous Waste Disposal

Amount Generated: 1071

Disposal Cost: See chemical copst

C. Waste Minimization Programs

Indicate recycling/waste minimization programs being conducted at this facility. Provide an estimate of the number, pounds, or gallons for those materials **not** sent to the Materials Service Center during the quarter.

Materials	Amount/Volume	Cost
Aluminum cans	2000-3000 lbs	02/04/05
Antifreeze (gallons)	100 gallons	CDC
Batteries	6000-7000 lbs	see recycling cost
Alkaline	See Batteries	0
Lead-acid	See Batteries	0
Lithium	See Batteries	0
Ni-cad	See Batteries	0
Other		
Cardboard	300-400 CY	5000
Chemicals	Not Tracked	29000
Drums	Not Tracked	0
Glass	Not Tracked	0
Industrial rags (laundered)	N/A	0
Oil	N/A	0
On-site (burned for energy recovery)	N/A	
Off-site (Noble)	Shamrock ~21000 gallons	see chemical cost
Oil filters	Not Tracked	see chemicals
Paper	5000-6000 yrds	see solid waste p 1
Plastic	Not Tracked	0
Printer cartridges /ribbons	400-500	0
Scrap metal	50000-70000 lbs	sold for profit
Wood	12-15 tons	see recycling cost
Pallets	Processed with wood	0
Poles	N/A	0
Treated wood (cross ties and cross arms)	Removed by contractor	0
Other (list) Lighting	5000-6000 lamps	0

Comments: Numbers are based on contract invoices and historical data.

Recycling cost = $3500

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 11

Progress Energy

I
Information
Use

PROGRESS ENERGY

HARRIS NUCLEAR PLANT

PLANT OPERATING MANUAL

VOLUME 1

PART 2

PROCEDURE TYPE:	Plant Program Procedure (PLP)
NUMBER:	PLP-502
TITLE:	Hazardous Waste Management

Table of Contents

1.0 PURPOSE

Provide guidance necessary to manage the disposal of surplus chemicals, hazardous and nonhazardous wastes in accordance with corporate, state, and federal environmental regulations. Hazardous wastes are controlled by the Resource Conservation and Recovery Act (RCRA) requirements from the time the wastes are generated through handling, storage, and transportation to a treatment/disposal facility.

2.0 REFERENCES

1. CRC-001, SHNPP Environmental and Chemistry Sampling and Analysis Program
2. FPP-002, Fire Emergency
3. OP-180, Plant Communication Systems
4. PEP-350, Protective Actions
5. PLP-201, Emergency Plan
6. PLP-500, Fish Kill Reporting, Hazardous Substances Release Notification, and Oil Spill Notification
7. EVC-SUBS-00016 "Hazardous Waste Management," Environmental Compliance Manual Guidance Document – Common
8. EVC-SUBS-00023 "Solid Waste," Environmental Compliance Manual Guidance Document – Common
9. EVC-SUBS-00025 "Used Oil," Environmental Compliance Manual Guidance Document – Common
10. TRN-NGGC-011, Environmental Training
11. Title 40 Code of Federal Regulations, Protection of the Environment
12. Title 29 Code of Federal Regulations Part 1910, Occupational Safety and Health and Standards
13. Title 49 Codes of Federal Regulations, Transportation
14. Title 15A North Carolina Administrative Code, Chapter 13
15. NPDES Permit NC0039586
16. Letter ESS-87-970, "New Hazardous Waste Requirements Off Site Disposal of Solvents," G. H. Warriner to J. L. Willis, et al, dated August 28, 1987
17. Fawcett, H. H., Hazardous and Toxic Materials: Safe Handling and Disposal, John Wiley & Sons, New York, 1984
18. Emergency Response Guidebook: Current revision

3.0 DEFINITIONS / ABBREVIATIONS

3.1 Definitions

1. Hazardous Waste - A solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical or chemical characteristics may (1) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. See 40CFR261.2-261.4.
2. Wake County Warning Point - The 24-hour point of contact is defined in the HNP Emergency Plan (PLP-201) for activating a hazardous waste emergency response team (HAZMAT) in Wake County, North Carolina.
3. Surplus Chemical - Chemical having an expired shelf life or any chemical deemed unwanted.
4. Generator - Facility that produces a hazardous waste identified or listed in 40CFR261.
5. Transporter - Person or contractor engaged in the off site transportation of hazardous waste by air, rail, highway, or water.
6. TSD Facility - Facility in business of hazardous waste treatment, storage, or disposal.

3.2 Abbreviations

1. ARF - Authorization Request Form
2. EPA - United States Environmental Protection Agency
3. ESS - Corporate Environmental Services Section
4. HWC - Hazardous Waste Coordinator
5. LQG – Large Quantity Generator
6. M&CS – Material and Contract Services
7. MSC - Materials Service Center
8. MSDS - Material Safety Data Sheet
9. NRC - Nuclear Regulatory Commission
10. RCRA - Resource Conservation and Recovery Act
11. SQG – Small Quantity Generator
12. TSD - Treatment, Storage, and Disposal Facility

4.0 GENERAL

R 4.1 Waste Minimization and Segregation (40CFR262.41)

Nonhazardous wastes should never be mixed with potential hazardous wastes and waste volumes generated should be minimized to the fullest extent possible. The EPA requires, as part of the hazardous waste annual reports by hazardous waste generators, that descriptions of efforts made to reduce the volume and toxicity of hazardous waste by the facility be included. Careful hazardous waste segregation practices and other methods to minimize hazardous waste generation will help the Company meet this requirement as well as reduce hazardous waste disposal costs and liabilities.

R 4.2 Used Oil (40CFR279)

The Company currently uses used oil recyclers to dispose of used oil. If the oil contains any hazardous or toxic chemicals, the recycler will not remove the oil and may be hesitant to remove any oil if it contains any foreign substance, even water. Therefore, Used Oil must be kept separate from other wastes such as solvents and paints. **In North Carolina, used oil is not classified as a hazardous waste and is regulated only as a solid waste.**

R 4.3 Waste Solvents and Paints (40CFR261)

Spent varsol, xylene, toluene, acetone, and methyl-ethyl-ketone shall be kept separate from other hazardous waste; such as, halogenated solvents. Paint wastes must also be segregated from these spent solvents. Waste paint collection drums are available in designated satellite storage areas for collecting waste paints and related paint cleaning solvents.

R 4.4 Mixed Wastes (40CFR266)

Any hazardous waste that becomes contaminated with radioactivity is regulated by both the Environmental Protection Agency and the Nuclear Regulatory Commission and is classified as a mixed waste. These wastes will have to be handled, stored, and disposed of in accordance with NRC regulations.

5.0 IMPLEMENTATION

5.1 Responsibilities

5.1.1 General Manager - Harris Plant

The General Manager – Harris Plant is responsible for providing the resources necessary to implement the provisions of this procedure.

5.1.2 Superintendent - Environmental & Chemistry

1. Appoint a Hazardous Waste Coordinator (HWC) and an alternate Hazardous Waste Coordinator.
2. Administer the Hazardous Waste Management Program.

5.1.3 Material & Contract Services

1. Provide arrangements for transportation of material when requested by the Hazardous Waste Coordinator.
2. Provide assistance to the Environmental Coordinator to ensure any material shipped is prepared in accordance with DOT regulations.
3. Coordinate with the Environmental Coordinator for the storage of surplus chemicals.

5.1.4 Maintenance

1. Assist in the collection, consolidation, and preparation of wastes for off site shipments.
2. Transport waste and surplus chemicals to designated storage areas.
3. Label chemical waste containers at the direction of the Hazardous Waste Coordinator.
4. Construct special shipping crates, as required, for shipment of waste chemicals.
5. Maintain the Hazardous Waste Storage Facility and satellite storage areas.
6. Identify to the Hazardous Waste Coordinator maintenance activities that will generate oil, or chemicals.

R 5.1.5 Licensing / Regulatory Programs

1. Assist in the preparation of regulatory-required documents. (40CFR260-272)
2. Distribute copies of regulatory documents.

5.1.6 Hazardous Waste Coordinator

R 1. Ensure hazardous waste manifests (40CFR262.20) are prepared for all waste shipments.

R 2. Ensure correct loading of hazardous waste transporters for hazardous waste shipments (49CFR172).

R 3. Ensure completion of weekly inspections of the hazardous waste central storage areas (40CFR265.174).

R 4. Supply required information to the Environmental Service Section for preparation of regulatory reports (40CFR262.41).

R 5. Maintain awareness of RCRA regulations (40CFR262.34).

R 6. Act as the emergency coordinator during a hazardous waste emergency.

R 7. Maintain hazardous waste documents, manifests, and reports (40CFR259-265).

8. Assist Maintenance and Engineering in the identification, storage, and disposal of waste solvents, oils, and chemicals.

5.1.7 Environmental Services Section

1. Make required notification to local, state, and federal agencies, as necessary.
2. Provide technical support to the HNP Hazardous Waste Coordinator.
3. Assist in the preparation of required reports to government agencies.
4. Assist in the monitoring of the HNP Hazardous Waste Management Program to ensure compliance with appropriate regulations.

5.1.8 Progress Energy Hazardous Waste Materials Contract Coordinator

1. Administer contracts for the disposal of hazardous waste by qualified waste contractors.
2. Assist in the recycling, sale, or disposal of bulk chemicals and Used Oil.

5.1.9 HNP Engineering

Identify to the Hazardous Waste Coordinator any contractor/vendor activities that will generate waste solvents, oil, or chemicals.

5.1.10 Operations

R 1. Provide initial coordination for a hazardous waste emergency (40CFR265).

2. Identify to the Hazardous Waste Coordinator any activities that will generate waste solvents, oils, or chemicals.

R 3. Perform all required notifications as described by PLP-500 or other plant procedures.

5.1.11 Harris Training Section

R 1. Provide and document hazardous waste training to plant personnel who are involved in hazardous waste operations (40CFR262).

R 2. Ensure that one instructor maintains awareness of the HNP Hazardous Waste Program and is available to provide the required training as requested by HNP organizations.

5.2 Procedure

5.2.1 Surplus or Reusable Materials

The Materials Service Center (MSC) will accept surplus and reusable materials that can be used at other Progress Energy facilities or can be sold as surplus. Only unopened and bulk amounts of chemicals will be accepted by MSC.

1. Material and Contract Services will contact the Materials Service Center (MSC) and provide the necessary information (MSDS) for determining if the material is acceptable for reuse or can be sold.

2. If material is acceptable to MSC, Material and Contract Services will be responsible for properly preparing the material for shipment.

3. Some surplus items (paint, WD-40, empty drums, etc.) may be sold to HNP employees at sales conducted by Material and Contract Services. Other items may be sold directly to other vendors directly by HNP Material and Contract Services.

4. If the material cannot be reused or sold as surplus, Chemistry will classify the material as a solid waste or a hazardous waste.

5. After the waste material is classified, Chemistry will make the necessary arrangements for disposal.

5.2.2 Solid Waste Determination

NOTE: Attachment 1, Hazardous Waste Determination, can be used with Sections 5.2.2 and 5.2.3 to determine if waste material is a solid waste or a hazardous waste according to EPA guidelines.

R 1. Before any waste can be classified as hazardous, the waste must be defined as a solid waste. Solid waste can be physically solid, liquid, a semisolid, or a contained gas under pressure. It is any discarded material that is abandoned, recycled in certain ways, or considered "inherently waste-like." (40CFR261 Subparts A, B, and C)

R 2. If the material meets any one of these following criteria, then material is classified as a solid waste:

   a. Materials are solid waste if abandoned by being:

      (1) Disposed of, or

      (2) Burned or incinerated, or

      (3) Accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated.

   b. Materials are solid wastes if they are recycled by being:

      (1) Used in a manner constituting disposal, or

      (2) Burned for energy recovery or used to produce a fuel or found in a fuel, or

      (3) Reclaimed (regenerated or recovered in ways such as solvent distillation), or

      (4) Accumulated speculatively, see Table 1 in 40CFR261.2.

   c. Certain solid wastes are defined as inherently waste-like. These include chlorinated dioxins and chlorinated dibenzofurens, which are F listed wastes (40CFR261.31).

5.2.3 Hazardous Waste Determination

1. Hazardous waste is a subset of solid wastes. Hazardous wastes are not to be confused with other items termed hazardous. Hazardous substances include all hazardous wastes as well as many nonwaste chemicals that may or may not pose a problem to the environment or human health if spilled or released.

R 2. Certain wastes are listed for nonspecific sources; such as, the F wastes found in 40CFR261.31. Wastes from specific sources include the K wastes listed in 40CFR261.32, and discarded commercial chemical products in the part U listed wastes in 40CFR261.33.

R 3. For wastes not listed in Subpart D (40CFR261.30), the waste may be a characteristic waste if the waste exhibits any one of the following characteristics:

   a. Ignitability - A liquid with a closed cup flash point of less than 60°C (140°F) or if a solid is capable of causing a fire through friction, absorption of moisture, spontaneous combustion, or burns so vigorously as to cause a hazard. This is a D001 hazardous waste.

   b. Corrositivity - An aqueous material that has a pH less than or equal to 2 or greater than or equal to 12.5, or a liquid that erodes steel at a rate greater than one-quarter inch per year at a constant temperature of 130°F is a D002 hazardous waste.

   c. Reactivity - A solid waste is normally unstable and readily undergoes violent change, reacts violently or releases toxic gases when mixed with water, or the chemical has the ability to release toxic gases. If it is readily explosive or capable of detonation then it is a D003 hazardous waste.

   d. Toxicity - A solid waste is hazardous if a representative sample of the waste contains any contaminate exceeding the limits specified in the laboratory extraction procedure required by 40CFR261. These are hazardous wastes D004 through D043.

5.2.4 Exclusions (40CFR261.4)

R The following is a partial list of materials used at the Harris Plant that are not a solid waste and/or are not a hazardous waste. Consult 40CFR261.4 for the full list and details:

- Domestic sewage
- Industrial waste water discharges subject to regulation under Section 402 of the Clean Water Act (NPDES Permit).
- Used batteries (or used battery cells) returned to a battery manufacturer for regeneration or recycling.
- Scrap metal returned to a recycler.
- Discarded wood and wood or wood products treated with arsenic.
- Intact fluorescent lamps, batteries, mercury switches and computer components processed by the Universal Waste Rules.

5.2.5 Packaging and Labeling Containers

R 1. Packaging - All hazardous waste placed in storage must be in containers that are in good condition. Containers used in the transport of hazardous waste must meet DOT regulations outlined in 49CFR Part 172; which basically means the container is in "shipping condition." The drum or container must be compatible with the waste and must not be leaking or be in danger of leaking or rupturing. Any drum which does not meet these requirements should be replaced or the drum can be placed inside an "overpack" drum and surrounded with vermiculite or other absorbent material compatible with the waste (40CFR262.30).

2. Labeling (40CFR262.31)

R a. All hazardous waste drums must display a hazardous waste label (Attachment 2). The waste generator's name and address, manifest document number, DOT and EPA waste descriptions, and the EPA identification number for the Harris Plant must be listed on the hazardous waste label (40CFR262.31).

R b. Each drum must also display all "flammable," "corrosive," or other applicable labels as required by DOT regulations. Material and Contract Services personnel may be contacted for assistance in determining labeling requirements (40CFR262.32).

c. The ARF number assigned to the waste by the TSD facility must be identified on the drum. The ARF number must appear on the drum top and side above the hazardous waste label. See Attachment 3 for locations of drum labels.

R 3. Placarding - Normally, the hazardous waste transporter will provide the necessary placards for the truck as required by DOT regulations for transporting hazardous waste. However, the regulations require that the generator provide necessary placards if needed by the transporter (40CFR262.33).

5.2.6 Storage Requirements

1. Chemical Processing Area - Surplus chemicals and empty containers should be taken to the chemical processing area located west of the paint shop for evaluation for disposal.

a. Aerosol cans, small containers should be placed in the cabinets in the area. All other containers should be located on a spill pallet provided in the area.

b. Used oil should be transferred into the used oil tank if the container is less than a 55 gallon drum. The empty completely drained container should be disposed of a solid waste or the container many be reused for Used Oil in the future.

2. Satellite Accumulation Areas

R EPA provides for satellite storage areas for the collection of hazardous waste at the point of waste generation and is under the control of the Operator. The following requirements are placed on the satellite accumulation of hazardous waste (40CFR262.34):

a. Accumulation is limited to less than 55 gallons of waste without any time constraints. Only one quart of acutely hazardous waste, as defined in 40CFR261.33, can be accumulated at any time.

b. Containers must be in good condition and compatible with the waste.

c. Containers must be kept closed except when adding or removing wastes.

d. Containers are not handled in a way that will cause a leak.

e. Containers are marked with words Hazardous Waste or other words to identify the contents.

f. When container is full, seal and date drum.

R g. After the container is full, the waste shall be moved to the Central Storage Facility within 3 days (40CFR262.34).

5.2.6 Storage Requirements

3. Central Storage

R a. All drums placed in a central storage facility must be in shipping condition with all necessary labels attached at the time of shipment (see Section 5.2.5.1).

R b. Hazardous waste shall be shipped off site to a TSD facility within 180 days (40CFR262.34). If the 180 day limit is expected to be exceeded, the Environmental Services Section shall contact the state of North Carolina for an extension and reporting requirements.

c. The central hazardous waste storage facility should meet the following criteria:

- Controlled access area to prevent unmarked, unlabeled drums or barrels from being placed in the storage area.
- Some form of secondary containment should be employed to control possible spills and leakage.
- The area should be covered to prevent rain water associated problems.
- Drums should be elevated (pallets, and so forth) or placed on a slanted floor to provide drainage to prevent drums from standing in liquid spillage or leakage.
- The area should be clearly posted as a hazardous waste storage area, with name of person to contact for access to the area.
- Floor should be constructed of an impervious material, such as concrete.
- Have a spill kit and fire equipment available in the immediate area.
- Good housekeeping shall be maintained at all times. Spills and free standing water should be removed as soon as possible.
- Additional or temporary Central Storage Areas may be designed as needed (ex. Movement of drums to Receiving the day before shipment, outage activities).

R 5.2.7 Hazardous Waste Manifests (40CFR262.20-262.23, 262.40, 263.20-263.21)

1. All hazardous waste shipments must be documented on a hazardous waste manifest. Attachment 4 shows an example of a Hazardous Waste Manifest.

2. Some states have legislation requiring the use of that state's manifest form if the waste is disposed in that state (South Carolina, New Jersey, and Pennsylvania.) North Carolina will accept the use of other state manifest forms if the waste is disposed in another state. Select the appropriate manifest in the following order:

   a. Manifest from the TSD host state.

   b. Generator's state manifest.

   c. EPA uniform hazardous waste manifest.

3. If additional information is needed, contact ESS, a Progress Energy Hazardous Waste Coordinator or the TSD facility.

5.2.7 Hazardous Waste Manifests (40CFR262.20-262.21, 262.40, 263.20-263.21) (continued)

R 3. After completing the manifest, a trained (EPA and DOT) representative for the generator must sign the manifest. The transporter must also sign the manifest. At a minimum, four (4) copies of the manifest must be distributed:

- One copy for the generator.
- One or more copies for each transporter.
- Two copies for the TSD facility, one copy for the TSD facility's records; a second copy that the TSD facility must fully complete and return to the generator.
- Additional copies may be necessary if the state in which the generator TSD facility is located requires the generator and the TSD facility to submit a copy to the state.

R 4. Upon receipt of the waste, the TSD facility is required to sign the manifest and return a copy to the generator. A copy of each shipping manifest must be kept by the generator until the signed manifest is returned from the TSD facility. The completed manifest shall be kept a minimum of three years per the regulations.

R 5. If the plant does not receive a copy of the manifest from the TSD facility within 35 days from the date the waste was accepted by the transporter (waste shipment date), contact the transporter and TSD facility to determine status of the waste. Also, contact the Environmental Services Section. If a copy of the manifest is not returned to the generator within 45 days of the initial pick up date, the plant shall prepare an EPA Exception Report (40CFR262.42).

R 5.2.8 Land Disposal Restriction Certification

In addition to providing a hazardous waste manifest for each hazardous waste shipment, a land disposal restriction certification is required (40CFR268) to be on file at the TSD for each waste stream shipped. Attachment 5 is an example of a land ban restriction form. The TSD facility can provide necessary paperwork and instructions for completing the forms additional certifications may be required by the receiving state or TSD.

R 5.2.9 Hazardous Waste Authorization Request Form

Before a TSD facility will accept any waste for disposal, the TSDs Authorization Request Form (ARF) must be submitted and approved by the disposal facility. The TSD facility may require a sample of the waste to verify the waste. Wastes shipped to the TSD facility may be analyzed to ensure the waste chemistry meets the information submitted in the ARF. Approved ARFs must be maintained for at least five (5) years by HNP (40CFR268.7).

5.2.10 Environmental Services Section Contacts

Contacts for the Environmental Services Section are listed in EVC-SUBS-00018 as a web link to the Environmental Services Section Emergency Response page containing names, phone numbers and pager numbers.

R 5.2.11 Training (40CFR262.34, 265.16, 29CFR1910.1200)

1. Training is required for personnel (reference TRN-NGGC-0011):
   - Handling hazardous wastes.
   - Preparing hazardous waste shipments.
   - Responsible for inspections.
   - Involved in RCRA record keeping or reporting.
   - Managing the hazardous waste program.
   - Training of hazardous waste personnel.

R 5.2.11 Training (40CFR262.34, 265.16, 29CFR1910.1200)

2. Chemistry, Health Physics, Maintenance, Material and Contract Services personnel shall complete this training if they work with hazardous material which may become a hazardous waste.

3. Contract on-site painters shall complete this training before being allowed to work alone.

4. Training records must be maintained for three years after the employee has left the facility. These records must include:

- Employee name
- Employee job class
- Description of training

R 5.2.12 Preparedness and Prevention (40CFR265.30-265.37)

The Hazardous Waste Program is managed to minimize the possibility of a fire, explosion, or any unplanned sudden release of hazardous waste to the air, soil, or surface water which could threaten human health or the environment.

R 5.2.13 Reports and Record Keeping (40CFR262.40, 15 NCAC 13A.001(b)(3))

1. Waste Minimization Reports are required by the North Carolina Department of Environment and Natural Resources (NCDENR) when the annual hazard waste fees are invoiced and paid.

2. Manifests

a. The Hazardous Waste Coordinator will maintain manifest records for all hazardous waste shipments.

R b. Retain for three years a copy of the manifest signed by the initial transporter or a signed copy from the designated facility which received the waste (40CFR262.40).

R 3. Waste Analyses Records

Maintain records of any test results, waste analyses, or other determinations made on any waste for disposal for at least five years from the date the waste was last sent for disposal (40CFR262.40 and 40CFR268.7).

R 4. Training Records

a. The Harris Training Section shall maintain all training records per procedure requirements.

b. Record retention is required for at least three years after the employee has left the facility (40CFR265.16).

R 5. Inspections

CRC-001, Weekly Matrix Sheets are used to document the weekly central storage area inspections. Records and results of hazardous waste inspections shall be kept for at least three years from the date of inspection (40CFR262.40).

R 6. Exception Reporting

Maintain a copy of exception reports for a period of at least three years from the due date of report (40CFR262.40).

5.2.14 Inspections (40CFR265.170-265.177)

R 1. Hazardous waste containers stored in the central storage facility must be inspected weekly for leaks or deterioration, correct labeling, and ensure drums are tightly sealed.

2. The inspection of the central storage facility should document building and dike condition, fence integrity, and condition of signs.

3. Record the results of the inspections on the CRC-001 Weekly Matrix Sheet located in the E&C Tech Work Area (Waste Processing Building, Elevation 276).

5.2.15 Biological Waste

R 1. All biological waste should be tagged or bagged as a biological hazard. (29CFR1910.1030)

R 2. All workers who could come in contact with biological hazards should comply with the requirements of the Bloodborne Pathogens standard (29CFR1910.1030)

R 3. All biological waste that is also non-radioactive should be taken to the In-processing Facility for disposal (15A NCAC 13B 1200).

R 4. All biological waste that can not be released from a Radiation Control Area should be marked as a Biological Hazard and disposed of by the radwaste disposal contractor (15A NCAC 13B 1200).

6.0 DIAGRAMS / ATTACHMENTS

Attachment 1 - Hazardous Waste Determination

Attachment 2 - Hazardous Waste Label (Example)

Attachment 3 - Typical Drum Labeling and Marking

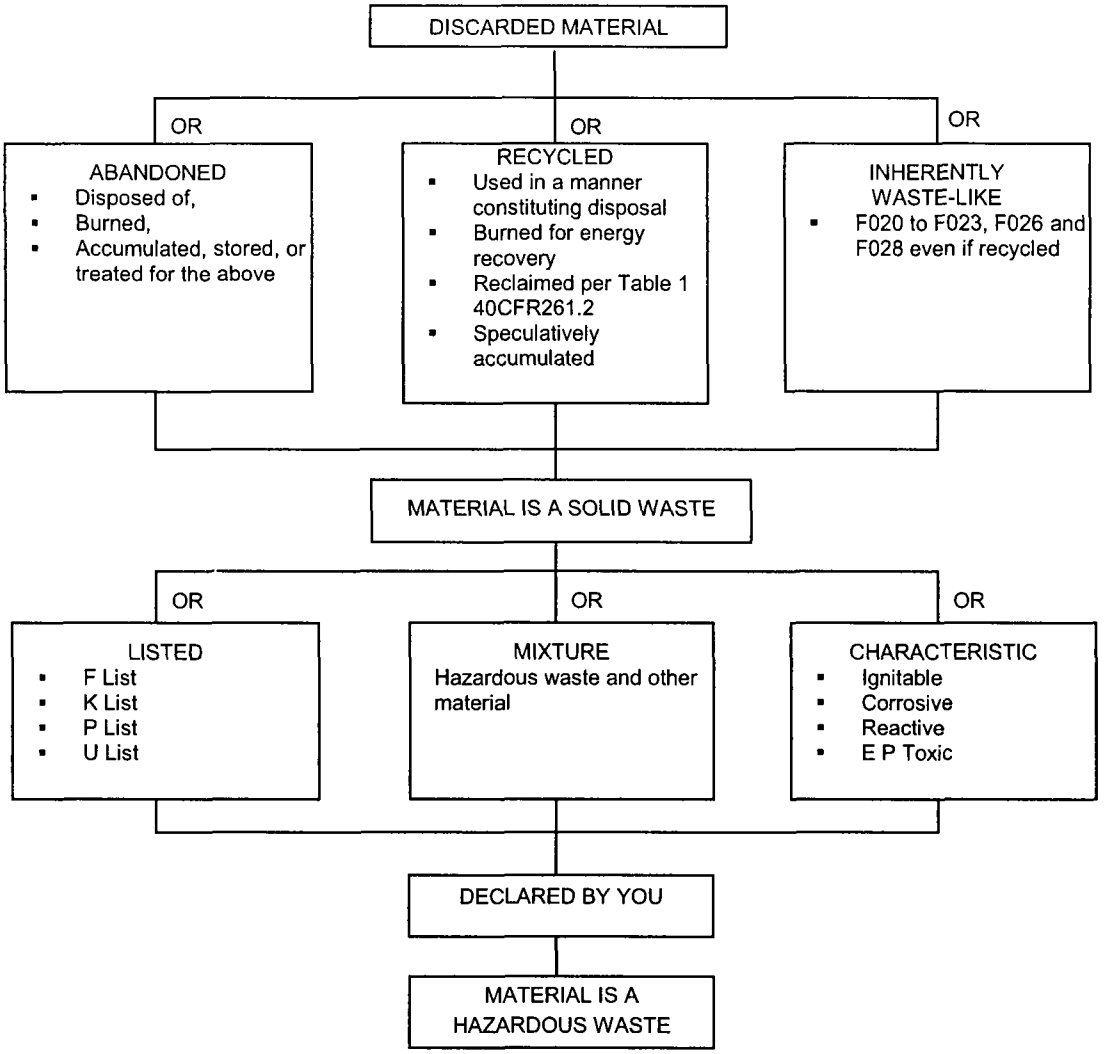
Attachment 4 - South Carolina Uniform Hazardous Waste Manifest (Example)

Attachment 5 - Land Disposal Restriction Notification Certification Form (Example)

Attachment 6 - HNP Hazardous Waste Contacts

Attachment 7 - HNP Hazardous Waste Area Evacuation Routes

HAZARDOUS WASTE DETERMINATION



HAZARDOUS WASTE LABEL
EXAMPLE

HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY
OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERATOR INFORMATION:

NAME: Progress Energy, Harris Nuclear Plant

ADDRESS: 5413 Shearon Harris Road PHONE: 919-362-2156

CITY: New Hill STATE: NC ZIP: 27562

EPA ID NUMBER: NCD991278284

MANIFEST DOCUMENT NO.: 040602

ACCUMULATION START DATE: 06/06/04

EPA WASTE NUMBER: D001, D035

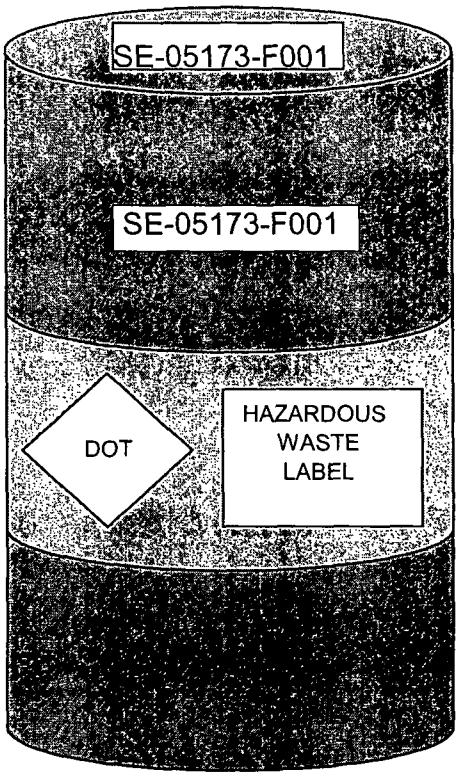
Waste Aerosols, Flammable, 2.1

UN1950

DOT PROPER SHIPPING NAME AND UN OR NA NUMBER WITH PREFIX

HANDLE WITH CARE

TYPICAL DRUM LABELING & MARKINGS



TSD Facility ARF Member
(Identified on top and side of drum)

EPA Hazardous Waste Label
shown in Attachment 2

DOT Hazardous Materials Label

UNIFORM HAZARDOUS WASTE MANIFEST
(Example)

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. / Manifest Document No.	2. Page 1 of
3. Generator's Name and Mailing Address	A. State Manifest Document Number
4. Generator's Phone ( )	B. State Generator's ID
5. Transporter 1 Company Name / 6. U.S. EPA ID Number	C. State Transporter's ID
	D. Transporter's Phone
7. Transporter 2 Company Name / 8. U.S. EPA ID Number	E. State Transporter's ID
	F. Transporter's Phone
9. Designated Facility Name and Site Address / 10. U.S. EPA ID Number	G. State Facility's ID
	H. Facility's Phone

Information in the shaded areas is not required by Federal law, but is by State law.

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a.					
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

a. ___-___-___ c. ___-___-___

b. ___-___-___ d. ___-___-___

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Public reporting burden for the collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 15 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St, S.W., Washington, D.C. 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

a. ___ lbs. c. ___ lbs.

b. ___ lbs. d. ___ lbs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name	Signature	Month Day Year

EPA Form 8700 (Rev. 9/88) Previous Editions are Obsolete [DHEC 1988 (Rev. 5/89)]

STATE OF SOUTH CAROLINA INSTRUCTIONS FOR UNIFORM HAZARDOUS WASTE MANIFEST
These Instructions Must Accompany Each "Original" Manifest

IMPORTANT: TYPE [on a 12-pitch (elite) typewriter] OR USE FIRM POINT PEN - PRESS DOWN HARD ALL COPIES MUST BE LEGIBLE!

GENERAL INFORMATION: Federal Regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, or disposal facilities to use the U.S. EPA Form 8700-22 Rev. 9/88 [DHEC 1988(REV 5/89)] and, if necessary, the continuation sheet U.S. EPA Form 8700-22A Rev. 9/88 (DHEC 1988A) (REV. 5/89) for both inter-state and intra-state transportation. Transporters who transport hazardous waste into the United States from another country are responsible for completing the manifest. Federal and State regulations also require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, or disposal facilities to complete the following information.

GENERATOR SECTION

1. Generator's U.S. EPA ID Number - Manifest Document Number: Enter the generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this manifest by the generator beginning with 00001. If your company does not have a U.S. EPA Identification Number, please contact S.C. DHEC at (803) 734-5200 about obtaining an identification number.
2. Page 1 of: Enter the total number of pages used to complete this manifest, i.e., the first page EPA Form 8700-22 Rev. 9/88 [DHEC 1988 (REV 5/89)] plus the number of continuation sheets EPA Form 8700-22 Rev. 9/88A (DHEC 1988A) (REV. 5/89) if any.

A. State Manifest Document Number: Leave blank.
B. State Generator Identification Number: Leave blank.

3. Generator's Name and Mailing Address: Enter the name and mailing address of the generator who will manage the returned manifest forms.
4. Generator's Phone Number: Enter a telephone number with area code where an authorized agent of the generator can be reached in the event of an emergency including nights, weekends, and holidays.
5. Transport 1 Company Name: Enter the company name of the first transporter who will transport the waste.
6. U.S. EPA ID Number: Enter the U.S. EPA twelve digit identification number of the first transporter identified in item 5.

C. State Transporter's ID Number: Leave blank.

D. Transporter's Phone Number: Enter a telephone number including area code where an authorized agent of the first transporter can be reached in the event of an emergency including nights, weekends, and holidays.

7. Transporter 2 Company Name: If applicable, enter the company name of the second transporter who will transport the waste. If more than 2 transporters will be used, use a U.S. EPA Form 8700-22A Rev. 9/88 (DHEC1988A) (REV. 5/89) continuation sheet and list the transporters in the order they will be transporting the waste.
8. U.S. EPA ID Number: If applicable, enter the U.S. EPA twelve digit ID number of the second transporter identified in item 7.

E. State Transporter's ID Number: Leave blank.

F. Transporter's Phone Number: Enter a telephone number including area code where an authorized agent of the second transporter can be reached in the event of an emergency including nights, weekends, and holidays.

9. Designated Facility Name and Site Address: Enter the company name and site address of the treatment, storage, or disposal facility designated to receive the waste listed on this manifest. The address must be the site address, which may differ from the mailing address.
10. U.S. EPA ID Number: Enter the U.S. EPA twelve digit identification number of the designated treatment, storage, or disposal facility identified in item 9.

G. State Facility's ID Number: Leave blank.

H. Facility's Phone Number: Enter a telephone number including area code where an authorized agent of the facility can be reached in the event of an emergency including nights, weekends, and holidays.

11. U.S. DOT Descriptions: Enter proper shipping name, hazard class and ID Number (UN/NA) for each waste as identified in 49 CFR 171-177. If additional space is needed, use a U.S. EPA Form 8700-22A Rev. 9/88 (DHEC 1988A) (REV. 5/89) Continuation Sheet.
12. Containers (no. and type): Enter number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of containers.

TABLE I

DM = Metal drums, barrels, kegs	TT = Cargo tanks (tank trucks)	CM = Metal boxes, cartons, cases, roll offs
DW = Wooden drums, barrels, kegs	TC = Tank cars	CW = Wooden boxes, cartons, cases
DF = Fiberboard or plastic drums, barrels, kegs	DT = Dump truck	CF = Fiber or plastic boxes, cartons, cases
TP = Tanks portable	CY = Cylinders	BA = Burlap, cloth, paper or plastic bags

13. Total Quantity: Enter total quantity of waste described on each line, relative to the units used in item 14.
14. Unit (weight/volume): Enter the appropriate abbreviations from Table II (below) for the unit of measure:

Table II

P = Pounds L = Liters K = Kilograms T = Tons M = Metric Tons N = Cubic Meters Y = Cubic Yards G = Gallons (liquid only)

I. Waste Number: Enter hazardous waste numbers as specified in South Carolina Hazardous Waste Management Regulation R.61-79.261 Subparts C and D to identify the hazardous waste on each line.

J. Additional Descriptions for Materials Listed Above: In the spaces provided, enter the authorization number (from the S.C. DHEC Authorization Request Form) for each waste stream listed in section 11 above. Note: Before any hazardous waste can be accepted for treatment, storage or disposal in South Carolina, the generator must obtain prior authorization from the treatment, storage or disposal facility.

K. Handling Codes for Wastes Listed Above: Leave blank.

15 Special Handling Instructions and Additional Information: Generators may use this space to indicate special transportation, treatment, storage or disposal information or Bill of Lading information. For international shipments, generators must enter in this space the point of departure (city and state) for those shipments destined for treatment, storage, or disposal outside the jurisdiction of the United States.

16 Generator Certification: The generator must READ, SIGN (BY HAND IN INK), and DATE the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water, or air) inserted in the space below. If another mode in addition to the highway mode is used, enter the appropriate additional mode (e.g., and rail) in the space below.

TRANSPORTER SECTION

17 Transporter 1 Acknowledgement: Enter the name of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the manifest by signing (BY HAND IN INK) and entering the DATE of receipt.

18. Transporter 2 Acknowledgement: Enter, if applicable, the name of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the manifest by SIGNING (BY HAND IN INK) and entering the DATE of receipt.

FACILITY SECTION

19. Discrepancy Indication Space: The authorized representative of the designated facility's owner or operator must note in this space any discrepancy between the waste described on the manifest and the waste actually received at the facility. Owners and operators of facilities who cannot resolve significant discrepancies within 15 days receiving the waste must submit to the Department a letter with a copy of the manifest describing the discrepancy and attempts to reconcile it. The treatment, storage, or disposal facility must enter the actual weight of waste in pounds in the spaces provided if the amount varies any from that specified by the generator in item 13 or if the generator uses a unit of measure other than pounds.
20. Facility Owner or Operator Certification: Print or type the name of the person accepting the waste on behalf of the owner or operator of the facility. That person must acknowledge acceptance of the waste described on the manifest by SIGNING (BY HAND IN INK) and entering the DATE of receipt.

IF ASSISTANCE IS NEEDED IN COMPLETION OF THIS MANIFEST, CONTACT THE TREATMENT, STORAGE, OR DISPOSAL FACILITY DESIGNATED TO RECEIVE THE WASTE OR THE S.C. DHEC MANIFEST SECTION AT (803) 734-5200 WEEKDAYS FROM 8:00 am TO 5:00 pm.

REPUBLIC ENVIRONMENTAL SYSTEMS

Page 1 of ____

LAND DISPOSAL RESTRICTION NOTIFICATION CERTIFICATION FORM

Generator Name:_____ Generator EPA ID Number:_____

Manifest Number:_____

The purpose of this form is to provide appropriate notification/certification, in accordance with the Land Disposal Restriction regulations set forth in 40 CFR Part 268, to the treatment, storage or disposal facility which receives the wastes referenced below. In accordance with the waste analysis and recordkeeping requirements specified in 40 CFR 268.7, I have indicated below the relevant information required to properly manage my waste(s) in compliance with the Land Disposal Restriction treatment standards found in 40 CFR 268 and any applicable prohibition levels set forth in 40 CFR 268.32 or RCRA section 3004(d).

Approval/Lab Code	Manifest Line # (e.g., Hpa, Hlab)	W W W	N W W	List the EPA Waste Codes, Subcategories and/or Constituent(s) of Concern	UHCs* (Y or N)	Classification Group

W.W. - Wastewater N.W.W. - Non-Wastewater

* The Underlying Hazardous Constituents (UHCs) must be identified for waste streams with the EPA Waste Codes F001-F005, F039, D001 (not treated by CMBST or RORGS), D002, D012-D043 (if treated in non-CWA, non-CWA equivalent or non-SDWA facilities). Please complete and attach an Underlying Hazardous Constituents Table sheet (photocopy as necessary) for each affected Approval/Lab Code.

Classification Groups

A. Restricted wastes which require treatment.

B. Restricted wastes already treated to meet LDR Treatment Standards.

C. Restricted wastes treated with a Specified Technology.

D. Restricted wastes that meet LDR Treatment Standards without prior treatment.

E. Restricted wastes subject to an Exemption or Variance.

F. Hazardous debris subject to Alternative Treatment Standards in 40 CFR 268.45 (List Contaminants).

G. Hazardous debris subject to Treatment Standards in 40 CFR 268.40.

H. Lab Pack wastes subject to Alternative Treatment Standards under 40 CFR 268.42(c).

I. Wastes already treated to remove hazardous characteristic(s) but require further treatment for underlying hazardous constituents (list constituents).

The following certification statements correspond to the Classification Groups as specified below:

Classification Group B: "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d) without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

Classification Group C: "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

Classification Group D: "I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D of all applicable prohibits set forth in 40 CFR 268.32 or RCRA section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

Classification Group H: "I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only wastes which have not been excluded under appendix IV to 40 CFR part 268 or acid wastes not subject to regulation under 40 CFR part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

Classification Group I: "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

I hereby certify that I believe that the information I submitted herein is true, accurate and complete.

Signature:_____ Title: _____ Date: _____

Republic Environmental Systems, Inc. DCN 01-330-PD1 (Rev. 0 12/96)

LAND DISPOSAL RESTRICTION NOTIFICATION CERTIFICATION FORM
(Example)

INSTRUCTIONS FOR COMPLETION

This form has been developed to comply with the revised notification/certification requirements specified in 40 CFR 268.7 which were amended on September 18, 1994 as a result of the Phase II Land Disposal Restrictions Rule.

Please follow the steps listed below to complete this form.

1. This form will be Page 1 of 1 except when a waste(s) requires the identification of underlying hazardous constituents (UHCs) and a UHC form(s) are included as attachments to the original LDR form.

2. Complete the Generator's name and EPA ID Number as it appears on the manifest.

3. Enter the State Manifest Document Number associated with the wastes identified on the form (NOTE: A separate LDR form must be used for each manifest). If no state number is assigned then use the 5 digit Manifest Document number in box 1 of the manifest.

4. List the approval/lab code for each waste stream identified on the form.

5. Identify the manifest line item number (e.g., 11(a), 11(b), etc.) that corresponds to each waste stream.

6. Place a check mark in the appropriate box to indicate whether the waste stream is a Wastewater (i.e., the waste contains less than 1% Total Organic Carbon (TOC) *and* less than 1% Total Suspended Solids (TSS) - see 268.2) or a Non Wastewater (i.e., wastes which contain >1% TOC *or* >1% TSS).

7. Identify all of the appropriate subcategories that apply to the waste stream.

8. The Underlying Hazardous Constituents (UHCs) must be identified for waste streams with any of the following codes:

   F001-F005
   F039
   D001 (except if treated by CMBST or RORGS)
   D002
   D012-D043
   (NOTE: D001, D002 and D012-D043 that are managed in CWA, CWA equivalent or a SWDA unit are not subject to the UHC requirements).

   The UHCs identified must be those *reasonably expected* to be present in the waste at the point of generation. This determination may be made through either direct testing or analysis or through the generator's knowledge of his waste process. The UHCs may be identified directly on the LDR form in the box with the waste codes or you may attach a copy of the UHC Table (this Table corresponds to the Universal Treatment Standards Table in 268.48) to the LDR form. The UHC Table sheet must be completed by: 1) numbering the page as appropriate; 2) providing the lab code and manifest number corresponding to the waste; and 3) marking the applicable UHCs from the Table or, when no UHCs are present, mark the box indicating no UHCs at the top of the form.

9. Place a letter corresponding to the appropriate Classification Group (as listed on the front of the form) that accurately reflects the required notification/certification for each waste stream or Approval/Lab Code.

Special Note for Lab Packs

Lab packs which do not qualify under the provisions of 40 CFR 268.42(c), Appendix IV to 40 CFR 268, must list all waste codes, subcategories and UHCs for each container identified.

Special Note for Hazardous Debris

Debris waste streams should be identified as destined for treatment and disposal using either the treatment standard specified for the wastes contained in the debris (i.e., those listed in 40 CFR 268.40), Group "G"; or using the alternative treatment standards identified in 40 CFR 268.45, Group "F". If the alternative standards are specified please include a list of the contaminants that must be addressed.

LAND DISPOSAL RESTRICTION NOTIFICATION CERTIFICATION FORM
(Example)

UNDERLYING HAZARDOUS CONSTITUENTS TABLE Page __of __

Lab Code:_____ Manifest No:_____

For F001-F005, F039, D001, D002 & D012-D043 Waste Streams

Please identify those constituents which are reasonably expected to be present in the waste referenced above.

☐ Check if none of the Underlying Hazardous Constituents (UHCs) are present in this waste.

(√)	Constituents
	Acenaphthylene
	Acenaphthene
	Acetone
	Acetonitrile
	Acetophenone
	2-acetylaminofluorene
	Acrolein
	Acrylamide
	Acrylonitrile
	Aldrin
	4-Aminobiphenyl
	Aniline
	Anthracene
	Arsenic
	alpha-BHC
	beta-BHC
	delta-BHC
	gamma-BHC
	Benzene
	Benz(a)anthracene
	Benzal Chloride
	Benzo(b)fluoranthene
	Benzo(k)fluoranthene
	Benzo(g,h,i)perylene
	Benzo(a)pyrene
	Bromodichloromethane
	Bromomethane (methyl bromide)
	4-Bromophenyl phenyl ether
	n-Butyl alcohol
	Butyl benzyl phthalate
	2-sec-butyl-4,6-dinitrophenol(Dinoseb)
	Carbon disulfide
	Carbon tetrachloride
	Chlordane (alpha & gamma isomers)
	p-Chloroaniline
	Chlorobenzene
	Chlorobenzilate
	2-Chloro-1,3-butadiene
	Chlorodibromomethane
	Chloroethane
	bis(2-chloroethoxy)methane
	bis(2-chloroethyl)ether
	Chloroform
	bis(2-chloroisopropyl)ether
	p-Chloro-m-cresol
	2-Chloroethyl vinyl ether
	Chloromethane (methyl chloride)
	2-Chloronaphthalene
	2-Chlorophenol
	3-Chloropropylene
	Chrysene
	o-Cresol
	m-Cresol
	p-Cresol
	Cyclohexanone
	1,2-Dibromo-3-chloropropane
	1,2-Dibromoethane (ethylene dibromide)
	Dibromomethane

(√)	Constituents
	2,4-D (2,4-Dichlorophenoxyacetic acid)
	o,p-DDD
	p,p-DDD
	o,p-DDE
	p,p-DDE
	o,p-DDT
	p,p-DDT
	Dibenz(a,h)anthracene
	Dibenz(a,e)pyrene
	m-Dichlorobenzene
	o-Dichlorobenzene
	p-Dichlorobenzene
	Dichlorodifluoromethane
	1,1-Dichloroethane
	1,2-Dichloroethane
	1,1-Dichloroethylene
	trans-1,2 Dichloroethene (1-Dichloroethylene)
	2,4-Dichlorophenol
	2,6-Dichlorophenol
	1,2-Dichloropropane
	cis-1,3-Dichloropropene
	trans-1,3 Dichloropropene
	Dieldrin
	Diethyl phthalate
	2,4-Dimethyl phenol
	Dimethyl phthalate
	Di-n-butyl phthalate
	1,4-Dinitrobenzene
	4,6-Dinitro-o-cresol
	2,4-Dinitrophenol
	2,4-Dinitrotoluene
	2,6-Dinitrotoluene
	Di-n-octyl phthlate
	p-Dimethylaminoazobenzene
	Di-n-propylnitrosamine
	1,4-Dioxane
	Diphenylamine
	Diphenylnitrosamine
	1,2-Diphenylhydrazine
	Disulfoton
	Endosulfan I
	Endosulfan II
	Endosulfan sulfate
	Endrin
	Endrin aldehyde
	Ethyl acetate
	Ethyl cyanide
	Ethyl benzene
	Ethyl ether
	bis-(2-ethylhexyl) phthalate
	Ethyl methacrylate
	Ethylene oxide
	Famphur
	Fluoranthene
	Fluorene
	Heptachlor
	Heptachlor epoxide
	Hexachlorobenzene

(√)	Constituents
	Hexachlorobutadiene
	Hexachlorocyclopentadiene
	Hexachlorodibenzo-p-dioxins
	Hexachlorodibenzo-furans
	Hexachloroethane
	Hexachloropropene
	Indeno(1,2,3,c,d) pyrene
	Iodomethane
	Isobutanol (isobutyl alcohol)
	Isodrin
	Isosafrole
	Kepone
	Methacrylonitrile
	Methanol
	Methapyrilene
	Methoxychlor
	3-Methylcholanthrene
	4,4 Methylene bis(2 chloroaniline)
	Methylene chloride
	Methyl ethyl ketone
	Methyl isobutyl ketone
	Methyl methacrylate
	Methyl methanesulfonate
	Methyl parathion
	Naphthalene
	2-Naphthylamine
	o-Nitroaniline
	p-Nitroaniline
	Nitrobenzene
	5-Nitro-o-toluidine
	o-Nitrophenol
	p-Nitrophenol
	N-Nitrosodiethylamine
	N-Nitrosodimethylamine
	N-Nitroso-di-n-butylamine
	N-Nitrosomethylethylamine
	N-Nitrosomorpholine
	N-Nitrosopiperidine
	N-Nitrosopyrrolidine
	Parathion
	PCBs (total)
	Pentachlorobenzene
	Pentachlorodibenzo-p-dioxins
	Pentachlorodibenzo-furans
	Pentachloroethane
	Pentachloronitrobenzene
	Pentachlorophenol
	Phenacetin
	Phenanthrene
	Phenol
	Pherate
	Phthalic acid
	Phthalic Anhydride
	Prenamide
	Pyrene
	Pyridine
	Safrole
	Silvex(2,4,5-TP)

(√)	Constituents
	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
	1,2,4,5-Tetrachlorobenzene
	Tetrachlorodibenzo-p-dioxins
	Tetrachlorodibenzo-furans
	1,1,1,2 Tetrachloroethane
	1,1,2,2 Tetrachloroethane
	Tetrachloroethene (Tetrachloroethylene)
	2,3,4,6-Tetrachlorophenol
	Toluene
	Toxaphene
	Bromoform (Tribromomethane)
	1,2,4-Trichlorobenzene
	1,1,1-Trichloroethane
	1,1,2-Trichloroethane
	Trichloroethylene
	Trichloromonofluoromethane
	2,4,5-Trichlorophenol
	2,4,6-Trichlorophenol
	1,2,3-Trichloropropane
	1,1,2-Trichloro-1,2,2-trifluoroethane
	tris(2,3-Dibromopropyl) phosphate
	Vinyl chloride
	Xylene(s)

INORGANIC CONSTITUENTS

	Antimony
	Arsenic
	Barium
	Beryllium
	Cadmium
	Chromium (total)
	Cyanides (total)
	Fluoride
	Lead
	Mercury
	Nickel
	Selenium
	Silver
	Sulfide
	Thallium
	Vanadium
	Zinc (not an UHC for characteristic wastes)

PRE SOLVENT WASTES ONLY

	2-Nitropropane
	2-Ethoxyethanol

*Please use photocopies of this form to identify the UHCs for each lab code as appropriate.

HNP HAZARDOUS WASTE CONTACTS

MAIN CONTROL ROOM
WORK PHONE: 919-362-2156
FAX: 919-362-2999

ADDRESS: HARRIS NUCLEAR PLANT
P.O. BOX 165
5413 Shearon Harris Road
New Hill, NC 27562

INITIAL EMERGENCY COORDINATOR (40CFR265.55)

HAZARDOUS WASTE COORDINATOR
EMERGENCY COORDINATOR (40CFR265.55)

PRIMARY:	BOB WILSON	WORK:	362-2444
		HOME:	552-6592
		PAGER:	510-1010
	Address:	103 Rocktree Court Fuquay-Varina, NC 27526	
ALTERNATE:	DALE TYSINGER	WORK:	362-2151
		HOME:	552-7995
		PAGER:	982-7382
	Address:	3408 Airpark Road Fuquay-Varina, NC 27526	

ON-CALL CHEMISTRY SUPERVISOR PAGER:
Per plant duty roster

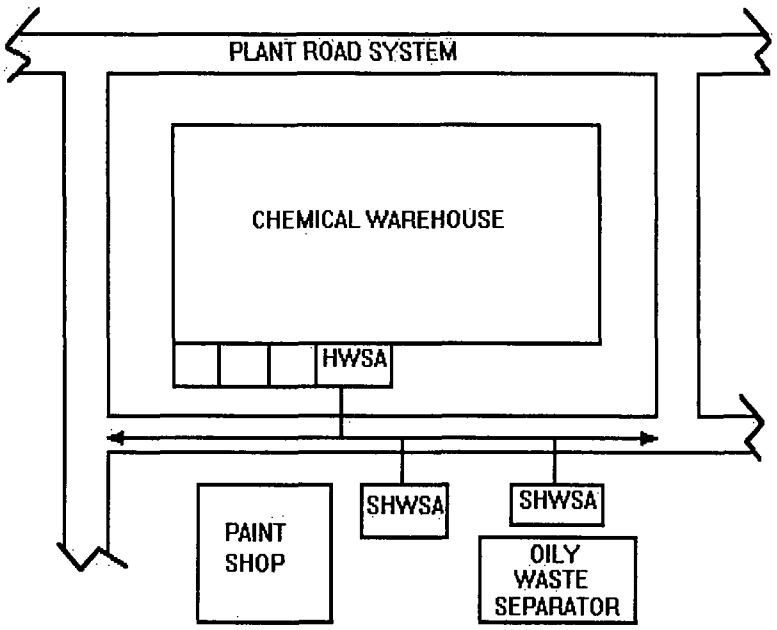
HAZMAT TEAMS

PRIMARY: **Spill clean-up Contractor**
Shamrock Environmental
800-881-1098

ALTERNATE: WAKE COUNTY
911

HNP HAZARDOUS WASTE AREA EVACUATION ROUTES
Figure 1

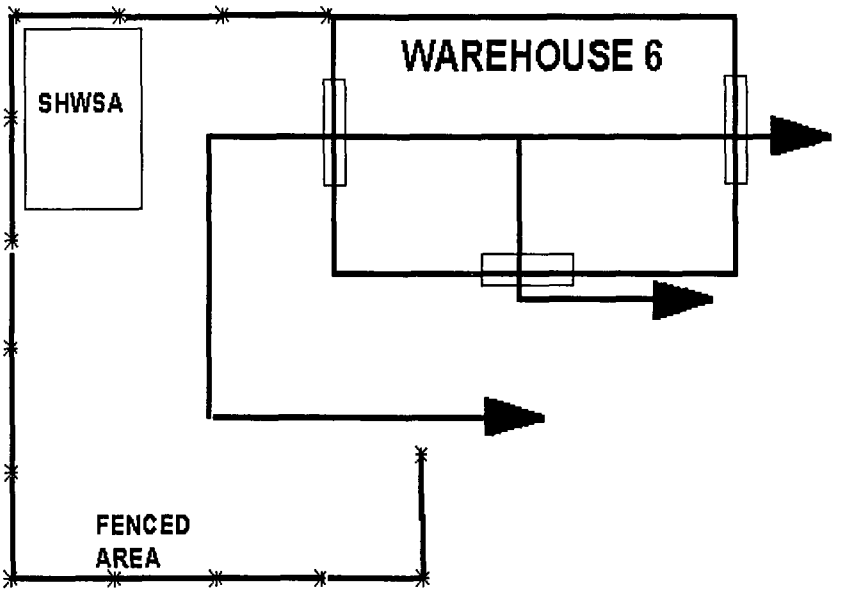
EVACUATION ROUTE FOR THE HAZARDOUS WASTE STORAGE AREA
AND THE PAINT SHOP SATELLITE HAZARDOUS WASTE STORAGE AREA



HNP HAZARDOUS WASTE AREA EVACUATION ROUTE

Figure 2

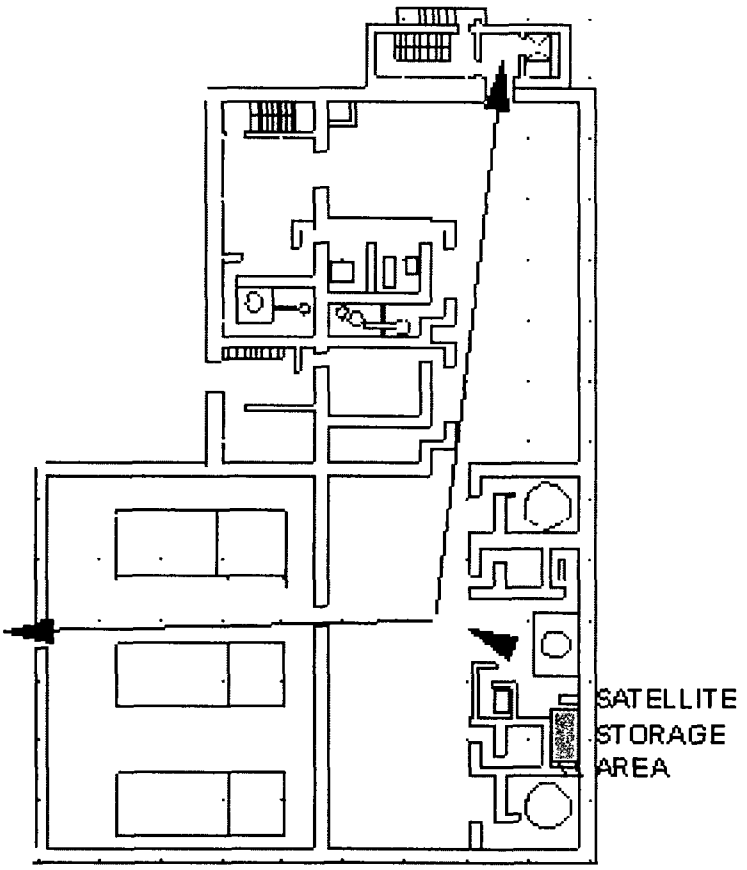
EVACUATION ROUTES FOR THE WAREHOUSE 6 PAINT SHOP SATELLITE HAZARDOUS WASTE STORAGE AREA



HNP HAZARDOUS WASTE AREA EVACUATION ROUTE

Figure 3

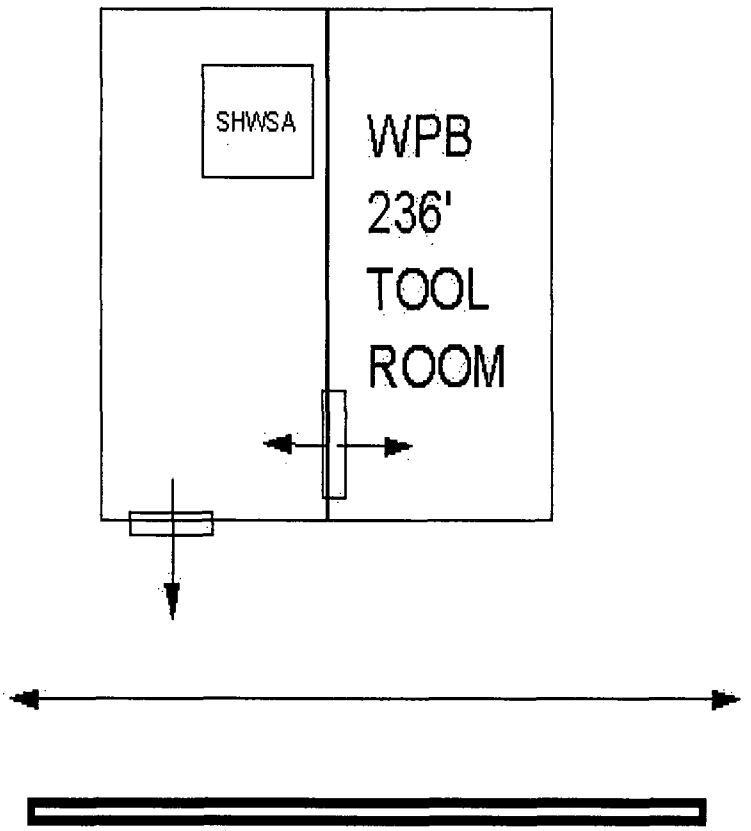
EVACUATION ROUTE FOR THE WASTE PROCESSING BUILDING 291 SATELLITE HAZARDOUS WASTE STORAGE AREA



HNP HAZARDOUS WASTE AREA EVACUATION ROUTE

Figure 4

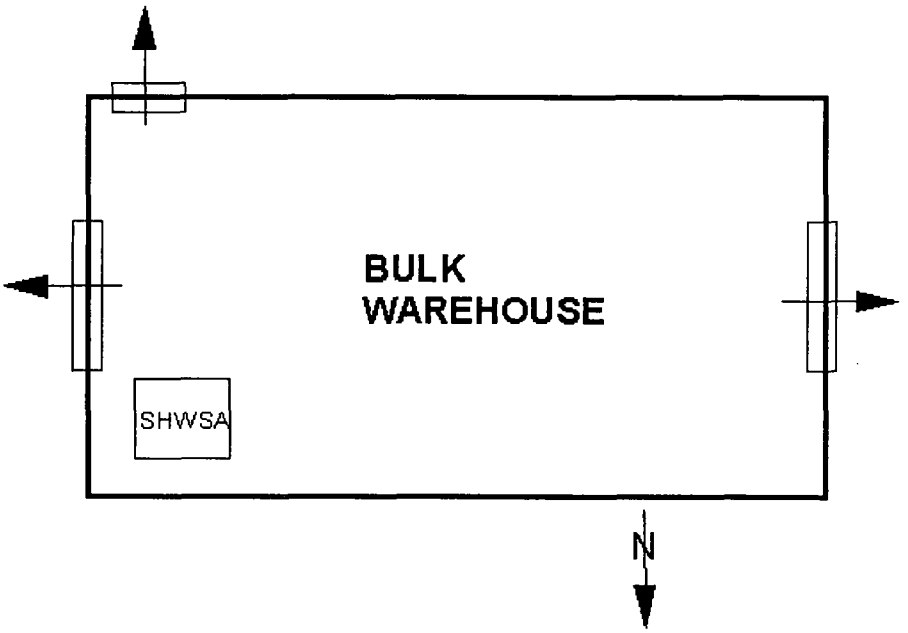
EVACUATION ROUTE FOR THE WASTE PROCESSING BUILDING SATELLITE 236'
HAZARDOUS WASTE STORAGE AREA



HNP HAZARDOUS WASTE AREA EVACUATION ROUTE

Figure 5

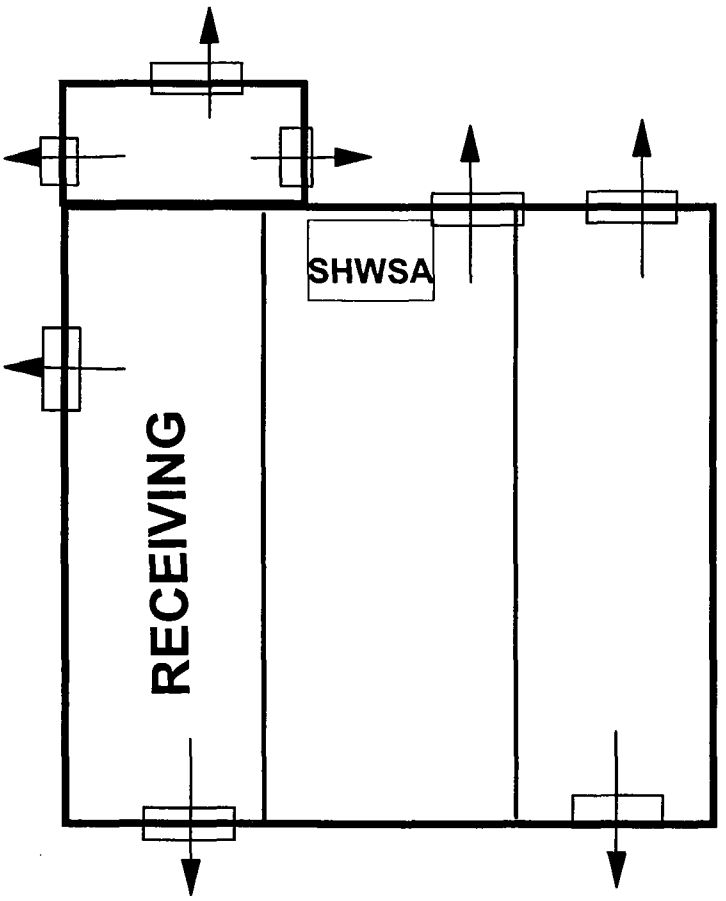
EVACUATION ROUTE FOR THE BULK
HAZARDOUS WASTE STORAGE AREA



HNP HAZARDOUS WASTE AREA EVACUATION ROUTE

Figure 6

EVACUATION ROUTE FOR THE RECEIVING BUILDING
HAZARDOUS WASTE STORAGE AREA



REVISION SUMMARY

Revision 10

Processed as PRR 129618

Page	Change
All	Updated footer Routine format upgrade
1	Changed Logo to Progress Energy Changed SHNPP to HNP Revised title to read Hazardous Waste Management
2	Created automatic Table of Contents (update by pressing F9 key and selecting, "update entire table")
3	References ▪ added reference to TRN-NGGC-011 ▪ changed from EVC-CPL-16 to EVC-SUBS-00016 ▪ added references EVC-SUBS-00023 and EVC-SUBS-00025 ▪ Changed order of references
5	3.2 - Added abbreviations for Large Quantity Generator, Small Quantity Generator and M&CS 3.2 – changed MSC from Garner Materials Service Center to Materials Service Center 3.2 – changed all abbreviations to alphabetic order 4.2 – Added 40CFR279 to title "Used Oil"
6	4.3 – Added 40CFR261 to title "Waste Solvents and Paints" 4.4 – Deleted reference to EPA regulations since NRC now has regulatory authority on mixed waste 5.1.3 – Renamed from Material Control to Material & Contract Services
7	5.1.5, Licensing / Regulatory Programs ▪ 5.1.5.1 - Changed from "Distribute copies of the Hazardous Waste Contingency Plan to local fire departments, hospitals, and government agencies (40CFR265.53)" to "Assist in the preparation of regulatory required documents" and "Distribute copies of regulatory documents." ▪ 5.1.5.2 – Changed "Distribute the Annual Hazardous Waste Report" 5.1.6.6 – Deleted "Maintain the HNP Hazardous Waste Contingency Plan (40CFR265). 5.1.6.7 – Changed wording from "Act as the emergency coordinator during implementation of the contingency plan" to "Act as the emergency coordinator during a hazardous waste emergency."
8	Deleted section 5.1.8, [Responsibilities of the] Hazardous Waste Response Team Renumbered subsequent sections 5.1.9 - Changed section title from "Garner Materials Service Center" to "Progress Energy Hazardous Waste Materials Contract Coordinator" 5.1.10 – Changed section title to HNP Engineering 5.1.11 – Reworded to reflect deletion of Hazardous Waste Contingency Plan
9	5.2.1 Changed from Garner Materials Service Center to Materials Service Center 5.2.1 – Changed from CP&L to Progress Energy 5.2.1.3 – Added "Other items may be sold directly to other vendors directly by HNP M&CS."
11	5.2.4 – sixth button – Added "batteries, mercury switches and computer components possessed by the Universal Waste Rules."
12	5.2.6.1.b – Deleted "Empty aerosol cans should be punctured using the can punch..."
13	5.2.6.3.b – Changed from "...hazardous waste shall be shipped...within 90 days..." to "...180 days..."
14	5.2.7.2 – Added Hazardous Waste Contractor as contact for information.

15-16	Added "R" for regulatory requirement for steps 5.2.7.3, 5.2.7.4 and 5.2.7.5 5.2.7.3 – Enhanced wording to reflect "...a trained (EPA and DOT representative for the generator must sign the manifest." 5.2.8 – Enhanced wording for clarification 5.2.9 – enhanced wording "Approved ARFs must be maintained for at least five years by HNP." 5.2.10 – deleted reference to CP&L Environmental Guidance Document – Added reference to EVC-SUBS-00018 5.2.11.1 – deleted "Having duties specified in the Contingency Plan" 5.2.11 – changed Material Control to Material and Contract Services
17	5.1.13 – Deleted "Site Hazardous Waste Contingency Plan" – renumbered subsequent sections 5.2.14 – Deleted "Reports and Record Keeping – Biannual Reports. Added "Waste Minimization Reports are required by NCDENR when the annual hazard waste fees are invoiced and paid.
18	5.2.14.2.c – Deleted "For business purposes, all manifests are being retained for the life of the plant". 5.2.14.4.b – enhanced wording "Record retention is required for at least three years...".
19	6.0 – Revised titles of attachments to reflect some new titles
20	Attachment 1 – converted scanned document to MicroSoft compatible flowchart
21	Attachment 2 – converted scanned Hazardous Waste Label" to Microsoft compatible drawing
22	Attachment 3 – converted scanned "typical drum labeling and marking" drawing to Microsoft compatible drawing
28	Deleted Attachment 6 – Hazardous Waste Contingency Plan – It is not required for a small quantity generator.
38	Converted Attachment 1 (Org Chart) from Hazardous Waste Contingency Plan to new Attachment 6 titled HNP Hazardous Waste Contacts – updated pager number for alternate Hazardous Waste Coordinator
39	Converted Rev. 9 Attachment 6 Figures 1 – 6 to Rev 10 Attachment 7 titled HNP Hazardous Waste Area Evacuation Routes.
	Updated Revision Summary

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 12

Document title

DOT Hazardous Materials Certificate of Registration

Document number

EVC-SUBS-00100

Applies to: Progress Energy Carolinas, Inc.; Progress Energy Florida, Inc.; Progress Energy Service Company, LLC ; Progress Energy Ventures, Inc. (CCO Merchant Fleet only)

Keywords: environmental; environmental compliance manual – common

TABLE OF CONTENTS

1.0 PROGRESS ENERGY CAROLINAS, INC.

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2006-2007

Registrant: PROGRESS ENERGY CAROLINAS, INC.
Attn: VICTORIA K. WILL
410 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

Reg. No: 053106 550 013O **Issued: 6/1/2006** **Expires: 6/30/2007**

Record Keeping Requirements for the Registration Program

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

(1) A copy of the registration statement filed with PHMSA; and
(2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, PHH-60, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 400 Seventh Street SW, Washington, DC 20590, telephone (202) 366-4109.

2.0 PROGRESS ENERGY FLORIDA, INC.

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2006-2007

Registrant: PROGRESS ENERGY FLORIDA, INC.
Attn: VICTORIA K. WILL
100 CENTRAL AV. CX 1B
ST PETERSBURG, FL 33701

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

Reg. No: 053106 550 014O **Issued: 05/31/2006** **Expires: 06/30/2007**

Record Keeping Requirements for the Registration Program

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

(1) A copy of the registration statement filed with PHMSA; and
(2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, DHM-60, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590, telephone (202) 366-4109.

3.0 PROGRESS ENERGY SERVICE COMPANY, L.L.C.

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2006-2007

Registrant: PROGRESS ENERGY SERVICE COMPANY, L.L.C.
Attn: REBECCA LEE
1406 MECHANICAL BLVD.
GARNER, NC 27529-2539

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

Reg. No: 060606 550 005O **Issued: 06/06/2006** **Expires: 06/30/2007**

Record Keeping Requirements for the Registration Program

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

(1) A copy of the registration statement filed with PHMSA; and
(2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, PHH-62, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590, telephone (202) 366-4109.

4.0 PROGRESS ENERGY VENTURES, INC.

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2006-2007

Registrant: ROWAN COUNTY POWER LLC
Attn: LAWRENCE P. SMALL
5755 HIGHWAY 801
SALISBURY, NC 28147

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

Reg. No: 062106 553 080O **Issued: 06/21/2006** **Expires: 06/30/2007**

Record Keeping Requirements for the Registration Program

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

(1) A copy of the registration statement filed with PHMSA; and
(2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, PHH-62, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590, telephone (202) 366-4109.

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2006-2007

Registrant: EFFINGHAM COUNTY POWER, LLC.
Attn: MATTHEW LYDON
3440 MCCALL ROAD
RINCON, GA 31326

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

Reg. No: 062706 552 096O **Issued: 06/27/2006** **Expires: 06/30/2007**

Record Keeping Requirements for the Registration Program

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

(1) A copy of the registration statement filed with PHMSA; and
(2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, PHH-62, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590, telephone (202) 366-4109.

Progress Energy

FEB 2 3 2007

SERIAL: HNP-07-025

N. C. Emergency Response Commission
ATTN: Tier II Coordinator
4701 Mail Service Center
Raleigh, NC 27699-4701

Subject: Progress Energy Carolinas, Inc.
Harris Nuclear Plant - 2006 Chemical Inventory Reports

Ladies and Gentlemen:

Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., is submitting the enclosed attachments to meet the specific federal and state chemical and hazardous material inventory reporting requirements described below:

- Attachment 1: EPCRA Section 311 Chemical List (40CFR302).

- Attachment 2: The format of the 2006 SARA Tier II Emergency and Hazardous Chemical Inventory (40CFR370) has changed utilizing the Wake County Local Emergency Planning Committee's SARA Tier II database.

  N.C. Right-to-Know Chemical Inventory (N.C. General Statute 95-194) has been included in the Tier II report at Wake County's request. This report is also being provided to the Apex and Holly Springs Fire Departments.

Omitted from these lists are ammunition and special devices necessary for the security of the Harris Plant. The information on these types of materials and quantities is considered "Safeguards Information" under Title 10, Section 73.21 of the Code of Federal Regulations. Should a response be required by your department to an area containing materials described herein, your personnel would be under the escort of Security Officers who are knowledgeable of the storage location.

Also, we are requesting that the attached information only be distributed to organizations and personnel on a "Need to Know" basis.

If you have any questions or comments regarding this information, please contact Mr. R. T. Wilson at (919) 362-2444.

Sincerely,

Eric McCartney
Plant General Manager
Harris Nuclear Plant

EM/mgw

Attachments

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O. Box 165
New Hill, NC 27562

c: Chief, Apex Fire Department
P.O. Box 250, Apex, NC 27502

Holly Springs Fire and Rescue
700 Flint Point Lane, Holly Springs, NC 27540

Mr. Martin Chriscoe, Wake County Emergency Management
P.O. Box 550, Raleigh, NC 27602

N. C. Emergency Response Commission
SERIAL: HNP-07-025

bc: Ms. D. B. Alexander
Mr. J. R. Toepfer
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

ATTACHMENT 1

EPCRA Section 311 Chemical List

PROGRESS ENERGY CAROLINAS, INC.
Harris Nuclear Plant
5413 Shearon Harris Road
New Hill, North Carolina 27562

Section 311 Chemical List

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Sulfuric Acid, 93%	7664-93-9
Sodium Hydroxide, 25%	1310-73-2
Sodium Hydroxide, 30%	1310-73-2
Sodium Hydroxide, 50%	1310-73-2
Welding Rods	7439-84-6 7440-47-3 7440-21-3 7440-50-8 6834-92-0 1317-65-3 13463-67-7 7439-96-5 7440-02-0 7439-98-7 1312-76-1 7784-75-5 7440-67-2
Unleaded Gasoline	8006-61-9
Boric Acid	10043-35-3
No. 2 Fuel Oil	68476-30-2 91-20-3
Hydrazine, 35% Solution	302-01-2
Sodium Hypochlorite, 5-15% Solution	7681-52-9
Nitrogen	7727-37-9
Ammonium Hydroxide, 25-30% Solution	1336-21-6

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Dow HGR-W2-H Resin	69011-22-9
Dow SBR-C-OH Resin	69011-18-3
Mobilgard 412 Oil	64742-54-7 64742-65-0 64742-56-9
Carbon Dioxide	124-38-9
Amberlite IRA-458	Mixture
Carbon	7440-44-0
Sand	14808-60-7
Garnet	1302-82-1
Amberlite IR-120 Resin	63182-08-1
Amberlite IRN-150 Resin	39389-20-3 9017-79-2
Sulfuric Acid in Stationary Batteries	7664-93-9
Lead in Stationary Batteries	7439-92-1
Ammonium Bisulfite (60-70%)	10192-30-0
Monoethanolamine, 70%	141-43-5
Mobilrad 797 Oil	8012-95-1
Creosote (in Treated Wood Products)	8001-58-9

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Polyurethane Coatings	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
GE Betz Inhibitor AZ8104	Mixture
GE Betz Depositrol PY5200	Mixture
Used Oil	Mixture
GE Betz Flogard MS6222	7664-38-2
GE Betz Flogard MS6208	7646-85-7
GE Betz Spectrus BD1500	Mixture
Rohm & Haas Amberjet 1500 Resin	39389-20-3
Rohm & Haas Amberjet 4400 Resin	9017-79-2
Propane	74-98-6
GE Betz Klaraid CDP 1301	10043-01-3
Argon	7440-37-1
Ionac NM-60SG Resin	Mixture
Potassium Permanganate	7722-64-7

Category 1 - Acute Health Hazard

Chemical Name	CAS# Hazardous Constituents
Citric Acid	77-92-9
GEBetz Spectrus DT1404	7631-90-5
GEBetz Hypersperse MDC700	Mixture
Rohm & Haas Amberjet 1600 (H) Resin	39389-20-3
Purolite NRW-160 (H) Macroporous Resin	69011-20-7
Purolite NRW-501P (OH) Macroporous Resin	69011-18-3
Bare Ground Performance Plus M De-Icer	50-21-5
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7 7791-18-6
Ambersep 900 -OH Resin	Mixture
Soltex DF-100	68855-24-3
GEBetz DCL 32 - Sodium Bisulfite	7631-90-5
Aluminum Oxide	100-00-5

Category 2 - Chronic Health Hazard

Chemical Name	CAS# Hazardous Constituents
Welding Rods	7439-84-6 7440-47-3 7440-21-3 7440-50-8 6834-92-0 1317-65-3 13463-67-7 7439-96-5 7440-02-0 7439-98-7 1312-76-1 7784-75-5 7440-67-2
GE Betz Inhibitor AZ8100	64665-57-2
Carbon	7440-44-0
Hydrazine, 35% Solution	302-01-2
GE Betz Klaraid CDP 1301	10043-01-3
Sand	14808-60-7
Garnet	1302-82-1
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7

Category 2 - Chronic Health Hazard

Chemical Name	CAS# Hazardous Constituents
Polyurethane Coating	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
Creosote (in Treated Wood Products)	8001-58-9
GE Betz Flogard MS6222	7664-38-2
GE Betz Flogard MS6208	7646-85-7
Lead in Stationary Batteries	7439-92-1

Category 3 - Fire Hazard

Chemical Name	CAS # Hazardous Constituents
Unleaded Gasoline	8006-61-9
No. 2 Fuel Oil	68476-30-2 91-20-3
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7
Polyurethane Coatings	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
Propane	74-98-6

Category 4 - Sudden Release of Pressure Hazard

Chemical Name	CAS # Hazardous Constituents
Nitrogen	7727-37-9
Carbon Dioxide	124-38-9
Propane	74-98-6
Argon	7440-37-1

Category 5 - Reactive Hazard

Chemical Name	CAS # Hazardous Constituents
None Known	

N. C. Emergency Response Commission
SERIAL: HNP-07-025

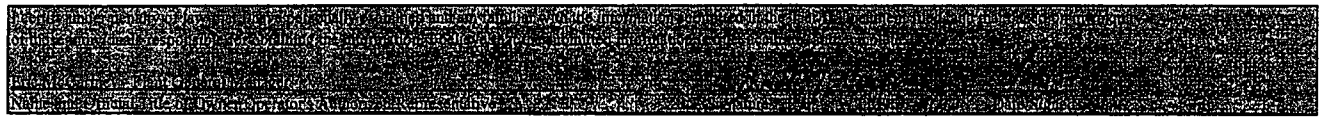
ATTACHMENT 2

SARA Tier II Emergency and Hazardous Chemical Inventory
and
N.C. Right-to-Know Chemical Inventory

Facility report filed by your company to the

SARA Title III Online Reporting System

This Reporting System has been approved by Wake County, North Carolina Local Emergency Planning Committee (LEPC) for Tier II submission for facilities located within Wake County.
This report was submitted to Wake County LEPC, Wake County Emergency Management, North Carolina State Emergency Response Commission, and the Local District Fire Department noted below and is accurate as of: 02/22/2007 04:20:07 PM.



FACILITY INFORMATION

Facility/Division: HARRIS NUCLEAR PLANT Physical Address: 5413 SHEARON HARRIS ROAD City/State/Zip: NEW HILL, NC 27562 County: WAKE Fire District: APEX FIRE DEPARTMENT	Owner/Operator: CAROLINA POWER & LIGHT D/B/A PROGRESS ENERGY CAROLINAS, INC. 5413 SHEARON HARRIS ROAD NEW HILL, NC 27562 919-362-8891
Emergency Contact 1: BOB WILSON, ENVIRONMENTAL COORDINATOR 919-362-2444/24-Hr. Phone: 919-362-2156	Emergency Contact 2: DALE TYSINGER , E & C TECHNICIAN I 919-362-2151/24-Hr. Phone: 919-362-2156

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2006

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
		Storage Codes/Location	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GEBETZ HYPERSPERSE MDC700	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, L	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ICE FOE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ICE FOE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 69011-20-7	Fire	03 Max. Daily Amount (code)	A
Chemical Name: NRW-160 (H) MACROPOROUS RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G	
CAS: 69011-20-7	Fire	03 Max. Daily Amount (code)	A
Chemical Name: NRW-160 (H) MACROPOROUS RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, J	
CAS: 69011-18-3	Fire	03 Max. Daily Amount (code)	A
Chemical Name: NRW-501P (OH) MACROPOROUS RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G	
CAS: 69011-18-3	Fire	03 Max. Daily Amount (code)	A
Chemical Name: NRW-501P (OH) MACROPOROUS RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, J	
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid, EHS	x Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G, L	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid, EHS	x Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		G, L	
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid, EHS	x Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B, C	
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid, EHS	x Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, C	
CAS: 7631-90-5	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GEBETZ SPECTRUS DT1404	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, L	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: HORNFLEX SEALANT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 75-45-6	Fire	02 Max. Daily Amount (code)	A
Chemical Name: FREON 22	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 2 4 Container/Pressure/Temp.	
		G	
CAS: 75-45-6	Fire	02 Max. Daily Amount (code)	A
Chemical Name: FREON 22	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B	
CAS: 7791-18-6	Fire	03 Max. Daily Amount (code)	A
Chemical Name: BARE GROUND PERFORMANCE PLUS M DE-ICER	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ INHIBITOR AZ 8104	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 7664-38-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ SPECTRUS BD 1500	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 7664-38-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ SPECTRUS BD 1500	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		E, F	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 77-92-9	Fire	03 Max. Daily Amount (code)	A
Chemical Name: CITRIC ACID	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, L	
CAS: 10043-35-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: BORIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, G, J	
CAS: 10043-35-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: BORIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		G	
CAS: 10043-35-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: BORIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G, J	
CAS: 10043-35-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: BORIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, G, J	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: CARBOLINE 801 PAINT, PARTS A & B	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ALUMINA DESICCANT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ALCOSEAL FOAM (3-6%)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ALCOSEAL FOAM (3-6%)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRA-402 RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 7440-44-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 7440-44-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 7440-44-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, L	
CAS: 25068-38-6	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: 5500 SERIES KOLORPOXY FLOOR COATING	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: IONAC NM-60SG RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: IONAC NM-60SG RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		1 1 4 Container/Pressure/Temp.	
		B, L	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GE BETZ CPD 90676 POLYMER SOLUTION	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: FIBERPERL ABSORBANT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: DENSTONE 57 DESCANT PELLETS	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		H	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: DENSTONE 57 DESCANT PELLETS	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B	
CAS: 9601-18-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: DOW SBR-C-OH	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS: 9601-18-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: DOW SBR-C-OH	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G	
CAS: 9601-18-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: DOW SBR-C-OH	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, C, G	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 8001-58-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CREOSOTE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		O, R	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS: 69911-22-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: DOW HGR-W2-H RESIN	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G	
CAS: 69911-22-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: DOW HGR-W2-H RESIN	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 69911-22-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: DOW HGR-W2-H RESIN	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRA-458 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 1 4 Container/Pressure/Temp.	
		B,L	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRA-458 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B,L	
CAS: 64665-57-2	Fire	02 Max. Daily Amount (code)	A
Chemical Name: TOLYTRIAZOLE (TTA) CORROSION INHIBITOR	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B,C	
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL, USED	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		B, H, K	
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL, USED	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp	
		B, H, K	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL, USED	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		P 1 4 Container/Pressure/Temp.	
		A, B, D, K	
CAS: 7646-85-7	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ FLOGARD MS6208	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-150 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C,J	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-150 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B,C,G	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL (MOBILEGARD 412)	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		H	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL (MOBILEGARD 412)	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 28182-81-2	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMERSHIELD ALIPHATIC POLYURETHANE PAINT	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B, C, J	
CAS: 1310-73-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE, 30%	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		J	
CAS: 63182-08-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IR-120 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 63182-08-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IR-120 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS: 124-38-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON DIOXIDE	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 2 6 Container/Pressure/Temp.	
		A	
CAS: 124-38-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON DIOXIDE	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B, C	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 74-98-6	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: PROPANE	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 2 4 Container/Pressure/Temp.	
		B, E, S	
CAS: 10043-01-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ KLARAID CDP 1301	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS: 1302-82-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GARNET	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B	
CAS: 1302-82-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GARNET	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS: 302-01-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDRAZINE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid, EHS	Reactivity	365 No. of Days On-site	
EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, G, L	
CAS: 302-01-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDRAZINE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid, EHS	Reactivity	365 No. of Days On-site	
EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		G, L	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 302-01-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDRAZINE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid, EHS	Reactivity	365 No. of Days On-site	
EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		G, B	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		G	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		G,L	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B,C	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B,C	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 7664-38-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ FLOGARD MS6222	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	366 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 10191-30-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM BISULFITE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		F	
CAS: 10191-30-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM BISULFITE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 10191-30-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM BISULFITE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B,F,L	
CAS: 14808-60-7	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SAND	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS: 14808-60-7	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SAND	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		E	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 14808-60-7	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SAND	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, E	
CAS: 7727-37-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: NITROGEN	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 7 Container/Pressure/Temp.	
		B, C	
CAS: 7727-37-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: NITROGEN	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B, C	
CAS: 7727-37-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: NITROGEN	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 2 7 Container/Pressure/Temp.	
		A, G	
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL (MOBILRAD 797)	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		G	
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL (MOBILRAD 797)	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 8006-61-9	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: GASOLINE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		B 1 4 Container/Pressure/Temp.	
		K	
CAS: 8006-61-9	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: GASOLINE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		A	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ DEPOSITROL	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 1310-73-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		G, P	
CAS: 1310-73-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, P	
CAS: 1310-73-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G, L	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID IN STATIONARY BATTERIES	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid, EHS	Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B, G, I, J, N, S	
CAS: 39389-20-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERJET 1500 (H) RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, G	
CAS: 7782-44-7	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OXYGEN	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 7 Container/Pressure/Temp.	
		A	
CAS: 7782-44-7	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OXYGEN	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: RADCLEAN DECON SOLUTION	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL DRY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: HYDRAULIC FLUID	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: VERMICULITE PACKING	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, E	
CAS: 497-19-8	Fire	02 Max. Daily Amount (code)	A
Chemical Name: SODIUM CARBONATE	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B, C	
CAS: 8008-20-6	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: FUEL OIL, NUMBER 1	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		B 1 4 Container/Pressure/Temp.	
		1	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: OIL, CUTTING	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: KEELER & LONG 4093B PAINT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, G, H	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, G, J, K	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: WELDING RODS	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		K 1 4 Container/Pressure/Temp.	
		B, E	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS: 1333-74-0	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDROGEN	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 7 Container/Pressure/Temp.	
		A	
CAS: 1333-74-0	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDROGEN	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B, C, G, J, L	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-217 RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 7440-37-1	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ARGON	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 1 7 Container/Pressure/Temp.	
		B,C	
CAS: 7440-37-1	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ARGON	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B,G,J	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		A	
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		A	
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		A, H	
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		B 1 4 Container/Pressure/Temp.	
		D, K	
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G, H, I, J	
CAS: 7681-52-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYPOCHLORITE	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 7681-52-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYPOCHLORITE	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, L, P	
CAS: 7681-52-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYPOCHLORITE	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, L, P	
CAS: 141-43-5	Fire	04 Max. Daily Amount (code)	A
Chemical Name: MONETHANOLAMINE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, G	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-78 RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C	
CAS: 9017-79-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERJET 4400 (OH) RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, G	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-77 RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ACID SPILL KIT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		1 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS: 107-21-1	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ANTIFREEZE (ETHYLENE GLYCOL)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, K	
CAS: 107-21-1	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ANTIFREEZE (ETHYLENE GLYCOL)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: CAUSTIC SPILL KIT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: BLAZEOFF CLEANER DEGREASER	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: CARBOLINE 890 EPOXY COATING	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 75-71-8	Fire	02 Max. Daily Amount (code)	A
Chemical Name: FREON 12	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: FYRQUEL EHC HYDRAULIC FLUID	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS: 1305-62-0	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDRATED LIME	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, P	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: FYRQUEL 220 HYDRAULIC FLUID	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS: 7647-01-0	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDROCHLORIC ACID	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	x Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: KEELER & LONG F SERIES KOLOR-SIL ENAMEL PAINT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 67-63-0	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: ALCOHOL, ISOPROPYL	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B, C	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: LUBRICANT, MOBILARMA-524	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B, G, J	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: LATEX PAINT (ALL COLORS & TYPES)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: OIL, MEDIUM	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, J, K	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: OIL, MEDIUM	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, J, K	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, EXTRA HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, EXTRA HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: NOVACITE 200 SILICA POWDER	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS: 7664-38-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ACID, PHOSPHORIC	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid	x Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, C	
CAS: 7664-38-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ACID, PHOSPHORIC	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid	x Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B, C	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: PF DEGREASER	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: POWDER IRON	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp	
		B, C, J	

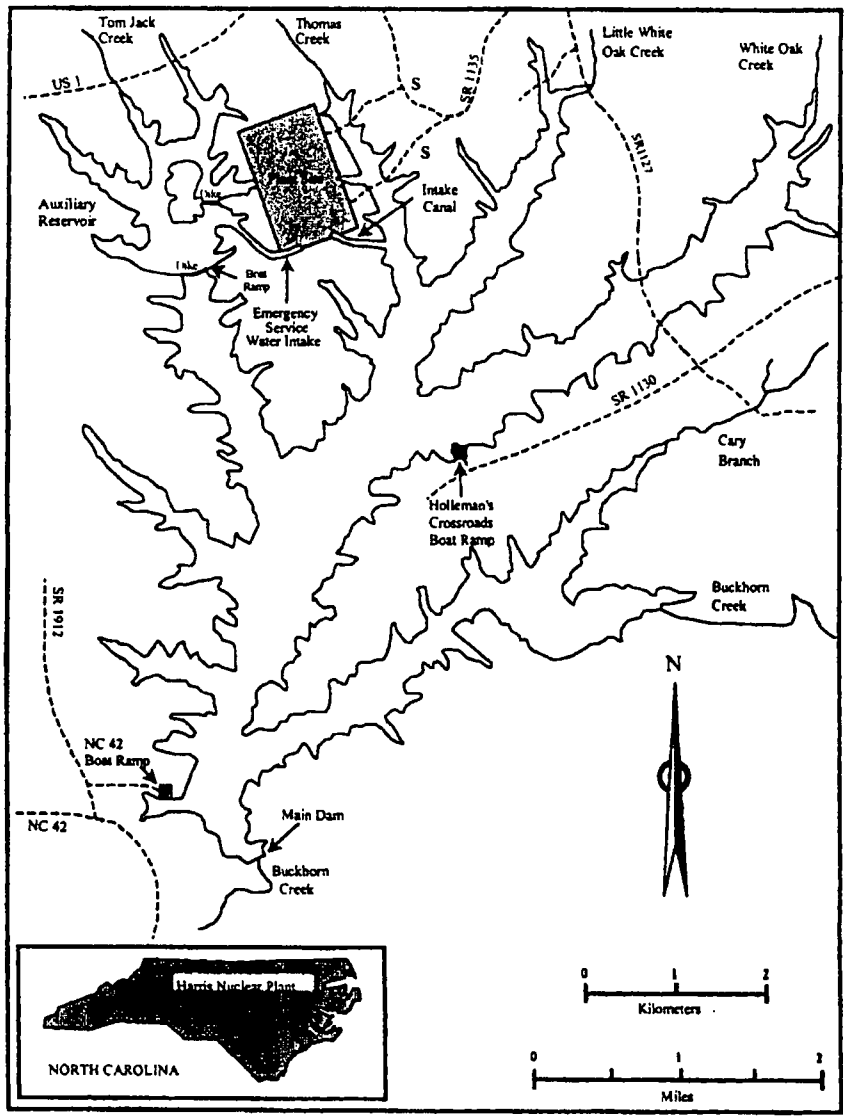
CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 3231-67-4	Fire	02 Max. Daily Amount (code)	A
Chemical Name: SILICA GEL DESICCANT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: SANDBLAST ABRASIVE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, E	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GROUT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: GEBETZ FOAMTROL 144	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, E, F, P	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ZINC PHOSPHATE CORROSION INHIBITOR	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, L	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GE BETZ MS-120P CORROSION INHIBITOR	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, L	

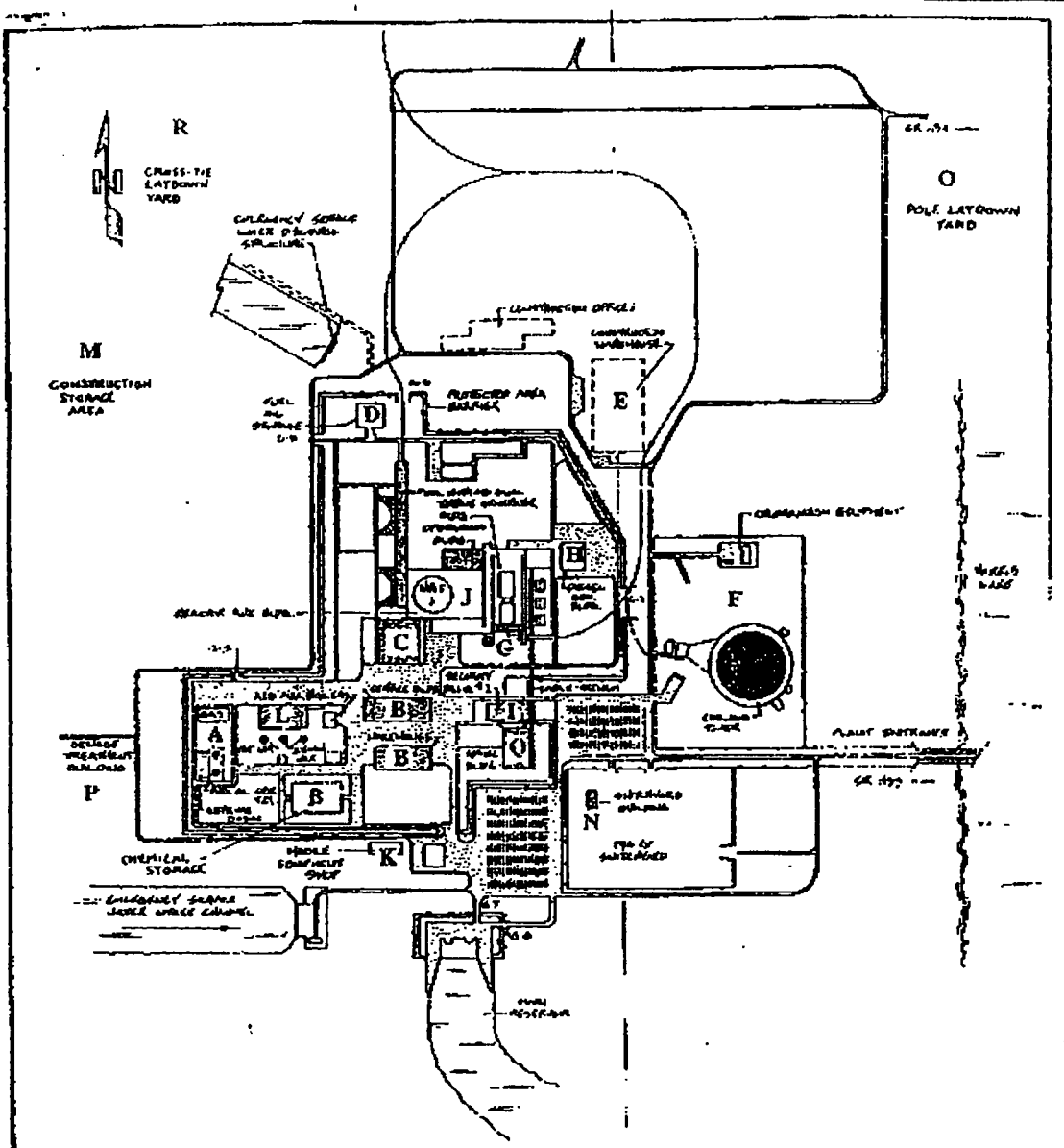
CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 107-21-1	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GE BETZ 1192 POLYMER	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		P	
CAS: 7439-92-1	Fire	03 Max. Daily Amount (code)	A
Chemical Name: LEAD IN STATION BATTERIES	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B,G,I,J,N,S	
CAS: 7722-64-7	Fire	02 Max. Daily Amount (code)	A
Chemical Name: POTASSIUM PERMANGANATE	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, L	
CAS: 39389-20-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERJET 1600 (H) RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	284 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, G	
CAS: 100-00-5	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ALUMINUM OXIDE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Solid	Reactivity	90 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		G	
CAS: 7631-90-5	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GEBETZ DCL32 -SODIUM BISULFITE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid	Reactivity	80 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, L	

CHEMICAL Description	Physical and Health Hazards	Inventory	Opt.
CAS: 1310-73-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE -25%	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid	Reactivity	97 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, L	
CAS: 1310-73-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE -25%	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid	Reactivity	97 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		P	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERSEP 900 -OH RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix	Reactivity	157 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 68855-24-3	Fire	02 Max. Daily Amount (code)	A
Chemical Name: SOLTEX DF100	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid	Reactivity	60 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		N	
End of Report Submitted 2/22/2007 04:20:07 PM			

NC Emergency Response Commission
Attachment to HNP-02-106

Harris Nuclear Plant
Location S





SHEARON HARRIS NUCLEAR POWER PLANT

Progress Energy

FEB 2 7 2006

SERIAL: HNP-06-036

N. C. Emergency Response Commission
ATTN: SARA Coordinator
4714 Mail Service Center
Raleigh, NC 27699-4714

Subject: Progress Energy Carolinas, Inc.
Harris Nuclear Plant - 2005 Chemical Inventory Reports

Ladies and Gentlemen:

Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., is submitting the enclosed attachments to meet the specific federal and state chemical and hazardous material inventory reporting requirements described below:

- Attachment 1: EPCRA Section 311 Chemical List (40CFR302).

- Attachment 2: The format of the 2005 SARA Tier II Emergency and Hazardous Chemical Inventory (40CFR370) has changed utilizing the Wake County Local Emergency Planning Committee's SARA Tier II database.

  N.C. Right-to-Know Chemical Inventory (N.C. General Statute 95-194) has been included in the Tier II report at Wake County's request. (This report is also provided to the Apex Fire and Holly Springs Public Safety Departments).

Omitted from these lists are ammunition and special devices necessary for the security of the Harris Plant. The information on these types of materials and quantities is considered "Safeguards Information" under Title 10, Section 73.21 of the Code of Federal Regulations. Should a response be required by your department to an area containing materials described herein, your personnel would be under the escort of Security Officers who are knowledgeable of the storage location.

Also, we are requesting that the enclosed maps only be distributed to organizations with a "Need to Know" of exact locations of our storage areas.

If you have any questions or comments regarding this information, please contact Mr. R. T. Wilson at (919) 362-2444.

Sincerely,

Eric McCartney
Plant General Manager
Harris Nuclear Plant

EM/mgw

Attachments

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P. O. Box 165
New Hill, NC 27562

c: Chief, Apex Fire Department
P.O. Box 336, Apex, NC 27502

Holly Springs Public Safety Department
P. O. Box 8, Holly Springs, NC 27540

Mr. Martin L. Chriscoe, Wake County Public Safety
P. O. Box 550, Raleigh, NC 27602

N. C. Emergency Response Commission
SERIAL: HNP-06-036

bc: Ms. D. B. Alexander
Mr. J. R. Toepfer
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

ATTACHMENT 1

EPCRA Section 311 Chemical List

PROGRESS ENERGY CAROLINAS, INC.
Harris Nuclear Plant
5413 Shearon Harris Road
New Hill, North Carolina 27562

Section 311 Chemical List

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Sulfuric Acid, 93%	7664-93-9
Sodium Hydroxide, 50%	1310-73-2
Welding Rods	7439-84-6 7440-47-3 7440-21-3 7440-50-8 6834-92-0 1317-65-3 13463-67-7 7439-96-5 7440-02-0 7439-98-7 1312-76-1 7784-75-5 7440-67-2
Unleaded Gasoline	8006-61-9
Boric Acid	10043-35-3
No. 2 Fuel Oil	68476-30-2 91-20-3
Hydrazine, 35% Solution	302-01-2
Sodium Hypochlorite, 5-15% Solution	7681-52-9
Nitrogen	7727-37-9
Ammonium Hydroxide, 25-30% Solution	1336-21-6
Dow HGR-W2-H Resin	69011-22-9

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Dow SBR-C-OH Resin	69011-18-3
Mobilgard 412 Oil	64742-54-7 64742-65-0 64742-56-9
Carbon Dioxide	124-38-9
Amberlite IRA-458	Mixture
Carbon	7440-44-0
Sand	14808-60-7
Garnet	1302-82-1
Amberlite IR-120 Resin	63182-08-1
Amberlite IRN-150 Resin	39389-20-3 9017-79-2
Sulfuric Acid in Stationary Batteries	7664-93-9
Lead in Stationary Batteries	7439-92-1
Ammonium Bisulfite (60-70%)	10192-30-0
Monoethanolamine, 70%	141-43-5
Mobilrad 797 Oil	8012-95-1
Sodium Hydroxide, 30% Solution	1310-73-2
Creosote (in Treated Wood Products)	8001-58-9
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Polyurethane Coatings	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
GE Betz Inhibitor AZ8104	Mixture
GE Betz Depositrol PY5200	Mixture
Used Oil	Mixture
GE Betz Flogard MS6222	7664-38-2
GE Betz Flogard MS6208	7646-85-7
GE Betz Spectrus BD1500	Mixture
Rohm & Haas Amberjet 1500 Resin	39389-20-3
Rohm & Haas Amberjet 4400 Resin	9017-79-2
Propane	74-98-6
GE Betz Klaraid CDP 1301	10043-01-3
Argon	7440-37-1
Ionac NM-60SG Resin	Mixture
Potassium Permanganate	7722-64-7

Category 1 - Acute Health Hazard

Chemical Name	CAS# Hazardous Constituents
Citric Acid	77-92-9
GEBetz Spectrus DT1404	7631-90-5
GEBetz Hypersperse MDC700	Mixture
Rohm & Haas Amberjet 1600 (H) Resin	39389-20-3
Purolite NRW-160 (H) Macroporous Resin	69011-20-7
Purolite NRW-501P (OH) Macroporous Resin	69011-18-3
Bare Ground Performance Plus M De-Icer	50-21-5 7791-18-6

Category 2 - Chronic Health Hazard

Chemical Name	CAS# Hazardous Constituents
Welding Rods	7439-84-6 7440-47-3 7440-21-3 7440-50-8 6834-92-0 1317-65-3 13463-67-7 7439-96-5 7440-02-0 7439-98-7 1312-76-1 7784-75-5 7440-67-2
GE Betz Inhibitor AZ8100	64665-57-2
Carbon	7440-44-0
Hydrazine, 35% Solution	302-01-2
GE Betz Klaraid CDP 1301	10043-01-3
Sand	14808-60-7
Garnet	1302-82-1
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7

Category 2 - Chronic Health Hazard

Chemical Name	CAS# Hazardous Constituents
Polyurethane Coating	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
Creosote (in Treated Wood Products)	8001-58-9
GE Betz Flogard MS6222	7664-38-2
GE Betz Flogard MS6208	7646-85-7
Lead in Stationary Batteries	7439-92-1

Category 3 - Fire Hazard

Chemical Name	CAS # Hazardous Constituents
Unleaded Gasoline	8006-61-9
No. 2 Fuel Oil	68476-30-2 91-20-3
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7
Polyurethane Coatings	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
Propane	74-98-6

Category 4 - Sudden Release of Pressure Hazard

Chemical Name	CAS # Hazardous Constituents
Nitrogen	7727-37-9
Carbon Dioxide	124-38-9
Propane	74-98-6
Argon	7440-37-1

Category 5 – Reactive Hazard

Chemical Name	CAS # Hazardous Constituents
None Known	

ATTACHMENT 2

SARA Tier II Emergency and Hazardous Chemical Inventory
and
N.C. Right-to-Know Chemical Inventory

Facility report filed by your company to the
SARA Title III Online Reporting System

This Reporting System has been approved by Wake County, North Carolina Local Emergency Planning Committee (LEPC) for Tier II submission for facilities located within Wake County. This report was submitted to Wake County LEPC, Wake County Emergency Management, North Carolina State Emergency Response Commission, and the Local District Fire Department noted below and is accurate as of: 2/21/2006 3:26:30 PM

I certify under penalty of law that I have personally examined and am familiar with the information submitted in the Tier II Document filed, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Eric McCartney, General Manager - Harris Nuclear Plant — 2/21/06

Name and Official Title of Owner/Operator's Authorized Representative — Signature — Date Signed

FACILITY INFORMATION

Facility/Division: HARRIS NUCLEAR PLANT Physical Address: 5413 SHEARON HARRIS ROAD City/State/Zip: NEW HILL, NC 27562 County: WAKE Fire District: APEX FIRE DEPARTMENT	Owner/Operator: CAROLINA POWER & LIGHT D/B/A PROGRESS ENERGY CAROLINAS, INC. 5413 SHEARON HARRIS ROAD NEW HILL, NC 27562 919-362-8891
Emergency Contact 1: BOB WILSON, ENVIRONMENTAL COORDINATOR 919-362-2444/24-Hr. Phone: 919-362-2156	Emergency Contact 2: DALE TYSINGER , E & C TECHNICIAN I 919-362-2151/24-Hr. Phone: 919-362-2156

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2005			
Chemical Description	Physical and Health Hazards	Inventory	Opt.
		Storage Codes/Location	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GEBETZ HYPERSPERSE MDC700	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, L	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ICE FOE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ICE FOE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 69011-20-7	Fire	03 Max. Daily Amount (code)	A
Chemical Name: NRW-160 (H) MACROPOROUS RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G	
CAS: 69011-20-7	Fire	03 Max. Daily Amount (code)	A
Chemical Name: NRW-160 (H) MACROPOROUS RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, J	
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix, EHS	x Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G, L	

CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix, EHS	x Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B, C	
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix, EHS	x Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, C	
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix, EHS	x Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		G, L	
CAS: 7631-90-5	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GEBETZ SPECTRUS DT1404	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, L	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ DEPOSITROL	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: HORNFLEX SEALANT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: HORNFLEX SEALANT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	E 1 4 Container/Pressure/Temp.	
CAS: 75-45-6	Fire	02 Max. Daily Amount (code)	A
Chemical Name: FREON 22	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		

	Delayed (Chronic)	**CONFIDENTIAL**	
		A 2 4 Container/Pressure/Temp.	
		G	
CAS: 75-45-6	Fire	02 Max. Daily Amount (code)	A
Chemical Name: FREON 22	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B	
CAS: 7791-18-6	Fire	03 Max. Daily Amount (code)	A
Chemical Name: BARE GROUND PERFORMANCE PLUS M DE-ICER	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ INHIBITOR AZ 8104	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 7664-38-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ SPECTRUS BD 1500	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 7664-38-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ SPECTRUS BD 1500	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		E, F	

CAS: 77-92-9	Fire	03 Max. Daily Amount (code)	A
Chemical Name: CITRIC ACID	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, L	
CAS: 8001-58-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CREOSOTE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		O, R	
CAS: 69911-22-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: DOW HGR-W2-H RESIN	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G	
CAS: 69911-22-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: DOW HGR-W2-H RESIN	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G	
CAS: 69911-22-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: DOW HGR-W2-H RESIN	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRA-458 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B,L	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRA-458 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 1 4 Container/Pressure/Temp.	
		B,L	

CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		A	
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		B 1 4 Container/Pressure/Temp.	
		D, K	
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G, H, I, J	
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		A	
CAS: 68476-30-2	x Fire	06 Max. Daily Amount (code)	A
Chemical Name: DIESEL FUEL NO. 2	Sudden Release of Pressure	06 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		A, H	
CAS: 64665-57-2	Fire	02 Max. Daily Amount (code)	A
Chemical Name: TOLYTRIAZOLE (TTA) CORROSION INHIBITOR	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B,C	
CAS: 141-43-5	Fire	04 Max. Daily Amount (code)	A
Chemical Name: MONETHANOLAMINE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, G	

CAS: 7646-85-7	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ FLOGARD MS6208	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL, USED	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		B, H, K	
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL, USED	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, H, K	
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL, USED	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		P 1 4 Container/Pressure/Temp.	
		A, B, D, K	
CAS: 7681-52-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYPOCHLORITE	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 7681-52-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYPOCHLORITE	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, L, P	
CAS: 7681-52-9	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYPOCHLORITE	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, L, P	

CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL (MOBILEGARD 412)	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL (MOBILEGARD 412)	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		H	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-150 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B,C,G	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-150 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C,J	
CAS: 124-38-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON DIOXIDE	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 2 6 Container/Pressure/Temp.	
		A	
CAS: 124-38-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON DIOXIDE	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B, C	
CAS: 74-98-6	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: PROPANE	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 2 4 Container/Pressure/Temp.	
		B, E, S	

CAS: 63182-08-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IR-120 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 63182-08-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IR-120 RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS: 1310-73-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE, 30%	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		J	
CAS: 10043-01-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ KLARAID CDP 1301	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS: 28182-81-2	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMERSHIELD ALIPHATIC POLYURETHANE PAINT	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B, C, J	
CAS: 9601-18-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: DOW SBR-C-OH	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G	
CAS: 9601-18-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: DOW SBR-C-OH	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G	

CAS: 9601-18-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: DOW SBR-C-OH	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS: 302-01-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDRAZINE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix, EHS	Reactivity	365 No. of Days On-site	
EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		G, B	
CAS: 302-01-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDRAZINE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix, EHS	Reactivity	365 No. of Days On-site	
EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		G, L	
CAS: 302-01-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDRAZINE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix, EHS	Reactivity	365 No. of Days On-site	
EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		B, G, L	
CAS: 7727-37-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: NITROGEN	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 2 7 Container/Pressure/Temp.	
		A, G	
CAS: 7727-37-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: NITROGEN	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 7 Container/Pressure/Temp.	
		B, C	
CAS: 7727-37-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: NITROGEN	x Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B, C	

CAS: 7440-44-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS: 7440-44-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS: 7440-44-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: CARBON	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, L	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		G	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		G,L	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B,C	

CAS: 1336-21-6	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM HYDROXIDE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B,C	
CAS: 1302-82-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GARNET	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B	
CAS: 1302-82-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GARNET	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS: 10043-35-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: BORIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, G, J	
CAS: 10043-35-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: BORIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G, J	
CAS: 10043-35-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: BORIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		G	
CAS: 10043-35-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: BORIC ACID	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, G, J	

CAS: 7664-38-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: GE BETZ FLOGARD MS6222	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	366 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS:	Fire	04 Max. Daily Amount (code)	A
Chemical Name: WELDING RODS	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		K 1 4 Container/Pressure/Temp.	
		B, E	
CAS: 10191-30-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM BISULFITE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		F	
CAS: 10191-30-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM BISULFITE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		O 1 4 Container/Pressure/Temp.	
		F	
CAS: 10191-30-0	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMMONIUM BISULFITE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B,F,L	
CAS: 14808-60-7	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SAND	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, E	
CAS: 14808-60-7	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SAND	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	

CAS: 14808-60-7	Fire	05 Max. Daily Amount (code)	A
Chemical Name: SAND	Sudden Release of Pressure	05 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		E	
CAS: 8006-61-9	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: GASOLINE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		B 1 4 Container/Pressure/Temp.	
		K	
CAS: 8006-61-9	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: GASOLINE	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Pure, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		A	
CAS: 9017-79-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERJET 4400 (OH) RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, G	
CAS: 25068-38-6	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: 5500 SERIES KOLORPOXY FLOOR COATING	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS: 25068-38-6	x Fire	04 Max. Daily Amount (code)	A
Chemical Name: 5500 SERIES KOLORPOXY FLOOR COATING	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	A 1 4 Container/Pressure/Temp.	
CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL (MOBILRAD 797)	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	

CAS: 8012-95-1	Fire	04 Max. Daily Amount (code)	A
Chemical Name: OIL (MOBILRAD 797)	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		G	
CAS: 1310-73-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		G, P	
CAS: 1310-73-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, G, L	
CAS: 1310-73-2	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, P	
CAS: 7664-93-9	Fire	04 Max. Daily Amount (code)	A
Chemical Name: SULFURIC ACID IN STATIONARY BATTERIES	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Liquid, Mix, EHS	Reactivity	365 No. of Days On-site	
EHS Name: SULFURIC ACID	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B, G, I, J, N, S	
CAS: 39389-20-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERJET 1500 (H) RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, G	
CAS: 7440-37-1	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ARGON	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B,G,J	

CAS: 7440-37-1	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ARGON	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 1 7 Container/Pressure/Temp.	
		B,C	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: IONAC NM-60SG RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, L	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: IONAC NM-60SG RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		B	
CAS: 1333-74-0	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDROGEN	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 7 Container/Pressure/Temp.	
		A	
CAS: 1333-74-0	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDROGEN	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B, C, G, J, L	
CAS: 7782-44-7	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OXYGEN	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 7 Container/Pressure/Temp.	
		A	
CAS: 7782-44-7	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OXYGEN	x Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B, C, G, J	

CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ALUMINA DESICCANT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ALCOSEAL FOAM (3-6%)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ALCOSEAL FOAM (3-6%)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRA-402 RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-217 RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-77 RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: AMBERLITE IRN-78 RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C	

CAS: 107-21-1	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ANTIFREEZE (ETHYLENE GLYCOL)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, K	
CAS: 107-21-1	Fire	02 Max. Daily Amount (code)	A
Chemical Name: ANTIFREEZE (ETHYLENE GLYCOL)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ACID SPILL KIT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: CAUSTIC SPILL KIT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: BLAZEOFF CLEANER DEGREASER	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: CARBOLINE 801 PAINT, PARTS A & B	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: CARBOLINE 890 EPOXY COATING	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	

CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: OIL, CUTTING	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: DENSTONE 57 DESCANT PELLETS	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: DENSTONE 57 DESCANT PELLETS	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		H	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: FIBERPERL ABSORBANT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B	
CAS: 75-71-8	Fire	02 Max. Daily Amount (code)	A
Chemical Name: FREON 12	x Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid, Gas	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		L 2 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: FYRQUEL EHC HYDRAULIC FLUID	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: FYRQUEL 220 HYDRAULIC FLUID	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	

CAS: 1305-62-0	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDRATED LIME	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, P	
CAS: 7647-01-0	Fire	03 Max. Daily Amount (code)	A
Chemical Name: HYDROCHLORIC ACID	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	x Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B	
CAS: 67-63-0	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: ALCOHOL, ISOPROPYL	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Liquid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B, C	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: KEELER & LONG 4093B PAINT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: KEELER & LONG F SERIES KOLOR-SIL ENAMEL PAINT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: LATEX PAINT (ALL COLORS & TYPES)	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		F 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: LUBRICANT, MOBILARMA-524	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B, G, J	

CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, G, H	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, G, J, K	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: OIL, MEDIUM	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, J, K	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: OIL, MEDIUM	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, J, K	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, EXTRA HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	

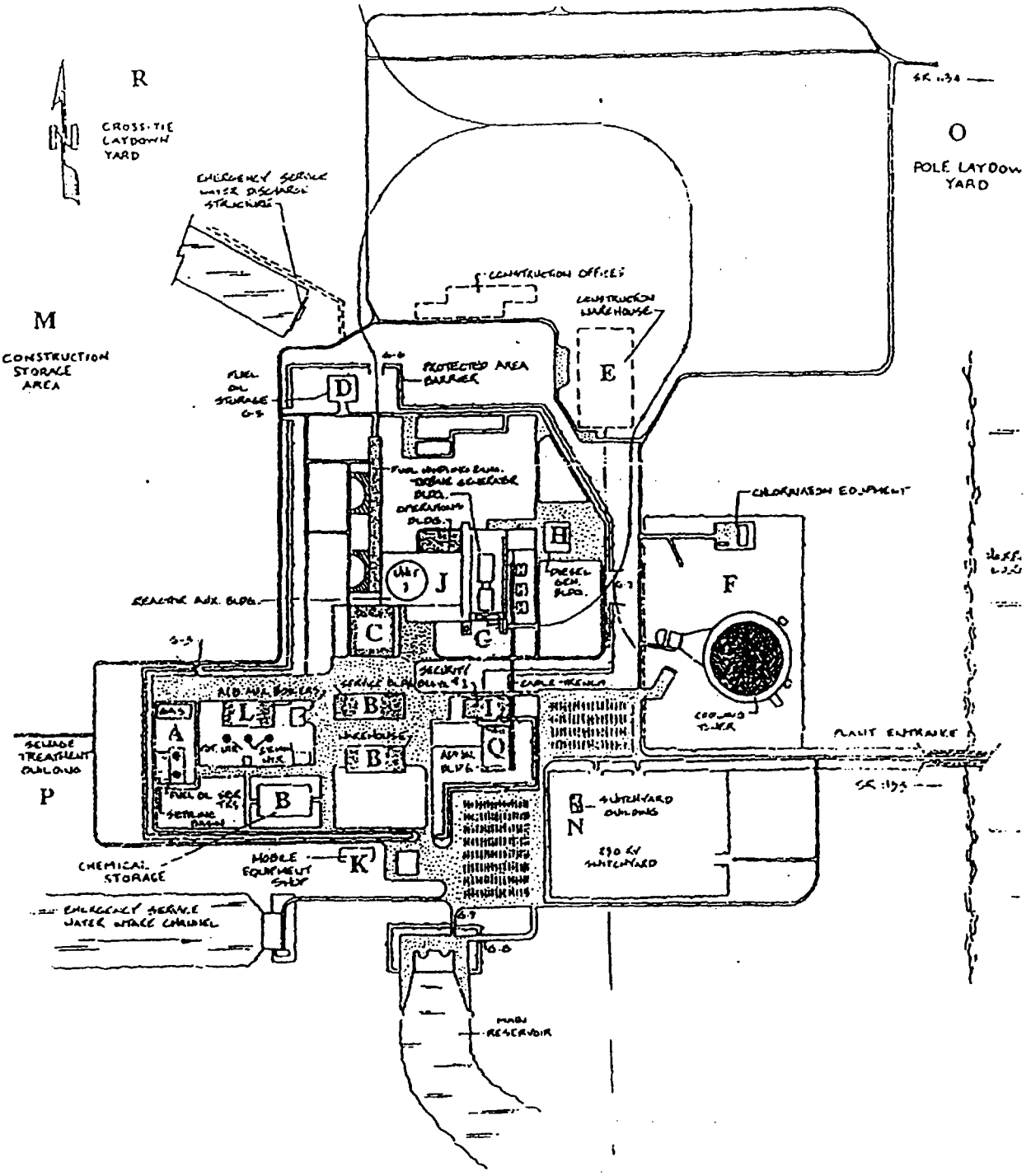
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL, EXTRA HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B	
CAS:	x Fire	02 Max. Daily Amount (code)	A
Chemical Name: HYDRAULIC FLUID	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B,	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, LIGHT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: GREASE, HEAVY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	

CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: NOVACITE 200 SILICA POWDER	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: OIL DRY	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, C, G, J, K	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: PF DEGREASER	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, C, G, J	
CAS: 7664-38-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ACID, PHOSPHORIC	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid	x Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B, C	
CAS: 7664-38-2	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ACID, PHOSPHORIC	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Pure, Liquid	x Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, C	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: POWDER IRON	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B, C, J	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: RADCLEAN DECON SOLUTION	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, C, G, J	

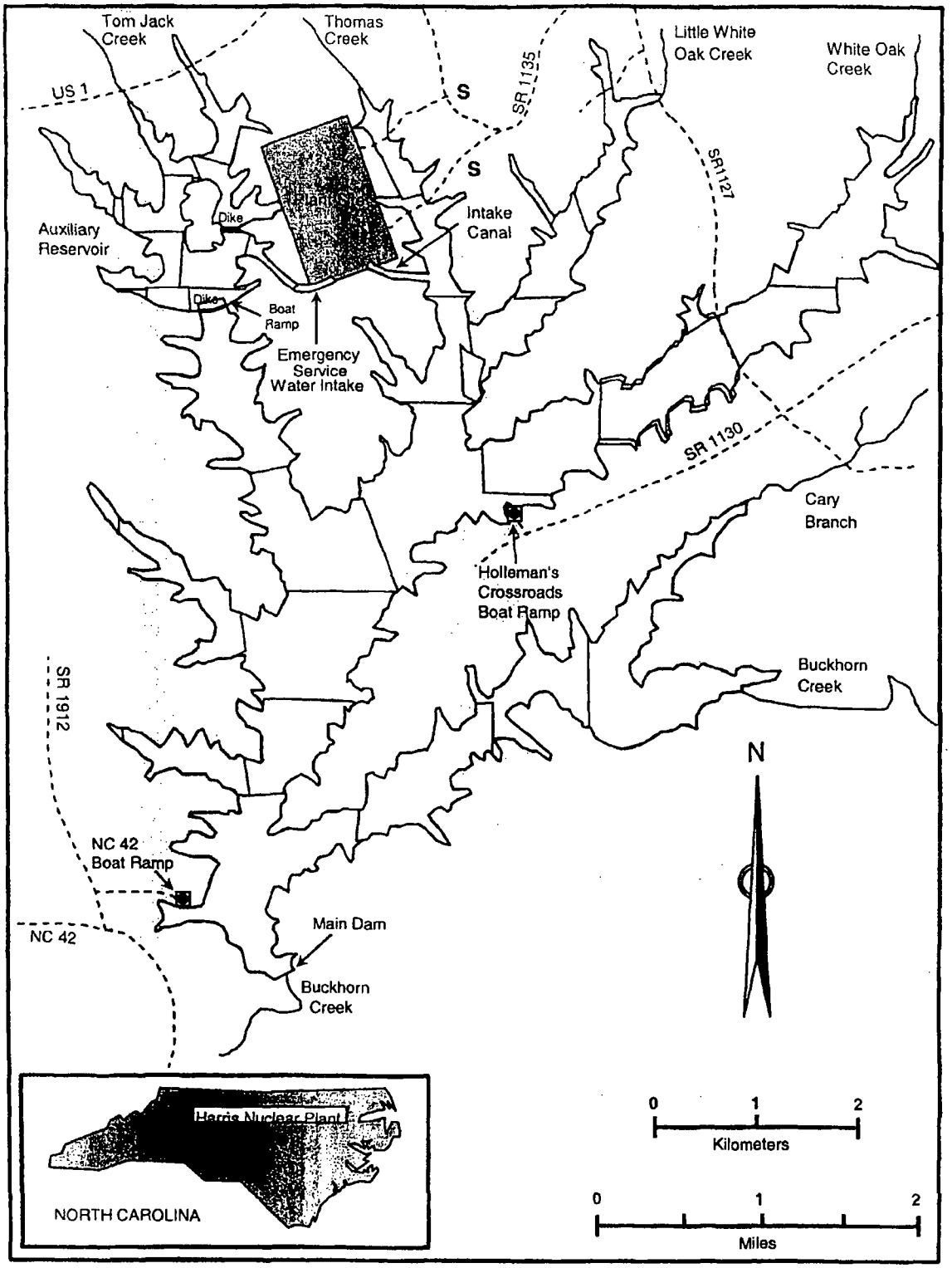
CAS: 3231-67-4	Fire	02 Max. Daily Amount (code)	A
Chemical Name: SILICA GEL DESICCANT	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		D 1 4 Container/Pressure/Temp.	
		B	
CAS: 497-19-8	Fire	02 Max. Daily Amount (code)	A
Chemical Name: SODIUM CARBONATE	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		M 1 4 Container/Pressure/Temp.	
		B, C	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GROUT	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: SANDBLAST ABRASIVE	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, E	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: VERMICULITE PACKING	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		J 1 4 Container/Pressure/Temp.	
		B, E	
CAS:	Fire	02 Max. Daily Amount (code)	A
Chemical Name: GEBETZ FOAMTROL 144	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		N 1 4 Container/Pressure/Temp.	
		B, E, F, P	
CAS: 8008-20-6	x Fire	03 Max. Daily Amount (code)	A
Chemical Name: FUEL OIL, NUMBER 1	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		B 1 4 Container/Pressure/Temp.	
		I	

CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GE BETZ CPD 90676 POLYMER SOLUTION	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		L	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GE BETZ MS-120P CORROSION INHIBITOR	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, L	
CAS:	Fire	03 Max. Daily Amount (code)	A
Chemical Name: ZINC PHOSPHATE CORROSION INHIBITOR	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, L	
CAS: 107-21-1	Fire	03 Max. Daily Amount (code)	A
Chemical Name: GE BETZ 1192 POLYMER	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Liquid, Mix	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		A 1 4 Container/Pressure/Temp.	
		P	
CAS: 7439-92-1	Fire	03 Max. Daily Amount (code)	A
Chemical Name: LEAD IN STATION BATTERIES	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	Immediate Acute		
	x Delayed (Chronic)	**CONFIDENTIAL**	
		R 1 4 Container/Pressure/Temp.	
		B,G,I,J,N,S	
CAS: 69011-18-3	Fire	03 Max. Daily Amount (code)	A
Chemical Name: NRW-501P (OH) MACROPOROUS RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, C, G	
CAS: 69011-18-3	Fire	03 Max. Daily Amount (code)	A
Chemical Name: NRW-501P (OH) MACROPOROUS RESIN	Sudden Release of Pressure	03 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		C 1 4 Container/Pressure/Temp.	
		C, J	

CAS: 39389-20-3	Fire	04 Max. Daily Amount (code)	A
Chemical Name: AMBERJET 1600 (H) RESIN	Sudden Release of Pressure	04 Avg. Daily Amount (code)	
Properties: Mix, Solid	Reactivity	284 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		I 1 4 Container/Pressure/Temp.	
		B, G	
CAS: 7722-64-7	Fire	02 Max. Daily Amount (code)	A
Chemical Name: POTASSIUM PERMANGANATE	Sudden Release of Pressure	02 Avg. Daily Amount (code)	
Properties: Pure, Solid	Reactivity	365 No. of Days On-site	
EHS Name:	x Immediate Acute		
	Delayed (Chronic)	**CONFIDENTIAL**	
		E 1 4 Container/Pressure/Temp.	
		B, L	



SHEARON HARRIS NUCLEAR POWER PLANT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Thomas Creek
Little White Oak Creek
White Oak Creek
US 1
SR 1135
SR1127
Auxiliary Reservoir
Dike
Intake Canal
Boat Ramp
Emergency Service Water Intake
SR 1130
Cary Branch
Holleman's Crossroads Boat Ramp
Buckhorn Creek
SR 1912
NC 42 Boat Ramp
NC 42
Main Dam
Buckhorn Creek
N
Harris Nuclear Plant
NORTH CAROLINA
0 1 2
Kilometers
0 1 2
Miles

Progress Energy

FEB 2 8 2005

SERIAL: HNP-05-025

N. C. Emergency Response Commission
ATTN: SARA Coordinator
4714 Mail Service Center
Raleigh, NC 27699-4714

Subject: Progress Energy Carolinas, Inc.
Harris Nuclear Plant - 2004 Chemical Inventory Reports

Ladies and Gentlemen:

Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., is submitting the enclosed attachments to meet the specific federal and state chemical and hazardous material inventory reporting requirements described below:

- Attachment 1: EPCRA Section 311 Chemical List (40CFR302). There are additions to this attachment.

- Attachment 2: The format of the 2004 SARA Tier II Emergency and Hazardous Chemical Inventory (40CFR370) has changed utilizing the Wake County Local Emergency Planning Committee's SARA Tier II database. The new chemicals on the list have been added.

  N.C. Right-to-Know Chemical Inventory (N.C. General Statute 95-194) has been included in the Tier II report at Wake County's request. (This report is also provided to the Apex Fire and Holly Springs Public Safety Departments).

Omitted from these lists are ammunition and special devices necessary for the security of the Harris Plant. The information on these types of materials and quantities is considered "Safeguards Information" under Title 10, Section 73.21 of the Code of Federal Regulations. Should a response be required by your department to an area containing materials described herein, your personnel would be under the escort of Security Officers who are knowledgeable of the storage location.

Also, we are requesting that the enclosed maps only be distributed to organizations with a "Need to Know" of exact locations of our storage areas.

If you have any questions or comments regarding this information, please contact Mr. R. T. Wilson at (919) 362-2444.

Sincerely,

B. C. Waldrep
Plant General Manager
Harris Nuclear Plant

BCW/mgw

Attachments

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O Box 165
New Hill, NC 27562

N. C. Emergency Response Commission
SERIAL: HNP-05-025

bc: Mr. J. F. Briggs
Mr. J. R. Toepfer
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

c: Chief, Apex Fire Department
P.O. Box 336, Apex, NC 27502

Holly Springs Public Safety Department
P. O. Box 8, Holly Springs, NC 27540

Mr. Martin L. Chriscoe, Wake County Public Safety
P. O. Box 550, Raleigh, NC 27602

ATTACHMENT 1

EPCRA Section 311 Chemical List

PROGRESS ENERGY CAROLINAS, INC.
Harris Nuclear Plant
5413 Shearon Harris Road
New Hill, North Carolina 27562

Section 311 Chemical List

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Sulfuric Acid, 93%	7664-93-9
Sodium Hydroxide, 50%	1310-73-2
Welding Rods	7439-84-6 7440-47-3 7440-21-3 7440-50-8 6834-92-0 1317-65-3 13463-67-7 7439-96-5 7440-02-0 7439-98-7 1312-76-1 7784-75-5 7440-67-2
Unleaded Gasoline	8006-61-9
Boric Acid	10043-35-3
No. 2 Fuel Oil	68476-30-2 91-20-3
Hydrazine, 35% Solution	302-01-2
Sodium Hypochlorite, 5-15% Solution	7681-52-9
Nitrogen	7727-37-9
Ammonium Hydroxide, 25-30% Solution	1336-21-6
Dow HGR-W2-H Resin	69011-22-9

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Dow SBR-C-OH Resin	69011-18-3
Mobilgard 412 Oil	64742-54-7 64742-65-0 64742-56-9
Carbon Dioxide	124-38-9
Amberlite IRA-458	Mixture
Carbon	7440-44-0
Sand	14808-60-7
Garnet	1302-82-1
Amberlite IR-120 Resin	63182-08-1
Amberlite IRN-150 Resin	39389-20-3 9017-79-2
Sulfuric Acid in Stationary Batteries	7664-93-9
Lead in Stationary Batteries	7439-92-1
Ammonium Bisulfite (60-70%)	10192-30-0
Monoethanolamine, 70%	141-43-5
Mobilrad 797 Oil	8012-95-1
Sodium Hydroxide, 30% Solution	1310-73-2
Creosote (in Treated Wood Products)	8001-58-9
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7

Category 1 - Acute Health Hazard

Chemical Name	CAS # Hazardous Constituents
Polyurethane Coatings	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
GE Betz Inhibitor AZ8104	Mixture
GE Betz Depositrol PY5200	Mixture
Used Oil	Mixture
GE Betz Flogard MS6222	7664-38-2
GE Betz Flogard MS6208	7646-85-7
GE Betz Spectrus BD1500	Mixture
Rohm & Haas Amberjet 1500 Resin	39389-20-3
Rohm & Haas Amberjet 4400 Resin	9017-79-2
Propane	74-98-6
GE Betz Klaraid CDP 1301	10043-01-3
Argon	7440-37-1
Ionac NM-60SG Resin	Mixture
Potassium Permanganate	7722-64-7

Category 1 - Acute Health Hazard

Chemical Name	CAS# Hazardous Constituents
Citric Acid	77-92-9
GEBetz Spectrus DT1404	7631-90-5
GEBetz Hypersperse MDC700	Mixture
Rohm & Haas Amberjet 1600 (H) Resin	39389-20-3
Purolite NRW-160 (H) Macroporous Resin	69011-20-7
Purolite NRW-501P (OH) Macroporous Resin	69011-18-3
Bare Ground Performance Plus M De-Icer	50-21-5 7791-18-6

Category 2 - Chronic Health Hazard

Chemical Name	CAS# Hazardous Constituents
Welding Rods	7439-84-6 7440-47-3 7440-21-3 7440-50-8 6834-92-0 1317-65-3 13463-67-7 7439-96-5 7440-02-0 7439-98-7 1312-76-1 7784-75-5 7440-67-2
GE Betz Inhibitor AZ8100	64665-57-2
Carbon	7440-44-0
Hydrazine, 35% Solution	302-01-2
GE Betz Klaraid CDP 1301	10043-01-3
Sand	14808-60-7
Garnet	1302-82-1
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7

Category 2 - Chronic Health Hazard

Chemical Name	CAS# Hazardous Constituents
Polyurethane Coating	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
Creosote (in Treated Wood Products)	8001-58-9
GE Betz Flogard MS6222	7664-38-2
GE Betz Flogard MS6208	7646-85-7
Lead in Stationary Batteries	7439-92-1

Category 3 - Fire Hazard

Chemical Name	CAS # Hazardous Constituents
Unleaded Gasoline	8006-61-9
No. 2 Fuel Oil	68476-30-2 91-20-3
Floor Coatings	25068-38-6 7631-86-9 14808-60-7 14807-96-6 13463-67-7 7727-43-7 100-51-6 108-95-2 1330-20-7
Polyurethane Coatings	13463-67-7 110-43-0 13983-17-0 1309-37-1 123-86-4 14808-60-7 1308-38-9 88230-35-7 108-65-6 1330-20-7 147-14-8 28182-81-2 123-86-4 64742-95-6
Propane	74-98-6

Category 4 - Sudden Release of Pressure Hazard

Chemical Name	CAS # Hazardous Constituents
Nitrogen	7727-37-9
Carbon Dioxide	124-38-9
Propane	74-98-6
Argon	7440-37-1

Category 5 - Reactive Hazard

Chemical Name	CAS # Hazardous Constituents
None Known	

N. C. Emergency Response Commission
SERIAL: HNP-05-025

ATTACHMENT 2

SARA Tier II Emergency and Hazardous Chemical Inventory
and
N.C. Right-to-Know Chemical Inventory

Facility report filed by your company to the
SARA Title III Online Reporting System

This Reporting System has been approved by Wake County, North Carolina, Local Emergency Planning Committee (LEPC) for Tier II submission for facilities located within Wake County.
This report was submitted to Wake County LEPC, Wake County Emergency Management, North Carolina State Emergency Response Commission, and the Local District Fire Department noted below and is accurate as of:

2/25/2005 9:51:27 AM

I certify under penalty of law that I have personally examined and am familiar with the information submitted in the Tier II Document filed, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

B C Waldrop Plant General Mgr. — 2-25-05

Name and Official Title of Owner/Operator's Authorized Representative — Signature — Date Signed

FACILITY INFORMATION Facility/Division:	Owner/Operator:
HARRIS NUCLEAR PLANT Physical Address: 5413 SHEARON HARRIS ROAD City/State/Zip: NEW HILL, NC 27562 County: WAKE Fire District: APEX FIRE DEPARTMENT	CAROLINA POWER & LIGHT D/B/A PROGRESS ENERGY CAROLINAS, INC. 5413 SHEARON HARRIS ROAD NEW HILL, NC 27562 919-362-8891
Emergency Contact 1: BOB WILSON, ENVIRONMENTAL COORDINATOR 919-362-2444 / 24-Hr. Phone: 919-362-2156	**Emergency Contact 2:** DALE TYSINGER , E & C TECHNICIAN I 919-362-2151 / 24-Hr. Phone: 919-362-2156

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 8001-58-9 Chemical Name: CREOSOTE Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** R 1 4 Container/Pressure/Temp. O R	A
CAS: 69911-22-9 Chemical Name: DOW HGR-W2-H RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** I 1 4 Container/Pressure/Temp. B C G	A
CAS: 69911-22-9 Chemical Name: DOW HGR-W2-H RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** C 1 4 Container/Pressure/Temp. C G	A
CAS: 69911-22-9 Chemical Name: DOW HGR-W2-H RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** D 1 4 Container/Pressure/Temp. B	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: Chemical Name: AMBERLITE IRA-458 RESIN Properties: Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B L	A
CAS: Chemical Name: AMBERLITE IRA-458 RESIN Properties: Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. L	A
CAS: Chemical Name: AMBERLITE IRA-458 RESIN Properties: Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 1 4 Container/Pressure/Temp. B L	A
CAS: 68476-30-2 Chemical Name: DIESEL FUEL NO. 2 Properties: Mix, Liquid EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	06 Max. Daily Amount (code) 06 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. A	A
CAS: 68476-30-2 Chemical Name: DIESEL FUEL NO. 2 Properties: Mix, Liquid EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	06 Max. Daily Amount (code) 06 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** B 1 4 Container/Pressure/Temp. D K	A
CAS: 68476-30-2 Chemical Name: DIESEL FUEL NO. 2 Properties: Mix, Liquid EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	06 Max. Daily Amount (code) 06 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. C G J H I	A
CAS: 68476-30-2 Chemical Name: DIESEL FUEL NO. 2 Properties: Mix, Liquid EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	06 Max. Daily Amount (code) 06 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** R 1 4 Container/Pressure/Temp. A H	A
CAS: 64665-57-2 Chemical Name: TOLYTRIAZOLE (TTA) CORROSION INHIBITOR Properties: Mix, Liquid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B C	A
CAS: 141-43-5 Chemical Name: MONOETHANOLAMINE Properties: Mix, Liquid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** O 1 4 Container/Pressure/Temp. B G	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 7646-85-7 Chemical Name: GE BETZ FLOGARD MS6208 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. F	A
CAS: 8012-95-1 Chemical Name: OIL, USED Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. B H K	A
CAS: 8012-95-1 Chemical Name: OIL, USED Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B H K	A
CAS: 8012-95-1 Chemical Name: OIL, USED Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** P 1 4 Container/Pressure/Temp. A B D K	A
CAS: 7681-52-9 Chemical Name: SODIUM HYPOCHLORITE Properties: Mix, Liquid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. F	A
CAS: 7681-52-9 Chemical Name: SODIUM HYPOCHLORITE Properties: Mix, Liquid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. C L P	A
CAS: 7681-52-9 Chemical Name: SODIUM HYPOCHLORITE Properties: Mix, Liquid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B L P	A
CAS: Chemical Name: OIL (MOBILGARD 412) Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: OIL (MOBILGARD 412) Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. H	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: Chemical Name: AMBERLITE IRN-150 RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** 1 1 4 Container/Pressure/Temp. B C G	A
CAS: Chemical Name: AMBERLITE IRN-150 RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. C J	A
CAS: 124-38-9 Chemical Name: CARBON DIOXIDE Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 2 6 Container/Pressure/Temp. A	A
CAS: 124-38-9 Chemical Name: CARBON DIOXIDE Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 2 4 Container/Pressure/Temp. B C	A
CAS: 74-98-6 Chemical Name: PROPANE Properties: Pure, Liquid, Gas EHS Name:	X Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 2 4 Container/Pressure/Temp. B E S	A
CAS: 63182-08-1 Chemical Name: AMBERLITE IR-120 RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** 1 1 4 Container/Pressure/Temp. B	A
CAS: 63182-08-1 Chemical Name: AMBERLITE IR-120 RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. L	A
CAS: 1310-73-2 Chemical Name: SODIUM HYDROXIDE, 30% Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. J	A
CAS: 10043-01-3 Chemical Name: GE BETZ KLARAID CDP 1301 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity – Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. L	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 28182-81-2 Chemical Name: AMERSHIELD ALIPHATIC POLYURETHANE PAINT Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** F 1 4 Container/Pressure/Temp. B C J	A
CAS: 69011-18-3 Chemical Name: DOW SBR-C-OH Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B C G	A
CAS: 69011-18-3 Chemical Name: DOW SBR-C-OH Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. C G	A
CAS: 69011-18-3 Chemical Name: DOW SBR-C-OH Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: 302-01-2 Chemical Name: HYDRAZINE Properties: Liquid, Mix, EHS EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. G B	A
CAS: 302-01-2 Chemical Name: HYDRAZINE Properties: Liquid, Mix, EHS EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. G L	A
CAS: 302-01-2 Chemical Name: HYDRAZINE Properties: Liquid, Mix, EHS EHS Name: HYDRAZINE, AQUEOUS SOLUTIONS, WITH MORE THAN 64% HYDRAZINE	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** O 1 4 Container/Pressure/Temp. B G L	A
CAS: 7727-37-9 Chemical Name: NITROGEN Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 2 7 Container/Pressure/Temp. A G	A
CAS: 7727-37-9 Chemical Name: NITROGEN Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 2 7 Container/Pressure/Temp. B C	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 7727-37-9 Chemical Name: NITROGEN Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 2 4 Container/Pressure/Temp. B C	A
CAS: 7440-44-0 Chemical Name: CARBON Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B	A
CAS: 7440-44-0 Chemical Name: CARBON Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. L	A
CAS: 7440-44-0 Chemical Name: CARBON Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B L	A
CAS: 1336-21-6 Chemical Name: AMMONIUM HYDROXIDE Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. G	A
CAS: 1336-21-6 Chemical Name: AMMONIUM HYDROXIDE Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. G L	A
CAS: 1336-21-6 Chemical Name: AMMONIUM HYDROXIDE Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B	A
CAS: 1336-21-6 Chemical Name: AMMONIUM HYDROXIDE Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** M 1 4 Container/Pressure/Temp. B C	A
CAS: 1336-21-6 Chemical Name: AMMONIUM HYDROXIDE Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B C	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 1302-82-1 Chemical Name: GARNET Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B	A
CAS: 1302-82-1 Chemical Name: GARNET Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. L	A
CAS: 10043-35-3 Chemical Name: BORIC ACID Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** R 1 4 Container/Pressure/Temp. J	A
CAS: 10043-35-3 Chemical Name: BORIC ACID Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** ! 1 4 Container/Pressure/Temp. B G J	A
CAS: 10043-35-3 Chemical Name: BORIC ACID Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. C G J	A
CAS: 10043-35-3 Chemical Name: BORIC ACID Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. G	A
CAS: 10043-35-3 Chemical Name: BORIC ACID Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B G J	A
CAS: 7664-38-2 Chemical Name: GE BETZ FLOGARD MS6222 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. F	A
CAS: Chemical Name: WELDING RODS Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** K 1 4 Container/Pressure/Temp. B E	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 10192-30-0 Chemical Name: AMMONIUM BISULFITE Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** A 1 4 Container/Pressure/Temp. F	A
CAS: 10192-30-0 Chemical Name: AMMONIUM BISULFITE Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** O 1 4 Container/Pressure/Temp. F	A
CAS: 10192-30-0 Chemical Name: AMMONIUM BISULFITE Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** E 1 4 Container/Pressure/Temp. B F L	A
CAS: 14808-60-7 Chemical Name: SAND Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** J 1 4 Container/Pressure/Temp. B E	A
CAS: 14808-60-7 Chemical Name: SAND Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** C 1 4 Container/Pressure/Temp. L	A
CAS: 14808-60-7 Chemical Name: SAND Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** A 1 4 Container/Pressure/Temp. E	A
CAS: 8006-61-9 Chemical Name: GASOLINE Properties: Pure, Liquid EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** B 1 4 Container/Pressure/Temp. K	A
CAS: 8006-61-9 Chemical Name: GASOLINE Properties: Pure, Liquid EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** R 1 4 Container/Pressure/Temp. A	A
CAS: 7664-93-9 Chemical Name: SULFURIC ACID Properties: Liquid, Mix, EHS EHS Name: SULFURIC ACID, SPENT	– Fire – Sudden Release of Pressure X Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** A 1 4 Container/Pressure/Temp. G L	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 7664-93-9 Chemical Name: SULFURIC ACID Properties: Liquid, Mix, EHS EHS Name: SULFURIC ACID, SPENT	– Fire – Sudden Release of Pressure X Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. C G L	A
CAS: 7664-93-9 Chemical Name: SULFURIC ACID Properties: Liquid, Mix, EHS EHS Name: SULFURIC ACID, SPENT	– Fire – Sudden Release of Pressure X Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** M 1 4 Container/Pressure/Temp. B C	A
CAS: 7664-93-9 Chemical Name: SULFURIC ACID Properties: Liquid, Mix, EHS EHS Name: SULFURIC ACID, SPENT	– Fire – Sudden Release of Pressure X Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B C	A
CAS: 9017-79-2 Chemical Name: AMBERJET 4400 (OH) RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B G	A
CAS: 25068-38-6 Chemical Name: 5500 SERIES KOLORPOXY FLOOR COATING Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** F 1 4 Container/Pressure/Temp. B	A
CAS: 8012-95-1 Chemical Name: OIL (MOBILRAD 797) Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: 8012-95-1 Chemical Name: OIL (MOBILRAD 797) Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. G	A
CAS: 1310-73-2 Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. G P	A
CAS: 1310-73-2 Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. C G L	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 1310-73-2 Chemical Name: SODIUM HYDROXIDE, 50% SOLUTION Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B P	A
CAS: Chemical Name: GE BETZ DEPOSITROL Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. F	A
CAS: Chemical Name: GE BETZ INHIBITOR AZ 8104 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. F	A
CAS: 7664-93-3 Chemical Name: SULFURIC ACID IN STATIONARY BATTERIES Properties: Liquid, Mix, EHS EHS Name: SULFURIC ACID, SPENT	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** R 1 4 Container/Pressure/Temp. B G I J N S	A
CAS: 39389-20-3 Chemical Name: AMBERJET 1500 (H) RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B G	A
CAS: 7664-38-2 Chemical Name: GE BETZ SPECTRUS BD 1500 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** O 1 4 Container/Pressure/Temp. E F	A
CAS: 7664-38-2 Chemical Name: GE BETZ SPECTRUS BD 1500 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. F	A
CAS: 7440-37-1 Chemical Name: ARGON Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 2 4 Container/Pressure/Temp. B G J	A
CAS: 7440-37-1 Chemical Name: ARGON Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 1 7 Container/Pressure/Temp. B C	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: Chemical Name: IONAC NM-60SG RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: IONAC NM-60SG RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B L	A
CAS: 1333-74-0 Chemical Name: HYDROGEN Properties: Pure, Liquid, Gas EHS Name:	X Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 7 Container/Pressure/Temp. A	A
CAS: 1333-74-0 Chemical Name: HYDROGEN Properties: Pure, Liquid, Gas EHS Name:	X Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 2 4 Container/Pressure/Temp. B C G J	A
CAS: 7782-44-7 Chemical Name: OXYGEN Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 7 Container/Pressure/Temp. A	A
CAS: 7782-44-7 Chemical Name: OXYGEN Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 2 4 Container/Pressure/Temp. B C G J	A
CAS: Chemical Name: ALUMINA DESICCANT Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity – Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: ALCOSEAL FOAM (3-6%) Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity – Immediate Acute X Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: ALCOSEAL FOAM (3-6%) Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity – Immediate Acute X Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** F 1 4 Container/Pressure/Temp. B	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: Chemical Name: AMBERLITE IRA-402 RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: AMBERLITE IRN-217 RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: AMBERLITE IRN-77 RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B C	A
CAS: Chemical Name: AMBERLITE IRN-78 RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B C	A
CAS: 107-21-1 Chemical Name: ANTIFREEZE (ETHYLENE GLYCOL) Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B K	A
CAS: 107-21-1 Chemical Name: ANTIFREEZE (ETHYLENE GLYCOL) Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. C	A
CAS: Chemical Name: ACID SPILL KIT Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B C G J	A
CAS: Chemical Name: CAUSTIC SPILL KIT Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B C G J	A
CAS: Chemical Name: BLAZEOFF CLEANER DEGREASER Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B C G J	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: Chemical Name: BLAZEOFF CLEANER DEGREASER Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B C G J	A
CAS: Chemical Name: CARBOLINE 801 PAINT, PARTS A & B Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** F 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: CARBOLINE 890 EPOXY COATING Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** F 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: OIL, CUTTING Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: DENSTONE 57 DESICCANT PELLETS Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: DENSTONE 57 DESICCANT PELLETS Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. H	A
CAS: Chemical Name: FIBERPERL ABSORBANT Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B	A
CAS: 75-71-8 Chemical Name: FREON 12 Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 2 4 Container/Pressure/Temp. B	A
CAS: 75-45-6 Chemical Name: FREON 22 Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 2 4 Container/Pressure/Temp. B	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 75-45-6 Chemical Name: FREON 22 Properties: Pure, Liquid, Gas EHS Name:	– Fire X Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** L 2 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: FYRQUEL EHC HYDRAULIC FLUID Properties: Liquid, Mix EHS Name	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: FYRQUEL 220 HYDRAULIC FLUID Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: HORNFLEX SEALANT Properties: Liquid, Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B	A
CAS: 1305-62-0 Chemical Name: HYDRATED LIME Properties: Pure, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B P	A
CAS: 7647-01-0 Chemical Name: HYDROCHLORIC ACID Properties: Liquid, Mix, EHS EHS Name: HYDROGEN CHLORIDE, REFRIGERATED LIQUID	– Fire – Sudden Release of Pressure X Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: ICE FOE Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** M 1 4 Container/Pressure/Temp B	A
CAS: Chemical Name: ICE FOE Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** I 1 4 Container/Pressure/Temp. B	A
CAS: 67-63-0 Chemical Name: ALCOHOL, ISOPROPYL Properties: Pure, Liquid EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site L 1 4 Container/Pressure/Temp.	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 67-63-0 Chemical Name: ALCOHOL, ISOPROPYL Properties: Pure, Liquid EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** M 1 4 Container/Pressure/Temp. B C	A
CAS: Chemical Name: KEELER & LONG 4093B PAINT Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** F 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: KEELER & LONG F SERIES KOLOR-SIL ENAMEL PAINT Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** F 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: LATEX PAINT (ALL COLORS & TYPES) Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** F 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: LUBRICANT, MOBILARMA-524 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** R 1 4 Container/Pressure/Temp. B G J	A
CAS: Chemical Name: OIL, LIGHT Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B G H	A
CAS: Chemical Name: OIL, LIGHT Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B G J K	A
CAS: Chemical Name: OIL, MEDIUM Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B J K	A
CAS: Chemical Name: OIL, MEDIUM Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B J K	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: Chemical Name: OIL, HEAVY Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: OIL, HEAVY Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: OIL, EXTRA HEAVY Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: OIL, EXTRA HEAVY Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: HYDRAULIC FLUID Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B C G J K	A
CAS: Chemical Name: GREASE, LIGHT Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B C G J K	A
CAS: Chemical Name: GREASE, LIGHT Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** R 1 4 Container/Pressure/Temp. B C G J K	A
CAS: Chemical Name: GREASE, HEAVY Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B C G J K	A
CAS: Chemical Name: GREASE, HEAVY Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** R 1 4 Container/Pressure/Temp. B C G J K	A

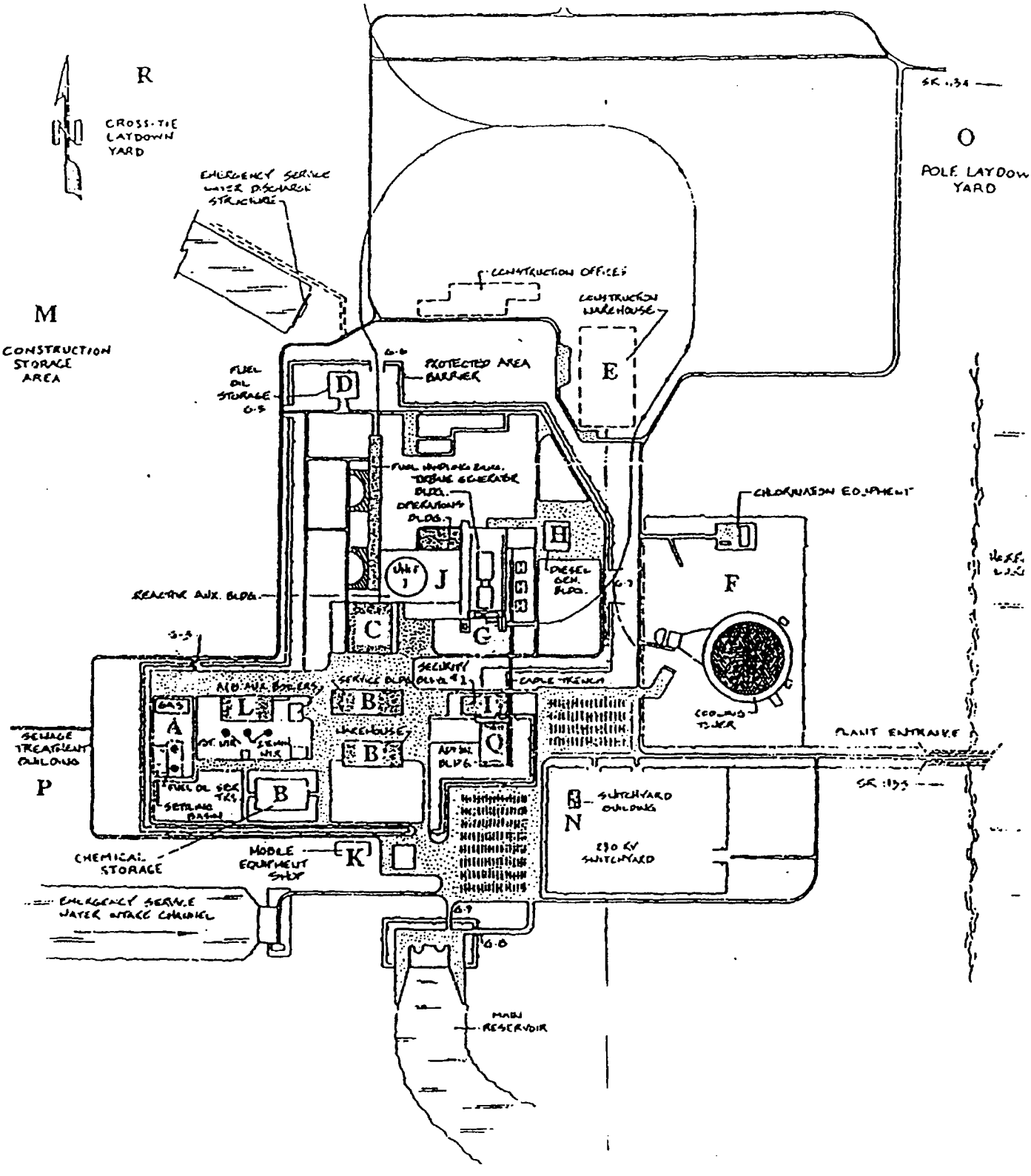
CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: Chemical Name: NOVACITE 200 SILICA POWDER Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: OIL DRY Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B C G J K	A
CAS: Chemical Name: PF DEGREASER Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B C G J	A
CAS: 7664-38-2 Chemical Name: ACID, PHOSPHORIC Properties: Pure, Liquid EHS Name:	– Fire – Sudden Release of Pressure X Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** M 1 4 Container/Pressure/Temp. B C	A
CAS: 7664-38-2 Chemical Name: ACID, PHOSPHORIC Properties: Pure, Liquid EHS Name:	– Fire – Sudden Release of Pressure X Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B C	A
CAS: Chemical Name: POWDER IRON Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B C J	A
CAS: Chemical Name: RADCLEAN DECON SOLUTION Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B C G J	A
CAS: 3231-67-4 Chemical Name: SILICA GEL DESICCANT Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** D 1 4 Container/Pressure/Temp. B	A
CAS: 497-19-8 Chemical Name: SODIUM CARBONATE Properties: Pure, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** M 1 4 Container/Pressure/Temp. B C	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: Chemical Name: GROUT Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B	A
CAS: Chemical Name: SANDBLAST ABRASIVE Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B E	A
CAS: Chemical Name: VERMICULITE PACKING Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute X Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** J 1 4 Container/Pressure/Temp. B E	A
CAS: Chemical Name: GEBETZ FOAMTROL 144 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** N 1 4 Container/Pressure/Temp. B E F P	A
CAS: 8008-20-6 Chemical Name: FUEL OIL, NUMBER 1 Properties: Liquid, Mix EHS Name:	X Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** B 1 4 Container/Pressure/Temp. I	A
CAS: Chemical Name: GE BETZ CPD 90676 POLYMER SOLUTION Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** C 1 4 Container/Pressure/Temp. L	A
CAS: Chemical Name: GE BETZ MS-120P CORROSION INHIBITOR Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B L	A
CAS: Chemical Name: ZINC PHOSPHATE CORROSION INHIBITOR Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** E 1 4 Container/Pressure/Temp. B L	A
CAS: 107-21-1 Chemical Name: GE BETZ 1192 POLYMER Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **CONFIDENTIAL** A 1 4 Container/Pressure/Temp. P	A

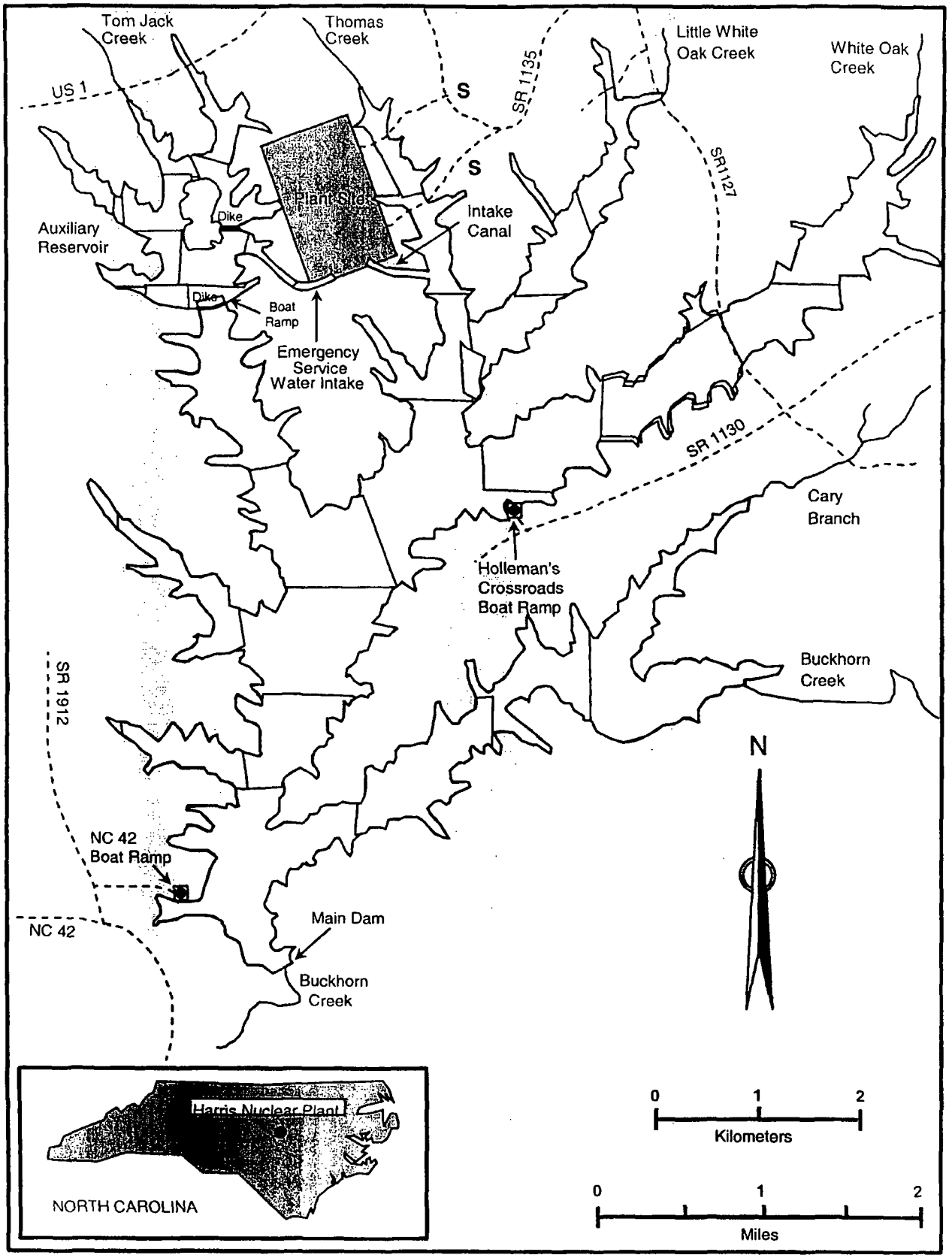
CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 7439-92-1 Chemical Name: LEAD IN STATION BATTERIES Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity – Immediate Acute X Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 366 No. of Days On-site **"CONFIDENTIAL"** R 1 4 Container/Pressure/Temp. B G I J N S	A
CAS: 7722-64-7 Chemical Name: POTASSIUM PERMANGANATE Properties: Pure, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	02 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 31 No. of Days On-site **"CONFIDENTIAL"** E 1 4 Container/Pressure/Temp. B L	A
CAS: 77-92-9 Chemical Name: CITRIC ACID Properties: Pure, Liquid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 31 No. of Days On-site **"CONFIDENTIAL"** O 1 4 Container/Pressure/Temp. B L	A
CAS: 7631-90-5 Chemical Name: GEBETZ SPECTRUS DT1404 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 31 No. of Days On-site **"CONFIDENTIAL"** O 1 4 Container/Pressure/Temp. B L	A
CAS: Chemical Name: GEBETZ HYPERSPERSE MDC700 Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 31 No. of Days On-site **"CONFIDENTIAL"** O 1 4 Container/Pressure/Temp. B L	A
CAS: 39389-20-3 Chemical Name: AMBERJET 1600 (H) RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 284 No. of Days On-site **"CONFIDENTIAL"** I 1 4 Container/Pressure/Temp. B G	A
CAS: 69011-20-7 Chemical Name: NRW-160 (H) MACROPOROUS RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 156 No. of Days On-site **"CONFIDENTIAL"** C 1 4 Container/Pressure/Temp. C J	A
CAS: 69011-20-7 Chemical Name: NRW-160 (H) MACROPOROUS RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 156 No. of Days On-site **"CONFIDENTIAL"** I 1 4 Container/Pressure/Temp. B C G	A
CAS: 69011-18-3 Chemical Name: NRW-501P (OH) MACROPOROUS RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 156 No. of Days On-site **"CONFIDENTIAL"** C 1 4 Container/Pressure/Temp. C J	A

CHEMICAL INVENTORY for Jan. 1 - Dec. 31, 2004 Chemical Description	Physical and Health Hazards	Inventory Storage Codes & Location(s)	Opt.
CAS: 69011-18-3 Chemical Name: NRW-501P (OH) MACROPOROUS RESIN Properties: Mix, Solid EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 156 No. of Days On-site ****CONFIDENTIAL**** I 1 4 Container/Pressure/Temp. B C G	A
CAS: 7791-18-6 Chemical Name: BARE GROUND PERFORMANCE PLUS M DE-ICER Properties: Liquid, Mix EHS Name:	– Fire – Sudden Release of Pressure – Reactivity X Immediate Acute – Delayed (Chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 320 No. of Days On-site ****CONFIDENTIAL**** E 1 4 Container/Pressure/Temp. B	A

End of Report Submitted 2/20/2005 4:59:28 PM



SHEARON HARRIS NUCLEAR POWER PLANT


Tom Jack Creek
Thomas Creek
Little White Oak Creek
White Oak Creek
US 1
SR 1135
SR1127
Plant Site
Intake Canal
Auxiliary Reservoir
Dike
Dike
Boat Ramp
Emergency Service Water Intake
SR 1130
Cary Branch
Holleman's Crossroads Boat Ramp
Buckhorn Creek
SR 1912
NC 42 Boat Ramp
NC 42
Main Dam
Buckhorn Creek
N
Harris Nuclear Plant
NORTH CAROLINA
0 1 2
Kilometers
0 1 2
Miles

Response to RAI No. 1
Item 13

Waste Minimization Report Form

Facility: Harris Nuclear Plant

Reporting Period: 2004

Facility Contact: Bob Wilson

Voicenet: 751-2444

A. Solid Waste Disposal Costs

Most facilities contract with a waste hauler for the lease of one or more dumpsters and the service of hauling the dumpster to the local landfill. The facility may also be charged tipping fees by the landfill. Disposal costs can be reduced by reducing the number of dumpsters, reducing the size of the dumpster, reducing the number of times the dumpster is hauled to the landfill, and by reducing the volume of material that is discarded.

Number of dumpsters on site: Varries

Waste Hauler: Waste Industries

Telephone: 919-662-7100

Container Capacity[1]	Monthly Lease Charge[1]	Hauling Fees[2] (Trips/Month)	Landfill Tipping Fee[3]	Total Monthly Cost
1. 8 CY	$ 415	$ 85 ( )	$ 0	$ 500
2. 30 CY	$ 415	$ 148 ( )	$ 150	$ 713
3. 40 CY	$ 415	$ 148 ( )	$ 150	$ 713
4.	$	$ ( )	$	$
5.	$	$ ( )	$	$

1. Typical containers are the 8 yd^3 dumpster, which is emptied into the waste hauler's truck, and the 30 yd^3 container (either open top or compactor), which is hauled directly to the landfill. More frequent emptying of the smaller container may be more cost effective than the larger container.
2. Waste haulers charge each time a dumpster is emptied. Regularly scheduled service of a partially filled container will cost more than calling the contractor for service when the container is nearly full. Discarding bulky items, such as empty cardboard boxes, will increase disposal costs. Recycling or reusing discarded items will decrease disposal costs.
3. Waste haulers pay a tipping fee to dispose of trash at the landfill. Recycling discarded items or using other waste reduction techniques to eliminate waste generation can reduce the volume of waste generated each month.

B. Hazardous Waste Disposal

Amount Generated: 1071

Disposal Cost: See chemical copst

C. Waste Minimization Programs

Indicate recycling/waste minimization programs being conducted at this facility. Provide an estimate of the number, pounds, or gallons for those materials **not** sent to the Materials Service Center during the quarter.

Materials	Amount/Volume	Cost
Aluminum cans	2000-3000 lbs	02/04/05
Antifreeze (gallons)	100 gallons	CDC
Batteries	6000-7000 lbs	see recycling cost
Alkaline	See Batteries	0
Lead-acid	See Batteries	0
Lithium	See Batteries	0
Ni-cad	See Batteries	0
Other		
Cardboard	300-400 CY	5000
Chemicals	Not Tracked	29000
Drums	Not Tracked	0
Glass	Not Tracked	0
Industrial rags (laundered)	N/A	0
Oil	N/A	0
On-site (burned for energy recovery)	N/A	
Off-site (Noble)	Shamrock ~21000 gallons	see chemical cost
Oil filters	Not Tracked	see chemicals
Paper	5000-6000 yrds	see solid waste p 1
Plastic	Not Tracked	0
Printer cartridges /ribbons	400-500	0
Scrap metal	50000-70000 lbs	sold for profit
Wood	12-15 tons	see recycling cost
Pallets	Processed with wood	0
Poles	N/A	0
Treated wood (cross ties and cross arms)	Removed by contractor	0
Other (list) Lighting	5000-6000 lamps	0

Comments: Numbers are based on contract invoices and historical data.

Recycling cost = $3500

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 14

Progress Energy

APR 1 9 2005 SERIAL: HNP-05-039

Mr. Jim Barber, Permitting Branch Head
North Carolina Dept. of Environment and Natural Resources
Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

Subject: Harris Nuclear Plant
Industrial Landfill Closure
N.C. SW Permit #92-10

Dear Mr. Barber:

The Harris Nuclear Plant recorded the solid waste permit for the above referenced landfill with the Wake County Register of Deeds on October 3, 1986 (copy attached). This recordation identified three separate areas: Area I, Area II and Area III. As previously discussed, Areas I & II were never utilized for waste disposal. Only Area III was developed into a landfill and used for waste disposal. Attached are the two deeds which encumber the property identified as Area III on the October 3, 1986 recordation. We hope this completes the required information to close the Industrial Landfill at the Harris Nuclear Plant.

If you have any questions regarding the information submitted, please contact Mr. Robert T. Wilson at 919-362-2444 or Mr. John R. Tocpfer at 919-546-7863.

Sincerely,

B.C. Waldrep
Plant General Manager
Harris Nuclear Plant

BCW/mgw

Attachments

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P. O. Box 165
New Hill, NC, NC 27562

SERIAL: HNP-05-039

bc: Mr. J. F. Briggs
Mr. L. F. Garner
Mr. S. W. Radford
Mr. J. R. Toepfer
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

COPY

CP&L
Carolina Power & Light Company
Shearon Harris Energy & Environmental Center
Route 1, Box 327
New Hill, North Carolina 27562

FILE COPY
566-13

Serial No.: ESS-86-1284

OCT 03 1986

Mr. Kenneth Wilkins
Wake County Register of Deeds
Wake County Courthouse
P.O. Box 1897
Raleigh, NC 27602

RE: RECORDATION OF SOLID WASTE MANAGEMENT PERMIT

Dear Mr. Wilkins:

The North Carolina Department of Human Resources, Division of Health Services, Solid and Hazardous Waste Management Branch, has granted Carolina Power & Light Company (CP&L) Solid Waste Permit No. 92-10 to operate two sanitary landfills and one demolition landfill at the Shearon Harris Nuclear Power Plant site in southwestern Wake County.

North Carolina General Statute 130-166.21(b) requires that any person (owner and/or operator) granted such a permit must file a certified copy of the permit in the Register of Deeds Office in the county in which the landfill is located. Accordingly, please find enclosed a certified copy of Solid Waste Permit No. 92-10 and a check for $8.50 payable to the Wake County Register of Deeds to cover the recording fee for the permit and attachments. Please send one copy of the recorded document to me.

The assistance provided by your office in this matter is most appreciated.

Yours very truly,

Original Signed By
G. H. Warriner

G. H. Warriner
Manager
Environmental Services

Original revised to $10.00 per addition of 2nd page of permit.
RHL
10-8-86

GHW/dfs (4186RHL)
Enclosures

cc: Mr. J. G. Layton

bcc: Mr. T. J. Crawford
Mr. R. B. Starkey, Jr.
Mr. R. A. Watson

Mail to: Gleason Davis' Energy + Environmental Consultants
Rt. 1, Box 327
New Hill, N.C. 27562
attn: H.A. Wanson

BOOK 3841 PAGE 735

Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

FILE COPY
566-13

PRESENTED FOR REGISTRATION
OCT 8 11 05 AM '86
KENNETH C. WILKINS
REGISTER OF DEEDS
WAKE COUNTY

CERTIFIED COPY OF SOLID WASTE PERMIT

I do hereby certify that the attached PERMIT is an exact and true copy of Permit No. 92-10.

RECEIVED
OCT 15 1986
ENVIRONMENTAL SERVICES

William L Meyer
William L. Meyer, Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

North Carolina

Wake County.

I, Pamela Faye Trask (Coble), a Notary Public for said County and State, do hereby certify that William L. Meyer personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 29 day of August, 1986.

(official seal)

Pamela Faye Trask (Coble)
Notary Public

My commission expires November 26, 1986.

BOOK 3841 PAGE 736

PERMIT NO. 92-10

DATE ISSUED 8-28-86

STATE OF NORTH CAROLINA

DEPARTMENT OF HUMAN RESOURCES

DIVISION OF HEALTH SERVICES

P.O. Box 2091 Raleigh 27602

SOLID WASTE PERMIT

Carolina Power & Light Company is hereby issued a permit to operate a Sanitary Landfill located in Wake County on Harris Plant Site, 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 on the below described property.

Area I (as shown on the site drawings submitted earlier to your office) is described as follows: BEGINNING at a point having N. C. Coordinates N=687,550 and E=2,010,540; and running thence generally north to a point having N. C. Coordinates N=688,250 and E=2,010,560; and thence directly east to a point having N. C. Coordinates N=688,250 and E=2,010,750; and runs thence generally southeast to a point having N. C. Coordinates N=687,550 and E=2,011,075; and thence runs west to the BEGINNING.

Area II is described as BEGINNING at a point having N. C. Coordinates N=687,480 and E=2,009,650; and thence running north to a point having N. C. Coordinates N=688,130 and E=2,009,650; thence running generally east-northeast to a point having N. C. Coordinates N=688,325 and E=2,010,250; and thence running south to a point having N. C. Coordinates N=687,600 and E=2,010,250; and thence running generally west-southwest to the BEGINNING.

(continued)

William L. Meyer, Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

PERMIT NO. 92-10

DATE ISSUED 8-28-86

SOLID WASTE PERMIT

Property Description (Continued):

Area III is described as BEGINNING at a point having N.C. Coordinates N=688,890 and E=2,010,530; thence running north to a point having N.C. Coordinates N=689,500 and E=2,010,530; thence running generally east-northeast to a point having N.C. Coordinates N=689,640 and E=2,011,800; and thence running generally south to a point having N.C. Coordinates N=689,020 and E=2,011,740; and thence runs generally west-southwest to BEGINNING.

PERMIT NO. 92-10
DATE ISSUED 8/29/86

S O L I D W A S T E P E R M I T
F O R
C P & L

Conditions of Permit:

1. This permit may be subject to review at an administrative hearing upon petition of anyone whose legal rights, privileges and duties may have been affected by the issuance thereof.

2. This permit shall not be effective unless the certified copy is filed in the register of deeds' office, in the grantor index under the name of the owner of the land in the county or counties in which the land is located. After recordation, the certified copy shall be returned to the Solid & Hazardous Waste Management Branch and shall have indicated on it the page and book number, date of recordation and registrar's seal.

3. When this property is sold, leased, conveyed or transferred, the deed or other instrument of transfer shall contain in the description section in no smaller type than that used in the body of the deed or instrument a statement that the property has been used as a sanitary landfill.

4. This permit amends and upgrades permit 92-A.

5. This solid waste disposal site is permitted to receive solid waste as defined in 10 NCAC 10G, .0101(36), except that hazardous waste, liquid waste and any other wastes that may pose a threat to the environmental or the public health are prohibited from disposal at this site unless prior authorization is obtained from the Division of Health Services. Industrial wastes and sludges shall be approved by DHS through waste determination procedure (Attachment #4).

6. This permit is for construction according to attached plans. Any modification or deviation from the approved plans shall be approved by the North Carolina Solid and Hazardous Waste Management Branch.

7. Groundwater monitoring wells and requirements:

   a. Wells shall be installed at locations as shown on construction plans.
   b. Installation shall conform to DHS well standard (Attachment 1).
   c. A well completion record shall be submitted to DHS for each monitoring well constructed (Attachment 2).
   d. Wells for Area 3 shall be installed within 60 days. Area 2 wells shall be installed prior to disposal in Area 2. Wells are not required for Area 1.
   e. Wells shall be installed and screened from the water table to ten (10) feet below the water table.
   f. Maximum depth of the wells should not exceed 100 feet. If the water table is not located above 100 feet, this office should be notified.

S O L I D W A S T E P E R M I T

(Continued)

8. This facility shall conform to operating procedures in Rule .0505 of the Solid Waste Management Rules.

9. Groundwater quality at this facility is subject to the classification and remedial action provisions of 15 NCAC 2L (Attachment 3).

10. Six inches of soil shall be applied to the working face weekly. Frequency of soil cover may be increased based on volume of paper disposed.

11. Wastes other than demolition wastes shall be covered with soil or demolition material daily.

12. Area 1 is approved for demolition wastes only.

13. Trenches shall be covered and seeded upon completion.

NORTH CAROLINA CREV BOOK 1961 PAGE 07

WAKE COUNTY

THIS DEED, made this 16th day of December, 1970, by CHARLES D. BARHAM, JR. and wife MARGARET C. BARHAM, parties of the first part; to CAROLINA POWER & LIGHT COMPANY, A North Carolina Corporation, party of the second part, all of the County of Wake and State of North Carolina:

W I T N E S S E T H:

That the said parties of the first part, in consideration of TEN DOLLARS ($10.00) AND OTHER VALUABLE CONSIDERATION, to them in hand paid by the party of the second part, the receipt of all of which is hereby acknowledged, have bargained and sold and by these presents do grant, bargain, sell and convey unto the party of the second part, its successors and assigns, those certain parcels of land in Buckhorn Township, Wake County, North Carolina, more particularly described as follows:

PARCEL 1:

Tract 1: BEGINNING at a point in the center of a public road, D. W. Walker's corner, and running said road North 54 degrees 10 minutes West 637 feet; thence with said road North 84 degrees 15 minutes West 500 feet; thence with said road North 81 degrees 00 minutes West 1115 feet to a point witnessed by a stake on the south side of road; thence South 4 degrees 00 minutes West 1405 feet to a Red Oak in Hedgerow; thence with Hedgerow North 85 degrees 00 minutes West 833 feet to an iron stake; thence North 3 degrees 00 minutes East 1785 feet to a stake; thence South 87 degrees 15 minutes East about 3060 feet to a stake; thence South 7 degrees 00 minutes West 912 feet to the beginning point in the center of road witnessed by a stake on the north side of said road, containing sixty three and one-half acres and being a portion of that tract of land conveyed to W. C. Holder by Norman Winston, and later conveyed to Len Winston and wife by deed of Arthur Baynes Wolfe and wife, dated Feb. 12, 1946, recorded Book 929, page 693, Wake County Registry.

SAVE AND EXCEPTING FROM THIS CONVEYANCE, HOWEVER, are those two certain tracts of land conveyed by Len Winston, widower, to Piedmont Woodyards, by deed dated March 26, 1956 and recorded in Book 1186, page 584.

Tract 2: Being Lot No. 3 as found in the division of the estate of William Booth (dec.) and bounded as follows: BEGINNING at a stake and pointers in W. J. Patrick's line L. M. Holt's corner, running South 88 degrees East to the center of Bonsal and Corinth Road; following said road, center to Lot No. 4; thence North 4 degrees East to a stone in the line of Lot 4, corner of Lot No. 1; thence North 88 degrees West 57.81 chains to a stake in Patrick's line, corner of Lot 2; thence South 1 degree 30 minutes West 8.65 chains to the beginning, containing 37 acres, more or less, and being the identical land conveyed to Lenin Winston by deed of R. B. Poole and wife, dated May 21, 1951, recorded Book 1073, page 54, Wake County Registry.

SAVE AND EXCEPTING FROM THIS CONVEYANCE, HOWEVER, is that certain tract of land formerly conveyed by Lenin Winston, widower to Riegal Woodlands, Corporation, by deed dated November 23, 1951, recorded Book 1084, page 290, Wake County Registry.

Tract 3: Lot No. 1 as found in the division of the estate of William Boothe deceased, and bounded as follows, viz: BEGINNING at a stake corner of Lot 4 in Davis' line; running North 85½ degrees West 29.81 chains to a stake, corner of Lot No. 2; thence South 1½ degrees West 19.70 chains corner of Lot No. 2 in the line of Lot No. 3; thence South 88 degrees East 29.81 chains corner of Lot No. 3 in the line of Lot No. 4; thence North 4 degrees East 18.56 chains to the beginning, containing 59.35 acres, more or less. This being the identical lands conveyed to Lenin Winston by deed of Mrs. F. W. Boothe et al, dated August 10, 1943, recorded in Book 897, page 546, Wake County Registry.

Parcel 1 being the identical land conveyed to Joe W. Stephenson and wife by deed dated November 23, 1962, and recorded in Book 1530, page 283, Wake County Registry.

DF 1599

PARCEL 2:

Tract 1: Adjoining the lands of C. J. Bright Estate, A. L. Wilson and Mimms Estate J. B. Womble and others and described as follows: BEGINNING at a sweet gum on the west bank of Thomas Creek; thence along said Bright line North 86 degrees 15 minutes West, 1860 feet to a stake and pointers; thence along A. L. Wilson's line South 7 degrees 00 minutes West, 1401 feet to a stake in Mimms' line; thence along J. B. Womble's line South 87 degrees 00 minutes East, 410 feet to a stake; thence North 4 degrees 45 minutes East, 235 feet to a stake; thence South 87 degrees 00 minutes East, 1402 feet to a stake thence North 71 degrees 30 minutes East, 85 feet to a hickory tree in bank of creek; thence up said Thomas Creek to the beginning, containing 52 acres, more or less. See deed to W. B. Womble and wife, recorded in Book 734, page 423, Wake County Registry.

Tract 2: Adjoining the lands of W. B. Womble, A. L. Wilson, J. B. Womble and other and described as follows: BEGINNING at a hickory and pointers on Thomas Creek, W. B. Womble's corner of his first tract; thence along his line South 71 degrees 30 minutes We 85 feet to a stake; thence North 87 degrees West 1402 feet to a stake; thence South 4 degrees 45 minutes West 235 feet to a stake; thence North 87 degrees West 410 feet to a stake in Mims' line; thence with said Mims' line South 7 degrees 15 minutes West 221 feet to a stake on East side of road to Bonsal, N. C.; J. B. Womble's corner; thence wit said Womble's line South 66 degrees East 1575 feet to a stake and pointers; thence South 86 degrees 45 minutes East 1326 feet to a poplar and pointers on the west bank of Thomas Creek; thence up the various curves of said creek 1642 feet to the beginning, containing 44 acres, more or less. See deed to W. B. Womble and wife, recorded in Book 871, page 434, Wake County Registry.

SAVE AND EXCEPTING, HOWEVER, from this conveyance of the above described Tract 2: All of that tract of land containing 3.1 acres, more or less, heretofore conveyed to Preston J. Thomas by Norman Winston and wife, described as follows: BEGINNING at an iron stake and pointers, J. B. Womble's and Norman Winston's corner, said point being the southeast end of a line described in Winston's 96 acre tract as South 66 degrees East 1575 feet and runs thence from this beginning corner with said Winston's line North 24 degrees East 340 feet to a stake and pointers on the edge of a field; runs thence with another of said Winston's line North 66 degrees West 397 feet to a stake in a field thence with another of said Winston's line South 24 degrees West 340 feet to a stake and pointers in J. B. Womble's line; thence with said Womble's line South 66 degrees East 397 feet to the beginning.

Parcel 2 being the identical land conveyed to Charles D. Barham, Jr. and wife by deed dated December 16, 1970 and recorded in Book _____, page _____, Wake County Registry.

TO HAVE AND TO HOLD the aforesaid parcels of land and all privileges thereunto belonging to the said party of the second part, its successors and assigns, forever.

And the said parties of the first part for themselves, their heirs, executors and administrators; covenant with the party of the second part, its successors and assigns, that they are seized of said premises in fee and have the right to convey the same in fee simple; that the same are free from encumbrances; and that they will warrant and defend the said title to the same against the claims of all persons whomsoever.

IN TESTIMONY WHEREOF, the said parties of the first part have hereunto set their hands and seals the day and year first above written.

Charles D Barham, Jr. (SEAL)
Charles D. Barham, Jr.

Margaret C. Barham (SEAL)
Margaret C. Barham

NORTH CAROLINA
WAKE COUNTY

I, Margaret M. Cook, a Notary Public, do hereby certify that Charles D. Barham, Jr. and wife, Margaret C. Barham, each personally appeared before me this day and acknowledged the due execution of the foregoing deed of conveyance.

Witness my hand and notarial seal, this the 17th day of December, 1970.

My commission expires:
July 4 1975

Margaret M. Cook
Notary Public

NOTARY PUBLIC WAKE COUNTY

NORTH CAROLINA

WAKE COUNTY

BOOK 2098 PAGE 374 Deed file 1539

THIS DEED, made and entered into this 7th day of September, 1972, by and between DORA E. JUDD, widow, of Wake County, North Carolina, GRANTOR, and CAROLINA POWER & LIGHT COMPANY, a corporation organized and existing under the laws of the State of North Carolina, with its principal office in the City of Raleigh, North Carolina, GRANTEE;

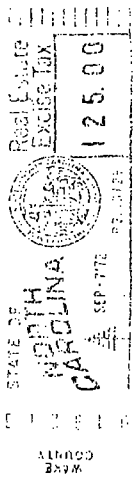
CREV Made

W I T N E S S E T H:

That the GRANTOR, for and in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration, receipt of which is hereby duly acknowledged, has bargained and sold, and by these presents does grant, bargain, sell, and convey unto the said CAROLINA POWER & LIGHT COMPANY, GRANTEE, its successors and assigns, the following described tract or parcel of land, lying and being in Buckhorn Township, Wake County, North Carolina:

The courses in the following description are based on the North Carolina State Plane Coordinate System.

BEGINNING at an iron pipe marking a northeastern corner of L. A. Buchanan, a southeastern corner of Triangle Plywood Corp., and a southwestern corner of Wilburn C. Calton; and runs thence along and with a southern property line of Wilburn C. Calton South 83 degrees 35 minutes 59 seconds East 378.56 feet to a stake marking a southeastern corner of Wilburn C. Calton; thence along and with an eastern property line of Wilburn C. Calton North 00 degrees 13 minutes 37 seconds East 1,254.64 feet to an iron pipe; thence along and with a southern property line of Wilburn C. Calton North 89 degrees 26 minutes 21 seconds East 560.93 feet to a southeastern corner of Wilburn C. Calton and a southwestern corner of Carolina Power & Light Company's Miguel D. Taylor Tract; thence along and with a southern property line of said Miguel D. Taylor Tract South 89 degrees 26 minutes 07 seconds East 1,344.40 feet to an iron pipe marking a southeastern corner of said Miguel D. Taylor Tract in a western property line of Carolina Power & Light Company's Joe W. Stephenson Tract; thence along and with western property lines of said Joe W. Stephenson Tract and Estelle D. Womble South 03 degrees 19 minutes 05 seconds West 1,504.27 feet to an iron pipe marking a southwestern corner of Estelle D. Womble; thence along and with a southern property line of Estelle D. Womble South 88 degrees 32 minutes 41 seconds East 1,025.24 feet to an iron pipe marking a southeastern corner of Estelle D. Womble in a western property line of Carolina Power & Light Company's J. B. Womble Estate Tract; thence along and with a western property line of said J. B. Womble Estate Tract South 02 degrees 08 minutes



29 seconds West 825.84 feet to the point having North Carolina Coordinates Y=687,793.004 and X=2,011,901.331; thence continuing along and with the last mentioned property line South 02 degrees 08 minutes 29 seconds West 497.67 feet to a pine tree marking a southwestern corner of said J. B. Womble Estate Tract in a northern property line of United States Steel and Carnegie Pension Fund; thence along and with a northern property line of United States Steel and Carnegie Pension Fund North 87 degrees 48 minutes 04 seconds West 654.14 feet to an iron pipe which is located within or near the Right of Way of North Carolina Secondary Road No. 1131; thence along and with another northern property line of United States Steel and Carnegie Pension Fund North 87 degrees 18 minutes 35 seconds West 537.33 feet to an oak tree marking a northwestern corner of United States Steel and Carnegie Pension Fund in an eastern property line of Joanne B. Mims; thence along and with an eastern property line of Joanne B. Mims North 00 degrees 33 minutes 00 seconds East 326.30 feet to an iron pipe marking a northeastern corner of Joanne B. Mims; thence along and with northern property lines of Joanne B. Mims and L. A. Buchanan South 86 degrees 52 minutes 38 seconds West 1817.24 feet to an iron pipe; thence along and with an eastern property line of L. A. Buchanan North 06 degrees 05 minutes 55 seconds West 895.41 feet to an iron pipe; and thence along and with another eastern property line of L. A. Buchanan North 09 degrees 35 minutes 30 seconds West 467.65 feet to the point of BEGINNING, containing 147.289 acres, more or less, as shown and described on Carolina Power & Light Company Drawing No. L-D-2370, which is incorporated herein by reference, and being the same tract of land described in a deed dated January 17, 1947 and recorded in Deed Book 959, page 324, Wake County Registry.

TO HAVE AND TO HOLD the above described tract or parcel of land, together with all privileges and appurtenances thereunto belonging to the said CAROLINA POWER & LIGHT COMPANY, GRANTEE, its successors and assigns, in fee simple forever.

And the said GRANTOR for herself, her heirs, executors and administrators does hereby covenant with the GRANTEE, its successors and assigns, that she is seized of the above described tract or parcel of land in fee and has the right to convey the same in fee simple; that the same is free and clear from all liens and encumbrances; and that she will warrant and forever defend the title thereto against the lawful claims of all persons whomsoever.

IN TESTIMONY WHEREOF, GRANTOR has hereunto set her hand and affixed her seal, the day and year first above written.

Dora E. Judd (SEAL)
DORA E. JUDD

NORTH CAROLINA

Wake COUNTY

I, Audrey L Harrell, a Notary Public within and for Wake County, North Carolina, do hereby certify that DORA E. JUDD personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and notarial seal, this 7th day of Sept, 1972.

Audrey L Harrell
Notary Public

My commission expires:

5-4-75

NORTH CAROLINA

WAKE COUNTY

The foregoing certificate of Audrey L. Harrell, a Notary Public is certified to be correct. This instrument was filed for registration at 12:30 o'clock, P.M., and recorded in this office in Book 2098, page 374.

This 7 day of September, 1972.

D. A. Rowland
Register of Deeds

Mary S. Peoples, Deputy

Response to RAI No. 1
Item 15

9/6/21/05 KTW

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

May 25, 2005

Mr. B.C. Waldrep, Plant General Manager
Progress Energy Carolinas, Inc. - Harris Nuclear Plant
P.O. Box 165
New Hill, North Carolina 27562

SUBJECT: Closure of the Harris Nuclear Plant
Unlined Industrial Landfill Unit; New Hill, North Carolina
FACILITY PERMIT #: 92-10

Dear Mr. Waldrep:

The Solid Waste Section (the Section) has received and reviewed documentation submitted by Progress Energy Carolinas, Inc. (PEC), by John R. Toepfer, P.E. , regarding the subject facility. Based upon the certification report dated 29 March 2004 from PEC, the Section has determined that the unlined industrial landfill unit at the subject facility has been closed in accordance with the applicable requirements. This determination may be rescinded should any of the documentation prove to be inaccurate.

The unlined industrial landfill unit at the subject facility is considered closed subject to the following post closure conditions. The owner and/or operator of the facility, Progress Energy Carolinas, Inc., is responsible for compliance with these conditions. Condition #8 addresses continued water quality monitoring for the existing ground water monitoring system.

Please note, that this closure shall become effective upon written notification by the owner/operator that the facility shall be maintained in compliance with the post closure conditions specified in this letter. Rule .0510 also states that when a disposal unit is closed, the permit to operate that unit is terminated and any future disposal operations will require approval by the Section.

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone: 919-508-8400 \ FAX: 919-733-4810 \ Internet http://wastenotnc.org

Please note that the post-closure monitoring period is effective starting on 25 March 2004, as indicated by the certification date in the closure documentation submittal provided by the certifying engineer. Also note that this closure letter and Post Closure conditions must be recorded in accordance with condition #7 and a copy of this recorded document returned to the Solid Waste Section at:

DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION
1646 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1646
ATTN: Jim Barber

The entire closure letter, pages 1 thru 12 (including the recordation page) , should be recorded against the following tracts of property, as referenced by the deeds provided by PEC to the Solid Waste Section for recordation purposes. The unlined, industrial waste landfill is located on the following properties:

A. Deed Book: 1961 Page: 07-08;
B. Deed Book: 2098 Page: 374-376;

If you have any questions concerning this closure letter don't hesitate to call Jim Barber at (919) 508-8495 or John Crowder in the Wilmington Regional Office at (910) 395-3900.

Sincerely,

Jim Barber
Permitting Branch Supervisor
Solid Waste Section
Division of Waste Management

cc: Mark Poindexter
John Crowder
Raleigh Regional office files
Raleigh Central File: Wake/Progress Energy Carolinas(CP&L)Permit # 92-10
Progress Energy Carolinas, Inc.
Environmental Services Section
410 S. Wilmington Street
Raleigh, N.C. 27602
Attn: John Toefper, P.E.

NCDENR
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: 92-10
Closure of INDUSTRIAL LANDFILL Unit
Date: 25 May 2005

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
1646 MAIL SERVICE CENTER; RALEIGH, N.C. 27699-1646

INDUSTRIAL SOLID WASTE LANDFILL FACILITY

PROGRESS ENERGY CAROLINAS, INC., LANDOWNER
formerly CAROLINA POWER & LIGHT COMPANY

is hereby issued a

LETTER OF CLOSURE

for the PROGRESS ENERGY CAROLINAS, INC. - HARRIS NUCLEAR PLANT UNLINED INDUSTRIAL LANDFILL UNIT located on property recorded in DEED BOOK: 1961 PAGE: 07-08 AND DEED BOOK: 2098 PAGE: 374-376

located at 5413 Shearon Harris Road in New Hill, Wake 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 letter of closure.

James C Coffey

James C. Coffey
Section Chief
Solid Waste Section
Division of Waste Management

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone: 919-508-8400 \ FAX: 919-733-4810 \ Internet http://wastenotnc.org

POST CLOSURE CONDITIONS

1. MANAGEMENT OF LANDFILL GAS: The owner and/or operator shall take the measures necessary to ensure that the closed site shall continue to meet the design standards for landfill gas found in Rule .0503(2)(a).

2. MANAGEMENT OF SURFACE WATER: The owner and/or operator shall take the measures necessary to ensure that the closed site shall meet the requirements of Rule .0503(2)(c). In addition, the landfill unit shall be maintained such that surface water runoff occurs in a controlled manner, and surface water shall not be impounded over waste.

3. AIR QUALITY: The owner/operator shall ensure that landfill units do not violate any applicable requirements developed under a State Implementation Plan approved or promulgated by the U.S. EPA Administrator pursuant to Section 110 of the Clean Air Act, as amended.

4. FINAL COVER SYSTEM: The integrity and effectiveness of the final cover system and any permanent erosion control devices must be maintained. This could include making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events.

5. PROPOSED USES: The owner/operator shall submit a proposal for the Section's review and approval addressing post closures uses of the facility. Proposed post closure uses shall not violate any post closure conditions found in this letter. In particular, plans for post closure uses shall avoid possibilities for the entrapment of methane gas. Routine landfill gas monitoring within structures and at the facility boundary may not be sufficient to detect potentially dangerous situations.

6. ONGOING SOLID WASTE MANAGEMENT ACTIVITIES: Continuing solid waste management activities shall not violate any post closure conditions found in this letter, and must meet any other applicable requirements.
   A. Based upon information provided in the closure certification report dated 29 March 2004, PEC-Harris Nuclear Plant will have a Material Laydown Yard as shown on sheet 2 of 3 of the Landfill Closure survey drawings on the plant site for the collection, storage and reuse of the following materials on the Harris Nuclear Plant site:

i. Non-painted concrete rubble
ii. Non-painted asphalt rubble
iii. Gravel, non-contaminated soil
iv. Concrete pipe
v. concrete road barricades(pier foundations, concrete piles, ballast, etc.)
vi. Railroad ties/treated cross ties
vii. Vegetative debris generated from on-site landscaping/mulch.

7. RECORDATION: The owner/operator shall ensure that the recordation requirements for land disposal sites found in Rule .0204 are met. The original landfill permit for the Harris Nuclear Plant was recorded on 8 October 1986 in Deed Book: 3841 Page: 735 - 739.

Following closure of the unlined Industrial Landfill unit, the owner or operator shall record a notation on the deed to the landfill facility property, or some other instrument that is normally examined during title search, and notify the Division that the notation has been recorded and a copy has been placed in the operating record. The notation on the deed shall in perpetuity notify any potential purchaser of the property that:

(a) The property has a unlined landfill unit; and
(b) Its use is restricted under the closure plan approved by the Division.

The attached certified copy of the closure letter shall be recorded by the Register of Deeds and indexed in the grantor index under the name of the land owner. The certified copy affixed with the Register's seal and the date, book, and page number of the recording shall be returned to the Solid Waste Section at:

DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION
1646 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1646
ATTN: Jim Barber

8. WATER QUALITY MONITORING AND REPORTING REQUIREMENTS:

a. Groundwater quality at this facility is subject to the "Classification and Water Quality Standards Applicable to the Groundwaters of North Carolina," 15A NCAC 2L. This includes, but is not limited to, the provisions for detection monitoring, assessment, and corrective action.

b. The permittee shall sample the detection monitoring wells and surface water sampling location(s) at a minimum on a semi-annual basis.

c. Water quality detection monitoring shall continue for a **minimum** of five years from the date of the engineers certification, indicating that the facility is closed. After five years the Sections will determine if further monitoring is to be required.

d. Sampling equipment and methods shall conform to specifications in Attachment 1, "North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities." The sampling parameters and methods shall be those found in Attachment 2, "Sampling and Analysis Requirements for Construction and Demolition Landfills and Closed Sanitary Landfills", or an alternate list of sampling parameters as approved by the Solid Waste Section.

e. The permittee shall maintain a record of all monitoring events and analytical data. Reports of the sampling events and analytical data shall be submitted to the Section in a timely manner.

NORTH CAROLINA CREV BOOK 1961 PAGE 07

WAKE COUNTY

THIS DEED, made this 16th day of December, 1970, by CHARLES D. BARHAM, JR. and wife MARGARET C. BARHAM, parties of the first part; to CAROLINA POWER & LIGHT COMPANY, A North Carolina Corporation, party of the second part, all of the County of Wake and State of North Carolina:

W I T N E S S E T H:

That the said parties of the first part, in consideration of TEN DOLLARS ($10.00) AND OTHER VALUABLE CONSIDERATION, to them in hand paid by the party of the second part, the receipt of all of which is hereby acknowledged, have bargained and sold and by these presents do grant, bargain, sell and convey unto the party of the second part, its successors and assigns, those certain parcels of land in Buckhorn Township, Wake County, North Carolina, more particularly described as follows:

PARCEL 1:

Tract 1: BEGINNING at a point in the center of a public road, D. W. Walker's corner, and running said road North 54 degrees 10 minutes West 637 feet; thence with said road North 84 degrees 15 minutes West 500 feet; thence with said road North 81 degrees 00 minutes West 1115 feet to a point witnessed by a stake on the south side of road; thence South 4 degrees 00 minutes West 1405 feet to a Red Oak in Hedgerow; thence with Hedgerow North 85 degrees 00 minutes West 833 feet to an iron stake; thence North 3 degrees 00 minutes East 1785 feet to a stake; thence South 87 degrees 15 minutes East about 3060 feet to a stake; thence South 7 degrees 00 minutes West 912 feet to the beginning point in the center of road witnessed by a stake on the north side of said road, containing sixty three and one-half acres and being a portion of that tract of land conveyed to W. C. Holder by Norman Winston, and later conveyed to Len Winston and wife by deed of Arthur Baynes Wolfe and wife, dated Feb. 12, 1946, recorded Book 929, page 693, Wake County Registry.

SAVE AND EXCEPTING FROM THIS CONVEYANCE, HOWEVER, are those two certain tracts of land conveyed by Len Winston, widower, to Piedmont Woodyards, by deed dated March 26, 1956 and recorded in Book 1186, page 584.

Tract 2: Being Lot No. 3 as found in the division of the estate of William Booth (dec.) and bounded as follows: BEGINNING at a stake and pointers in W. J. Patrick's line L. M. Holt's corner, running South 88 degrees East to the center of Bonsal and Corinth Road; following said road, center to Lot No. 4; thence North 4 degrees East to a stone in the line of Lot 4, corner of Lot No. 1; thence North 88 degrees West 57.81 chains to a stake in Patrick's line, corner of Lot 2; thence South 1 degree 30 minutes West 8.65 chains to the beginning, containing 37 acres, more or less, and being the identical land conveyed to Lenin Winston by deed of R. B. Poole and wife, dated May 21, 1951, recorded Book 1073, page 54, Wake County Registry.

SAVE AND EXCEPTING FROM THIS CONVEYANCE, HOWEVER, is that certain tract of land formerly conveyed by Lenin Winston, widower to Riegal Woodlands, Corporation, by deed dated November 23, 1951, recorded Book 1084, page 290, Wake County Registry.

Tract 3: Lot No. 1 as found in the division of the estate of William Boothe deceased, and bounded as follows, viz: BEGINNING at a stake corner of Lot 4 in Davis' line; running North 85½ degrees West 29.81 chains to a stake, corner of Lot No. 2; thence South 1½ degrees West 19.70 chains corner of Lot No. 2 in the line of Lot No. 3; thence South 88 degrees East 29.81 chains corner of Lot No. 3 in the line of Lot No. 4; thence North 4 degrees East 18.56 chains to the beginning, containing 59.35 acres, more or less. This being the identical lands conveyed to Lenin Winston by deed of Mrs. F. W. Boothe et al, dated August 10, 1943, recorded in Book 897, page 546, Wake County Registry.

Parcel 1 being the identical land conveyed to Joe W. Stephenson and wife by deed dated November 23, 1962, and recorded in Book 1530, page 283, Wake County Registry.

PARCEL 2:

Tract 1: Adjoining the lands of C. J. Bright Estate, A. L. Wilson and Mimms Estate J. B. Womble and others and described as follows: BEGINNING at a sweet gum on the west bank of Thomas Creek; thence along said Bright line North 86 degrees 15 minutes West, 1860 feet to a stake and pointers; thence along A. L. Wilson's line South 7 degrees 00 minutes West, 1401 feet to a stake in Mimms' line; thence along J. B. Womble's line South 87 degrees 00 minutes East, 410 feet to a stake; thence North 4 degrees 45 minutes East, 235 feet to a stake; thence South 87 degrees 00 minutes East, 1402 feet to a stake thence North 71 degrees 30 minutes East, 85 feet to a hickory tree in bank of creek; thence up said Thomas Creek to the beginning, containing 52 acres, more or less. See deed to W. B. Womble and wife, recorded in Book 734, page 423, Wake County Registry.

Tract 2: Adjoining the lands of W. B. Womble, A. L. Wilson, J. B. Womble and other and described as follows: BEGINNING at a hickory and pointers on Thomas Creek, W. B. Womble's corner of his first tract; thence along his line South 71 degrees 30 minutes We 85 feet to a stake; thence North 87 degrees West 1402 feet to a stake; thence South 4 degrees 45 minutes West 235 feet to a stake; thence North 87 degrees West 410 feet to a stake in Mims' line; thence with said Mims' line South 7 degrees 15 minutes West 221 feet to a stake on East side of road to Bonsal, N. C.; J. B. Womble's corner; thence wit said Womble's line South 66 degrees East 1575 feet to a stake and pointers; thence South 86 degrees 45 minutes East 1326 feet to a poplar and pointers on the west bank of Thomas Creek; thence up the various curves of said creek 1642 feet to the beginning, containing 44 acres, more or less. See deed to W. B. Womble and wife, recorded in Book 871, page 434, Wake County Registry.

SAVE AND EXCEPTING, HOWEVER, from this conveyance of the above described Tract 2: All of that tract of land containing 3.1 acres, more or less, heretofore conveyed to Preston J. Thomas by Norman Winston and wife, described as follows: BEGINNING at an iron stake and pointers, J. B. Womble's and Norman Winston's corner, said point being the southeast end of a line described in Winston's 96 acre tract as South 66 degrees East 1575 feet and runs thence from this beginning corner with said Winston's line North 24 degrees East 340 feet to a stake and pointers on the edge of a field; runs thence with another of said Winston's line North 66 degrees West 397 feet to a stake in a field thence with another of said Winston's line South 24 degrees West 340 feet to a stake and pointers in J. B. Womble's line; thence with said Womble's line South 66 degrees East 397 feet to the beginning.

Parcel 2 being the identical land conveyed to Charles D. Barham, Jr. and wife by deed dated December 16, 1970 and recorded in Book _____, page _____, Wake County Registry.

TO HAVE AND TO HOLD the aforesaid parcels of land and all privileges thereunto belonging to the said party of the second part, its successors and assigns, forever.

And the said parties of the first part for themselves, their heirs, executors and administrators; covenant with the party of the second part, its successors and assigns, that they are seized of said premises in fee and have the right to convey the same in fee simple; that the same are free from encumbrances; and that they will warrant and defend the said title to the same against the claims of all persons whomsoever.

IN TESTIMONY WHEREOF, the said parties of the first part have hereunto set their hands and seals the day and year first above written.

Charles D. Barham, Jr. (SEAL)
Charles D. Barham, Jr.

Margaret C. Barham (SEAL)
Margaret C. Barham

NORTH CAROLINA
WAKE COUNTY

BOOK 1961 PAGE 09

I, Margaret M. Cook, a Notary Public, do hereby certify that Charles D. Barham, Jr. and wife, Margaret C. Barham, each personally appeared before me this day and acknowledged the due execution of the foregoing deed of conveyance.

Witness my hand and notarial seal, this the 17th day of December, 1970.

My commission expires:

Margaret M. Cook
Notary Public

Deed file 153

WAKE COUNTY

THIS DEED, made and entered into this 7th day of September, 1972, by and between DORA E. JUDD, widow, of Wake County, North Carolina, GRANTOR, and CAROLINA POWER & LIGHT COMPANY, a corporation organized and existing under the laws of the State of North Carolina, with its principal office in the City of Raleigh, North Carolina, GRANTEE;

CREV Made

W I T N E S S E T H:

That the GRANTOR, for and in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration, receipt of which is hereby duly acknowledged, has bargained and sold, and by these presents does grant, bargain sell, and convey unto the said CAROLINA POWER & LIGHT COMPANY, GRANTEE, its successors and assigns, the following described tract or parcel of land, lying and being in Buckhorn Township, Wake County, North Carolina:

The courses in the following description are based on the North Carolina State Plane Coordinate System.

BEGINNING at an iron pipe marking a northeastern corner of L. A. Buchanan, a southeastern corner of Triangle Plywood Corp., and a southwestern corner of Wilburn C. Calton; and runs thence along and with a southern property line of Wilburn C. Calton South 83 degrees 35 minutes 59 seconds East 378.56 feet to a stake marking a southeastern corner of Wilburn C. Calton; thence along and with an eastern property line of Wilburn C. Calton North 00 degrees 13 minutes 37 seconds East 1,254.64 feet to an iron pipe; thence along and with a southern property line of Wilburn C. Calton North 89 degrees 26 minutes 21 seconds East 560.93 feet to a southeastern corner of Wilburn C. Calton and a southwestern corner of Carolina Power & Light Company's Miguel D. Taylor Tract; thence along and with a southern property line of said Miguel D. Taylor Tract South 89 degrees 26 minutes 07 seconds East 1,344.40 feet to an iron pipe marking a southeastern corner of said Miguel D. Taylor Tract in a western property line of Carolina Power & Light Company's Joe W. Stephenson Tract; thence along and with western property lines of said Joe W. Stephenson Tract and Estelle D. Womble South 03 degrees 19 minutes 05 seconds West 1,504.27 feet to an iron pipe marking a southwestern corner of Estelle D. Womble; thence along and with a southern property line of Estelle D. Womble South 88 degrees 32 minutes 41 seconds East 1,025.24 feet to an iron pipe marking a southeastern corner of Estelle D. Womble in a western property line of Carolina Power & Light Company's J. B. Womble Estate Tract; thence along and with a western property line of said J. B. Womble Estate Tract South 02 degrees 08 minutes

Real Estate Excise Tax 1 2 5 0 0

STATE OF NORTH CAROLINA SEP 7 72

WAKE COUNTY

29 seconds West 825.84 feet to the point having North Carolina Coordinates Y=687,793.004 and X=2,011,901.331; thence continuing along and with the last mentioned property line South 02 degrees 08 minutes 29 seconds West 497.67 feet to a pine tree marking a southwestern corner of said J. B. Womble Estate Tract in a northern property line of United States Steel and Carnegie Pension Fund; thence along and with a northern property line of United States Steel and Carnegie Pension Fund North 87 degrees 48 minutes 04 seconds West 654.14 feet to an iron pipe which is located within or near the Right of Way of North Carolina Secondary Road No. 1131; thence along and with another northern property line of United States Steel and Carnegie Pension Fund North 87 degrees 18 minutes 35 seconds West 537.33 feet to an oak tree marking a northwestern corner of United States Steel and Carnegie Pension Fund in an eastern property line of Joanne B. Mims; thence along and with an eastern property line of Joanne B. Mims North 00 degrees 33 minutes 00 seconds East 326.30 feet to an iron pipe marking a northeastern corner of Joanne B. Mims; thence along and with northern property lines of Joanne B. Mims and L. A. Buchanan South 86 degrees 52 minutes 38 seconds West 1817.24 feet to an iron pipe; thence along and with an eastern property line of L. A. Buchanan North 06 degrees 05 minutes 55 seconds West 895.41 feet to an iron pipe; and thence along and with another eastern property line of L. A. Buchanan North 09 degrees 35 minutes 30 seconds West 467.65 feet to the point of BEGINNING, containing 147.289 acres, more or less, as shown and described on Carolina Power & Light Company Drawing No. L-D-2370, which is incorporated herein by reference, and being the same tract of land described in a deed dated January 17, 1947 and recorded in Deed Book 959, page 324, Wake County Registry.

TO HAVE AND TO HOLD the above described tract or parcel of land, together with all privileges and appurtenances thereunto belonging to the said CAROLINA POWER & LIGHT COMPANY, GRANTEE, its successors and assigns, in fee simple forever.

And the said GRANTOR for herself, her heirs, executors and administrators does hereby covenant with the GRANTEE, its successors and assigns, that she is seized of the above described tract or parcel of land in fee and has the right to convey the same in fee simple; that the same is free and clear from all liens and encumbrances; and that she will warrant and forever defend the title thereto against the lawful claims of all persons whomsoever.

IN TESTIMONY WHEREOF, GRANTOR has hereunto set her hand and affixed her seal, the day and year first above written.

Dora E. Judd (SEAL)
DORA E. JUDD

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NORTH CAROLINA

Wake COUNTY

I, Audrey L Harrell, a Notary Public within and for Wake County, North Carolina, do hereby certify that DORA E. JUDD personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and notarial seal, this 7th day of Sept, 1972.

Audrey L Harrell
Notary Public

My commission expires:

5-4-75

NORTH CAROLINA

WAKE COUNTY

The foregoing certificate of Audrey L. Harrell, a Notary Public is certified to be correct. This instrument was filed for registration at 12:30 o'clock, P .M., and recorded in this office in Book 2098, page 374.

This 7 day of September, 1972.

D. A. Rowland
Register of Deeds

Mary S. Peoples, Depu

DOCUMENT LIST

1. Construction documentation report, dated 29 March 2004, for the Harris Nuclear Plant Closure and Landfill Closure Survey drawings dated January 2004.

2. Deeds for the Harris Nuclear Plant properties used for the industrial waste landfill identified as follows:
   A. Book: 1961 Page: 07 - 08 dated 16 December 1970;
   B. Book: 2098 Page: 374 - 379 dated 7 September 1972;

3. A copy of the original landfill permit, #92-10, dated 28 August 1986 that was recorded on 8 October 1986 in Book: 3841 Page: 739 - 739; received from Progress Energy Carolinas, Inc. on 21 April 2005.

Response to RAI No. 1
Item 16

Location Code	Location Description	Department	Job Title	Address 1	City	St	Postal
10120	New Hill- Harris	Corp Comm	Comm Spec	821 Essex Forest Drive	Cary	NC	27511
10120	New Hill- Harris	Corp Comm	Supv-Generation Comm-HNP	513 Cameron Glen Drive	Apex	NC	27502
10120	New Hill- Harris	EnvHlth&Saf	Sr Occ Health & Safety Spec	1311 evert Dowdy RD	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Admin Asst to Department Head	812 Hollies Pines Road	Broadway	NC	27505
10120	New Hill- Harris	Har Nuc Plant	Assessor	605 Lombardy Rd	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Assessor-RNAS	1402 Laughridge Dr	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Assessor-RNAS	266 Troy Drive	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Assessor-RNAS	5916 Fordland Dr	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Assessor-RNAS	7186 VILLANOW DRIVE	SANFORD	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Assoc Engr	6294 Rawls Church Road	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Assoc Engr	920 Cahlfield Ct	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Assoc Engr	5211 Trinity Village Lane Apt. 302	Raleigh	NC	27607
10120	New Hill- Harris	Har Nuc Plant	Assoc Engr	1912 Hidden Knoll Pl	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Assoc Engr	6831 Crescent Moon Ct #106	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Assoc Engr	4835 Summit Arbor Apt. 105	Raleigh	NC	27612
10120	New Hill- Harris	Har Nuc Plant	Assoc Radiation Control Spec	205 William Dr	Benson	NC	27504
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	2104 Pilot Mountain Court	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	P.O. Box 242	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	109 Sunrise Circle	Benson	NC	27504
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	205 Smith St	Broadway	NC	27505
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	1112 Collington Dr	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	208 Trillingham Ln	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	7301-106 Calibre Park Drive	Durham	NC	27707
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	701 Lucas St	Erwin	NC	28339
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	909 Ransdell Rd	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	303 Cross Lake Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	1201 Secotan Place	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	5933 Burt Road	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	200 Middlecrest Way	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	112 Meadow Fox Road	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	141 Silverstone Drive	Pittsboro	NC	27312
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	176 Rocky Hills Rd	Pittsboro	NC	27312
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	6132 Vicky Dr	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	2817 Henslowe Dr	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	186 Pineview Circle	Salisbury	NC	28144
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	3218 Windmere Drive	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	1284 Cotten Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	305 Waterside Drive	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Aux Oper A-Nuc	969 South Bay	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Aux Oper B-Nuc	212 Old Dock Tr	Cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Aux Oper B-Nuc	2227 Waterford Forest Circle	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Aux Oper B-Nuc	704 Birkdale Drive	Clayton	NC	27520
10120	New Hill- Harris	Har Nuc Plant	Aux Oper B-Nuc	105 W Marsha Gayle Ct	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Aux Oper B-Nuc	209 Braxton Village Way	Holly Springs	NC	27540

10120	New Hill- Harris	Har Nuc Plant	Aux Oper B-Nuc	5140 Simmons Branch Tr	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Aux Oper B-Nuc	po box 831	springlake	NC	28390
10120	New Hill- Harris	Har Nuc Plant	Aux Oper C-Nuc	736 Reunion Ridge Way	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Aux Oper C-Nuc	600 N Harrison Avenue	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	114 stockton dr.	Angier	NC	27501
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	2081 Harnett Central Rd	Angier	NC	27501
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	208 Trey Drive	Benson	NC	27504
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	745 Tranquil Lane	Broadway	NC	27505
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	414 Kent Drive	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	1347 Christian Light Road	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	2115 Sterling Green Drive	Morrisville	NC	27560
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	6012 Wolverhampton Drive	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	351 Island Creek Road	Rose Hill	NC	28458
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	269 Brothers Drive	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	319 Winterlocken Dr	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	2417 Wintergreen Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	2901 Cheshire Drive	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Cont Oper-Nucl	307 Allen Farms Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Control Room Supv-Nuc	1106 Secotan Place	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Control Room Supv-Nuc	608 Wagstaff Rd	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Control Room Supv-Nuc	228 Elmcrest Dr.	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Control Room Supv-Nuc	501 Roxanne Dr	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Control Room Supv-Nuc	210 Shaw Street	Randleman	NC	27317
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	76 Woodcroft Drive	Angier	NC	27501
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	1533 Cone Ave	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	4101 Friendship Rd	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	P.O. Box 1187	Broadway	NC	27505
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	3008 Brozak Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	11176 NC 42	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	360 Big Oak Dr	New Hill	NC	27562
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	1800 Butler St	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	P.O. BOX 4102	SANFORD	NC	27331
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	4121 Buckhorn Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	4445 Swanns Station Road	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	4109 Steele Bridge Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	2774 Mallard Cove Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst I	1870 Pumping Station Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Data Mgmt Asst II	1-D 205 East Ransom St	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Dir-Site Operations-HNP	103 Trident Court	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	117 Huntsmoor Lane	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	139 Sandy Branch Lane	Clayton	NC	27520
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	3408 Airpark Rd	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	4009 Ruran Ct	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	56 Vanstore Drive	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	PO Box 273	Moncure	NC	27559
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	13827 Darington Court	Pineville	NC	28134

10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	3557 Mount Gilead Church Rd	Pittsboro	NC	27312
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	5309 Woodsdale Rd	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	344 Northfield Dr	Raleigh	NC	27609
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	4508 Deer Stream Lane	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	1601 Westhaven Dr	Raleigh	NC	27607
10120	New Hill- Harris	Har Nuc Plant	E&C Tech I-Nuc	8318 Hillcrest Farm Rd.	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Engr	477 Farrells Creek Rd	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Engr	108 Cedar Wynd	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Engr	1021 Climbing Rose Turn	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Engr	60 Avery Spence Rd	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Engr	1123 Black Angus Drive	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	Engr	6209 Tributary Drive	Raleigh	NC	27609
10120	New Hill- Harris	Har Nuc Plant	Engr Tech I-Nuc	100 Longneedle Ct	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Financial Support Asst I	5687 McArthur Road	Broadway	NC	27505
10120	New Hill- Harris	Har Nuc Plant	I&C Tech II-Nuc	2701 Sunnybrook Drive	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	I&C Tech II-Nuc	1226 sheriff watson rd	sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	1125 N Raleigh St	Angier	NC	27501
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	2713 Whistling Quail Run	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	400 Nottinghill Walk	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	212 Kronos Ln	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	1412 Dunbar Ct	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	2984 Farrington Point	Chapel Hill	NC	27514
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	671 Grill Rd.	Clayton	NC	27520
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	3782 Barber Mill Rd	Clayton	NC	27520
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	1055 Lassiter Rd	Four Oaks	NC	27524
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	5813 Penton Ct	Fuquary Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	5000 Allanbrooke Lane	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	5000 Shimberg Place	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	5904 Burt Rd	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	5000 Beckwyck Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	5309 Autumn Trace Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	1549 ATKINS RD	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	847 E Maple Lane	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	358 Dewar St	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	2424 Hidden Meadow Drive	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	431 Brims Way	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	108 Foley Dr	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	P.O. Box 265	Lillington	NC	27546
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	125 East River Rd	Moncure	NC	27559
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	3016 Old Us #1	New Hill	NC	27562
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	59 W Cornwallis St	Pittsboro	NC	27312
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	3109 Southall Road	Raleigh	NC	27604
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	9500 Candor Oaks Drive	Raleigh	NC	27615
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	1521 202 Creekwood Ct	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	1505 Spennymore Road	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	5004 Runon Cir	Raleigh	NC	27603

10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	6309 Oakbrook Circle	Raleigh	NC	27609
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	302 Hawk Rd.	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	3079 Farrell Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	721 Stoney Brook Dr	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	202 Hillcrest Dr	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	439 Oakleaf Rd	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	429 Hilltop Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	1651 Crantock Rd	Smithfield	NC	27577
10120	New Hill- Harris	Har Nuc Plant	I&C Tech I-Nuc	3208 Virginia Creeper Lane	Willow Springs	NC	27592
10120	New Hill- Harris	Har Nuc Plant	Intern	4517 Trenton Road	Chapel Hill	NC	27517
10120	New Hill- Harris	Har Nuc Plant	Intern	1020 High Lake Ct	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Lead Assessor	313 Holly Branch Drive	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Lead Bus Fin Anlyst	2010 Graybark Ct	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Lead Bus Fin Anlyst	2409 Forestbluff Drive	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	72 Stockton Drive	Angier	NC	27501
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	102 White Magnolia Court	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	1002 Lindfield Ct	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	4133 Mountainbrook Rd	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	817 Northampton Dr	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	237 Custer Trail	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	103 Fox Squirrel Ct.	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	105 Abram Dr	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	100 Iulworth Ct	Cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	1824 Audubon Parc Drive	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	203 Brook Creek Dr.	Cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	302 Hunters Crossing	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	103 Kiawah Drive	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	300 Dry Ave	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	128 Huntsmoor Ln	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	3085 Abattior Rd.	Coats	NC	27521
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	3324 Bentwillow Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	1012 White Meadows Drive	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	5253 Linwick Drive	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	4829 Edge Cliff Ct	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	5108 Salem Ridge Road	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	173 Cardinal Court	Pittsboro	NC	27312
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	3316 Tall Tree Pl.	Raleigh	NC	27607
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	5713 Heatherstone Dr	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	1929 Brassfield Rd	Raleigh	NC	27614
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	4113 Ridgebluffs Court	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	3101 Shadwell Ct	Raleigh	NC	27613
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	7913 Holly Springs Rd	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Lead Engr	3221 Virginia Creeper Lane	Willow Springs	NC	27592
10120	New Hill- Harris	Har Nuc Plant	Lead Engr (IO)	201 Cakebread Court	Cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Lead Engr Technical Supt Spec	4100 West Lake Road	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Lead Engr Technical Supt Spec	104 Belclaire Ct	Cary	NC	27513

10120	New Hill- Harris	Har Nuc Plant	Lead Engr Technical Supt Spec	5112 Grey Dove Lane	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	Lead Engr Technical Supt Spec	5820 Heatherstone Dr	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Lead Engr Technical Supt Spec	6016 Bedfordshire Drive	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Emerg Prepare Spec	5748 Brushy Meadows Drive	Fuquay	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Tech Proj Mgmt Spec	3004 Buckingham Way	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Tech Proj Mgmt Spec	4517 Trenton Rd	Chapel Hill	NC	27517
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Tech Proj Mgmt Spec	391 The Preserve Trail	Chapel Hill	NC	27517
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Tech Proj Mgmt Spec	1405 Holland Hills Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Tech Proj Mgmt Spec	5409 Royal St George Lane	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Tech Proj Mgmt Spec	5720 Country Forest	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Work Mgmt Spec	3221 Pleasant Plains Rd	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Work Mgmt Spec	563 Graceland Dr	Asheboro	NC	27203
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Work Mgmt Spec	302 Heidinger	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Lead Nuc Work Mgmt Spec	4112 Carson Dr	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Lead Nucl Self Evaluation Spec	8200 Wanstraw Way	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Lead Nucl Self Evaluation Spec	3601 Knightcroft Place	Fuquay - Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Nucl Self Evaluation Spec	1308 Stonemoor Court	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Lead Nuclear Procedure Writer	501 Colonial Dr	Broadway	NC	27505
10120	New Hill- Harris	Har Nuc Plant	Lead Nuclear Procedure Writer	1534 Clearwater Drive	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Lead Nuclear Procedure Writer	8620 South Creek Rd.	Willow Springs	NC	27592
10120	New Hill- Harris	Har Nuc Plant	Lead Radiation Control Spec	8301 Maude Stewart Rd	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Lead Radiation Control Spec	5820 Heatherstone Dr	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Lead Radiation Control Spec	4716 Glen Forest Dr	Raleigh	NC	27612
10120	New Hill- Harris	Har Nuc Plant	LeadNucTecProjMgtSpec-R(02/07)	831 South Franklin Dr	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	100 Gran Nad Ln	Angier	NC	27501
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	7117 Meadow Gate Dr..	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	3942 Pilson Road	Cameron	NC	28326
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	120 Promise Lane	Cameron	NC	28326
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	6701 Valley Woods Lane	cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	3340 Keener Rd	Clinton	NC	28328
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	370 Lakestone Est	Pittsboro	NC	27312
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	5328 Barclay Dr	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	192 Popular Springs Church Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	2916 Cheshire Dr.	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	237 Holder Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	916 Stoneybrook Dr	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	1886 Riddle Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	1678 S Plank Road	Sanford	NC	27331
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	764 White Memorial Chur	Willow Springs	NC	27592
10120	New Hill- Harris	Har Nuc Plant	Mech 1/C-Nuc	P.O. Box 1341	Wilson	NC	27583
10120	New Hill- Harris	Har Nuc Plant	Mech 2/C-Nuc	401 Barrett Street	Carthage	NC	28327
10120	New Hill- Harris	Har Nuc Plant	Mech 2/C-Nuc	762 Chevy Chase Street	Fayetteville	NC	28306
10120	New Hill- Harris	Har Nuc Plant	Mech 2/C-Nuc	2704 Avent Ferry Road	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Mech 2/C-Nuc	4665 corinth road	moncure	NC	27559
10120	New Hill- Harris	Har Nuc Plant	Mgr-Hess	604 Crossway Lane	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Mgr-Maint-Nuc	109 North Fern Abbey Lane	Cary	NC	27511

10120	New Hill- Harris	Har Nuc Plant	Mgr-Nuclear Assessment	5104 Fielding Dr	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Mgr-Oper-Nuc	311 Parkside Cir	Chapel Hill	NC	27516
10120	New Hill- Harris	Har Nuc Plant	Mgr-Outage & Scheduling	210 Parkroyale Lane	Cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Mgr-Shift Ops-HNP	1108 Turner Farms Rd	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	Mgr-Support Services-Nuc	109 MacLaurin Street	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Nucl Self Evaluation Spec	5409 Royal St. George Lane	Fuquay-Varina, NC	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Plant Services Asst I	5925 Hampton Ridge Road	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Plt Gen Mgr-Harris Plt	1702 Charlion Downs Lane	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Princ Nuc Tech Proj Mgmt Spec	1007 E Lady Diana Court	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	QA/QC/NDE Tech I-Nuc	8413 Capua Ct	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	QA/QC/NDE Tech I-Nuc	912 Andersonwood Drive	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	QA/QC/NDE Tech I-Nuc	1600 athens drive	raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	101 Waddell Ct	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	104 George Place	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	104 Westbourne CT	CARY	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	30138 Village Park Drive	Chapel Hill	NC	27517
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	204 Hunting Lodge Rd	Clayton	NC	27520
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	533 Woodchase Green Dr.	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	132 Cross Lake Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	2956 Tram Rd	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	12221 HWY 42 West	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	6416 Burt Road	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	1411 Poplar Ridge Road	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	804 Stinson Avenue	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	673 Fred Burns Rd	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	P O Box 283	Lillington	NC	27546
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	3516 Bartley Holleman Rd	New Hill	NC	27562
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	3225 Pea Ridge Road	New Hill	NC	27562
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	2105 Howson Rd	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	2437 Millstone Harbor Drive	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	804 Carmen Court	Raleigh	NC	27610
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	501 Strother Rd	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	1218 Fernridge Drive	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	726 Hickory House Rd.	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	2120 Tramway Road	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	3220 Westchester Dr	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	205 Womble Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	3113 Wild Forest Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	PO Box 505	Selma	NC	27576
10120	New Hill- Harris	Har Nuc Plant	Rad Cont Tech I-Nuc	7038 Landingham Drive	Willow Springs	NC	27592
10120	New Hill- Harris	Har Nuc Plant	Shift Tech Advisor-Nucl	106 Doves Haven Drive	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Shift Tech Advisor-Nucl	1412 Highland Trail	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Shift Tech Advisor-Nucl	8501 Wellsley Way	Raleigh	NC	27613
10120	New Hill- Harris	Har Nuc Plant	Sr Bus Fin Anlyst	208 Colonial Townes Ct	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Sr Bus Fin Anlyst	107 Stockett Ct	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	Sr Bus Fin Anlyst	5333 Birchleaf Dr	Raleigh	NC	27606

10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	104 Windance Ct	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	5612 Cary Glen Blvd	Cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	218 Lewey Brook Dr	Cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	102 Stoneford Ct	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	20 Annie V Dr	Clayton	NC	27520
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	6004 Brown Swiss Way	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	5100 Beckwyck Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	4908 Larchmont Dr	Raleigh	NC	27612
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	4520 Timberhurst Drive	Raleigh	NC	27612
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	3213 Foggy Mtn Loop	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Cont Oper-Nucl	249 Zimmerman Rd.	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Data Mgmt Asst	1200 Cool Springs Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Document Control Spec	1325 Wheeler Drive	Angier	NC	27501
10120	New Hill- Harris	Har Nuc Plant	Sr Document Control Spec	3300 Needlepoint Circle	Willow Springs	NC	27592
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	2105 Bull Run Dr	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	1702 Melbry Ct	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	105 Laurel Hollow Place	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	108 Fox Ct	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	109 Royce Dr	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	406 Early Morning Trail	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	112 Gablewood Lane	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	308 River Bluff Drive	Pittsboro	NC	27312
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	6020 Bedfordshire Drive	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	1104 Redleaf Court	Raleigh	NC	27609
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	8703 Twin Bridge Circle	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Sr Engr	818 Cannon Lane	Sugar Land	TX	77479
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	5001 Hollybrook Dr	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	3428 Friendship Rd	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	9700 Astor Ct	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	78 Bass Hound Circle	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	107 Queensbury Ct	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	306 Whithorne Dr	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	2805 Camfield Place	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	1417 Roy Averette Dr	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	8513 Langtree Ln	Raleigh	NC	27613
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	3308 HENLEY ROAD	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Engr Technical Supt Spec	3451 Lower Moncure Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Environmental Specialist	103 Rocktree Ct	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Maint/Mod Planner	625 Thomas Williams Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Maint/Mod Planner	1635 Yelverton Grove Road	Smithfield	NC	27577
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	311 Culvert Street	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	5217 Ten Ten Rd	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	5938 South Plank Rd	Cameron	NC	28326
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	5909 Burt Rd	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	3181 Corinth Rd	Moncure	NC	27559
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	3974 Pea Ridge Rd	New Hill	NC	27562

10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	192 Pete Roberson Road	Pittsboro	NC	27312
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	4119 South Plank Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	835 S Franklin Dr	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	2421 Carbonton Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Mech-Nuc	P.O. Box 180	Timberlake	NC	27583
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Emerg Prepare Spec	226 Windbyrne Drive	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Emerg Prepare Spec	1202 Andersonwood Dr	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Emerg Prepare Spec	39 Shaddox Drive	New Hill	NC	27562
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Tech Proj Mgmt Spec	3712 Wicker St	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Tech Proj Mgmt Spec	1028 Traders Trail	Wake Forest	NC	27587
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	21405 NC Hwy 902	Bear Creek	NC	27207
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	5001 Herder Place	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	Harris Nuclear Plant - Zone 6	New Hill	NC	27562
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	54 Line Drive	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	6708 Queen Annes Dr	Raleigh	NC	27613
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	415 Abbott Dr	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	3276 Henley Road	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	904 Covert Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Nuc Work Mgmt Spec	352 Country Way	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Sr Nucl Self Evaluation Spec	7186 Villanow Drive	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Nuclear Procedure Writer	732 Torchwood Rd	Carthage	NC	28327
10120	New Hill- Harris	Har Nuc Plant	Sr Nuclear Procedure Writer	1022 Renshaw Court	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Sr Nuclear Procedure Writer	4705 Tee Box Ct	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Nuclear Procedure Writer	2063 Chalybeate Springs Road	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Nuclear Procedure Writer	1505 Dillon Circle	Raleigh	NC	27610
10120	New Hill- Harris	Har Nuc Plant	Sr Plant Services Asst	5308 Rivington Road	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Sr Plant Services Asst	3409 Rabbit Ridge Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Sr Science & Lab Svs Spec	1110 Wellstone Circle	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Sr Science & Lab Svs Spec	204 Onondaga Court	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Sr Science & Lab Svs Spec	70 Hermitage Lane	Moncure	NC	27559
10120	New Hill- Harris	Har Nuc Plant	Sr Science & Lab Svs Spec	235 Cameron Drive	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	SrNuclOpsTrngInstr-R(12/05)	4221 Surry Ridge Cir	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	SRO Class	4012 Westwood Lane	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	SRO Class	2059 White Pond Court	Apex	NC	27523
10120	New Hill- Harris	Har Nuc Plant	SRO Class	140 Deer Wood Court	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Supt-Design Engr	115 Fieldbrook Ct	Morrisville	NC	27560
10120	New Hill- Harris	Har Nuc Plant	Supt-Electrical/I&C Maint	2700 Mary Marvin Trail	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supt-Envir & Chem	1607 Windows Ct.	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Supt-Mechanical Maint	1279 Horsham Way	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Supt-Oper Support	3008 Brozak Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supt-Plt Supp Assmt	505 St Croix Drive	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Supt-Prog,Proj & Facility Svs	106 Beaujolais Ct	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Supt-Rad Protection	577 Hope Hills Drive	Silk Hope	NC	27344
10120	New Hill- Harris	Har Nuc Plant	Supt-Shift Operations	453 Rose Point Dr	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Supt-Shift Operations	109 Odessa Circle	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Supt-Shift Operations	5012 Allanbrooke Lane	Fuquay Varina	NC	27526

10120	New Hill- Harris	Har Nuc Plant	Supt-Shift Operations	9017 Hometown Dr	Raleigh	NC	27615
10120	New Hill- Harris	Har Nuc Plant	Supt-Systems Engr	7520 Villanow Drive	Sanford	NC	27332
10120	New Hill- Harris	Har Nuc Plant	Supt-Tech Svcs	203 Bromfield Way	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Supv-BOP Systems	8328 Muirfield Drive	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supv-Elec/I&C Systems	5608 Crossfield Dr	Raleigh	NC	27613
10120	New Hill- Harris	Har Nuc Plant	Supv-Elect/I&C Dsgn	8812 Kirkstall Ct	Raleigh	NC	27615
10120	New Hill- Harris	Har Nuc Plant	Supv-Electrical/I&C Maint-Nuc	3113 Olive Farm Rd	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Supv-Electrical/I&C Maint-Nuc	2108 Bull Run Dr	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Supv-Electrical/I&C Maint-Nuc	2534 Mary Marvin Trail	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supv-Electrical/I&C Maint-Nuc	5616 Soft Wind Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supv-Emergency Prep	2402 Poets Corner Court	Apex	NC	27502
10120	New Hill- Harris	Har Nuc Plant	Supv-Engr Rapid Response	204 Union Mills Way	Cary	NC	27519
10120	New Hill- Harris	Har Nuc Plant	Supv-Env & Chem	110 Loblolly Court	Clayton	NC	27527
10120	New Hill- Harris	Har Nuc Plant	Supv-Env & Chem	604 Wagstaff Rd	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supv-Equipment Perf	4520 Birnamwood Court	Holly Springs	NC	27540
10120	New Hill- Harris	Har Nuc Plant	Supv-Fin Team	7901 Whimbrel Lane	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supv-Financial Services	124 Okamato St	Raleigh	NC	27603
10120	New Hill- Harris	Har Nuc Plant	Supv-Fire Protection	3612 Jamison Park Dr	Apex	NC	27539
10120	New Hill- Harris	Har Nuc Plant	Supv-Licensing/Reg Programs	601 Merrie Rd	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Supv-Mech/Civil Dsgn	7604 Cypress Wood Ct	Raleigh	NC	27606
10120	New Hill- Harris	Har Nuc Plant	Supv-Mechanical Maint	2805 Piney Grove Wilbon	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supv-Mechanical Maint	600 Powell Farm Road	Lillington	NC	27546
10120	New Hill- Harris	Har Nuc Plant	Supv-Mechanical Maint	516 holt rd	sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Supv-Mechanical Maint	5929 Sanford Road	Wilson	NC	27893
10120	New Hill- Harris	Har Nuc Plant	Supv-On Line Scheduling	104 W Dutton Ct	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Supv-Outage Management	114 Windswept Ln	Cary	NC	27511
10120	New Hill- Harris	Har Nuc Plant	Supv-Planning & Procedures	2000 Lakewood Falls	Goldston	NC	27252
10120	New Hill- Harris	Har Nuc Plant	Supv-Radiation Control	P. O. Box 15094	Durham	NC	27704
10120	New Hill- Harris	Har Nuc Plant	Supv-Radiation Control	3815 Rawls Church Road	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supv-Radiation Control	3204 Doulton Lane	Fuquay-Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	Supv-Reactor Systems	Harris Nuclear Plant	New Hill	NC	27562
10120	New Hill- Harris	Har Nuc Plant	Supv-Self Eval & Doc Svcs-HNP	715 Pendergrass Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Supv-Spent Fuel	P.O. Box 114	Garner	NC	27529
10120	New Hill- Harris	Har Nuc Plant	Supv-Spent Fuel	360 Phil Johnson Rd	Sanford	NC	27330
10120	New Hill- Harris	Har Nuc Plant	Tech I-Oper-Nuc	101 Vineyard Lane	Cary	NC	27513
10120	New Hill- Harris	Har Nuc Plant	Tech I-Oper-Nuc	808 Sheridan Ct	Fuquay Varina	NC	27526
10120	New Hill- Harris	Har Nuc Plant	VP-Harris Nuc Plant	125 Trellingwood Drive	Morrisville	NC	27560
10120	New Hill- Harris	Human Resources	Sr HR Speciliast				
10120	New Hill- Harris	Nuc Security	Lead Nuclear Security Spec	9574 Big Bay Road	Linden	NC	28356
10120	New Hill- Harris	Nuc Security	Lead Nuclear Security Spec	94 Happy Valley Dr	Spring Lake	NC	28390
10120	New Hill- Harris	Nuc Security	Sr Access Authorization Spec	5420 Oldtowne Road	Raleigh	NC	27612
10120	New Hill- Harris	Nuc Security	Supt-Security	4109 Yates Pond Rd	Raleigh	NC	27606
10120	New Hill- Harris	Nuc Security	Supv-Plant Access Auth-HNP	2837 Horseman's Ridge Drive	Clayton	NC	27520
10120	New Hill- Harris	NucEngrandSvcs	Engr Technical Supt Spec	109 Holly Creek Rd	Morrisville	NC	27560
10120	New Hill- Harris	NucEngrandSvcs	Intern	3101-K Walnut Creek Pkwy	Raleigh	NC	27606
10120	New Hill- Harris	NucEngrandSvcs	IT Analyst	3301 Ashby Place	Raleigh	NC	27604

10120	New Hill- Harris	NucEngrandSvcs	Lead Engr	115 Paladin Place	Cary	NC	27513
10120	New Hill- Harris	NucEngrandSvcs	Lead Engr	PO Box 93	Lemon Springs	NC	28355
10120	New Hill- Harris	NucEngrandSvcs	Lead Engr Technical Supt Spec	5608 West Cool Springs Rd.	Broadway	NC	27505
10120	New Hill- Harris	NucEngrandSvcs	Lead Engr Technical Supt Spec	PO Box 801	Raleigh	NC	27602
10120	New Hill- Harris	NucEngrandSvcs	Lead IT Analyst	P.O.Box 116	Townsville	NC	27584
10120	New Hill- Harris	NucEngrandSvcs	Nuc Electronic Svcs Spec-NGG	1435 Briarcliff Drive	Asheboro	NC	27205
10120	New Hill- Harris	NucEngrandSvcs	Nuc Electronic Svcs Spec-NGG	211 Gipson Dr.	Garner	NC	27529
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Assistant	159 Don Ron Rd	Erwin	NC	28339
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Assistant	1118 Secotan Place	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Assistant	370 Lakestone Estates	Pittsboro	NC	27312
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Assistant	5251 Passenger Place	Raleigh	NC	27603
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Assistant	5421 Holland Farms Way	Raleigh	NC	27603
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Assistant	3313 Banks Rd	Raleigh	NC	27603
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Assistant	486 South Plank Road	Sanford	NC	27330
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Assistant	4341 Deep River Rd	Sanford	NC	27330
10120	New Hill- Harris	NucEngrandSvcs	Nuc Materials Receipt Insp-NGG	1007 Dual Parks Rd.	Apex	NC	27502
10120	New Hill- Harris	NucEngrandSvcs	NucMatReceipt&DedSpec-NGG	6536 Wildflower Lane	Efland	NC	27243
10120	New Hill- Harris	NucEngrandSvcs	NucMatReceipt&DedSpec-NGG	8328 Muirfield Dr	Fuquay Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	NucMatReceipt&DedSpec-NGG	PO Box 108	Moncure	NC	27559
10120	New Hill- Harris	NucEngrandSvcs	NucMatReceipt&DedSpec-NGG	7983 Villanow Dr	Sanford	NC	27330
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr	1405 Celandine	Apex	NC	27502
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr	116 Trimble Ave	Cary	NC	27511
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr	P.O. Box 577	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr	7004 Deep Water Court	Holly Springs	NC	27540
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr	1980 McDougald RD	Lillington	NC	27546
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr	217 Wortham Dr	Raleigh	NC	27614
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr	5727 Magellan Way	Raleigh	NC	27612
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr	1708 Quail Grove St	Willow Springs	NC	27592
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	1760 Chalybeate Springs Rd	Angier	NC	27501
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	626 Wakehurst Dr	Cary	NC	27519
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	2837 Horsemans Ridge Dr.	Clayton	NC	27520
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	810 Royal Oak Dr.	Durham	NC	27712
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	5240 Linwick Drive	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	5000 Shimberg Place	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	116 S. Friars Chase Lane	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	1924 North Bryson Ct	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	5104 Salinas Ct	Holly Springs	NC	27540
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	5113 Linksland Dr	Holly Springs	NC	27540
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	100 Hawks Spiral Way	Pittsboro	NC	27312
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	204 Veranda Court	Raleigh	NC	27615
10120	New Hill- Harris	NucEngrandSvcs	Sr Engr Technical Supt Spec	1800 Wait Ave	Wake Forest	NC	27587
10120	New Hill- Harris	NucEngrandSvcs	Sr IT Analyst	143 Lansing Drive	Benson	NC	27504
10120	New Hill- Harris	NucEngrandSvcs	Sr IT Analyst	1729 E. Ridge Heights Dr.	Fuquay Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Sr IT Analyst	426 Dogwood Creek Pl.	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Sr IT Analyst	377 Victoria Hills Drive	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Sr IT Analyst	105 Redwing Ln.	Moncure	NC	27559

10120	New Hill- Harris	NucEngrandSvcs	Sr IT Analyst	7705 Cresthill Ct	Raleigh	NC	27615
10120	New Hill- Harris	NucEngrandSvcs	Sr IT Analyst	112 Fox Glen Court	Willow Springs	NC	27592
10120	New Hill- Harris	NucEngrandSvcs	Storekeeper A	2190 Cleveland Circle	Sanford	NC	27332
10120	New Hill- Harris	NucEngrandSvcs	Supt-Mat & Contract Svcs-HNP	5504 Lares Lane	Fuquay-Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Supv-Materials Acq-R(12/04)	12012 Strickland Rd	Raleigh	NC	27613
10120	New Hill- Harris	NucEngrandSvcs	Supv-Materials Mgmt	4004 Lake Point Circle	Raleigh	NC	27606
10120	New Hill- Harris	NucEngrandSvcs	Supv-Nuc Info Tech	PO Box 1410	Fuquay Varina	NC	27526
10120	New Hill- Harris	NucEngrandSvcs	Supv-Proc,DedEngr&V/E-R(12/04)	303 Breckenwood Drive	Cary	NC	27513
10120	New Hill- Harris	NucEngrandSvcs	Supv-Rect&TstSvcs-Nuc-R(12/04)	437 Seastone Street	Raleigh	NC	27603
10120	New Hill- Harris	PE&Reg Af Sec	Assessor-RNAS	109 Monabreeze Way	Garner	NC	27529
10120	New Hill- Harris	PE&Reg Af Sec	INPO Loanee	2913 Trestle Court	Fuquay-Varina	NC	27526
10120	New Hill- Harris	PE&Reg Af Sec	Sr Nucl Empl Concerns Spec	9370 Chapel Hill Rd	Cary	NC	27513

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 17

Progress Energy

DEC 19 2006

SERIAL: HNP-06-149

Mr. Alan Klimek, Director
Division of Water Quality
N. C. Department of Environment and Natural Resources
1617 Mail Service Center
Raleigh, NC 27699-1617

Subject: Harris Nuclear Plant 2005 Environmental Monitoring Report

Dear Mr. Klimek:

Enclosed are three copies of the Harris Nuclear Plant 2005 Environmental Monitoring Report. The report summarizes the results of water quality monitoring conducted by Progress Energy Carolinas, Inc. at the Harris Reservoir during 2005. During 2005, operational effects of the Harris Nuclear Plant on the water quality and aquatic life continued to be minimal.

Please contact Mr. Bob Wilson at (919) 362-2444 if you have any questions concerning this report or if you have a need for additional information.

Sincerely,

Eric McCartney
Plant General Manager
Harris Nuclear Plant

EM/mgw

Enclosure

c: Mr. D. Goodrich – NCDWQ
Mr. B. Curry – NCWRC
Ms. C. Sullins - NCDWQ

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P. O. Box 165
New Hill, NC 27562

bc: Mr. S. G. Cahoon
Mr. J. M. Swing
Mr. A. E. Madewell
Mr. R. T. Wilson
Nuclear Records
HNP Licensing File: H-X-230

Harris Nuclear Plant
2005 Environmental Monitoring Report

December 2006

Environmental Services Section

PROGRESS ENERGY SERVICE COMPANY

Harris Nuclear Plant
2005 Environmental Monitoring Report

The following is provided as a summary of the environmental monitoring activities performed on the Harris Reservoir in 2005. Due to the rotating schedule of assessing the fish community every other year, only the water quality and water chemistry was monitored during 2005. The attached two appendices include the data collected during 2005. The methods and analyses utilized were the same as in previous years.

The Harris Reservoir continued to show qualities of a typical, biologically productive, southeastern reservoir in 2005. Reservoir waters were well-mixed during late autumn and winter months with similar temperature and dissolved oxygen levels throughout the water column. Dissolved oxygen levels declined near the bottom with stratification during the late spring and summer. Nutrient concentrations remained similar to recent years and were in an acceptable range for a productive reservoir in this area with the exception of total nitrogen which was slightly elevated over previous years. Continued monitoring of the nitrogen concentrations and any potential impacts is ongoing.

Hydrilla stands reached the water surface in the intake canal in the Harris Reservoir during 2005. However, no fouling of the plant intake screens occurred. No stands of hydrilla were observed in the littoral zone of the Auxiliary Reservoir during 2005. The attempt to control hydrilla in the Auxiliary Reservoir by releasing grass carp appears to have been effective in reducing the quantity and area coverage of hydrilla.

Appendix 1. Water temperature, dissolved oxygen, conductivity, pH, and Secchi disk transparency data collected from Harris Reservoir during 2005.

January 26, 2005

Depth (m)	Temperature (EC)				Dissolved oxygen (mg/L)				Conductivity (ΦS/cm)				pH				Secchi disk depth (m)			
	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2
0.2	6.6	5.9	6.0	4.5	12.4	12.6	12.8	11.1	101	96	98	120	7.0	7.1	7.3	7.5	1.6	1.1	1.7	0.9
1.0	6.5	5.8	5.8	4.4	12.1	12.4	12.8	10.9	101	95	98	120	7.0	7.1	7.3	7.5				
2.0	6.3	5.7	5.8	4.3	12.1	12.3	12.8	10.8	101	95	98	120	7.0	7.1	7.3	7.4				
3.0	6.3	5.3	5.8	3.8	11.8	12.0	12.8	10.7	101	94	98	116	7.0	7.1	7.3	7.4				
4.0	6.3	5.3	5.8	3.8	11.7	11.8	12.7	10.4	101	94	98	115	7.0	7.1	7.3	7.3				
5.0	6.3	5.2	5.8	3.8	11.7	11.8	12.6	10.0	101	94	98	115	7.0	7.1	7.3	6.9				
6.0	6.3	5.1	5.7		11.7	11.5	12.5		101	94	98		7.0	7.1	7.3					
7.0	6.2	5.1	5.6		11.6	11.4	12.4		101	94	99		7.0	7.1	7.3					
8.0	6.2	5.1	5.6		11.6	10.6	12.3		101	94	99		7.0	7.0	7.2					
9.0	6.2	5.1			11.6	10.4			101	94			7.0	7.0						
10.0	6.2				11.6				101				7.0							
11.0	6.2				11.6				101				7.0							
12.0	6.2				11.5				101				7.0							
13.0	6.2				11.3				101				7.0							
14.0	6.2				7.3				166				6.9							

May 25, 2005

Depth (m)	Temperature (EC)				Dissolved oxygen (mg/L)				Conductivity (ΦS/cm)				pH				Secchi disk depth (m)			
	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2
0.2	21.9	22.7	22.2	23.0	9.5	9.4	9.0	8.3	101	100	101	107	7.8	8.4	7.7	7.3	1.2	1.3	1.3	1.0
1.0	22.0	22.5	22.2	22.9	9.0	9.4	9.0	8.1	102	100	101	107	7.8	8.3	7.7	7.3				
2.0	21.9	22.4	22.2	22.2	9.0	9.2	9.0	6.9	102	100	101	107	7.8	8.1	7.7	7.0				
3.0	21.9	22.3	22.1	20.5	8.7	9.0	8.9	3.4	101	100	101	106	7.6	7.9	7.6	6.7				
4.0	21.9	21.7	22.1	20.2	8.7	8.3	8.3	3.3	101	101	101	106	7.6	7.8	7.4	6.8				
5.0	21.8	20.4	18.9		8.6	4.8	4.1		101	101	104		7.6	6.8	6.9					
6.0	21.8	19.1	18.1		8.5	2.7	3.1		101	102	105		7.6	6.7	7.1					
7.0	21.6	17.5	17.4		8.3	1.0	2.3		101	104	105		7.5	6.7	7.4					
8.0	18.4	17.0	16.8		3.8	0.7	0.9		105	106	166		6.7	6.8	7.6					
9.0	17.7	16.8	17.0		3.3	0.4	0.7		105	109	111		6.6	6.7	7.6					
10.0	16.7		16.8		2.9		0.2		104		160		6.6		7.7					
11.0	16.1				2.5				105				6.6							
12.0	15.7				1.8				108				6.6							
13.0	15.1				0.8				114				6.7							
14.0	14.7				0.3				119				6.9							
15.0	14.4				0.2				123				6.8							
16.0	14.1				0.1				134				6.9							

Appendix 1 (continued)

July 21, 2005

Depth (m)	Temperature (EC)				Dissolved oxygen (mg/L)				Conductivity (ΦS/cm)				pH				Secchi disk depth (m)			
	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2
0.2	32.0	32.3	32.1	32.0	8.3	8.4	8.2	8.0	128	127	128	129	8.2	8.3	8.1	8.7	1.8	1.6	2.1	2.0
1.0	31.2	32.0	31.8	32.0	8.5	8.4	8.2	8.1	129	127	128	129	8.3	8.3	8.2	8.7				
2.0	30.7	31.2	31.1	31.7	8.6	7.6	8.2	8.6	129	126	128	132	8.3	7.8	8.2	8.8				
3.0	29.5	29.4	29.9	28.7	7.6	3.9	6.9	1.0	128	130	128	212	8.0	7.0	7.6	7.4				
4.0	27.6	27.9	27.8	28.4	2.2	0.7	1.6	0.5	130	132	133	228	7.1	6.4	6.8	6.8				
5.0	24.0	24.9	24.6		0.6	0.4	0.6		154	148	157		6.7	6.1	6.3					
6.0	22.3	22.1	22.1		0.5	0.4	0.5		160	157	157		6.4	5.7	6.0					
7.0	20.7	20.8	20.7		0.4	0.4	0.4		159	157	155		6.1	5.5	5.8					
8.0	20.0	20.2	20.0		0.4	0.3	0.4		152	157	153		5.9	5.7	5.7					
9.0	19.1	20.0	19.2		0.4	0.4	0.4		147	161	173		5.8	5.7	6.1					
10.0	18.3				0.4				145				5.7							
11.0	17.3				0.4				147				5.5							
12.0	16.7				0.3				152				5.4							
13.0	15.6				0.3				172				5.4							
14.0	15.2				0.3				180				5.4							
15.0	15.0				0.3				185				5.4							
16.0	14.8				0.3				191				5.4							

November 29, 2005

Depth (m)	Temperature (EC)				Dissolved oxygen (mg/L)				Conductivity (ΦS/cm)				pH				Secchi disk depth (m)			
	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2	E2	H2	P2	S2
0.2	13.0	14.0	13.8	12.7	8.0	9.6	9.6	10.5	130	126	125	135	7.9	7.9	7.6	7.4	1.4	1.3	1.6	2.0
1.0	12.9	14.0	13.4	12.6	7.9	9.6	9.5	10.1	129	126	125	135	7.8	7.9	7.5	7.4				
2.0	12.9	14.0	13.4	12.2	7.9	9.6	9.4	8.6	130	126	125	139	7.7	7.9	7.4	7.3				
3.0	12.9	14.0	13.2	8.6	7.9	9.6	9.4	5.5	130	126	125	246	7.7	7.8	7.4	7.2				
4.0	12.9	13.9	13.0	8.6	7.9	9.6	9.4	5.0	130	126	125	264	7.7	7.8	7.4	7.2				
5.0	12.9	12.6	12.3		7.8	9.6	9.0		130	124	125		7.6	7.6	7.4					
6.0	12.8	12.6	12.1		7.8	9.6	8.6		130	124	125		7.6	7.6	7.3					
7.0	12.7	12.4	12.1		7.7	8.8	8.6		130	125	125		7.5	7.5	7.3					
8.0	12.6	11.6	12.1		7.5	7.6	8.4		128	124	125		7.4	7.4	7.3					
9.0	12.6	11.5	12.1		7.5	2.7	8.2		128	134	125		7.4	7.2	7.2					
10.0	12.6				7.5				128				7.4							
11.0	12.5				7.4				128				7.4							
12.0	12.5				7.4				128				7.4							
13.0	12.5				7.4				127				7.4							
14.0	12.5				7.4				127				7.3							

Appendix 2. Means, ranges, and spatial trends of selected limnological variables from the surface waters of Harris Reservoir during 2005.

Variable	Station				Reservoir Mean
	E2	H2	P2	S2	
Total dissolved solids (mg/L)	70 (60-82)	66 (56-72)	65 (63-68)	74 (62-94)	69 (56-94)
Turbidity (NTU)	3.8 (2.1-5.7)	4.6 (3.3-5.6)	3.6 (1.3-4.8)	5.5 (3.5-10)	4.4 (1.3-10)
Secchi disk transparency (m)	1.5 (1.2-1.8)	1.3 (1.1-1.6)	1.7 (1.3-2.1)	1.5 (0.9-2.0)	1.5 (0.9-2.1)
Chlorophyll *a* (Φg/L)	13 (3.0-17)	18 (15-21)	14 (9.9-18)	8.0 (3.6-15)	13 (3.0-21)
Nutrients (mg/L)					
Ammonia-N	0.02 (< 0.02-0.05)	< 0.02 < 0.02	< 0.02 (< 0.02-0.02)	0.02 (< 0.02-0.05)	< 0.02 (<0.02-0.05)
Nitrate + nitrite-N	0.08 (< 0.02-0.21)	0.08 (< 0.02-0.21)	0.06 (< 0.02-0.19)	0.05 (< 0.02-0.11)	0.06 (<0.02-0.21)
Total nitrogen	0.88 (0.50-1.5)	0.93 (0.44-1.9)	0.69 (0.46-1.1)	1.17 (0.48-3.0)	0.92 (0.44-3.0)
Total phosphorus	0.041 (0.022-0.054)	0.031 (0.024-0.045)	0.026 (0.020-0.033)	0.024 (0.018-0.031)	0.03 (0.018-0.054)
Total organic carbon	7.7 (7.4-8.0)	7.5 (7.1-8.1)	7.4 (7.3-7.5)	7.8 (7.3-8.5)	7.6 (7.1-8.5)
Hardness[&]	20 (12-28)	19 (14-24)	20 (13-28)	24 (20-29)	21 (12-29)
Specific conductance (ΦS/cm)	115 (101-130)	112 (96-127)	113 (98-128)	123 (107-135)	116 (96-135)
Ions (mg/L)					
Calcium	4.9 (2.2-7.5)	4.3 (2.9-5.5)	4.8 (2.5-7.2)	6.1 (5.5-7.1)	5.0 (2.2-7.5)
Chloride	13 (10-20)	14 (11-20)	13 (9.8-20)	15 (11-21)	14 (9.8-21)
Magnesium	2.0 (1.7-2.3)	2.0 (1.7-2.4)	2.1 (1.6-2.6)	2.1 (1.4-2.6)	2.0 (1.4-2.6)
Sodium	12 (10-15)	11 (9.4-13)	11 (9.8-14)	12 (8.8-15)	11 (8.8-15)
Sulfate	11 (6.6-16)	14 (11-18)	11 (8.0-14)	13 (11-17)	12 (6.6-18)
Total alkalinity[&]	18 (14-21)	18 (14-20)	19 (16-27)	20 (18-24)	19 (14-27)
Copper (Φg/L)	2.7 (<2.0-4.3)	2.3 (1.0-5.4)	2.1 (1.0-3.9)	1.8 (1.5-2.2)	2.2 (<2.0-5.4)

[&]Total alkalinity units are in mg/L as $CaCO_3$ and hardness is calculated as mg equivalents $CaCO_3$/L.

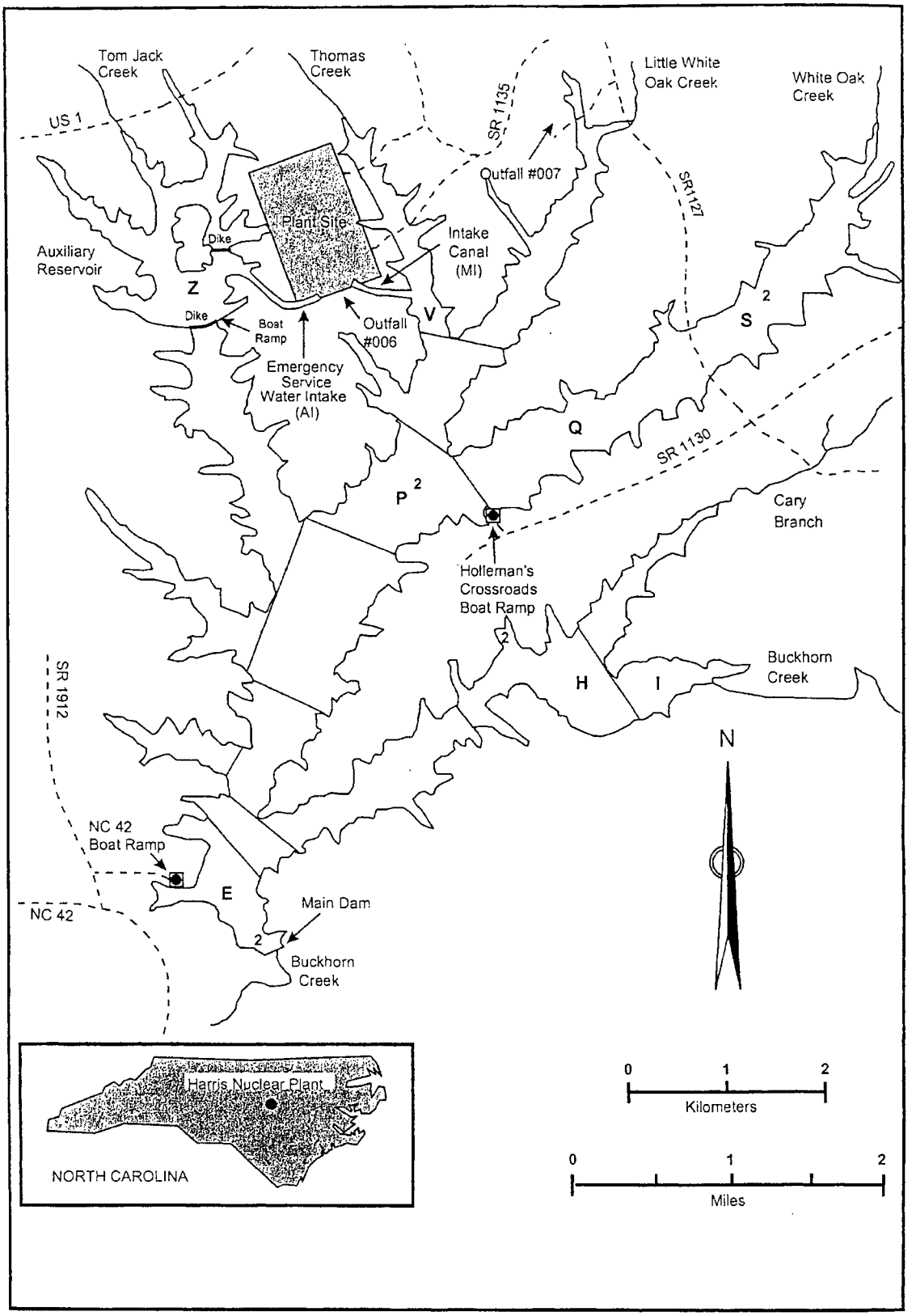


Figure 1. Sampling areas and stations at Harris Reservoir during 2005.

Response to RAI No. 1
Item 18

NCDENR Division of Waste Management-UST Section	**Underground Storage Tank Operating Permit Application**	Complete the questionnaire on the reverse side and return it with proper fee payment to: DENR-UST, 1646 Mail Service Center Raleigh, NC 27699-1646 Attn: DWM UST Section

CP&L DBA PROGRESS ENERGY INC
410 S WILMINGTON ST / PEB4
RALEIGH
NC 27601-1849

UST FACILITY ID #: 0-006715
HARRIS NUCLEAR PLANT, CP&L
5413 SHEARON HARRIS RD
NEW HILL
NC 27562-0165
A1 UST OWNER TEL. #: (919) 362-2444

TANK #	CAPACITY(GALS)	CONTENTS	INSTALLATION DATE
001	10,000.00	Diesel/Mixture	1993/05/01
002	10,000.00	Gasoline/Mixture	1993/05/01
003	1,000.00	Kerosene/Mixture	1999/12/06
14	175,000.00	Diesel/Mixture	1984/05/08
15	175,000.00	Diesel/Mixture	1984/05/08

******Payment of fees does NOT guarantee a permit; tanks temporarily closed on or after 12/22/88 require payment as well.******

If the above information is not correct or is incomplete, please make the corrections on this application and submit the required documentation (see "Step One" on Page 4).

PART A

VOLUME of TANK (GALLONS)	NUMBER of TANKS WITH PRODUCT (A)	(B)	TOTAL NUMBER of TANKS		TANK FEE RATE		ANNUALLY or QUARTERLY AMOUNT DUE	PERIOD of COVERAGE
					Balance Forward	(1) =	.00	
greater than 3,500	2	2	4	X	$300.00 per	(2) =	1,200.00	FROM:
3,500 or less	1	0	1	X	$200.00 per	(3) =	200.00	01/01/07
LAST PAYMENT RECEIVED: 12/16/05			PRORATED FEES (SEE INSTRUCTIONS)			(4) =	.00	
DATE LAST BILLED: 11/01/05			RETROACTIVE FEES (SEE INSTRUCTIONS)			(5) =	.00	THROUGH:
BILLING DATE: 11/01/06			LATE PENALTY			(6) =	.00	12/31/07
DUE DATE: 12/01/06			TOTAL PAYMENT DUE (1)+(2)+(3)+(4)+(5)+(6) =				1,400.00	

☐ Check here for an ownership change.	Previous Owner:	Current Owner:

Compliance Questionnaire:

Facility ID#: 0-006715

1. Mark the type(s) of **Stage I Vapor Recovery** being used:
   (Mark all that apply for the facility)
   - ☐ Coaxial system
   - ☒ Dual point system
   - ☒ Vapor recovery is not required at this facility (see instructions)

2. Mark the method(s) of **leak detection** being used for **underground storage tanks**:
   (Mark all that apply for the facility)
   - ☐ Tank tightness testing and inventory control*
   - ☒ Automatic tank gauging
   - ☐ Vapor monitoring
   - ☐ Groundwater monitoring
   - ☐ Interstitial monitoring
   - ☐ Manual tank gauging (This method is not valid for tanks that are greater than 550 gallons in capacity)
   - ☐ Manual tank gauging and tank tightness testing (This method is not valid for tanks that are greater than 2,000 gallons in capacity)*
   - ☐ Statistical inventory reconciliation
   - ☐ Other state approved method (specify) _____
   - ☒ Leak detection not required at this facility because:
     - ☐ the USTs at this facility are not regulated (for example, the USTs at this facility store heating oil for on-site use) and/or
     - ☒ the USTs at this facility store fuel solely for use by emergency power generators

   *USTs that have been protected against corrosion for more than ten years cannot use these methods of leak detection beyond Dec. 22, 1998.

3. Mark the method of **leak detection** being used for **underground piping**:
   (Mark all that apply for the facility)
   - ☐ Automatic line leak detector
   - ☐ Periodic line tightness tests
   - ☐ Interstitial monitoring of piping
   - ☐ Groundwater monitoring
   - ☐ Vapor monitoring
   - ☐ Statistical inventory reconciliation
   - ☐ Electronic Line Leak Detection
   - ☐ Other state approved method (specify) _____
   - ☒ Exempt under 40 CFR 280.41 (b) (2) (I) - (iv) (This exemption applies only to "European" suction systems.)
   - ☒ Leak detection not required at this facility because:
     - ☐ the piping systems at this facility are not regulated (for example, the USTs at this facility store heating oil for on-site use) and/or
     - ☒ the USTs at this facility store fuel solely for use by emergency power generators

4. Mark if ALL **regulated** underground storage tank systems in operation at this location meet **12/22/98** upgrade requirements or **12/22/88** "new" UST system requirements:
   - ☒ The USTs and associated piping in operation at this facility are fully compliant with the corrosion protection, spill protection and overfill prevention requirements for UST systems as described in Title 15A Subchapter 2N Section .0300.
     (If tanks at this site are not regulated then do not check this box.)

I certify under penalty of law that the information on this form is correct and compliance with all applicable release detection, corrosion protection monitoring, spill protection and overfill prevention requirements has been achieved for the petroleum underground storage tanks located at this facility. I also certify compliance with all applicable Stage I vapor recovery requirements for this facility. Name and official title of owners(s) or authorized representative.

11/20/06	Eric McCartney - PGM	
Date Signed	Print Name and Title	Signature (please sign in ink)

Response to RAI No. 1
Item 19

Progress Energy

FEB 2 7 2004

SERIAL: HNP-04-041

Mr. Kenneth Schuster
Raleigh Regional Supervisor
North Carolina Department of Environment and Natural Resources
3800 Barrett Drive, Suite 101
Raleigh, NC 27602

Subject: Progress Energy Carolinas, Inc.
Shearon Harris Nuclear Plant
National Pollutant Discharge Elimination System Permit # NC0039586

Dear Mr. Schuster:

On February 23, 2004, Mr. Shannon Langley of the Raleigh Regional Office of the North Carolina Division of Environment and Natural Resources was notified via telephone by Mr. Steve Cahoon of Progress Energy's Environmental Services Section that an exceedance of the 2 hour time limit for chlorination had occurred at Outfall 001 (Cooling Tower Blowdown) of the Shearon Harris Nuclear Plant. The exceedance occurred as a result of a failed controller on one of the Sodium hypochlorite pumps. The facility is terming this an "upset" condition since by definition this was an exceptional incident in which there was an unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee.

On Monday, February 23, 2004, at approximately 8:30 a.m. an inspection of the Sodium hypochlorite pumps at the Cooling Tower revealed that the controller was stuck in the "on" position at one pump. It was estimated that the timer had been stuck in that position since approximately 9:00 p.m., Sunday, February 22, 2004. Over this period of time approximately 1,500 to 2,000 gallons of Sodium hypochlorite were pumped into the Cooling Tower. The plant went into mitigation mode as soon as the incident was discovered and began taking chlorine samples every 15 minutes. The first reading at 8:40 a.m. on Monday February 23, 2004, was 0.40 mg/l of free chlorine. This reading was below the maximum daily permit limit of 0.5 mg/l. Approximately 14 more readings were taken, and at 11:59 a.m. the reading was less than 0.1 mg/l. The controller on the pump has been taken out of service and the pump will be operated manually until the repair is made. An investigation is in progress to determine additional corrective actions. The investigation will focus on minimizing the probability of a similar event in the future.

As stated above, we consider the incident resulted from an upset condition. Attached are the facility's residual chlorine sample log sheets (sample location CTBD) for the week of February 16, through February 23, 2004, demonstrating the facility was operating properly prior to the incident. The facility has been operating the Sodium hypochlorite pumps in this manner for approximately 7 years without incident. In this particular event, when the controller failed and there was a continuous feed of Sodium hypochlorite to the Cooling Tower, other systems

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O. Box 165
New Hill, NC 27562

were functioning normally. Dechlorination using Ammonium bisulfite was working properly. However, the normal feed rate of the dechlorination agent was not sufficient to deal with the increased concentration from the upset. When mitigation mode was entered, more aggressive dechlorination actions were taken, which included increasing the chemical feed pump speed and adding additional Ammonium bisulfite from drums into the Cooling Tower Basin.

If you have any questions or comments regarding this information please contact Mr. Steve Cahoon at (919) 362-3568 or Mr. Bob Wilson at (919) 362-2444.

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

Sincerely,

B. C. Waldrep
Plant General Manager
Harris Nuclear Plant

MGW

Attachment

bc: Mr. S. G. Cahoon
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

ATTACHMENT TO SERIAL: HNP-04-041

RESIDUAL CHLORINE SAMPLE LOG SHEETS (SAMPLE LOCATION CTBD)
FOR THE WEEK OF FEBRUARY 16, THROUGH FEBRUARY 23, 2004

(6 SHEETS)

NPDES Total Residual Chlorine Sample Log

Sample Location	Date & Time	Sampler Initials	Sample Volume mls (1)	Titrant mls	PAO Normality	Measured Value	Dilution Factor	Chlorine ppm	Average ppm (2)	Analysis Date/Time	Analyst Initials and Date
CTBD T	2/15/04 1055	LW	200	N/A	N/A	<.1	—	<.1	—	2/15/04 1057 1046 2/15/04 1057	2/15/04 LW
F						<.1	—	<.1	—		
CTBD T	1105					<.1	—	<.1	—	1107	
F						<.1	—	<.1	—		
CTBD T	1115					<.1	—	<.1	—	1117	
F						<.1	—	<.1	—		
CTBD T	2-16-04 1027	MW	200			<0.1	—	<0.1	—	2-16-04 1029	MW 2-16-04
F						<0.1	—	<0.1	—		
STRM 2 T	1142		10			0.585	1:20	11.7	—	1145	
F						0.396		7.92	—	1149	

Notes: (1) Amount of sample analyzed (i.e.: 200 mls if no dilution required, 20 mls if diluted 1 to 10)
(2) If required
(3) 10% Duplication required - if only one sample per month, it must be duplicated.
(4) Analysis performed in accordance with CRC-351 or CRC-354.

Reviewed by [signature] Date 02/26/04

(Retention- 5 Years)

NPDES Total Residual Chlorine Sample Log

Sample Location	Date & Time	Sampler Initials	Sample Volume mls (1)	Titrant mls	PAO Normality	Measured Value	Dilution Factor	Chlorine ppm	Average ppm (2)	Analysis Date/Time	Analyst Initials and Date
STOUT2 F	2/17/04 0840	MT	10	NA	NA	0.430	1:20	8.60	—	2/17/04 0845	MV 2/17/04
Fdup						0.442		8.84	8.72	0850	
T	0852					0.601		12.02	—	0856	
Tdup						0.595		11.90	11.96	0859	
CTBD T	1011		200			<0.1	—	<0.1	—	1014	
F						<0.1	—	<0.1	—		
2/18/04 STOUT2 F	2/18/04 0610	W	10			.769	1:20	13.8	—	2/18/04 0615	W 2/18/04
T			5			.577	1:40	20.6@	—	0625	
CTBD T	2/18/04 0940	W	200			<.1	—	<.1	—	2/18/04 0945	W 2/18/04
F						<.1	—	<.1	—		

Notes: (1) Amount of sample analyzed (i.e.: 200 mls if no dilution required, 20 mls if diluted 1 to 10)
(2) If required
(3) 10% Duplication required - if only one sample per month, it must be duplicated.
(4) Analysis performed in accordance with CRC-351 or CRC-354.

Reviewed by [signature] Date 2/24/04

(Retention- 5 Years)

NPDES Total Residual Chlorine Sample Log

Sample Location	Date & Time	Sampler Initials	Sample Volume mls (1)	Titrant mls	PAO Normality	Measured Value	Dilution Factor	Chlorine ppm	Average ppm (2)	Analysis Date/Time	Analyst Initials and Date
CTBD T	2/19/04 0958	W	200	N/A	N/A	<.1	—	<.1	—	2/19/04 1000	W 2/19/04
F						<.1	—	<.1	—		
CL2 DUKE AREA T	2/19/04 1015	W	200			<.1	—	<1	—	2/19/04 1020	W 2/19/04
F						<.1	—	<.1	—		
STPOUT F	2/19/04 1050	W	10			.572	1:20	11.44	—	2/19/04 1055	W 2/19/04
T			5			.448	1:40	17.6	—	1115	
STPOUT F	2-20-04 0820	PD	10			0.93	20	18.6	—	2-20-04 0822	PD 2/20/04
T			10			1.02	20	20.4	—	2-20-04 0826	
STPOUT F	2/21/04 1000	PD	10			0.72	20	14.4	—	2/21/04 1005	PD 2/21/04
T			10			0.74	20	14.8	—	2/21/04 1012	
STPOUT F	2/22/04 1000	PD	10			0.44	20	8.80	—	2/22/04 1008	PD 2/22/04

Notes: (1) Amount of sample analyzed (i.e.: 200 mls if no dilution required, 20 mls if diluted 1 to 10)
(2) If required
(3) 10% Duplication required - if only one sample per month, it must be duplicated.
(4) Analysis performed in accordance with CRC-351 or CRC-354.

Reviewed by Robert Lewis Date 02/26/04

(Retention- 5 Years)

NPDES Total Residual Chlorine Sample Log

Sample Location	Date & Time	Sampler Initials	Sample Volume mls (1)	Titrant mls	PAO Normality	Measured Value	Dilution Factor	Chlorine ppm	Average ppm (2)	Analysis Date/Time	Analyst Initials and Date
Spout T	2/22/04 1000	PD	10	N/A	N/A	2.7	20	54.0	—	2/22/04 1015	PD 2/22/04
CTBD T	2/23/04 0840	↓	200	↓	↓	(1) →	→	→	→	2/23/04 0845	↓ 2/23/04
↓ F	↓	↓	↓	↓	↓	.396	—	.396	—	↓	↓
T	0855		50			.145	1:4	.58	—	0859	
F	↓		200			.338	—	.338	—	↓	
T	0910		50			.739	1:4	2.96	—	0915	
F	↓		200			.345	—	.345	—	↓	
T	0923		50			.640	1:4	2.56	—	0930	
F	↓		200			.353	—	.353	—	↓	
T	0940		50			.798	1:4	3.19	—	0947	
F	↓ ↓	↓	200	↓	↓	.351	—	.351	—	↓ ↓	↓

Notes: (1) Amount of sample analyzed (i.e.: 200 mls if no dilution required, 20 mls if diluted 1 to 10)
(2) If required
(3) 10% Duplication required - if only one sample per month, it must be duplicated.
(4) Analysis performed in accordance with CRC-351 or CRC-354.

Reviewed by Robert D. Wirth Date 02/26/04

(1) Sample needed to be diluted.

(Retention- 5 Years)

NPDES Total Residual Chlorine Sample Log

Sample Location	Date & Time	Sampler Initials	Sample Volume mls (1)	Titrant mls	PAO Normality	Measured Value	Dilution Factor	Chlorine ppm	Average ppm (2)	Analysis Date/Time	Analyst Initials and Date
CTBD T	2/23/04 0955	[illegible]	50	N/A	N/A	.642	1:4	2.57	—	~~2/23/04 1000~~ 2/23/04 1047	[illegible] 2/23/04
F	↓	↓	200			.303	—	.303	—	↓	
T	1014		50			.638	1:4	2.55	—	1017	
F	↓	↓	200			.337	—	.337	—	↓	↓
T	1029	PD/[illegible]	50			.588	1:4	2.35	—	1035	
F	↓		200			.345	—	.345	—	↓	
T	1044		50			.169	1:4	.676	—	1047	
F	↓		200			.145	—	.145	—	↓	
T	1100		50			.331	1:4	1.32	—	1104	
F	↓	↓	200			.30	—	.30	—	↓	
				↓	↓						

Notes: (1) Amount of sample analyzed (i.e.: 200 mls if no dilution required, 20 mls if diluted 1 to 10)
(2) If required
(3) 10% Duplication required - if only one sample per month, it must be duplicated.
(4) Analysis performed in accordance with CRC-351 or CRC-354.

Reviewed by [signature] Date 02/26/04

(Retention- 5 Years)

NPDES Total Residual Chlorine Sample Log

Sample Location	Date & Time	Sampler Initials	Sample Volume mls (1)	Titrant mls	PAO Normality	Measured Value	Dilution Factor	Chlorine ppm	Average ppm (2)	Analysis Date/Time	Analyst Initials and Date
CTBD T	2/23/04 1116	WD/PD	50	N/A	N/A	.375	1:4	1.5	—	2/23/04 1120	PD/WD 2/23/04
F	↓		200			.343	—	.343	—	↓	
T	1125		50			.395	1:4	1.58	—	1129	
F	↓		200			<.1	—	<.1	—	↓	
T	1142		200			.569	—	.569	—	1144	
F	↓		200			<.1	—	<.1	—	↓	
T	1154		200			<.1	—	<.1	—	1158	
F	↓		200			<.1	—	<.1	—	↓	
T	1159		200			<.1	—	<.1	—	1201	
F	↓ ↓	↓	200	↓	↓	<.1	—	<.1	—	↓ ↓	↓

Notes: (1) Amount of sample analyzed (i.e.: 200 mls if no dilution required, 20 mls if diluted 1 to 10)
(2) If required
(3) 10% Duplication required - if only one sample per month, it must be duplicated.
(4) Analysis performed in accordance with CRC-351 or CRC-354.

Reviewed by: Robert Lewis Date 2/26/04

(Retention- 5 Years)

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 20

Progress Energy

SERIAL: HNP-04-136

OCT 0 7 2004

Mr. Kenneth Schuster
Raleigh Regional Supervisor
North Carolina Department of Environment and Natural Resources
3800 Barrett Drive, Suite 101
Raleigh, NC 27602

Subject: Progress Energy Carolinas, Inc,
Harris Nuclear Plant
National Pollutant Elimination Discharge Permit (NPDES) No. NC0039586

Dear Mr. Schuster:

On September 3, 2004, representatives from Progress Energy (Mr. Chuck Wakild, Mr. Bob Wilson and Mr. Steve Cahoon) met with Ms. J.E. Garrett and yourself at the Raleigh Regional Office of the North Carolina Division of Environment and Natural Resources. The purpose of the meeting was to discuss a Notice of Violation (NOV) dated June 25, 2004, for the Harris Nuclear Plant (HNP). The following discussion serves as a summary of the events beginning on June 14, 2003, and a summary of the cooling tower system at the plant to aid in your evaluation that an "upset" condition occurred at the plant that caused a zinc exceedance in the cooling tower blowdown (Outfall 001) for the subject week.

On June 14, 2003, the HNP experienced a reactor trip at 10:55 a.m. A reactor trip is a safety feature where the plant is designed to automatically shut itself down. When the plant trips it no longer produces electricity. The heat source is lost which eliminates the steam, which is needed to turn the turbine and generate electricity. At the time of a plant trip operators are performing actions designed to keep the plant in balance and maintain plant safety as mandated by the plant's operating license which is issued by the Nuclear Regulatory Commission (NRC).

After these steps have been performed and the plant has been safely shutdown, the operators then reduce the flow to the Cooling Tower Basin. This is done by manually throttling down the flow control valve allowing more water to flow through the Cooling Tower By-pass Line. Normally approximately 18-19 million gallons per day (MGD) of water from the Cooling Tower Make-Up (CTMU) pumps bypasses the Cooling Tower with the remaining flow being used for Cooling Tower Blowdown (approximately 4 MGD) and evaporation (approximately 14 MGD). While all of the actions to stabilize the plant following a plant reactor trip are occurring, the Cooling Tower Blowdown (CTBD) increases (4 MGD plus the 14 MGD evaporation which stops due to lost of the heat source). The total return to the lake is 32-33 MGD (cooling tower blowdown + amount of water bypassing the cooling tower).

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O. Box 165
New Hill, NC 27562

During normal plant operations the CTMU pumps supply water through the manually operated flow control valve, into the plant to the normal service water (NSW) pumps. All of the chemicals for protecting the plant piping from corrosion including zinc are added by automatic feed (based on the amount of cooling tower blowdown) to the service water at the NSW pumps. This water is then pumped through the plant condenser and sent back to the cooling tower to be reused, discharged as blowdown to the lake or to be evaporated into the atmosphere.

As explained above, when the plant tripped it caused the Cooling Tower to increase discharge due to the drastic reduction in evaporation rate. CTBD flow increased from ~3600 gpm to ~8000 gpm. The large increase in CTBD flow signaled the zinc pumps (computer controlled) to increase feed rate to compensate for the flow change. The zinc feed rate went from ~6-7 gpd to ~17 gpd. The CTBD flow was decreased by Operations within hours back to normal flow values. The zinc pump controls returned to the reduced feed rate in correlation with CTBD flow decrease. The excess zinc remained in the Cooling Tower Basin until it was either consumed by the corrosion treatment process or blown down to Harris Lake.

For the NPDES sample taken on June 16, 2003, the analysis showed an increased concentration of zinc in the effluent (which exceeded the permit limit) due to the increased feed rate of the zinc pump. Another contributing factor resulting in increased zinc in the effluent is temperature. At normal operating temperatures the zinc coats the carbon steel pipes, (to aid in corrosion prevention) at lower temperatures, during a shutdown, more zinc remains soluble in water thus allowing more zinc to be discharged in the effluent.

Effluent samples were taken on June 16, 2003, and sent to the certified laboratory for zinc analysis. Because metals samples have a long holding time (6 months) the samples were not analyzed quickly. The lab analyzes its metals samples in batch mode and the sample was not analyzed until June 25, 2003. The HNP was unaware of the exceedance until the laboratory results were received on June 26, 2003. The Raleigh Regional office was notified of the exceedance of the permit limit via phone call on June 26, 2003, and via a 5 day follow-up letter from the plant dated July 1, 2003.

In an attempt to mitigate any further problems with the zinc pumps the Chemistry Supervisor issued a night order with guidance on securing zinc pumps directly after a plant trip. Following completion of the investigation, a corrective action was implemented which programmed the zinc pumps to not exceed the rate of 7 gallons per day no matter how much increase there is in CTBD.

We hope you find this information useful in your evaluation of the events that occurred at the HNP the week of June 14, 2003. In our opinion the events described above meet the definition of an "upset" as described in our NPDES permit (Permit No. NC0039586). We respectfully request the NOV dated June 25, 2004, be withdrawn.

If you have any questions please contact Mr. Bob Wilson at (919) 362-2444 or Mr. Steve Cahoon at (919) 362-3568.

Mr. Kenneth Schuster
SERIAL: HNP-04-136

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

Sincerely,

B. C. Waldrep
Plant General Manager
Harris Nuclear Plant

MGW

Mr. Kenneth Schuster
SERIAL: HNP-04-136

bc: Mr. J. F. Briggs
Mr. S. G. Cahoon
Mr. C. R. Wakild
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

Response to RAI No. 1
Item 21

Duke Records

NCDENR

North Carolina Department of Environment and Natural Resources
Division of Water Quality

Michael F. Easley, Governor

William G. Ross, Jr., Secretary
Alan W. Klimek, P.E., Director

November 17, 2004

Mr. B.C. Waldrup, Plant General Manager
Harris Nuclear Plant
Progress Energy Carolinas, Inc.
P.O. Box 165
New Hill, NC 27562

Subject: Retraction of Notice of Violation and Assessment of Civil Penalty
Case No. LV-2004-0173
Shearon Harris Nuclear Power Plant, NPDES Permit No. NC0039586
Wake County

Dear Mr. Waldrup:

The Raleigh Regional Office staff have reviewed your response to your letter dated October 7, 2004 in which you have described the events that occurred June 14, 2003 which resulted in zinc concentrations in the cooling tower effluent being discharged in excess of the NPDES Permit limit. Your letter followed a meeting in our office that occurred on September 3, 2004 concerning the contested case that your company filed. The contested case was in response to a fine issued by this office for an exceedance of the daily maximum limitation for zinc for June 16, 2003.

Your letter described the events of an automatic shutdown of the Shearon Harris Nuclear Power Plan that occurred on June 14, 2003 and stated that you and your staff believe that these circumstances fit the definition of upset as set forth in the NPDES Permit. You have further stated that you have put a plan in place to prevent further problems of this sort in the future caused by an automatic shut down.

We agree that these circumstances meet the criteria to be considered an upset as described in the NPDES Permit. Therefore, I hereby retract the Notice of Violation and Assessment of Civil Penalty, LV 2004-0173 dated June 25, 2004.

If you have questions, please call Judy Garrett or myself at (919) 571-4700.

Sincerely,

Kenneth Schuster, PE.
Regional Surface Water Protection Supervisor

1628 Mail Service Center, Raleigh, North Carolina 27699-1628
3800 Barrett Dr., Raleigh, North Carolina 27609
Phone: 919-571-4700 / FAX 919-571-4718 / Internet: h2o.enr.state.nc.us

Response to RAI No. 1
Item 22

NCDENR

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

November 18, 2004

Mr. B.C. Waldrep
Plant General Manager
Harris Nuclear Plant
PO Box165
New Hill, NC 27562

RE: Draft Water Quality Monitoring Plan – Harris Nuclear Plant Landfill (Permit # 92-10)

Dear Mr. Waldrep:

The Draft Ground Water Monitoring Plan for the Harris Nuclear Plant Industrial Landfill has been reviewed. The Solid Waste Section approves the plan as submitted. Water quality monitoring must conform to the specifications outlined in the plan. All modifications to the plan must receive prior approval from this agency before being implemented.

Thank you for your cooperation. If you have any questions, please call me at (919) 733-0692, extension 257.

Sincerely,

Larry Rose

Larry Rose
Solid Waste Section

cc: Mark Poindexter – Head, Field Operations Branch
John Crowder – Eastern District Supervisor
Robert Hearn – Waste Management Specialist
Ellen Lorscheider - Hydrogeologist

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone 919-733-0692 \ FAX 919-733-4810 \ Internet http://wastenotnc.org

Response to RAI No. 1
Item 23

Progress Energy

AUG 2 3 2004

SERIAL: HNP-04-119

Mr. Larry Rose
Solid Waste Section
Division of Waste Management
401 Oberlin Road, Suite 150
Raleigh NC 27605

Subject: Progress Energy Carolinas, Inc.
Harris Nuclear Plant
Industrial Landfill, N.C. SW Permit #92-10
Draft Ground Water Monitoring Plan

Dear Mr. Rose,

As requested in a letter from the Division of Waste Management dated April 1, 2004, please find enclosed 1 copy of a draft Groundwater Monitoring Plan for the Harris Nuclear Plant's Industrial Landfill for your review. This plan was drafted to reflect the requirements of 15A NCAC 13B .0600 and the Division's *Groundwater Monitoring Guidance Document.*

If you have any questions or comments please contact Mr. Steve Cahoon of Progress Energy's Environmental Services Section. Mr. Cahoon can be reached via telephone at (919) 362-3568 or via e-mail at steve.cahoon@pgnmail.com.

Sincerely,

B.C. Waldrep
Plant General Manager
Harris Nuclear Plant

MGW/mgw

Enclosure: Draft Ground Water Monitoring Plan

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O. Box 165
New Hill NC 27562

SERIAL: HNP-04-119

bc: Mr. S. G. Cahoon
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

DRAFT GROUND WATER MONITORING PLAN

PROGRESS ENERGY CAROLINAS, INC.

HARRIS NUCLEAR PLANT

Table of Contents

INTRODUCTION

During the construction of the Harris Nuclear Plant (HNP) several landfills were permitted, utilized and closed. The current landfill was permitted as a Construction and Demolition landfill under Permit #92-A in 1983. The landfill consisted of 3 areas of varying sizes, Area #1 was 6.71 acres, Area #2 was 9.47 acres and Area #3 was 17.2 acres. In 1986 HNP received approval under permit #92-10 to convert Areas #2 and #3 to a sanitary landfill which allowed for the disposal of solid waste. Approximately 25% of Area #3 was used for waste disposal. Areas #1 and #2 were never used for waste disposal. Area #3 was divided into 3 cells. Cell #1 ceased to accept waste in the fall of 1989. Cell #2 was never utilized for waste disposal, and Cell #3 was capped in the fall of 2003. Presently, sampling is conducted by Progress Energy employees, however in the future the sampling may be contracted to a certified laboratory.

MONITORING WELLS

HNP has monitored groundwater around the landfill since 1987. The sampling program has involved routine (semi-annual) sampling and analysis of five monitoring wells that were installed in December 1986. Monitoring wells MW-1, MW-2, and MW-3 (Figure 1) are located within ¼ mile of the landfill. Monitoring wells MW-4 and MW-5 are located greater than ¼ mile from the landfill. Since monitoring wells MW-4 and MW-5 are not useful for groundwater monitoring, they have been abandoned. A geophysical study was conducted for HNP by G. N. Richardson & Associates, Inc. to evaluate the location of waste in the landfill and to identify any potential water bearing fractures in the vicinity of the landfill for the potential location of additional groundwater monitoring wells. The study identified the location for two additional wells MW-6 and MW-7 (Figure 1). HNP owns all the land within approximately 0.7 miles of the landfill (Figure 2).

WELL CONSTRUCTION

Monitoring wells MW-1, MW-2, and MW-3, were constructed in December 1986. The well screen depths range from 35 to 97 feet below ground surface and groundwater levels at the time of installation ranged from 19 to 52 feet below ground surface. The low permeability of Triassic soils at the site cause groundwater recovery rates to be very slow. During sampling events the wells are bailed dry. It is then necessary to wait two or three days before enough groundwater is available in each well to obtain a sufficient sample. Monitoring wells MW-6 and MW-7 were constructed in December 2003, to replace monitoring wells MW-4 and MW-5 which were abandoned. These wells were constructed in accordance with 15A NCAC 2C, Well Construction Standards (See Attached Well Construction Logs).

PORTABLE MONITORING

HNP will use Teflon portable bailers to conduct purging and monitoring of groundwater. Each bailer will be equipped with either nylon rope, Teflon coated wire, single stranded stainless steel wire, or another monofilament line. New line will be used for each well sampled and all unused line will be protected from contamination.

Equipment Cleaning Procedures

All equipment coming into contact with samples or ground water inside a monitoring well will be cleaned within an established and properly maintained laboratory. No field cleaning of bailers will be permitted. A Teflon bailer will be assigned to each well, as to further eliminate the possibility of contamination. All Teflon bailers will be cleaned as follows:

1) Phosphate free soap and tap water wash

2) Tap water rinse

3) 10% nitric or hydrochloric acid soak

4) De-ionized or Distilled water rinse

5) Isopropyl alcohol rinse

6) De-ionized or Distilled water rinse

7) Air dry

8) Aluminum foil wrap with shiny side out

The water level indicator will also be cleaned between the sampling of monitoring wells. Water level indicator cables and probes will be decontaminated before and between well usage and transported in a manner to prevent contamination.

The plant may purchase preconditioned disposable teflon bailers (cleaned to EPA protocol) from a laboratory supplier instead of following the above cleaning procedure.

PURGING METHODS

The HNP landfill is located on the Harris Plant Lands within the Triassic basin. The protocol for purging these wells is somewhat different from the standard purging method used at most sites. The low permeability of soils in this basin cause very slow groundwater recovery rates. During sampling events wells will be bailed dry and then

allowed two to three days to recharge. After sufficient recharging, a representative sample of the ground water in the vicinity of the well will be collected.

All water levels in the wells will be measured and recorded with an electronic indicator prior to purging any of the wells.

SAMPLE COLLECTION

Representative samples will be taken from all ground water wells. All sampling equipment will be properly decontaminated. Proper sampling and sample handling technique will be used. Nothing will be placed inside the well casing that has not been decontaminated. To further eliminate the possibility of contamination during sampling there will be frequent glove changes.

Once the well cap is removed from the casing, all equipment and sampling procedures will be performed while wearing gloves. Care will be taken to ensure bailers and other sampling equipment do not come into contact with anything other than the well contents.

Each monitoring well will be treated as a separate entity. Therefore, there will be enough decontaminated sampling equipment for each well; no sampling equipment will be used between sampling wells.

HNP will conduct semi-annual sampling of the five monitoring wells around the landfill (MW-1, MW-2, MW-3, MW-6, and MW-7) for a minimum of 5 years post closure (or as directed by the North Carolina Department of Environment and Natural Resources). HNP may petition the Solid Waste Section for either reduction or cessation of groundwater monitoring after the five year period.

Sampling Containers

There will be several different types of containers used for sampling purposes because of the wide array of parameters that must be analyzed. All sampling containers will be properly decontaminated before use. The number of containers used for sampling collection and the use of acid preservation will follow the rules established by the laboratory analyzing the samples.

Sampling Order

Samples will be collected in the following order at each well: Volatile Organic Compounds (VOC's) and total metals.

HNP will monitor the groundwater wells for the following parameters based on the 8 RCRA metals and the 47 VOC's. The following is the list of parameters for which the ground water wells will be monitored:

Arsenic	1,2-dibromo-3-chloropropane	Methyl ethyl keytone
Barium	1,2-Dibromoethane	Methyl iodide
Cadmium	o-Dichlorobenzene	4-Methyl-2-pentanone
Chromium	p-Dichlorobenzene	Styrene
Lead	Trans-1, 4-Dichloro-2-butene	1,1,1,2-Tetrachloroethane
Mercury	1,1-Dichloroethane	1,1,2,2-Tetrachloroethane
Selenium	1,2-Dichloroethane	Tetrachloroethylene
Silver	1,1-Dochloroethylene	Toluene
Acetone	cis-1,2-Dichloroethylene	1,1,1-Trichloroethane
Acrylonitrile	trans-1, 2-Dichloroethylene	1,1,2-Trichloroethane
Benzene	1,2-Dichloropropane	Trichloroethylene
Bromochloromethane	cis-1,3-Dichloropropene	Trichloroflouromethane
Bromoform	trans-1,3-Dichloropropene	1,2,3-Trichloropropane
Carbon disulfide	Ethylbenzene	Vinyl acetate
Carbon tetrachloride	2-Hexanone	Vinyl chloride
Chlorobenzene	Methyl bromide	Xylene
Chloroethane	Methyl chloride	Bromodichloromethane
Chloroform	Methylene bromide	
Dibromochloromethane	Methylene chloride	

TRANSPORTATION AND STORAGE OF SAMPLES

Upon completion of sample collection, all samples will be stored on ice or in a refrigerator until the samples are transported to a certified state laboratory for analysis. Samples will be stored in such a manner as to prevent breakage or accidental spillage. Unless circumstances prevent otherwise, all samples collected will be delivered to the laboratory on the same day as collected. There will be no field filtering of samples.

Chain of Custody

A Chain-of-Custody form will be completed and accompany each sample to the laboratory. The chain-of-custody form will contain the following: Sample number, signature of collector, date and time of collection, sample time, well identification, total number of containers, signature(s) of person involved in chain-of-possession and inclusive dates of possession.

QUALITY ASSURANCE/QUALITY CONTROL

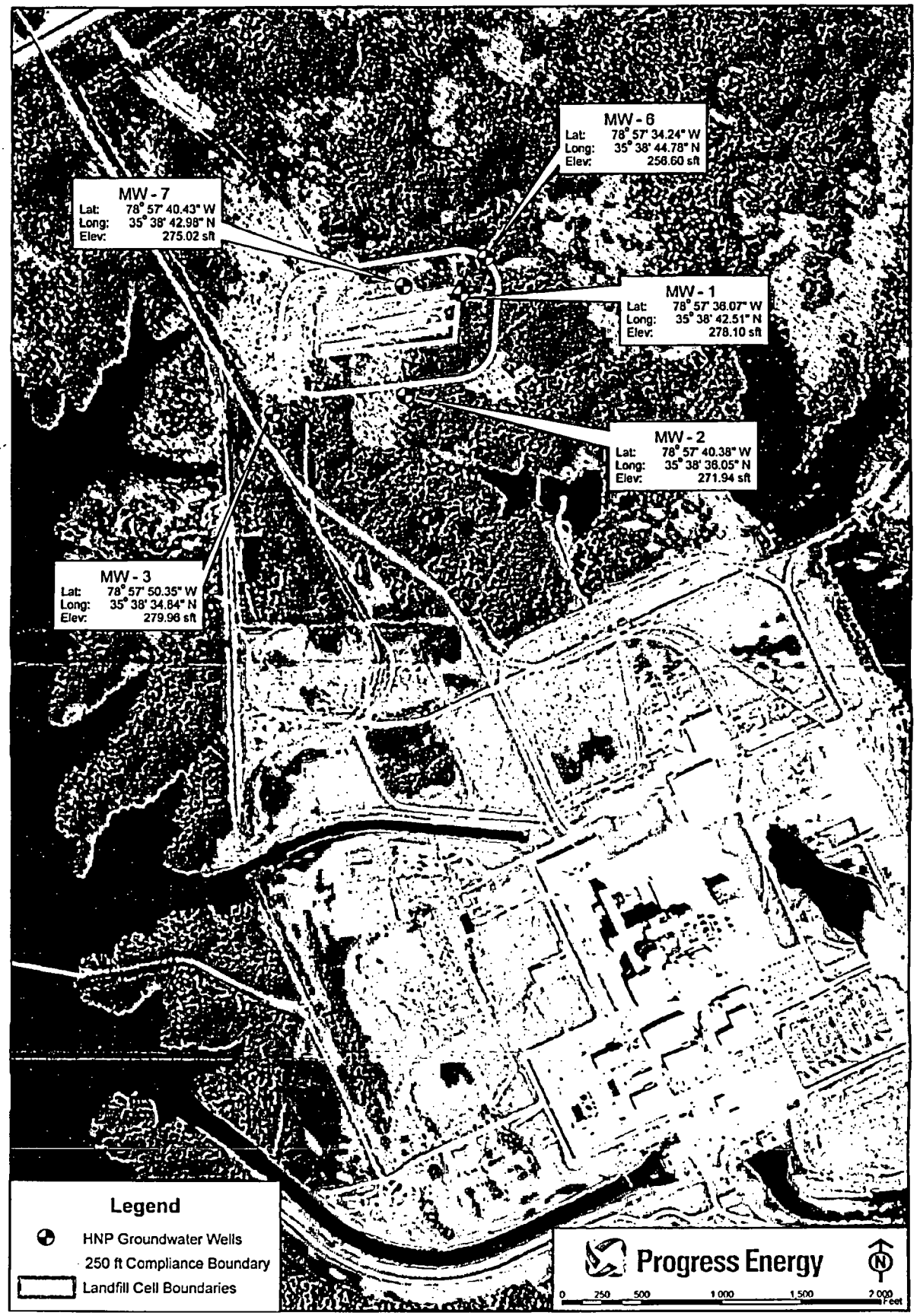
Since all wells have been established at the Landfill site and we have many years of data, sampling will be conducted on a semi-annual basis. Each well sampling event will include the following field parameters: pH, and specific conductivity. One equipment and one trip blank will be analyzed with each sampling event.

Monitoring data, quality assurance/quality control data, chain-of-custody records, and any other required information will be submitted to the Solid Waste Section within 15 days of receipt by the facility.

All monitoring samples will be analyzed by a laboratory certified under the Division of Environmental Management (DEM) certification program.

SURFACE WATER MONITORING

The landfill site does not border any surface water. The closest surface water to the landfill site is Harris Lake which is approximately 800 feet away. Therefore no surface water sampling is part of this monitoring plan.



DRAFT

Figure 1

3153177

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1 of 2

DRAFT

Figure 2

3133177
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HARD COPY
2 of 2

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WELL CONSTRUCTION RECORD

North Carolina - Department. of Environment and Natural Resources - Division of Water Quality - Groundwater Section

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Ronald Barron CERTIFICATION # 2091

WELL CONTRACTOR COMPANY NAME Engineering Tectonics PHONE # (336)724-6894

STATE WELL CONSTRUCTION PERMIT# (if applicable) ASSOCIATED WQ Permit # (if applicable)

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump water Injection ☐ other ☐ If other, list use: MW-6

2. WELL LOCATION:
Nearest Town: Holly Springs County Wake
5413 Shearon Harris Rd New Hill NC
(Street Name, Numbers, Community, Subdivision, Lot No., Zip Code) 27562

Topographic/Land setting
☐ Ridge ☐ slope ☒ valley ☐ Flat
(check appropriate box)
Latitude/Longitude of well location n/a
(degrees/minutes/seconds)
Latitude/Longitude source: ☐ GPS ☐ Topographic map
(check box)

3. OWNER Progress Energy
Address 5413 Shearon Harris Rd
(Street or Route No)
New Hill, NC 27562
City or Town State Zip code
( ) -
Area Code - Phone number

4. DATE DRILLED 12-18-03
5. TOTAL DEPTH 68.5
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing: ___ FT. (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 3.0 FT. Above Land Surface
Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118.
9. YIELD (gpm): n/a METHOD OF TEST
10. WATER ZONES (depth): 63.0 & 67.0
11. DISINFECTION: Type n/a Amount n/a
12. CASING:

	Depth From	To	Ft	Diameter	Wall Thickness or Weight/Ft.	Material
	+3.0	53.5		2"	sch 40	PVC

13. GROUT:

	Depth From	To	Ft	Material	Method
	0	49.0		Portland	trimie

14. SCREEN

	Depth From	To	Ft	Diameter		Slot Size		Material
	53.5	68.5		2"	in.	.010	in.	PVC
					in.		in.	

15. SAND/GRAVEL PACK

	Depth From	To	Ft	Size	Material
	51.0	68.5		#3	Sand
	49.0	51.0		3/8	Bentonite

16. REMARKS

DEPTH

From	To	DRILLING LOG Formation Description
see attached log		

LOCATION SKETCH

Show direction and distance in miles from at least two State Roads or County Roads. Include the road numbers and common road names.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER

Ronald F. Barron - For Engineering Tectonics 12-19-03

SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit the original to the Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 133-3221, within 30 days.

GW-1 REV. 07/2001

G. N. Richardson & Associates, Inc.
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER MW-6 Page 1 of 2

PROJECT NAME: Shearon Harris Sanitary Landfill
LOCATION: New Hill, NC
DRILLING CO. Engineering Tectonics, P.A.
DRILLING METHOD: AR/AH
FIELD PARTY: R. Barron
GEOLOGIST: J. Smyth
DATE BEGUN: 12/17/03 DATE COMPLETED: 12/18/03

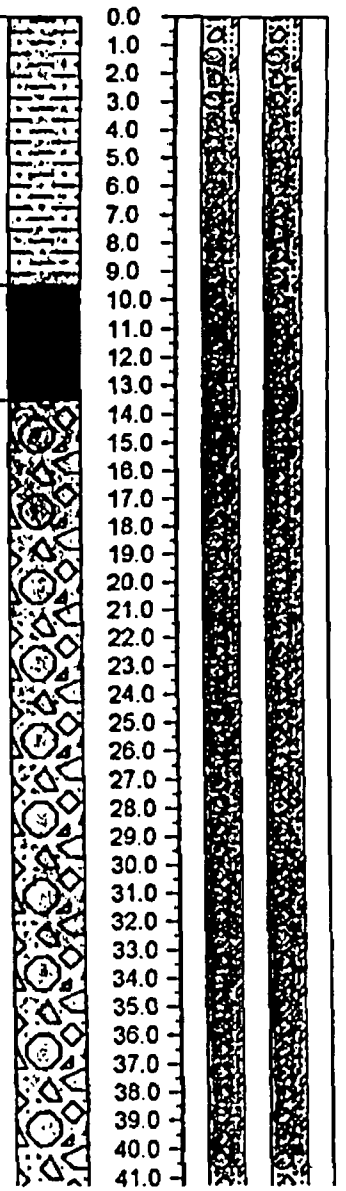
TOTAL DEPTH. 68.5
GROUND SURFACE ELEVATION. NA
TOP OF CASING ELEVATION: NA

STATIC WATER LEVEL (BLS)		
Depth (ft)	1 below grade	0.5 above grade
Time	5:00 pm	4:00 pm
Date	12/17/03	12/18/03

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION
0.0				AR	SILTY CLAY: Dry to slightly moist tan to purple silty clay
3.0	7,11,16	SS	10"		
8.0	24,26,32	SS	8"		
10.0					CLAY: Dry red clay.
13.0	50/0"	SS	0"	AH	CONGLOMERATE: Red to whitish conglomeratic bedrock.

LITHOLOGY

WELL INSTALLATION



14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

BOREHOLE NUMBER MW-6 Page 2 of 2

PROJECT NAME: Shearon Harris Sanitary Landfill
LOCATION: New Hill, NC
DRILLING CO: Engineering Tectonics, P.A.
DRILLING METHOD: AR/AH
FIELD PARTY: R. Barron
GEOLOGIST: J. Smyth
DATE BEGUN: 12/17/03 DATE COMPLETED: 12/18/03

TOTAL DEPTH: 68.5
GROUND SURFACE ELEVATION: NA
TOP OF CASING ELEVATION: NA

STATIC WATER LEVEL (BLS)		
Depth (ft)	1 below grade	0.5 above grade
Time	5:00 pm	4:00 pm
Date	12/17/03	12/18/03

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
42.0							42.0	
43.0							43.0	
44.0							44.0	
45.0							45.0	
46.0							46.0	
47.0							47.0	
48.0							48.0	
49.0							49.0	
50.0							50.0	
51.0							51.0	
52.0							52.0	
53.0							53.0	
54.0							54.0	
55.0							55.0	
56.0							56.0	
57.0							57.0	
58.0							58.0	
59.0							59.0	
60.0							60.0	
61.0							61.0	
62.0							62.0	
63.0							63.0	
64.0							64.0	
65.0							65.0	
66.0							66.0	
67.0							67.0	
68.0					CONGLOMERATE: Red to whitish conglomeratic bedrock. Significant water noted at 68 feet, boring dry to that point. Boring terminated at 68.5 feet		68.0	

WELL CONSTRUCTION RECORD

North Carolina - Department. of Environment and Natural Resources - Division of Water Quality - Groundwater Section

WELL CONTRACTOR (INDIVIDUAL) NAME (print) Ronald Barron CERTIFICATION # 2091

WELL CONTRACTOR COMPANY NAME Engineering Tectonics PHONE # (336) 724-6994

STATE WELL CONSTRUCTION PERMIT# _____ (if applicable) ASSOCIATED WQ Permit # _____ (if applicable)

1. WELL USE (Check Applicable Box): Residential ☐ Municipal/Public ☐ Industrial ☐ Agricultural ☐ Monitoring ☒ Recovery ☐ Heat Pump water Injection ☐ other ☐ If other, list use: MW-7

2. WELL LOCATION:
Nearest Town: Holly Springs County Wake
5413 Shearon Harris Rd New Hill, NC 27562
(Street Name, Numbers, Community, Subdivision, Lot No., Zip Code)

Topographic/ Land setting
☐ Ridge ☐ slope ☒ valley ☐ Flat
(check appropriate box)
Latitude/Longitude of well location n/a
(degrees/minutes/seconds)
Latitude/Longitude source: ☐ GPS ☐ Topographic map
(check box)

3. OWNER Progress Energy
Address 5413 Shearon Harris Rd.
(Street or Route No)
New Hill, NC 27562
City or Town State Zip code
( ) -
Area Code - Phone number

4. DATE DRILLED 12-18-03
5. TOTAL DEPTH 53
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing: ___ FT. (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2.0 FT. Above Land Surface
Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C.0118.
9. YIELD (gpm): n/a METHOD OF TEST _____
10. WATER ZONES (depth): _____
11. DISINFECTION: Type n/a Amount n/a
12. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From +2.0	To 38.0	Ft	2"	sch 40	PVC
From	To	Ft			
From	To	Ft			

13. GROUT:

	Depth		Material	Method
From 0	To 34.0	Ft	Portland	trimie
From	TO	Ft		

14. SCREEN

	Depth		Diameter		Slot Size		Material
From 38.0	To 53.0	Ft.	2"	in.	.010	in.	PVC
From	To	Ft.		in.		in.	

15. SAND/GRAVEL PACK

	Depth		Size	Material
From 36.0	To 53.0	Ft	#3	Sand
From 34.0	To 36.0	Ft	3/8	Bentonite

16. REMARKS _____

DEPTH From	To	DRILLING LOG Formation Description
see attached log		

LOCATION SKETCH
Show direction and distance in miles from at least two State Roads or County Roads. Include the road numbers and common road names.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER

Ronald F. Barron For Engineering Tectonics 12-19-03

SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit the original to the Division of Water Quality, Groundwater Section, 1636 Mail Service Center - Raleigh, NC 27699-1636 Phone No. (919) 133-3221, within 30 days.

GW-1 REV. 07/2001

G. N. Richardson & Associates, Inc.
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER MW-7

PROJECT NAME: Shearon Harris Sanitary Landfill
LOCATION: New Hill, NC
DRILLING CO: Engineering Tectonics, P.A.
DRILLING METHOD: AR/AH
FIELD PARTY: R. Barron
GEOLOGIST: J. Smyth
DATE BEGUN: 12/18/03 DATE COMPLETED: 12/18/03

TOTAL DEPTH: 53
GROUND SURFACE ELEVATION: NA
TOP OF CASING ELEVATION: NA

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	NA
Time	NA	NA
Date	NA	NA

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
0.0				AR	CLAY: Dry to slightly moist tan to purple silty clay			
3.0	9.20,31	SS	10"					
8.0	50/3"	SS	8"					
12.0				AH	CONGLOMERATE: Red to whitish conglomeratic bedrock. Slightly softer seam at 27 feet but no water.			

G. N. Richardson & Associates, Inc.
14 North Boylan Avenue, Raleigh NC 27603
(919) 828-0577

FIELD BOREHOLE LOG

BOREHOLE NUMBER MW-7

PROJECT NAME: Shearon Harris Sanitary Landfill
LOCATION: New Hill, NC
DRILLING CO: Engineering Tectonics, P.A.
DRILLING METHOD: AR/AH
FIELD PARTY: R. Barron
GEOLOGIST: J. Smyth
DATE BEGUN: 12/18/03 DATE COMPLETED: 12/18/03

TOTAL DEPTH: 53
GROUND SURFACE ELEVATION: NA
TOP OF CASING ELEVATION: NA

STATIC WATER LEVEL (BLS)		
Depth (ft)	NA	NA
Time	NA	NA
Date	NA	NA

DEPTH	BLOW COUNT	SAMPLING METHOD	RECOVERY	DRILL METHOD	DESCRIPTION	LITHOLOGY	DEPTH	WELL INSTALLATION
32.0–53.0					CONGLOMERATE: Red to whitish conglomeratic bedrock. Ground water seam at 53 feet. Dry drilling until that point. Boring terminated at 53 feet.		32.0–53.0	

Department of Natural Resources and Community Development
Division of Environmental Management
P. O. Box 27687 Raleigh, N. C. 27611

WELL ABANDONMENT RECORD MW-4

CONTRACTOR Engineering Tectonics REG. NO. 2091

LOCATION: (Show a sketch of the location on back: of form.)

Nearest Town: Holly Springs County Wake

5413 Shearon Haris Road New Hill, NC Quadrangle No.
(Road, Community, Subdivision, Lot No.)

OWNER: Progress Energy

ADDRESS: 5413 Shearon Harris Rd New Hill

TOPOGRAPHY: draw slope hilltop valley (flat)

USE OF WELL: Monitoring Date: 12-19-03

TOTAL DEPTH: 35.0 DIAMETER 2"

CASING REMOVED:

feet	diameter
n/a	n/a
n/a	n/a

SEALING MATERIAL:

Neat cement	Sand cement
bags of cement 2.0	bags of cement:
gals. of water: 11.0	yds. of sand
	gals. of water

Other:

Type Material

Amount

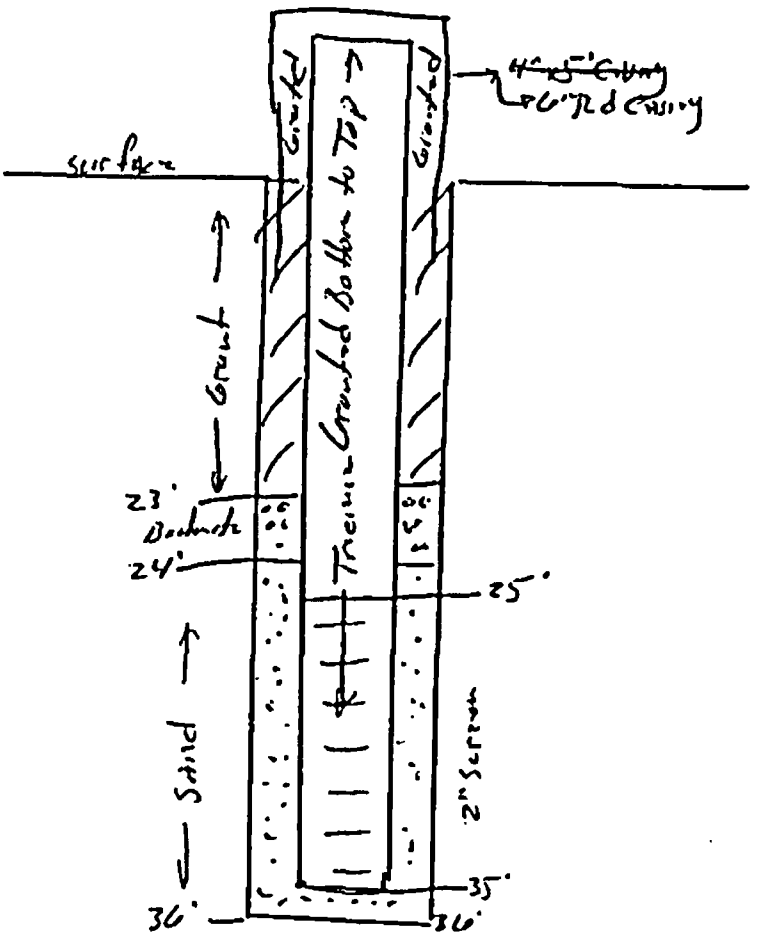
EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL

Proceeded to trimie grout 2"well pipe in place from bottom to top of pipe and to top of protective casing.

I do hereby certify that this well abandonment record is true and exact.

Robert G. Bowers For Engineering Tectonics 12-19-03
Signature of contractor or Agent Date

WELL DIAGRAM: Draw a detailed sketch of the well showing total depth, depth and diameter of screens remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.



submit original to the Division of Environmental Management, one copy to the Driller, and one copy to the Owner.

Department of Natural Resources and Community Development
Division of Environmental Management

P. O. Box 27687 Raleigh, N. C. 27611

ELL ABANDONMENT RECORD MW-5

CONTRACTOR Engineering Tectonics REG. NO. 2091

LOCATION: (Show a sketch of the location on back: of form.)

Nearest Town: Holly Springs County Wake

5413 Shearon Harris Road New Hill, NC Quadrangle No.
(Road, Community, Subdivision, Lot No.)

OWNER: Progress Energy

ADDRESS: 5413 Shearon Harris Rd New Hill

TOPOGRAPHY: draw slope hilltop valley (flat)

USE OF WELL: Monitoring Date: 12-19-03

TOTAL DEPTH: 38.0 DIAMETER 2"

CASING REMOVED:

feet	diameter
n/a	n/a
n/a	n/a

SEALING MATERIAL:

Neat cement	Sand cement
bags of cement 2.0	bags of cement:
gals. of water: 11.0	yds. of sand
	gals. of water

Other:

Type Material

Amount

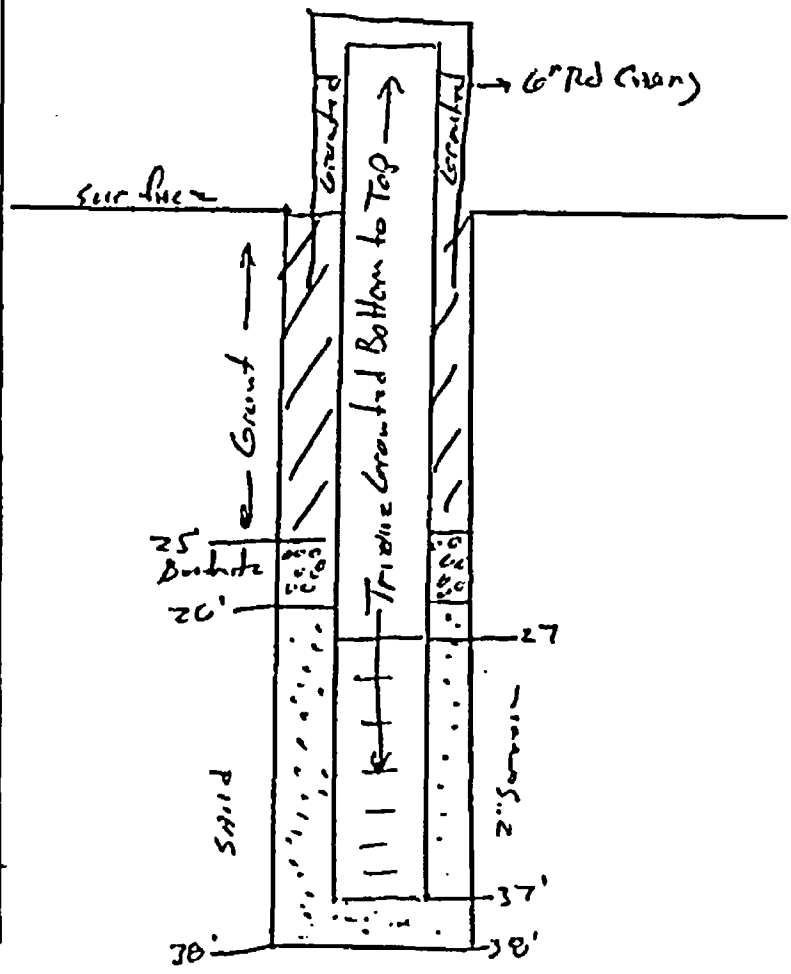
EXPLAIN METHOD OF EMPLACEMENT OF MATERIAL

Proceeded to trimie grout 2"well pipe in place from bottom to top of pipe and to top of protective casing.

I do hereby certify that this well abandonment record is true and exact.

Ronald F. Brewster Engineering Technician 12-19-03
Signature of contractor or Agent Date

WELL DIAGRAM: Draw a detailed sketch of the well showing total depth, depth and diameter of screens remaining in the well, gravel interval, intervals of casing perforations, and depths and types of fill materials used.



submit original to the Division of Environmental Management, one copy to the Driller, and one copy to the Owner.

DIVISION OF ENVIRONMENTAL MANAGEMENT GROUNDWATER SECTION
P.O. BOX 27687 – RALEIGH, N.C. 27611, PHONE (919) 733-3083

FILE COPY

Qua.. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc ___
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

FILE COPY
83C-12-2

RILLING CONTRACTOR EMA INC CONSULTING ENGINEERS

RILLER REGISTRATION NUMBER 446

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

WELL LOCATION: (Show sketch of the location below)

Nearest Town: NEW HILL

County: WAKE

SHEARON HARRIS PLANT SANITARY LANDFILLS W-1
(Road, Community, or Subdivision and Lot No.)

OWNER CAROLINA POWER & LIGHT COMPANY

ADDRESS PO BOX 1551, ZCZ CENTER PLAZA BLDG.
(Street or Route No.)

RALEIGH NC 27602
City or Town State Zip Code

DATE DRILLED 11-14-86 USE OF WELL OBSERVATION

TOTAL DEPTH 98 FEET CUTTINGS COLLECTED ☐ Yes ☑ No

DOES WELL REPLACE EXISTING WELL? ☐ Yes ☑ No

STATIC WATER LEVEL: 68 FT. ☐ above ☑ below TOP OF CASING.

TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.

YIELD (gpm): _____ METHOD OF TEST _____

WATER ZONES (depth): _____

CHLORINATION: Type _____ Amount _____

CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From	+2	To -3 Ft.	4 in		STEEL
From	+2	To -87 Ft.	2 in	SCH 40	PVC
From		To Ft.			

GROUT:

	Depth		Material	Method
From	SURFACE	To -85 Ft.	CEMENT	
From	-85	To -86 Ft.	BENTONITE PELLETS SEAL	

SCREEN:

	Depth		Diameter	Slot Size	Material
From	-87	To -97 Ft.	2 in.	.010 in.	PVC
From		To Ft.	in.	in.	
From		To Ft.	in.	in.	

GRAVEL PACK:

	Depth		Size	Material
From	-86	To -98 Ft.	#2	SAND
From		To Ft.		

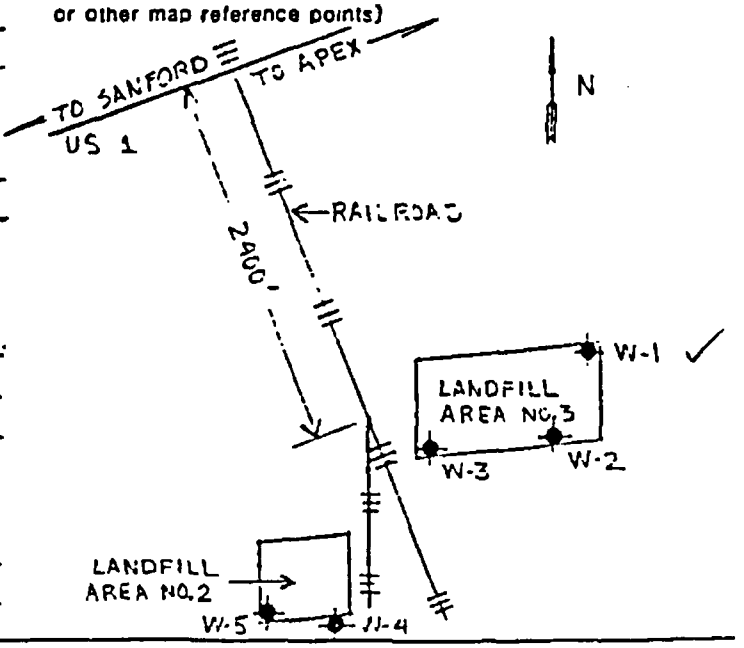
REMARKS: _____

Depth From	To	DRILLING LOG Formation Description
WELL #1		
SURFACE TO		BROWNISH TAN
BOTTOM OF WELL		CLAYEY SANDY SILT OF
		THE TRIASSIC BASIN;
		VERY DENSE

If additional space is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Robert M. S. 11/7/87
SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner

N. C. Department of Human Resour
Division of Health Services

WELL COMPLETION RECORD

COMPLETE ALL INFORMATION REQUESTED BELOW FOR EACH WELL INSTALLED, AND RETURN FORM TO THE DEPARTMENT OF HUMAN RESOURCES, SOLID AND HAZARDOUS WASTE MANAGEMENT BRANC P. O. BOX 2091, RALEIGH, N.C. 27602

NAME OF SITE:	PERMIT NO.:
Shearon Harris Nuclear Power Plant	92-10
ADDRESS: P. O. Box 165, New Hill, N.C. 27562	**OWNER (print):** Carolina Power & Light Co mpan
DRILLING CONTRACTOR: ERA I.C Consulting Engineers	**REGISTRATION NO.:** 446

Casing Type: Steel dia. 4 in.
Casing Depth: from +2 to 3 ft. - dia. 4 in.
Screen Type: Slotted PVC dia. 2 in.
Screen Depth: from 87 to 97 ft. - dia. 2 in.

Grout Depth: from 0 to 35 ft. - dia. [illegible]
Bentonite Seal: from 35 to 36 ft. - dia. [illegible]
Sand/Gravel PK: from 36 to 93 ft. - dia. [illegible]
Total Well Depth: from [illegible] to 93 ft. - dia. [illegible]

Static Water Level: 54 feet from top of casing — Date Measured 12 / 16 / [illegible]

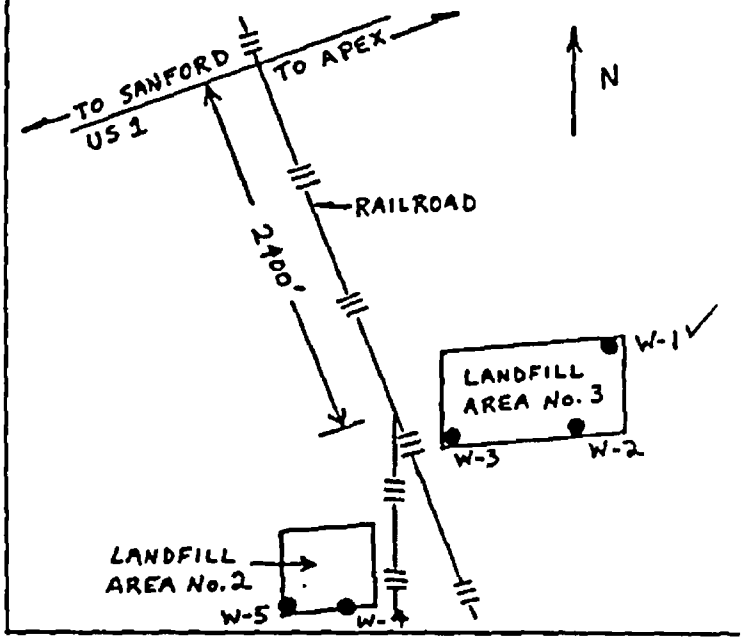
Yield (gpm): _____ Method of Testing: _____ Casing is 2 feet above land surfa

DRILLING LOG

DEPTH FROM	TO	FORMATION DESCRIPTION
Well #1		
Surface	Bottom	Brownish tan clayey,
		silt of the Triassic
		Basin, very dense

LOCATION SKETCH

(show distance to numbered roads, or other map reference points



REMARKS: _____

DATE: _____ SIGNATURE: _____

DIVISION OF ENVIRONMENTAL MANAGEMENT GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

Qua. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc ____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR EMA INC CONSULTING ENGINEERS
DRILLER REGISTRATION NUMBER 446
STATE WELL CONSTRUCTION PERMIT NUMBER: _____

WELL LOCATION: (Show sketch of the location below)

Nearest Town: NEW HILL County: WAKE
SHEARON HARRIS PLANT SANITARY LANDFILLS WELL #2
(Road, Community, or Subdivision and Lot No.)

OWNER CAROLINA POWER & LIGHT COMPANY
ADDRESS PO BOX 1551, 2CZ CENTER PLAZA BLDG (Street or Route No.)
RALEIGH NC 27602
City or Town State Zip Code

DATE DRILLED 11-18-86 USE OF WELL OBSERVATION
TOTAL DEPTH 52.5 FT. CUTTINGS COLLECTED ☐ Yes ☑ No
DOES WELL REPLACE EXISTING WELL? ☐ Yes ☑ No
STATIC WATER LEVEL: 32 FT. ☐ above ☑ below TOP OF CASING,
TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.
YIELD (gpm): _____ METHOD OF TEST _____
WATER ZONES (depth): _____
CHLORINATION: Type _____ Amount _____

CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From	+2	To -3 Ft.	4 in		STEEL
From	+2	To -30 Ft.	2 in	SCH 40	PVC
From		To Ft.			

GROUT:

	Depth		Material	Method
From	SURFACE	To -28 Ft.	CEMENT	
From	-28	To -29 Ft.	BENTONITE PELLETS SEAL	

SCREEN:

	Depth		Diameter	Slot Size	Material
From	-30	To -40 Ft.	2 in.	.010 in.	PVC
From		To Ft.	in.	in.	
From		To Ft.	in.	in.	

GRAVEL PACK:

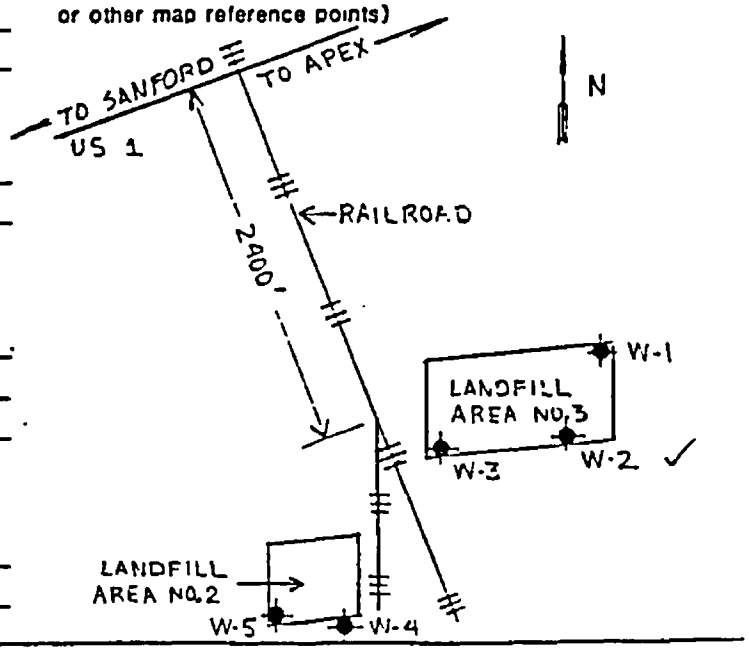
	Depth		Size	Material
From	-29	To -52.5 Ft.	#2	SAND
From		To Ft.		

REMARKS. _____

Depth From	Depth To	DRILLING LOG Formation Description
WELL #2		
SURFACE TO		BROWNISH TAN CLAYEY
BOTTOM OF WELL		SANDY SILT OF THE
		TRIASSIC BASIN;
		VERY DENSE.

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT — DATE 1/2/87

Submit original to Division of Environmental Management and copy to well owner.

Revised 11/84

N. C. Department of Human Resources
Division of Health Services

WELL COMPLETION RECORD

COMPLETE ALL INFORMATION REQUESTED BELOW FOR EACH WELL INSTALLED, AND RETURN FORM TO THE DEPARTMENT OF HUMAN RESOURCES, SOLID AND HAZARDOUS WASTE MANAGEMENT BRAN P. O. BOX 2091, RALEIGH, N.C. 27602

NAME OF SITE:	PERMIT NO.:
Shearon Harris Nuclear Power Plant	92-10
ADDRESS:	**OWNER (print):**
P. O. Box 165, New Hill, N. C. 27562	Carolina Power & Light Co.
DRILLING CONTRACTOR:	**REGISTRATION NO.:**
EMA INC Consulting Engineers	446

Casing Type:	Steel	dia. 4 in.		Grout Depth:	from 0	to 28	ft. - dia.
Casing Depth:	from +2	to 3 ft. - dia. 4 in.		Bentonite Seal:	from 28	to 29	ft. - dia.
Screen Type:	Slotted PVC	dia. 2 in.		Sand/Gravel PK:	from 29	to 52	ft. - dia.
Screen Depth:	from 30	to 40 ft. - dia. 2 in.		Total Well Depth:	from 0	to 52	ft. - dia.

Static Water Level: 28 feet from top of casing Date Measured 12 / 15

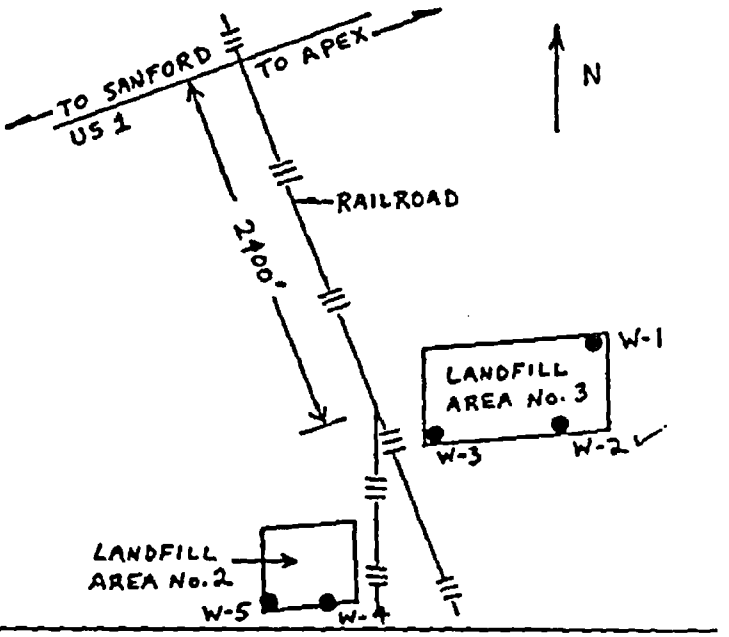
Yield (gpm): _____ Method of Testing: _____ Casing is 2 feet above land surf

DRILLING LOG

DEPTH FROM	TO	FORMATION DESCRIPTION
Well #2		
Surface	Bottom	Brownish tan clayey, sandy silt of the Triassic Basin, very dense.

LOCATION SKETCH

(show distance to numbered roads, or other map reference point



REMARKS: _____

DATE: _____ SIGNATURE: _____

GHS 3342 (6/85)
Solid & Hazardous Waste Management Branch

DIVISION OF ENVIRONMENTAL MANAGEMENT GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

Qua. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR EMA INC. CONSULTING ENGINEERS
DRILLER REGISTRATION NUMBER 446
STATE WELL CONSTRUCTION PERMIT NUMBER: _____

WELL LOCATION: (Show sketch of the location below)
Nearest Town: NEW HILL County: WAKE
SHEARON HARRIS PLANT SANITARY LANDFILL'S WELL #3
(Road, Community, or Subdivision and Lot No.)

OWNER CAROLINA POWER & LIGHT COMPANY
ADDRESS PO BOX 1551, 2C2 CENTER PLAZA BLDG (Street or Route No.)
RALEIGH N.C. 27602
City or Town State Zip Code

DATE DRILLED 11-24-86 USE OF WELL OBSERVATION
TOTAL DEPTH 56 FT. CUTTINGS COLLECTED ☐ Yes ☑ No
DOES WELL REPLACE EXISTING WELL? ☐ Yes ☑ No
STATIC WATER LEVEL: 49 FT. ☐ above ☑ below TOP OF CASING.
TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.
YIELD (gpm): _____ METHOD OF TEST _____
WATER ZONES (depth): _____

CHLORINATION: Type _____ Amount _____

CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From	+2	To -3 Ft.	4 in		STEEL
From	+2	To -47 Ft.	2 in	SCH 40	PVC
From		To Ft.			

GROUT:

	Depth		Material	Method
From	SURFACE	To -45 Ft.	CEMENT	
From	-45	To -46 Ft.	BENTONITE PELLETS SEAL	

SCREEN:

	Depth		Diameter	Slot Size	Material
From	-47	To -57 Ft.	2 in.	.010 in.	PVC
From		To Ft.	in.	in.	
From		To Ft.	in.	in.	

GRAVEL PACK:

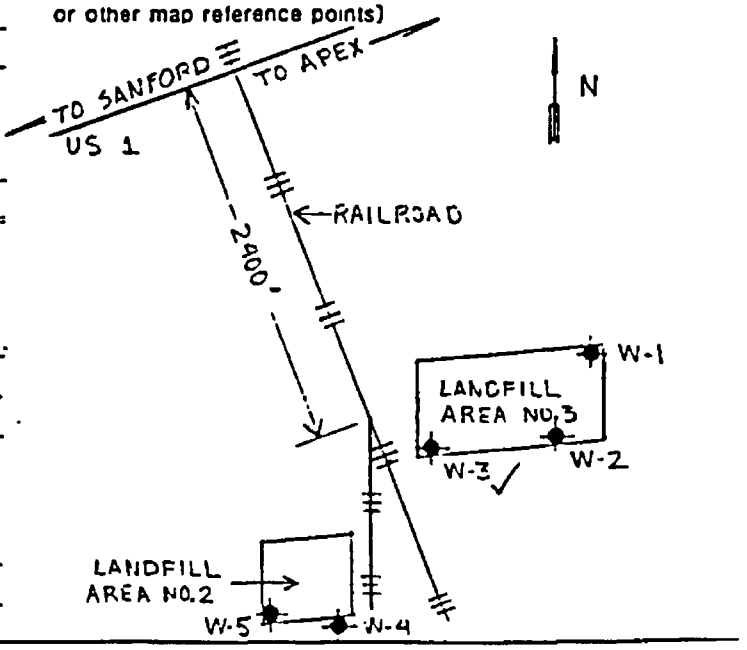
	Depth		Size	Material
From	-46	To -56 Ft.	#2	SAND
From		To Ft.		

REMARKS. _____

Depth From	To	DRILLING LOG Formation Description
WELL #3		
SURFACE TO		BROWNISH TAN CLAYEY
BOTTOM OF WELL		SANDY SILT OF THE
		TRIASSIC BASIN

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CONTRACTOR OR AGENT — DATE 1/7/87

GW-1 Revised 11/84
Submit original to Division of Environmental Management and copy to well owner

N. C. Department of Human Resou
Division of Health Services

WELL COMPLETION RECORD

COMPLETE ALL INFORMATION REQUESTED BELOW FOR EACH WELL INSTALLED, AND RETURN FORM TO THE DEPARTMENT OF HUMAN RESOURCES, SOLID AND HAZARDOUS WASTE MANAGEMENT BRAN P. O. BOX 2091, RALEIGH, N.C. 27602

NAME OF SITE:	PERMIT NO.:
Shearon Harris Nuclear Power Plant	92-10
ADDRESS:	**OWNER (print):**
P. O. Box 165, New Hill, N. C. 27562	Carolina Power & Light Compa
DRILLING CONTRACTOR:	**REGISTRATION NO.:**
EMA INC Consulting Engineers	446

Casing Type: Steel dia. 4 in.
Casing Depth: from +2 to 3 ft. - dia. 4 in.
Screen Type: Slotted PVC dia. 2 in.
Screen Depth: from 47 to 57 ft. - dia. 2 in.

Grout Depth: from 0 to 45 ft. - dia. 5
Bentonite Seal: from 45 to 46 ft. - dia. 6
Sand/Gravel PK: from 46 to 58 ft. - dia. 6
Total Well Depth: from 0 to 58 ft. - dia. 5

Static Water Level: 27 feet from top of casing Date Measured 12 / 16

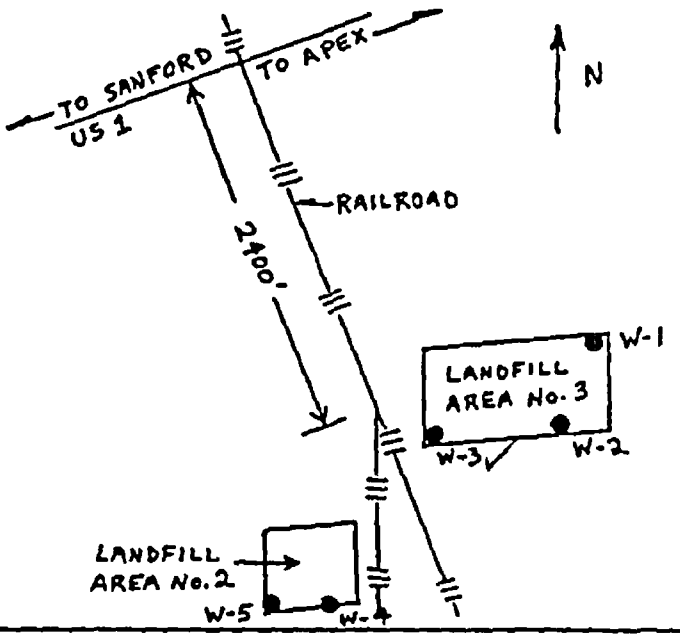
Yield (gpm): _____ Method of Testing: _____ Casing is 2 feet above land surf

DRILLING LOG

DEPTH FROM	TO	FORMATION DESCRIPTION
Well #3		
Surface	Bottom	Brownish tan clayey, sandy silt of the Triassic Basin, very dense

LOCATION SKETCH

(show distance to numbered roads, or other map reference point



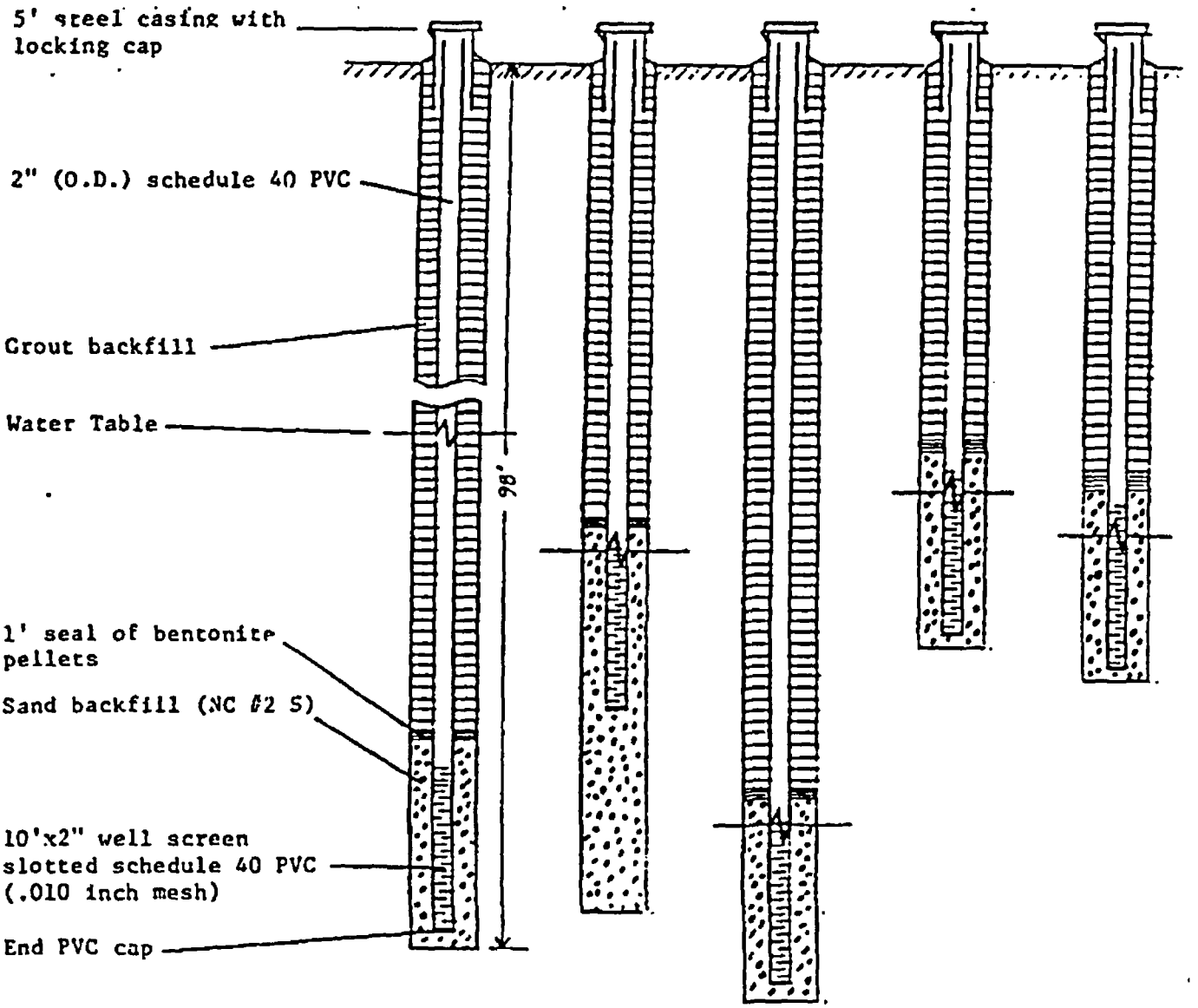
REMARKS: _____

DATE: _____ SIGNATURE: _____

HS 3342 (6/85)
Solid & Hazardous Waste Management Branch

MONITORING WELL LOGS

W-1 W-2 W-3 W-4 W-5



E.M.A. INC. CONSULTING ENGINEERS
RALEIGH, NORTH CAROLINA

MONITORING WELL CONSTRUCTION LOGS
SHEARON HARRIS SANITARY LANDFILL
NEW HILL, NC

DWN. BY	JW	DATE	DEC. 1986	SCALE	1" = 10' V.
CKD. BY	PC	JOB NO.	2.6893		

Response to RAI No. 1
Item 24

Progress Energy

APR 1 1 2006

SERIAL: HNP-06-055

Mr. Ken Schuster, Water Quality Supervisor
Raleigh Regional Office
Department of Environment and Natural Resources
1628 Mail Service Center
Raleigh, N. C. 27699-1628

Subject: Harris Nuclear Plant
National Pollutant Discharge Elimination System (NPDES) Permit No. NC0039586
Non-Discharge Permit Application for Pump and Haul of Wastewater

Dear Mr. Schuster:

The Harris Nuclear Plant (HNP) is requesting approval to transport domestic sewage from Outfall No. 002 to Outfall No. 007 of the above referenced NPDES Permit. HNP is scheduled to have an outage in the spring (approximately April 1 through May 31), and this outage will mean an influx of approximately 1,000 temporary workers to support outage activities. Concurrently, the influx of workers for the outage could overburden the existing on-site sewage treatment plant. Therefore, we are requesting a Pump and Haul permit from the Division of Water Quality to allow HNP, if necessary, to pump and haul domestic wastewater from the on-site sewage treatment plant to the sewage treatment plant at the Harris Energy and Environmental Center. Both outfalls are permitted under the same NPDES Permit (NC0039586).

Attached are the completed Non-Discharge Pump and Haul Permit Application, a check for the $675.00 application fee, and letters of agreement from the Harris Energy and Environmental Center (sludge hauler and receiver), and drawings depicting the location of the pump and valve used for sludge transfer. It is requested that the permit have an effective date of April 1, 2006.

Progress Energy Carolinas, Inc. appreciates the continued cooperation demonstrated by the North Carolina Division of Water Quality staff in responding to its permitting needs. If you have any questions or comments regarding this request, please contact Mr. Bob Wilson at (919) 362-2444 or Mr. Steve Cahoon at (919) 546-7457.

Sincerely,

Eric McCartney
Plant General Manager
Harris Nuclear Plant

EM/mgw

Attachments

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O. Box 165
New Hill, NC 27562

Mr. Ken Schuster, Water Quality Supervisor
SERIAL: HNP-06-055

bc: Ms. D. B. Alexander
Mr. S. G. Cahoon
Mr. J. T. Ellis
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

NORTH CAROLINA
DEPARTMENT OF
ENVIRONMENT AND
NATURAL RESOURCES

Division of Water Quality
Raleigh Regional Office
Non-Discharge Pump and Haul Permit Application

Application Number: _____ (to be completed by DWQ for new projects)

I. GENERAL INFORMATION:

1. Applicant (corporation, individual, other): Shearon Harris Nuclear Plant
2. Print owners or signing official's name and title (person legally responsible for the facility and its compliance):
   Eric A. McCartney – Plant General Manager
3. Mailing address of applicant: 5413 Shearon Harris Road
   City: Raleigh State: NC Zip: 27562
   Telephone number: (919) 362-2000 Facsimile number: (919) 362-2483
   Email Address: eric.mccartney@pgnmail.com
4. Project name (facility or establishment): Pump and Haul RFO 13
5. County where project is located: Wake
6. Fee submitted: $ 675.00 **(See Instruction B.)**
7. Name and complete address of engineering firm: McKim & Creed 200 MacKenan Ct.
   City: Cary State: NC Zip: 27511
   Telephone number: (919) 233-8091 Facsimile number: (919) 233-8031
8. Name and affiliation of contact person who can answer questions about project: Steve Cahoon
   Progress Energy Email Address: steve.cahoon@pgnmail.com

II. PERMIT INFORMATION:

1. If this application is being submitted as a result of a modification to or renewal of an existing permit, please provide the existing permit number NA and the issuance date NA
2. Specify whether the applicant is: public _____ or private Private

III. INFORMATION ON WASTEWATER:

1. Nature of wastewater: 100 %Domestic _____ %Commercial _____ %Industrial
   %Other waste (specify): _____
2. Please provide a one or two-word description specifying the origin of the wastewater (school, restaurant, apartments, commercial): Domestic waste from a STP at an industrial facility
3. Volume of wastewater generated by this project: 8,500 gallons per day.
4. Explanation of how wastewater flow was determined (15A NCAC 2H .0219(l)): flow meters on sludge discharge
5. Description of any pretreatment of wastewater prior to pumping and hauling: no pretreatment

IV. TREATMENT FACILITY INFORMATION:

1. Name of treatment facility receiving wastewater: Harris Energy and Environmental Center
2. NPDES permit number of treatment facility: NC0039586
3. Treatment facility contact person and telephone no: Jack Ellis 362-3476
4. County where treatment facility is located: Wake

V. CONTRACT HAULER INFORMATION:

1. Name of owner/company of transporting (hauler) vehicle: Progress Energy Carolinas, Inc.
2. Mailing address of hauler: 3932 New Hill –Holleman Road 27562
3. Telephone number of hauler: (919) 362-3476
4. Provide the typical hauling volume of the vehicle: 4,000 gallons

VI. GENERAL PROJECT INFORMATION

1. Brief project description: Permit needed to prevent possible capacity issues at the STP due to extra refueling outage workers onsite for approximately 2 months
2. Explanation of why pump and haul is being requested: Provide relief for existing STP if capacity issue present a problem for effective sewage treatment
3. Specify how long the pump and haul permit will be needed (maximum of six months): April 1 through May 31
4. What will be the permanent method of wastewater disposal once the pump and haul activities have ceased?: Existing onsite STP
5. Date that permanent disposal method will be available: Currently available
6. Have permits/approvals for the permanent disposal method been obtained?

   X Yes; Permit No. NC0039586 Permitting agency _____

   _____ No; Pending permit No. _____ Permitting agency _____

7. What type of tank or container will the wastewater be pumped from and what is the volume of this container?____

Wastewater will be pumped from two raw water storage tanks with a volume of 22,000 & 28,000 gallons.

8. Is the tank or container already in place or will it be installed for these activities? In place

9. What type of high water alarm does the container have? Visual X Auto dialer____

VII. OWNER'S SIGNATURE:

Applicant's Signature and Certification:

I, Eric A. McCartney, attest that this application for Pump and Haul Permit has been reviewed by me and is accurate and complete to the best of my knowledge. I understand that if all required parts of this application are not completed and that if all required supporting information and attachments are not included, this application package will be returned to me as incomplete. **Note:** In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application shall be guilty of a Class 2 misdemeanor which may include a fine not to exceed $10,000 as well as civil penalties up to $25,000 per violation.

Signature: Eric A McCartney Date: 4/11/06

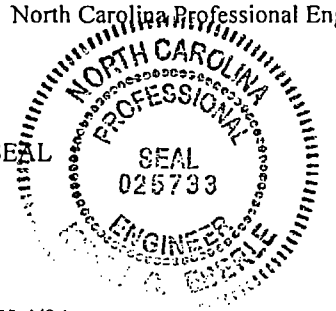
VIII. ENGINEER'S CERTIFICATION:

Professional Engineer's Certification:

I, Kevin Eberle, attest that this application for Pump and Haul Permit has been reviewed by me and is accurate, complete and consistent with the information supplied in the engineering plans, calculations, and all other supporting documentation to the best of my knowledge. I further attest that to the best of my knowledge the proposed design has been prepared in accordance with the applicable regulations. Although certain portions of this submittal package may have been developed by other professionals, inclusion of these materials under my signature and seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design. **Note:** In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application shall be guilty of a Class 2 misdemeanor which may include a fine not to exceed $10,000 as well as civil penalties up to $25,000 per violation.

North Carolina Professional Engineer's seal, signature, and date:

SEAL



Signature

4/7/06
Date

Progress Energy Service Company, LLC
on behalf of Progress Energy, Inc. subsidiaries
P.O. Box 1551
Raleigh, NC 27602

Progress Energy

Check Date	Check Number	Vendor name	Vendor #
06-MAR-06	154434	N C DENR	11946

Invoice Number	Invoice Date	Adjustments	Paid Amount
030206	02-MAR-06	0.00	675.00

Copy Check is at PEB - ESS.
RW
04/14/04

Questions? Invoice.Inquiry@pgnmail.com	$ .00	$ 675.00
		$ 675.00

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND NOT A WHITE BACKGROUND

Progress Energy Service Company, LLC
on behalf of Progress Energy, Inc. subsidiaries
P.O. Box 1551
Raleigh, NC 27602

Progress Energy

64-1327
611

154434

Vendor Number 11946

VOID AFTER 6 MONTHS FROM DATE

Check Date
06-MAR-06 154434

*********675.00

Pay Exactly Six Hundred Seventy-Five Dollars And 00 Cents**********

TO THE ORDER OF
N C DENR
1628 MAIL SERV CTR
RALEIGH, NC 27699-1628

Wachovia Bank, N.A.
Augusta, GA

Signature

⑈154434⑈ ⑆061209756⑆ 2079900450678⑈

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 25

Progress Energy

MAY 25 2006

SERIAL: HNP-06-078

Mr. Barry Herzberg
North Carolina Department of Environment and Natural Resources
Division of Water Quality, Raleigh Regional Office
1628 Mail Service Center
Raleigh, North Carolina 27699-1628

Subject: Domestic Wastewater Pump and Haul Permit No. WQ0030120
Progress Energy Carolinas, Inc.
Harris Nuclear Plant, Wake County
May 2006 Report

Dear Mr. Herzberg:

As specified in Condition 12 of the subject permit, Progress Energy Carolinas, Inc. (PEC) is required to submit a monthly report of the specified wastewater pump and haul records to your office on or before the 10th day of the following month. The attached form contains the information required by this condition of the permit.

As identified in the application for the permit, the pump and haul was a temporary activity to support a refueling outage at the facility. Condition 18 of the permit requires PEC to provide written notification when pump and haul activities are no longer necessary. This letter provides notification that the refueling outage has been completed and the temporary pump and haul activities are no longer necessary. PEC has resumed normal waste treatment operations.

PEC appreciates the assistance provided by the staff at the Raleigh Regional Office in matters related to its NPDES permits. If you have any questions or require additional information, please contact Mr. Bob Wilson at (919) 362-2444 or Steve Cahoon at (919) 546-7457.

Sincerely,

Eric McCartney
Plant General Manager
Harris Nuclear Plant

EM/mgw

Enclosure

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P. O. Box 165
New Hill, NC 27562

bc: Ms. D. B. Alexander
Mr. S. G. Cahoon
Mr. J. T. Ellis
Mr. L. F. Garner
Mr. R. T. Wilson
Nuclear Records
HNP Licensing File: H-X-230

Monthly Pump and Haul Activities for HNP Wastewater Facility

Month: MAY

Name of facility from which wastewater is removed: HNP SEWAGE TREATMENT PLANT

Name of facility receiving wastewater: HE&EC SEWAGE TREATMENT PLANT

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/1/06 0150	5/1/06	3000	BB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-1-06 1320	5-1-06	3000	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/2/06 0015	5-2-06	3000	BB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-2-06 1100	5-2-06	3000	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

These records shall be submitted monthly (by the 10th of the following month) to the Division of Water Quality, SWP Regional Supervisor, Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.

Monthly Pump and Haul Activities for HNP Wastewater Facility

Month: MAY

Name of facility from which wastewater is removed: HNP SEWAGE TREATMENT PLANT

Name of facility receiving wastewater: HE&EC SEWAGE TREATMENT PLANT

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/3/6 / 0150	5-3-6	3000 gal	EB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/3/06 / 0950	5-3-6	3000 gal	EB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/3/06 1400	5/3/6	2250 gal	EB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/4/6 0445	5/4/06	3000 gal	EB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

These records shall be submitted monthly (by the 10th of the following month) to the Division of Water Quality, SWP Regional Supervisor, Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.

Monthly Pump and Haul Activities for HNP Wastewater Facility

Month: MAY

Name of facility from which wastewater is removed: HNP SEWAGE TREATMENT PLANT

Name of facility receiving wastewater: HEEC SEWAGE TREATMENT PLANT

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-4-06 1310	5-4-06	3000	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-4-06 1600	5-4-06	2250	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/5/06 2010	5-6-06	3000	BB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-6-06 0915	5-6-06	3000	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

These records shall be submitted monthly (by the 10th of the following month) to the Division of Water Quality, SWP Regional Supervisor, Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.

Monthly Pump and Haul Activities for HNP Wastewater Facility

Month: MAY

Name of facility from which wastewater is removed: HNP SEWAGE TREATMENT PLANT

Name of facility receiving wastewater: HEPEC SEWAGE TREATMENT PLANT

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-6-06 1110	5-6-06	2250	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:

N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/6/06 ~~22~~ 2140 BB 5/6/06	5-7-06	3000	BB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:

N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-7-06 1125	5-7-06	3000	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:

N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-7-06 1400	5-7-06	2250	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:

N/A

These records shall be submitted monthly (by the 10th of the following month) to the Division of Water Quality, SWP Regional Supervisor, Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.

Monthly Pump and Haul Activities for HNP Wastewater Facility

Month: MAY

Name of facility from which wastewater is removed: HNP Sewage Treatment Plant

Name of facility receiving wastewater: HEEC Sewage Treatment Plant.

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/7/06 / 2120	5-8-06	3000	BB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-8-06 1225	5-8-06	3000	M

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-8-06 1555	5/8/06	2250	M

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/8/06 2120	5-9-06	2800	BB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
waste foaming badly, could not fill truck to top. BB

These records shall be submitted monthly (by the 10th of the following month) to the Division of Water Quality, SWP Regional Supervisor, Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.

Monthly Pump and Haul Activities for HNP Wastewater Facility

Month: MAY

Name of facility from which wastewater is removed: HNP SEWAGE TREATMENT PLANT

Name of facility receiving wastewater: HEEC SEWAGE TREATMENT PLANT

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-9-06 1055	5-9-06	3000	[illegible]

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-9-06 1630	5-9-06	2250	[illegible]

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/10/6 0800	5/10/6	3000	EB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/10/6 1250	5/10/6	3000	EB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

These records shall be submitted monthly (by the 10th of the following month) to the Division of Water Quality, SWP Regional Supervisor, Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.

Monthly Pump and Haul Activities for HNP Wastewater Facility

Month: May

Name of facility from which wastewater is removed: HNP SEWAGE TREATMENT PLANT

Name of facility receiving wastewater: HEEC SEWAGE TREATMENT PLANT

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/10/6 1530	5/10/6	2250	EB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5/10/06 / 2100	5-11-06	2900	BB

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
Raw Sewage foaming.

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials
5-11-06 1250	5-11-06	3000	MM

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:
N/A

Inspection Date/Time	Date Removed	Volume Removed	Tech Initials

Observations made, any maintenance, repairs, or corrective actions taken by the Permittee:

These records shall be submitted monthly (by the 10th of the following month) to the Division of Water Quality, SWP Regional Supervisor, Raleigh Regional Office, 1628 Mail Service Center, Raleigh, NC 27699-1628.

Response to RAI No. 1
Item 26

Progress Energy

HNP-04-040

FEB 2 3 2004

Mr. Kenneth Schuster
Raleigh Regional Office Supervisor
North Carolina Department of Natural Resources
3800 Barrett Drive, Suite 101
Raleigh, NC 27602

Subject: Harris Nuclear Plant and Harris Energy & Environmental Center
NPDES Permit Number NC0039586
Submittal of Collection System Sanitary Sewer Overflow Reporting Form

Dear Mr. Schuster:

Enclosed is the completed Collection System Sanitary Sewer Overflow Reporting Form for the sanitary sewage overflow incident (#200400351) which occurred at the Harris Energy and Environmental Center on February 18, 2004. The incident was initially reported via phone conversation between Mr. Steve Cahoon , Progress Energy Carolinas, Inc. and Mr. Mitch Hayes, Division of Water Quality on February 18, 2004.

The overflow incident occurred as a result of a pine tree root wrapping itself around a pipe fitting causing the fitting to fail. Due to the quick response of onsite personnel (immediate shut down of the lift station) it was estimated that approximately 250 gallons of sewage was spilled to ground, with approximately 25 gallons estimated to reach Little White Oak Creek, approximately 750 feet away from the spill site. Stallings Pump Service was called to pump the remaining sewage from the lift station and transport it to the sewage treatment plant. Affected areas were disinfected to eliminate any possible pathogens.

If there are any questions concerning the information contained in this submittal, please contact Mr. Bob Wilson at (919) 362-2444 or Mr. Steve Cahoon at (919) 362-3568.

Sincerely,

B. C. Waldrep
Plant General Manager
Harris Nuclear Plant

MGW

Enclosure

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O. Box 165
New Hill, NC 27562

Mr. Kenneth Schuster
SERIAL: HNP-04-040

bc: Mr. S. G. Cahoon
Mr. J. T. Ellis
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

Form CS-SSO

Collection System Sanitary Sewer Overflow Reporting Form

PART I

This form shall be submitted to the appropriate DWQ Regional Office within five days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number : NC0039586 (NPDES) (WQCS# if active, otherwise use treatment plant NC/WQ#)

Facility: Harris Energy and Environmental Center
Incident # 200400351
Owner: Progress Energy Carolinas, Inc.
Region: Raleigh
City: New Hill, NC
County: Wake

Source of SSO (check applicable) : ☑ Sanitary Sewer ☐ Pump Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc.) : HEEC Main Lift Station

Latitude (degrees/minute/second): 35 38.86' N
Longitude(degrees/minute/second): 78 55.55' W

Incident Started Dt: 02-18-2004 (mm-dd-yyyy) Time: 1:30 pm hh:mm AM/PM
Incident End Dt: 02-18-2004 (mm-dd-yyyy) Time: 2:30 pm hh:mm AM/PM

Estimated volume of the SSO: 250 gallons
Estimated Duration (Round to nearest hour): 1

Describe how the volume was determined: Duration of event, size of pipe and lift station, time of day, daily flow at that time, number of people onsite at that time

Weather conditions during SSO event: Partly Sunny

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown
Volume reaching surface waters (gallons): 25

Surface water name: Little White Oak Creek

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed?

SPECIFIC cause(s) of the SSO:

- ☐ Severe Natural Condition
- ☐ Grease
- ☑ Roots
- ☐ Inflow and Infiltration
- ☐ Pump Station Equipment Failure
- ☐ Power outage
- ☐ Vandalism
- ☐ Debris in line
- ☐ Other (Please explain in Part II)

Immediate 24-hour verbal notification reported to: Mitch Hayes

☑ DWQ ☐ Emergency Mgmt. Date (mm-dd-yyyy): 02-18-2004 Time (hh:mm AM/PM): 4:20 pm

If an SSO is ongoing, please notify Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 gallons or more of untreated wastewater to surface waters shall issue a press release within 48-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the referenced statute for further detail.

The Director, Division of Water Quality, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was caused by severe natural conditions and there were no feasible alternatives to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis for the determination of any enforcement action. Therefore, it is important to be as complete as possible.

WHETHER OR NOT PART II IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM.

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTIONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I

In the check boxes below, NA = Not Applicable and NE = Not Evaluated

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWQ REGIONAL OFFICE UNLESS IT HAS BEEN SUBMITTED ELECTRONICALLY THROUGH THE ONLINE REPORTING SYSTEM

Severe Natural Condition (hurricane, tornado, etc.)

Describe the "severe natural condition" in detail.

How much advance warning did you have and what actions were taken in preparation for the event?

Comments:

Grease (Documentation such as cleaning, inspections, enforcement actions, past overflow reports, educational material and distribution date, etc. should be available upon request.)

When was the last time this specific line (or wet well) was cleaned? _____

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☐Yes ☐No ☐NA ☐NE

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☐Yes ☐No ☐NA ☐NE

Explain.

Have there been other SSOs or blockages in this area that were also caused by grease? ☐Yes ☐No ☐NA ☐NE

When? _____

If yes, describe them:

Have cleaning and inspections ever been increased at this location? ☐Yes ☐No ☐NA ☐NE

Explain.

Have educational materials about grease been distributed in the past? ☐Yes ☐No ☐NA ☐NE

When? _____

and to whom? _____

Explain?

_____

If the SSO occurred at a pump station, when was the wet well and pumps last checked for grease accumulation? _____

Were the floats clean? ☐Yes ☐No ☐NA ☐NE

Comments:

_____

Roots

Do you have an active root control program? ☑Yes ☐No ☐NA ☐NE

Describe

Roots are controlled by tree removal. Although principally for aesthetics, a secondary benefit is root control, 75 trees were removed on the HEEC campus last fall, several in the vicinity of the sewer line.

Have cleaning and inspections ever been increased at this location because of roots? ☐Yes ☑No ☐NA ☐NE

Explain:

There has been no cause to increase inspections, this is the first incident.

What corrective actions have been accomplished at the SSO location (and surrounding system if associated with the SSO)? The fitting that failed was replaced with a mechanical fitting, also tree roots in the area of the failure were trimmed.

What corrective actions are planned at the SSO location to reduce root intrusion?

Continued use of tree removal program.

Has the line been smoke tested or videoed within the past year? ☐Yes ☑No ☐NA ☐NE

If Yes, when? _____

Comments:

_____

Inflow and Infiltration

Are you under an SOC (Special Order by Consent) or do you have a schedule in any permit that addresses I/I? ☐Yes ☐No ☐NA ☐NE

Explain if Yes:

What corrective actions have been taken to reduce or eliminate I & I related overflows at this spill location within the last year?

Has there been any flow studies to determine I/I problems in the collection system at the SSO location? ☐Yes ☐No ☐NA ☐NE

If Yes, when was the study completed and what actions did it recommend?

Has the line been smoke tested or videoed within the past year? ☐Yes ☐No ☐NA ☐NE

If Yes, when and indicate what actions are necessary and the status of such actions:

Are there I/I related projects in your Capital Improvement Plan? ☐Yes ☐No ☐NA ☐NE

If Yes, explain:

Have there been any grant or loan applications for I/I reduction projects? ☐Yes ☐No ☐NA ☐NE

If Yes, explain:

Do you suspect any major sources of inflow or cross connections with storm sewers? ☐Yes ☐No ☐NA ☐NE

If Yes, explain:

Have all lines contacting surface waters in the SSO location and upstream been inspected recently? ☐Yes ☐No ☐NA ☐NE

If Yes, explain:

What other corrective actions are planned to prevent future I/I related SSOs at this location?

Comments:

Pump Station Equipment Failure (Documentation of testing, records etc., shoul be provided upon request.)

What kind of notification/alarm systems are present?

Auto-dialer/telemetry (one-way communication) ☐Yes

Audible	☐Yes
Visual	☐Yes
SCADA (two-way communication)	☐Yes
Emergency Contact Signage	☐Yes
Other	☐Yes

Describe the equipment that failed?

What kind of situations trigger an alarm condition at this station (i.e. pump failure, power failure, high water, etc.)?

Were notification/alarm systems operable? ☐Yes ☐No ☐NA ☐NE

If no, explain:

If a pump failed, when was the last maintenance and/or inspection performed?

What specifically was checked/maintained?

If a valve failed, when was it last exercised? _____

Were all pumps set to alternate? ☐Yes ☐No ☐NA ☐NE

Did any pump show above normal run times prior to and during the SSO event? ☐Yes ☐No ☐NA ☐NE

Were adequate spare parts on hand to fix the equipment (switch, fuse, valve, seal, etc.)? ☐Yes ☐No ☐NA ☐NE

Was a spare or portable pump immediately available? ☐Yes ☐No ☐NA ☐NE

If a float problem, when were the floats last tested? How?

If an auto-dialer or SCADA, when was the system last tested? How?

Comments:

Power outage (Documentation of testing, records, etc., should be provided of alternative power source upon request.)

What is your alternate power or pumping source?

On-Site Generator w/ATS

Did it function properly? ☐Yes ☐No ☐NA ☐NE

Describe?

When was the alternate power or pumping source last tested under load?

If caused by a weather event, how much advance warning did you have and what actions were taken to prepare for the event?

Comments:

Vandalism

Provide police report number: _____

Was the site secured? ☐Yes ☐No ☐NA ☐NE

If Yes, how?

Padlocked Control Panel

Fence with Locked Gate

Have there been previous problems with vandalism at the SSO location? ☐Yes ☐No ☐NA ☐NE

If Yes, explain:

What security measures have been put in place to prevent similar occurrences in the future? ☐Yes ☐No ☐NA ☐NE

Comments:

Debris in line (Rocks, sticks, rags and other items not allowed in the collection system, etc.)

What type of debris has been found in the line?

How could it have gotten there?

Are manholes in the area secure and intact? ☐Yes ☐No ☐NA ☐NE

When was the area last checked/cleaned? _____

Have cleaning and inspections ever been increased at this location due to previous problems with debris? ☐Yes ☐No ☐NA ☐NE

Explain:

_____

Are appropriate educational materials being developed and distributed to prevent future similar occurrences? ☐Yes ☐No ☐NA ☐NE

Comments:

_____

Other (Pictures and a police report should be available upon request.)

Describe:

_____

Were adequate equipment and resources available to fix the problem? ☐Yes ☐No ☐NA ☐NE

If Yes, explain:

_____

If the problem could not be immediately repaired, what actions were taken to lessen the impact of the SSO?

_____

Comments:

_____

For DWQ Use Only:

DWQ Requested an Additional Written Report: ☐Yes ☐No ☐NA ☐NE

If Yes, What Additional Information is Needed:

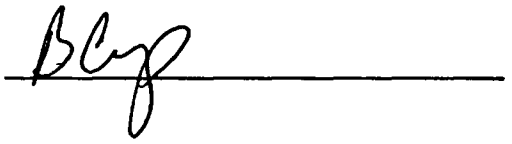
_____

Comments:

_____

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: B. C. Waldrep Date: 02-23-04

Signature:  Title: Plant General Manager - HNP

Telephone Number: (919) 362-2000

Any additional information desired to be submitted should be sent to the appropriate Division Regional Office within five days of first knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of this form is completed, if used).

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 27

Progress Energy

SERIAL: HNP-05-095

AUG 1 4 2005

Mr. John Holley
Land Quality Section
North Carolina Department of Environment and Natural Resources
Raleigh Regional Office
3800 Barrett Drive, Suite 101
Raleigh, NC 27609

Subject: Progress Energy Carolinas, Inc.
Erosion Control Plan for Landscaping Near Harris Plant

Dear Mr. Holley:

Progress Energy Carolinas, Inc. (PEC) is submitting the enclosed erosion control plan for land disturbing near the Harris Plant in southwestern Wake County.

PEC proposes to "stump" and minimally grade areas adjacent to existing roadways near the plant entrance. The grading will be done only to facilitate routine mowing of the cleared areas. Minor drainage work on a portion of the roadway will be included. The proposed work is similar to, but separate from, work previously undertaken at the Harris Plant related to tree cutting adjacent to distribution line rights-of-way. That earlier work has been completed and stabilized.

If you have any questions, please contact Mr. Bob Wilson at (919) 362-2444 or Mr. Buzz Bryson in our Environmental Services Section at (919) 546-6637 or by e-mail at buzz.bryson@pgnmail.com.

Sincerely,

Eric McCartney
Plant General Manager
Harris Nuclear Plant

EM/mgw

Enclosure

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P O Box 165
New Hill, NC 27562

Land Quality Section
SERIAL: HNP-05-095

bc: Mr. W. T. Bryson
Mr. L. F. Garner
Mr. R. T. Wilson
Nuclear Records
Licensing File H-X-230

FINANCIAL RESPONSIBILITY /OWNERSHIP FORM
SEDIMENTATION POLLUTION CONTROL ACT

No person may initiate a land-disturbing activity on one or more acres as covered by the Act before this form and an acceptable erosion and sedimentation control plan have been completed and approved by the Land Quality Section, NC Department of Environment, and Natural Resources. (Please type or print and, if question is not applicable, place N/ A in the blank).

Part A.

1. Project Name Electrical Distribution Right of Way Clearing – Phase 2
2. Location of land-disturbing activity: County Wake
   City or Township Buckhorn, and Highway/Street SR 1134 Shearon Harris Road
3. Approximate date land-disturbing activity will be commenced: September, 2005
4. Purpose of development (residential, commercial, industrial, etc.): Utility ROW Clearing
5. Total acreage disturbed or uncovered (including off-site borrow and waste areas): 11.0 acres
6. Amount of fee enclosed $ 550
7. Has an erosion and sedimentation control plan been filed? Yes XX No _____
   Enclosed XX
8. Person to contact should sediment control issues arise during land-disturbing activity.
   Name Larry Garner Telephone 919-362-2255
9. Landowner(s) of Record (Use blank page to list additional owners):

Progress Energy Name(s)	
P.O. Box 1551 Current Mailing Address	 Current Street Address
Raleigh N.C. 27602 City State Zip	 City State Zip

10. Recorded in Deed Book No. 3067 Page No. 177

Part B.

Person(s) or firm(s) who are financially responsible for this land-disturbing activity (Use a blank page to list additional persons or firms):

Same Name of Person(s) or Firm(s)	
 Current Mailing Address	 Current Street Address
 City State Zip	 City State Zip
Telephone	Telephone

2. (a) If the Financially Responsible Party is not a resident of North Carolina give name and street address of a North Carolina Agent.

Name

Mailing Address

City State Zip

Telephone

Street Address

City State Zip

Telephone

(b) If the Financially Responsible Party is a Partnership or other person engaging in business under an assumed name, attach a copy of the certificate of assumed name. If the Financially Responsible Party is a Corporation give name and street address of the Registered Agent.

Name of Registered Agent

Mailing Address

City State Zip

Telephone

Street Address

City State Zip

Telephone

The above information is true and correct to the best of my knowledge and belief and was provided by me under oath. (This form must be signed by the financially responsible person if an individual or his attorney-in-fact or if not an individual by an officer, director, partner, or registered agent with authority to execute instruments for the financially responsible person). I agree to provide corrected information should there be any change in the information provided herein.

Eric McCartney
Type or print name

Plant General Manager – Harris Nuclear Plant
Title or Authority

Signature

8/14/05
Date

I, Darlene S. Yarborough, a Notary Public of the County of Harnett State of North Carolina, hereby certify that Eric McCartney appeared personally before me this day and being duly sworn acknowledged that the above form was executed by him.

Witness my hand and notarial seal, this 14 day of Aug., 2005

DARLENE S. YARBOROUGH NOTARY *** PUBLIC HARNETT COUNTY, NC

Seal

Darlene S. Yarborough
Notary

My commission expires 2-21-2010

GEORGE FINCH/BONEY & ASSOCIATES, P.A.
309 N. BOYLAN AVE.
RALEIGH, NC 27603

WACHOVIA BANK
OF NORTH CAROLINA, N.A.
RALEIGH, NC
66-763/0531

8111

6/30/2005

PAY TO THE ORDER OF NC DENR

$ **550.00

Five Hundred Fifty and 00/100********** DOLLARS

MEMO Erosion Control Review/04056.01

[redacted]

GEORGE FINCH/BONEY & ASSOCIATES, P.A.

8111

NC DENR

6/30/2005

540

550.00

WACH-CHK	Erosion Control Review/04056.01	550.00

ELECTRICAL DISTRIBUTION RIGHT OF WAY CLEARING – PHASE 2

PROGRESS ENERGY – SHEARON HARRIS NUCLEAR POWER PLANT

SEDIMENTATION AND EROSION CONTROL PLAN

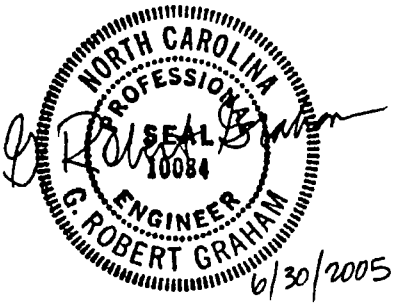
NARRATIVE - The purpose of the project is to clear rights of way for electrical distribution lines serving the Shearon Harris Nuclear Power Plant. The site is located in the southwest corner of Wake County in the Thomas Creek drainage area of the Cape Fear River basin.

The erosion control measures are designed to minimize erosion during clearing, to minimize off-site sedimentation and to provide stabilization of the disturbed areas after tree removal.

The soils on the site are typical piedmont sandy clays. The rights of way include several ditches which will be reconstructed with flatter side slopes and reinforced with turf reinforcement matting.

Where the power line alignment crosses creeks, we have called for silt fence to prevent off site sedimentation. Rock check dams are also used in some areas.

The work is to begin as soon as all permits are acquired and be completed in 4 months. The seeding will be completed within 30 days of completion of work in a given area.



CALCULATIONS

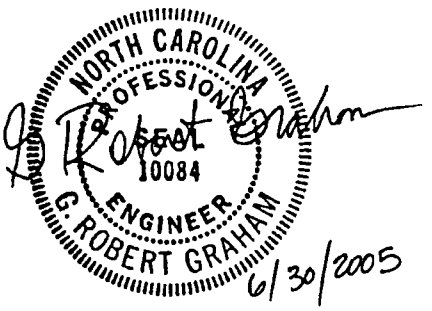
FLOW, VELOCITY AND SHEAR STRESS IN DITCHES

ELECTRICAL DISTRIBUTION RIGHT OF WAY CLEARING – PHASE 2

PROGRESS ENERGY - HARRIS NUCLEAR PLANT

NEW HILL, NC

The following calculations were prepared based on the worst case ditch slope and a maximum flow of 3.0 cfs using the software of the North American Green Company. Based on the results of these calculations, we have specified a turf reinforcement mat in all regarded ditches.



****

NORTH AMERICAN GREEN EROSION CONTROL MATERIALS DESIGN SOFTWARE VERSION 4.3
NORTH AMERICAN GREEN CHANNEL PROTECTION - ENGLISH/S.I.
USER SPECIFIED CHANNEL LINING BACK-UP COMPUTATIONS
****

PROJECT NAME: Progress Energy PROJECT NO.: 04056.02
COMPUTED BY: Daniel Woods DATE: 6/13/2005
FROM STATION/REACH: TO STATION/REACH:
DRAINAGE AREA: DESIGN FREQUENCY:

****
INPUT PARAMETERS
****

Channel Discharge : 3.0 cfs (.08 m^3/s)
Peak Flow Period : 1 hours
Channel Slope : 0.035 ft/ft (0.035 m/m)
Channel Bottom Width : .0 ft (.00 m)
Left Side Slope : 4:1
Right Side Slope : 4:1

Channel Lining : SC250 Staple E Bunch 50-75%
Permi. Shear(Tp) :7.00 psf (335.2 Pa)
Phase = 2
Class = D Vegetation
Soil = Loam
Allowable Soil Shear(Ta):2.5 psf (119.7 Pa)

****
CALCULATIONS
****

Initial Depth Estimate = 0.16 * (3.0 /(0.035^0.5))^0.375 = 0.45 ft (.14 m)
Final Channel Depth (after 7 iterations) = .47 ft (0.14 m)
Flow Area = (0.0 * 0.5)+(0.5 *0.47^2 * (4.0+4.0)) = 0.9 sq.ft (0.1 m^2)
Wet Per. =0.0 +(0.5*(((4.0^2)+1)^.5 +((4.0^2)+1)^.5)) = 3.8 ft (1.2 m)
Hydraulic Radius = (0.9 / 3.8) = 0.2 ft (0.1 m)
Channel Velocity =(1.486/0.030)*(0.2^0.667)*(0.035^.5) = 3.4 fps (1.0 m/s)

Channel Effective Manning's Roughness = 0.030
Calculated Shear (Td) = 62.4 * 0.47 * 0.035 = 1.02 psf (48.8 Pa)
Safety Factor = (Tp/Td) = (7.00 /1.02) = 6.87

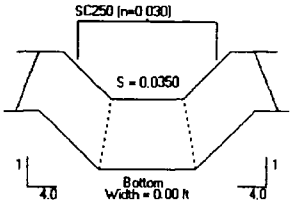
Effective Stress on Blanket(Te) = 1.0*(1-0.40)*(/0.030)^2 = 1.09 psf (52.0 Pa)

Safety Factor = (Ta/Te) = (2.50 /1.087) = 2.30
"

North American Green - ECMDS Version 4.3 6/13/2006 09:06 AM

HYDRAULIC RESULTS

Discharge (cfs)	Peak Flow Period (hrs)	Velocity (fps)	Area (sq.ft)	Hydraulic Radius(ft)	Normal Depth (ft)
3.0	1.0	3.44	0.87	0.23	0.47



Not to Scale

LINER RESULTS

Reach	Matting Type	Stability Analysis	Vegetation Characteristics				Permissible Shear Stress (psf)	Calculated Shear Stress (psf)	Safety Factor	Remarks
	Staple Pattern		Phase	Class	Type	Density				
Straight	SC250	Vegetation	2	D	Bunch	50-75%	7.00	1.02	6.87	STABLE
	Staple E	Soil	Loam				2.500	1.087	2.30	STABLE

Back to Input Screen

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 28

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

February 16, 2006

Dave Corlett
Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P.O. Box 165
New Hill, NC 27562

Re: Shearon Harris Nuclear Power Plant, Wake and Chatham County, NC

Dear Dave Corlett:

Thank you for your letter, dated November 16, 2005, requesting comments from the U.S. Fish and Wildlife Service on the subject project. Our comments are submitted pursuant to, and in accordance with, provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act).

Based on the information provided and other information available, it appears that the proposed project is not likely to adversely affect any federally-listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing under the Act. We believe that the requirements of section 7(a)(2) of the Act have been satisfied. Please remember that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

Thank you for your cooperation with our agency in protecting federally-listed species. If you have any questions or comments, please contact Mr. David Rabon at (919) 856-4520, extension 16, or via email at david_rabon@fws.gov.

Sincerely,

Pete Benjamin
Ecological Services Supervisor

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 1
Item 29

Document title

Real Estate Department Property Environmental Due Diligence

Document number

EVC-REDX-00009

Applies to: Real Estate Department – Carolinas and Florida

Keywords: environmental; real estate – environmental; property management

1.0 PURPOSE

This document outlines the Real Estate Department's (RE) policies designed specifically to mitigate the environmental risk associated with the acquisition and disposition of land and buildings.

2.0 SCOPE

RE acquires and disposes of land and buildings for Progress Energy (PE). The Land Acquisition/Disposition Unit is responsible for acquiring and disposing of land and buildings and is responsible for achieving environmental compliance and stewardship with all activities it manages. This unit occasionally issues contracts to consultants or engineering firms for detailed property assessments. The RE Land Acquisition/Disposition Specialist will also be the Designated Representative (DR) for each contract and is accountable for proper selection, monitoring, approvals and performance of the contractor to RE and PE environmental standards.

3.0 RISK MANAGEMENT

In addition to utilizing the approval, assessment, and environmental review policies in the RE Environmental Management System (EVC-REDX-00002), RE mitigates the risk of selecting property that cannot be utilized for it's intended use or has excessive contamination liability and mitigates this risk by:

- Utilizing three comprehensive Due Diligence Checklists or forms.
    1. Property Risk Assessment Checklist (FRM-REDX-00074)
    2. Waiver of Third Party Assessment Form, if applicable, and for dispositions only.
- Facilitating client and stakeholder reviews.
- Requiring Department Vice President environmental reviews and approvals for land acquisitions and dispositions.

4.0 DEFINITIONS

4.1 Due Diligence

The phase in the acquisition/disposition process where the buyer/seller is allowed to evaluate the condition of a property to assess the value and potential risks.

4.2 ESS

Environmental Services Section

4.3 Land Acquisition and Land Disposition Due Diligence Teams

A team assembled to conduct an environmental review of a specific proposed land acquisition or disposition. The team will be lead by the RE Land Acquisition/Disposition Specialist. It will be the responsibility of the team lead to schedule meetings and/or reviews and communicate progress to the rest of the team.

The team will also include the RE Environmental Coordinator, Client Environmental Coordinator, and ESS Environmental Specialist.

5.0 ROLES AND RESPONSIBILITIES

5.1 Land Acquisition Due Diligence Team

- Provide independent review and input into the data gathering process.
- Ensure that all environmental laws, regulations, and restrictions associated with the property are known and documented.
- Review and approve conclusions regarding environmental restrictions, any requirements including permit modifications or transfers, suitability for intended use, and appropriateness of environmental risk associated with ownership of the property.
- Ensure that a site visit is conducted by the RE Environmental Coordinator or an ESS Environmental Specialist for all land purchases.
- Contract with an outside consultant or engineering firm for an environmental site assessment that is in accordance with, at the very minimum, the most current ASTM standard for all land purchases (See Appendix A for an overview of site assessments). Additional assessment may be warranted depending on results.
- The Land Acquisition Due Diligence Team shall use the following checklists prior to purchase:
    - Property Risk Assessment Checklist (FRM-REDX-00074)

Land Disposition Due Diligence Team

- Provide independent review and input into the data gathering process.
- Ensure that all environmental laws, regulations, and restrictions associated with the property are known and documented.
- Ensure that a thorough file review and site visit is conducted by the RE Environmental Coordinator or an ESS Environmental Specialist for all land sales. This will be done to determine if it is warranted to contract with an outside consultant or engineering firm for additional assessment activities.
- Review and approve conclusions regarding environmental restrictions, any requirements including permit modifications or transfers and appropriateness of environmental risk associated with transferring ownership of the property.

- The Land Disposition Due Diligence Team shall use the following checklists or forms prior to purchase:
  - Property Risk Assessment Checklist (FRM-REDX-00074)
  - Waiver of Third Party Assessment Form if applicable

5.2 Department Vice President

- Review and approve conclusions regarding environmental restrictions and requirements. All completed due diligence checklists and forms will be provided to the Department Vice President for review.
- Review and approve environmental permit modifications or transfers associated with the property, if applicable.
- Review and approve conclusions regarding environmental restrictions, requirements, suitability for intended use for land purchases, and appropriateness of environmental risk associated with ownership of the property.
- Approve all land purchases and land sales.

5.3 RE Land Acquisition/Disposition Specialist and Designated Representative (DR)

- Ensures that the steps listed in this policy are followed.
- Responsible for assembling the appropriate team, scheduling meetings and/or reviews to communicate progress to the rest of the team, and gaining appropriate approvals before proceeding with property transactions.
- Knowledgeable on scope of work and be familiar with related environmental laws and regulations. May consult RE Environmental Coordinator for assistance.
- The key control point for vendor management and will be held accountable for vendor environmental performance.
- Must be a PE employee and not a contractor.
- Selects vendors per the RE Vendor Management Policy.
- Communicate environmental expectations to the vendor.
- Monitor vendor performance in accordance with standing policies and/or procedures.
- Provide written approvals and certifications as required by policy.
- Proactively assess vendor compliance with policies, procedures, regulations and laws.
- Attend the Contract Administration course (MD-102).
- Use standard PE contract language applicable to environmental compliance and indemnities in vendor contracts.
- Maintain required documentation as defined by the EMS program and related policies and procedures and documentation needed to support contract enforcement.

5.4 Consultants, Contractors, Sub-contractors

- Provide personnel that have been trained in accordance with current industry practices to perform the required work activities.
- Comply with local, state and federal environmental laws and regulations.
- Conduct all work activities in accordance with RE's Environmental Policy Statement.
- Ensure that sub-contractors conduct all work activities in accordance with the RE Environmental Policy Statement.
- Conduct all work activities in a manner that will prevent any negative impact to environment.
- Ensure proper management of all wastes and pollutants.
- Submit incident, near miss, unusual occurrence and other lessons learned information to the DR.
- Maintain required documentation as defined by the EMS program and related policies and procedures.

5.5 RE Environmental Coordinator

- Engaged in the environmental due diligence process.
- Provide environmental compliance and analysis support for the corporate buildings and land.
- Facilitate communication with Client Environmental Coordinators on environmental matters, and ensure appropriate services are provided by RE employees and vendors.
- Responsible for new building environmental compliance after the transition from RE.
- Responsible for achieving environmental compliance and stewardship with all activities

5.6 Client Environmental Coordinator

- Engaged in the environmental due diligence.
- Responsible for new building environmental compliance after the transition from RE.
- Approve all environmental due diligence analysis and ensure that property is suitable for its intended use.

5.7 ESS

- Engaged in the environmental due diligence and permitting modification and/or transfer process.
- ESS conducts review of available records and notes any known environmental compliance or contamination issues with land.

- ESS provides technical assistance with environmental policies, procedures, and laws.

6.0 DUE DILIGENCE AND ENVIRONMENTAL REVIEW PROCESS

6.1 Upon receiving approval to proceed with a land purchase or sale the appropriate team will be assembled by the RE Land Acquisition/Disposition Specialist: either the Land Acquisition Due Diligence Team or Land Disposition Due Diligence team.

6.2 All purchase contracts will allow for at least a 90 day due diligence period, or as much as reasonably allowed under the contract. In rare instances where less than 90 days is allowed, this process may be expedited. However, under no circumstances should the transaction proceed until the Land Acquisition Due Diligence has agreed that all necessary due diligence has been conducted. All land sales will allow for at least a 90 day due diligence period prior to marketing property for sale.

6.3 The following steps must be taken by the **Land Acquisition Due Diligence Team** prior to the purchase of any land:

1. The RE Land Acquisition/Disposition Specialist will identify the proposed land to be purchased and receive approval to move forward by receiving the appropriate signatures.
2. The RE Land Acquisition/Disposition Specialist will conduct a file review and provide all known information by completing the Property Risk Assessment Checklist (FRM-REDX-00074).
3. The Land Acquisition Due Diligence Team will review details of property and intended use. At this time, the RE Land Acquisition/Disposition Specialist will provide the RE Environmental Coordinator with all available information and forms completed. The RE Environmental Coordinator will work with the ESS Environmental Specialist to conduct a site visit to identify any concerns or issues including permitting requirements. During this initial review, the Client Environmental Coordinator will provide input on suitability of land for intended use and any known environmental concerns with the proposed purchase.
4. Once a site visit has been performed, The Land Acquisition Due Diligence Team will review site visit findings. Potential concerns should be identified and a scope of work for the assessment should be documented and sent to an approved vendor by the RE Land Acquisition/Disposition Specialist
5. The RE Land Acquisition/Disposition Specialist will obtain a proposal from approved environmental vendor. Once obtained, the bid will be reviewed by RE Environmental Coordinator or ESS Environmental Specialist.
6. RE Land Acquisition/Disposition Specialist, along with the RE Environmental Coordinator, will review the assessment scope of work with vendor prior to their mobilization.
7. The Land Acquisition Due Diligence Team will review the environmental assessment report findings prepared. At this time, it may be determined that additional assessment or studies are warranted. In this case, additional assessment activities should be contracted with the appropriate vendor, following the above review process.

8. Once all appropriate assessment activities have been completed, the Land Acquisition Due Diligence Team will determine if the purchase should proceed under the existing contract, or suggest any recommended environmental language be included in an amended contract if agreeable by seller and subject to review by the legal department. Environmental approvals are needed from all team members before proceeding with Department VP approval. Additionally, all supporting environmental documents will be provided to the Department VP for review, prior to final approval as outlined in Section 6.6 of this policy.

This process is also illustrated on the flowchart included in this policy.

6.4 The following steps must be taken by the **Land Disposition Due Diligence Team** prior to the sale of any land:

1. The RE Land Acquisition/Disposition Specialist will identify the proposed land to be sold and receive approval to move forward by receiving the appropriate signatures.
2. The RE Land Acquisition/Disposition Specialist will conduct a file review and provide all known information by completing the Property Risk Assessment Checklist (FRM-REDX-00074).
3. The Land Disposition Due Diligence Team will review details of property. At this time, the RE Land Acquisition/Disposition Specialist will provide the RE Environmental Coordinator with all available information and forms completed. The RE Environmental Coordinator will work with the ESS Environmental Specialist to conduct a thorough environmental file review and site visit to identify any concerns or issues including permitting requirements or and transfers. During this initial review, the Client Environmental Coordinator will provide input on any known environmental concerns with the proposed sale.
4. Once a site visit has been performed, The Land Acquisition Due Diligence Team will review site visit findings. Potential concerns should be identified and, if necessary, a scope of work for the additional assessment should be documented and sent to an approved vendor by the RE Land Acquisition/Disposition Specialist. If no recognized environmental concerns are noted with the property, approval will be granted by team to proceed with sale. A Waiver of Third Party Assessment Form will be executed, if applicable.
5. If additional assessment is warranted, the RE Land Acquisition/Disposition Specialist will determine if proceeding with the sale at this time is appropriate. If so, the RE Land Acquisition/Disposition Specialist will obtain a proposal from an approved environmental vendor to conduct additional assessment activities. Once obtained, the bid will be reviewed by RE Environmental Coordinator or ESS Environmental Specialist. The RE Land Acquisition/Disposition Specialist, along with the RE Environmental Coordinator, will review the assessment scope of work with vendor prior to their mobilization.
6. After the additional assessment is conducted, the Land Acquisition Due Diligence Team will review report findings. At this time, it may be determined that even more assessment or studies are warranted and should be contracted with the appropriate vendor, following the above review process.
7. Once all appropriate assessment activities have been completed, the Land Disposition Due Diligence Team will determine if the sale should proceed and suggest any recommended environmental language be included in the contract, subject to review by the legal department. Environmental approvals are needed from all team members before proceeding with Department VP approval. Additionally, all supporting environmental documents will be provided to the Department VP for review, prior to final approval as outlined in Section 6.6 of this policy.

This process is also illustrated on the flowchart included in this policy.

6.5 The teams may call for additional information or assessments as needed.

6.6 The RE Land Acquisition/Disposition Specialist will assemble a final approval package of documentation for the final team review and for the Department Vice President's final review. This includes the following documentation, as applicable:

- Property Risk Assessment Checklist (FRM-REDX-00074)
- Waiver of Third Party Assessment Form (if applicable and for land dispositions only)
- Phase 1 ESA (as per Appendix A)
- Phase 2 ESA (as per Appendix A)
- Phase 3 ESA (as per Appendix A)
- Any other environmental information pertinent to the subject property
- RE Approval Form

6.7 The final approval package will be maintained by the Real Estate Document Center for the life of the corporation.

6.8 All information in the final approval package and any new information will be reviewed with appropriate client representatives prior to the transition of environmental responsibilities.

7.0 INTERNAL PROJECT TRANSFER

During transitions of environmental responsibilities between individuals or units within RE, the next level up of management in the original unit will carry the responsibility for a minimum of 30 days to ensure proper transfer and communication.

APPENDIX A

Overview of Environmental Site Assessments

Environmental Site Assessments (ESAs) are conducted to evaluate the potential presence of contamination from current or historical use, or from surrounding properties that could adversely impact the subject property. Additional surveys such as wetland delineations and lead based paint and/or asbestos surveys may also be warranted.

There are four (4) types of environmental assessments:

1.0 Internal ESA (necessary for all property acquisitions and dispositions)

This assessment will be performed by the RE Environmental Coordinator or an ESS Environmental Specialist and will include a site visit documenting site conditions and conducting limited research on the subject property and adjacent properties. A written summary serves as the formal report.

2.0 Phase 1 ESA (necessary for all property acquisitions)

Performed in accordance with the most current ASTM standard, the Phase 1 ESA includes (at a minimum):

- A physical survey of the property and surrounding properties to assess general land use and occupants of the area.
- An on-site visual inspection of the site to identify recognized environmental concerns.
- A review of data regarding the local geology and hydrology.
- An assessment of current and past uses and practices of the property with particular attention given to assessing if any hazardous material or waste practices have occurred at the site.
- As assessment of the historic land use and development of the property through an interpretation of fire insurance maps, city directories, and/or aerial photographs of the site and interviews with persons knowledgeable of the site history.
- A review of owner/operator records.
- A review of local, state, and federal regulatory agency records maintained for the site.
- A written report of all findings including recommendations and conclusions.

3.0 Phase 2 ESA

The Phase 2 ESA will be recommended in the Phase 1 ESA based on the assessment findings, if necessary. This method provides a more comprehensive and detailed review of the subject property to further evaluate suspected environmental impairments and the extent of surface and subsurface contamination. A Phase 2 ESA qualitatively confirms environmental impairments and resulting liabilities, and yields basic projections of remediation costs. This information may be used in negotiating the terms and conditions in a particular property transaction.

4.0 Phase 3 ESA

A Phase 3 ESA will be called for when contamination is identified in a Phase 2 ESA. Documents from the Phase 1 and Phase 2 ESA reports will be reviewed to determine the hydrology and geology of the subsurface soil. The spread of contamination to other areas will be measured and the extent of groundwater contamination will be determined through established sampling methods. If further action is needed, site remediation efforts will be performed in accordance with applicable local, state and federal regulations.

Response to RAI No. 1
Item 30

Document title

Archaeological and Cultural Resources

Document number

EVC-SUBS-00105

Applies to: Progress Energy Carolinas, Inc.; Progress Energy Florida, Inc.; Progress Energy Service Company, LLC; Progress Telecom, LLC

Keywords: environmental; environmental compliance manual – common

TABLE OF CONTENTS

1.0 BACKGROUND

- The legal power to protect historic buildings, structures, sites, and districts rests primarily with local governments. The State Historic Preservation Office (SHPO) helps federal and state agencies and applicants:
  - ✓ Identify historic properties listed in, or eligible for, the National Register;
  - ✓ Evaluate the impacts of the proposed projects on them; and
  - ✓ Avoid or minimize negative impacts.
- The following guidelines are designed to protect the environment, historical sites, historical landmarks, and artifacts or archaeological sites during land-disturbing activities performed, assisted, permitted, or licensed by a federal agency; as well as applicable state funded, permitted, or assisted projects.
- These activities include, but are not limited to:
  - ✓ The construction or expansion of:
    - Buildings
    - Facilities
    - Substations
    - Power plants
    - Parking lots
    - Roads
    - Overhead or underground utility lines (electric, gas, etc.)
  - ✓ Clearing Rights-of-Way

- Archaeological or cultural resources include:
  - ✓ Cemeteries, burial sites, funereal monuments, or other sites with human remains;
  - ✓ Historic buildings, structures, or building remains;
  - ✓ Ancient sites containing cultural artifacts such as:
    - Pottery,
    - Tools, weaponry, and other implements,
    - Ritual artifacts, and
    - Discarded materials (i.e. Indian mounds with shells and animal bones);
  - ✓ Sites of historical significance to the community, state, or nation, such as battlegrounds, encampments, villages, etc.; and
  - ✓ Traditional cultural properties.
- A cultural resource assessment (CRA) will be required if the project or work activity is expected to impact cultural (e.g. archaeological, historical, or architectural) resources listed, or eligible for listing, on the "Natural Register of Historical Places" (NRHP).
- If a project or work activity inadvertently uncovers a grave, archaeological site, or other historical artifacts, all activities in the site area should be halted.
  - ✓ The group performing the land-disturbing activities should contact the appropriate environmental department; the Environmental Services Section (ESS) assists with energy supply projects and Environmental Health and Safety (EHS) works with delivery and service company projects.
  - ✓ A cultural resource assessment will be performed, and ESS/EHS will consult with the State Historic Preservation Office, as necessary, to determine the appropriate steps to be taken prior to resuming site activities.
- If land-disturbing activities are restricted to areas of the site previously disturbed during construction, a cultural resource assessment is not required.

2.0 PROGRAM REQUIREMENTS

2.1 COMPANY

- Employees and contractors have the responsibility to determine whether land-disturbing activities will impact archaeological and/or cultural resources.

- Employees and contractors should contact their Environmental Coordinator/Specialist, ESS and/or EHS during the planning process of land-disturbing activities which have the potential to impact cultural or archaeological resources.

  ✓ ESS and/or EHS permitting specialists will consult with the appropriate State Historic Preservation Office (SHPO), as necessary, to determine appropriate actions to take.

  ✓ Any land-disturbing activities that impact cultural resources require a cultural resource assessment.

- Land-disturbing activities in areas of known cultural or archaeological resources should be avoided if possible and minimized at all times.

- Employees and contractors should contact ESS or EHS if archaeological or cultural resources are inadvertently encountered during land-disturbing activities.

  ✓ All work should be halted while ESS and/or EHS permitting specialists consult with the appropriate State Historic Preservation Office to determine appropriate actions to take.

2.2 FEDERAL

- Section 106 of the National Historic Preservation Act of 1966 requires that historic properties are considered when federal agencies are involved in any aspect of permitting an activity. Federal agencies will consult with the SHPO and/or Tribal Preservation Office and give the Advisory Council on Historic Preservation and the public an opportunity to comment before projects are implemented.

2.3 FLORIDA

- The Florida Historical Resources Act (Chapter 267, Florida Statutes (F.S.)) requires that the Florida Division of Historical Resources provide environmental review of State and federal actions affecting historic and archaeological properties in Florida.

- Other State legislation addressing the preservation of the state's historical resources includes:

  ✓ The Emergency Archaeological Properties Acquisition Act of 1988 (Chapter 253.027, F.S.);

  ✓ Offenses Concerning Dead Bodies and Graves (Chapter 872, F.S.).

2.4 GEORGIA

- The Official Code of Georgia Annotated (OCGA) 12-3-620 to 622 requires that the Georgia Historic Preservation Division provide environmental review of State and federal actions affecting historic and archaeological properties in Georgia.

- Other pertinent State legislation includes:

  ✓ Submerged Cultural Resources, OCGA 12-3-80 to 83;

  ✓ Abandoned Cemeteries and Burial Grounds, OCGA 36-72-1 to 16; and

  ✓ Notification of Law Enforcement Agency Upon Disturbance, Destruction, or Debasement of Human Remains, OCGA 31-21-6.

2.5 NORTH CAROLINA

- The Archaeological Resources Protection Act, Chapter 70, Articles 1-3, General Statutes (G.S.) requires that the SHPO, working in conjunction with local historic preservation commissions, provides environmental review of State and federal actions affecting historic and archaeological properties in North Carolina.

- Other pertinent legislation includes:

  ✓ Cemetery protection, G.S. 14, G.S. 65; and

  ✓ Protection and Enhancement of the Historical and Cultural Heritage of North Carolina, Executive Order XVI.

2.6 SOUTH CAROLINA

- Sections of The South Carolina Code of Laws require that the SHPO provides environmental review of State and federal actions affecting historic and archaeological properties in South Carolina.

- Pertinent legislation includes:

  ✓ Title 16, Chapter 17 and Title 27, Chapter 43, pertaining to abandoned cemeteries and burials;

  ✓ Title 54, Chapter 7 Article 5-610 et seq., the South Carolina Underwater Antiquities Act of 1991;

  ✓ Title 48, Chapter 39, The Coastal Zone Management Act of 1976; and

  ✓ The South Carolina Department of Health and Environmental Control's regulations regarding Hazardous Waste Management Facilities, SC Code of Regulations 61-104.

3.0 PERMITS & CERTIFICATIONS

3.1 COMPANY

N/A

3.2 FEDERAL

- The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

- National Register properties are distinguished by having been documented and evaluated according to uniform standards.

3.3 FLORIDA

- Work in culturally important areas requires review by the state historical preservation office. A cultural resources assessment may be required.

- Typically authorization to proceed is granted in the form of a letter from the SHPO.

  ✓ If important sites are present, any restrictions or guidelines on how to proceed would be outlined in the letter.

- Individuals that survey, dig, remove, and/or catalog artifacts are typically required to be licensed, and their activities are regulated.

3.4 GEORGIA

- Work in culturally important areas requires review by the state historical preservation office. A cultural resources assessment may be required.

- Typically authorization to proceed is granted in the form of a letter from the SHPO.

  ✓ If important sites are present, any restrictions or guidelines on how to proceed would be outlined in the letter.

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3.5 NORTH CAROLINA

- Work in culturally important areas requires review by the state historical preservation office. A cultural resources assessment may be required.

- Typically authorization to proceed is granted in the form of a letter from the SHPO.

  ✓ If important sites are present, any restrictions or guidelines on how to proceed would be outlined in the letter.

- Individuals that survey, dig, remove, and/or catalog artifacts are typically required to be licensed, and their activities are regulated.

3.6 SOUTH CAROLINA

- Work in culturally important areas requires review by the state historical preservation office. A cultural resources assessment may be required.

- Typically authorization to proceed is granted in the form of a letter from the SHPO.

  ✓ If important sites are present, any restrictions or guidelines on how to proceed would be outlined in the letter.

- Individuals that survey, dig, remove, and/or catalog artifacts are typically required to follow the South Carolina Standards and Guidelines for Archaeological Investigations, with additional requirements for investigations that fall under the Underwater Antiquities Act.

4.0 TRAINING REQUIREMENTS

4.1 COMPANY

N/A

4.2 FEDERAL

N/A

4.3 FLORIDA

N/A

4.4 GEORGIA

N/A

4.5 NORTH CAROLINA

N/A

4.6 SOUTH CAROLINA

N/A

5.0 RECORD KEEPING REQUIREMENTS

5.1 COMPANY

- Copies of cultural resource assessments shall be kept on file during ownership of the property and made available on request.

5.2 FEDERAL

N/A

5.3 FLORIDA

N/A

5.4 GEORGIA

N/A

5.5 NORTH CAROLINA

N/A

5.6 SOUTH CAROLINA

N/A

6.0 SELF-ASSESSMENTS

N/A

7.0 REFERENCES

7.1 COMPANY

Agency links
EVC-SUBS-00030 Environmental Organizations: Roles and Responsibilities
Form links

7.2 FEDERAL

Legislation: U.S. Code, Title 16, Chapter 1A, Subchapter II, National Historic Preservation (National Historic Preservation Act of 1966)

Regulation: Code of Federal Regulations Title 36 Part 800: Protection of Historic Properties

7.3 FLORIDA

Legislation: Florida Statute Title XVIII, Chapter 267: Historical Resources (Florida Historical Resources Act)
Florida Statute Title XVIII, Chapter 253.027: Emergency Archaeological Properties Acquisition Act of 1988
Florida Statute Title XLVI, Chapter 872: Offenses Concerning Dead Bodies and Graves

7.4 GEORGIA

Legislation: Official Code of Georgia 12-3-80 to 83: Submerged Cultural Resources
Official Code of Georgia 12-3-620 to 622
Official Code of Georgia 31-21-6: Notification of Law Enforcement Agency Upon Disturbance, Destruction, or Debasement of Human Remains
Official Code of Georgia 36-72-1 to 16: Abandoned Cemeteries and Burial Grounds

7.5 NORTH CAROLINA

Legislation:
North Carolina General Statutes Chapter 14, Article 22-147: Removing, altering or defacing landmarks
North Carolina General Statutes Chapter 14, Article 22-148: Defacing or desecrating grave sites
North Carolina General Statutes Chapter 14, Article 22-149: Desecrating, plowing over or covering up graves
North Carolina General Statutes Chapter 65: Cemeteries
North Carolina General Statutes Chapter 70, Article 1: Indian Antiquities
North Carolina General Statutes Chapter 70, Article 2: Archaeological Resources Protection Act
North Carolina General Statutes Chapter 70, Article 3: Unmarked Human Burial and Human Skeletal Remains Protection Act
Protection and Enhancement of the Historical and Cultural Heritage of North Carolina, Executive Order XVI

7.6 SOUTH CAROLINA

Legislation:
South Carolina Code of Laws Title 16 Chapter 17, Article 1-600 et seq.: Destruction or desecration of human remains or repositories
South Carolina Code of Laws Title 27, Chapter 43: Removal of abandoned cemeteries
South Carolina Code of Laws Title 48, Chapter 20-10 et seq.: The South Carolina Mining Act of 1990
South Carolina Code of Laws Title 54, Chapter 7, Article 5-610 et seq.: The South Carolina Underwater Antiquities Act of 1991
South Carolina Code of Laws Title 48, Chapter 39: The Coastal Zone Management Act of 1976
South Carolina Code of Laws Title 60, Chapter 12: Protection Of State Owned Or Leased Historic Properties

Regulation:
South Carolina Code of Regulations 61-104: Hazardous Waste Management Location Standards

Response to RAI No. 1
Item 31

FILE COPY
410-6-J-4

NORTH CAROLINA DEPARTMENT OF CULTURAL RESOURCES

Raleigh,
North Carolina
27611

Division of
Archives and History
Larry E. Tise, Director

Sara W. Hodgkins,
Secretary
James B. Hunt, Jr.,
Governor

December 27, 1979

Mr. W. T. Hogarth, Ph.D.
Manager, Environmental Technology
Carolina Power and Light Company
Shearon Harris Energy & Environmental Center
Route 1, Box 327
New Hill, N.C. 27562

Re: Archaeological Survey, Shearon Harris Makeup Water System, Wake and Chatham Counties

Dear Mr. Hogarth:

We have received the survey report concerning the above project.

As you are aware Mr. Trawick Ward of the University of North Carolina at Chapel Hill has conducted a survey of the proposed project area. During the course of the survey one prehistoric lithic scatter was located within the project area. Due to the disturbed nature of the site and the sparse evidence of prehistoric activity, Mr. Ward has recommended that no further archaeological investigation be conducted in connection with this project. We concur with this recommendation and find that this project will have no effect upon significant archaeological resources.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966, the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at 36 CFR Part 800, and to Executive Order 11593, "Protection and Enhancement of the Cultural Environment."

Thank you for your cooperation and consideration. If you have questions concerning the above comments, please contact Ms. F. Langdon Edmunds, Environmental Review Coordinator, at 919/733-4763.

Sincerely,

Larry E. Tise
State Historic Preservation Officer

LET:slw

410-6-J-4

FILE COPY

NORTH CAROLINA DEPARTMENT OF CULTURAL RESOURCES

Raleigh,
North Carolina
27611

Division of
Archives and History
Larry E. Tise, Director

Sara W. Hodgkins,
Secretary
James B. Hunt, Jr.,
Governor

March 9, 1978

Mr. Ralph L. Sanders, Manager
Environmental Technology
Carolina Power and Light Company
P. O. Box 1551
Raleigh, N.C. 27602

Re: Shearon Harris Nuclear Plant
Wake and Chatham Counties; Inquiry

Dear Mr. Sanders:

We have reviewed the survey report concerning the Shearon Harris Nuclear Power Plant Cooling Lake Reservoir in Wake and Chatham counties, and have the following comments:

As you are aware, an archeological reconnaissance survey was conducted by Mr. Trawick Ward under the direction of Dr. Joffre L. Coe of the University of North Carolina at Chapel Hill. During the course of the survey, one historic period site and thirty-six prehistoric period sites were located. None of the sites located, however, are considered to be significant in terms of the criteria for inclusion in the National Register of Historic Places, due to damage and destruction caused by erosional processes. Mr. Ward has recommended that no further archeological investigations be conducted for this portion of the proposed power plant. We concur with his recommendations and find that the Cooling Lake Reservoir will have no adverse effect upon significant archeological resources.

Thank you for your cooperation and consideration. If you have questions concerning these comments, please contact Ms. F. Langdon Edmunds, Environmental Review Coordinator, at 919/733-4763.

Sincerely,

Larry E. Tise
State Historic Preservation Officer

LET:slw

cc: Carolyn Anderson, Scientist, CP&L

Archaeological Survey and Evaluation of the Shearon Harris Nuclear Power Plant Cooling Lake Reservoir

Trawick Ward
Archaeologist

Prepared By
Research Laboratories of Anthropology
The University of North Carolina at Chapel Hill

January 1978

ABSTRACT

An archaeological survey was made of the Shearon Harris cooling lake reservoir site in Chatham and Wake counties. One historic and several prehistoric sites were located within or adjacent to the impoundment area. The vast majority of these were occupied during the Archaic Period, although some evidence of later occupations was also encountered. The sites were small, badly disturbed, and lacked the potential for adding significantly to our knowledge of North Carolina history.

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INTRODUCTION

At the request of the Carolina Power and Light Company, the Research Laboratories of Anthropology at the University of North Carolina, Chapel Hill, conducted an archaeological survey of the proposed Shearon Harris Nuclear Power Plant cooling lake reservoir. The project site is located in eastern Chatham and southwestern Wake counties near the community of Merry Oaks. The main dam is being constructed on Buckhorn Creek less than a mile south of its confluence with White Oak Creek. In addition to these streams, the impoundment will flood land along several tributaries including Tom Jack Creek, Little White Oak Creek, and Thomas Creek. With a surface pool elevation of 220', the lake will innundate some 4,000 acres.

A small arm of the reservoir, just north of the confluence of White Oak and Buckhorn creeks, has been cleared of primary growth, and a few small cultivated fields are scattered about. Otherwise, the area is almost entirely undeveloped with at least 95 percent standing in forest. Where clearing has been completed, a tangle of brush, briers, and grass covers the surface. At the time of the survey (late fall), the few fields lay fallow, thinly covered with the stubble of the summer's harvest. However, stands of mixed hardwoods, interspersed with an occasional pine thicket, dominate the environmental scene.

Moderate to steep bluffs flank both sides of the major streams, being more pronounced along their lower reaches. A well-defined ridge separates Buckhorn and White Oak creeks and enhances the slope of the

bluffs paralleling the east bank of White Oak Creek. The flood plains are generally low and poorly drained, particularly in the area where the two creeks come together.

The proposed reservoir area presents a view typical of the Piedmont environment as encountered along most of the secondary streams. Although direct evidence is lacking, in all probability, it does not differ radically today from the environment exploited by peoples during most of the prehistoric period. A rich variety of wild plant and animal resources could have been exploited, whereas agricultural pursuits would not have proven overly productive. This latter weakness in the environment is evident today by the virtual absence of cultivated land.

METHODOLOGY

The proposed reservoir area can be divided into three distinct environmental strata: 1) the relatively steep bluffs along Buckhorn Creek and the eastern bank of White Oak Creek (Plate I); 2) the more rounded, undulating slopes along the smaller tributaries and the western bank of White Oak Creek (Plate II); and 3) the low, almost swampy, bottoms comprising the flood plains (Plate III). Although these strata were almost completely enshrouded by vegetation, a complex web of logging roads and farm trails allowed access and provided transects with good surface visibility. Also, extensive sheet erosion along the bluffs had sufficiently bared large areas to permit a surface appraisal.

After determining that there were no known historic or prehistoric sites in the impoundment, all roads, trails, erosional features, and any other areas with the slightest amount of surface visibility were investigated on foot. This strategy provided a look at a cross section of the various environmental zones and aided in determining the most likely locations to suspect sites. Based on these results, as well as prior experience in similar environmental settings, it was found that most of the sites were restricted to the relatively flat terraces rimming the more pronounced bluffs (Plate IV). In these areas, if ground cover prevented an adequate surface inspection, large patches were raked clear in an attempt to reveal any concealed artifact clusters.

Thirty-six prehistoric and one historic site were discovered during the course of the survey. Evidence for these sites ranged from a few flakes with indeterminate spacial and temporal parameters to moderate concentrations of artifacts, including diagnostic tools, clustered within fairly tight, well defined areas.

Plate I
Steep Bluffs along Buckhorn Creek

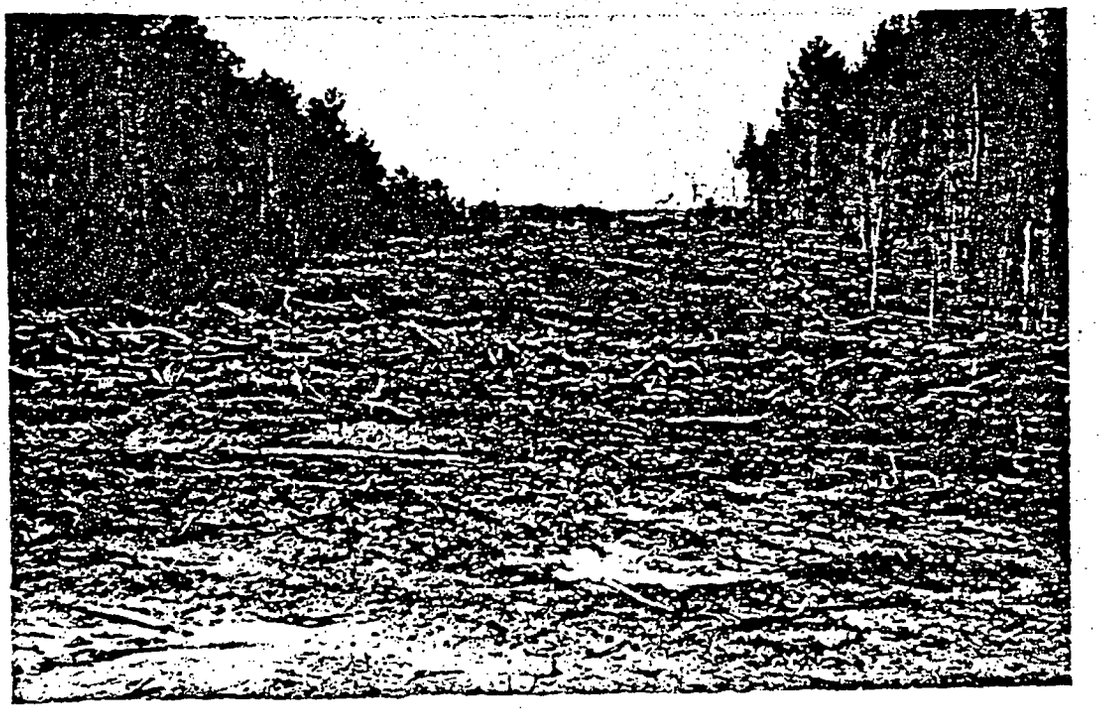


Plate II
Gently Rolling Terrain on West Side of White Oak Creek

Plate III
Swampy Bottomland along White Oak Creek

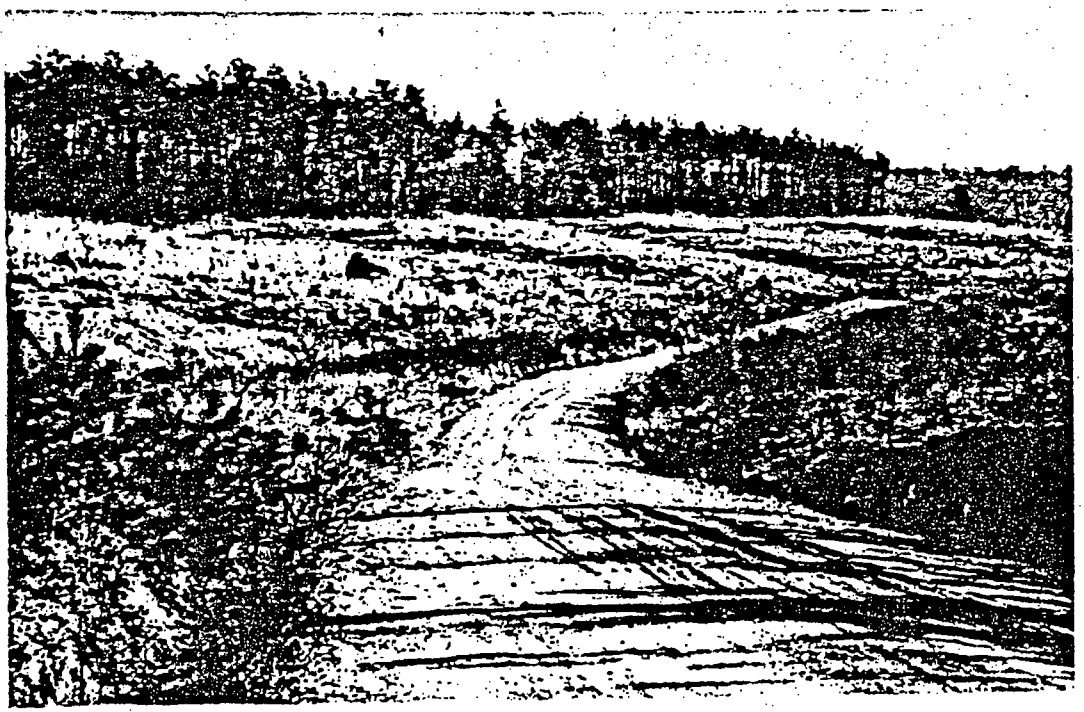


Plate IV
Terraces Rimming Bluffs along White Oak Creek

THE SITES

Ch^{V}333. This site was located on a slight rise west of Buckhorn Creek and north of SR 1915. Because of the removal of primary growth, the site area was covered by a moderately dense tangle of briers and brush. Artifacts were sporadically recovered from an area approximately 75' by 30'. Included in the inventory were one plain and one fabric-impressed, sand tempered sherd, a bifacially worked chopping tool, fifteen slate flakes, and six quartz chips. The sherds probably date to the Early Woodland Period (ca. A.D. 100) although their small size and deteriorated condition prevented a positive identification. The lithic collection did not contain any specimens with age-diagnostic attributes.

Ch^{V}334. Across the creek from Ch^{V}333, on the east side of SR 1915, another small site was located. The ground surface was obscured by briers and tall grass, but twelve slate and five quartz flakes were gleaned from an area approximately thirty feet in diameter. None of the flakes evidenced secondary modification.

Ch^{V}335. This was one of several sites found around the terrace of a bluff flanking White Oak Creek, north of its confluence with Buckhorn Creek. Four sites, Ch^{V}335, Ch^{V}336, Ch^{V}337, and Ch^{V}338, probably represent the same occupation, but since the specimens were found in isolated spots, separate numbers were assigned in order to maintain their spacial integrity. In this area, all the trees had been cut and removed, but surface visibility was generally poor because of secondary vegetation. However, patches bared by erosion were frequently encountered. In one of these a quartz scraper and one flake were found and designated Ch^{V}335.

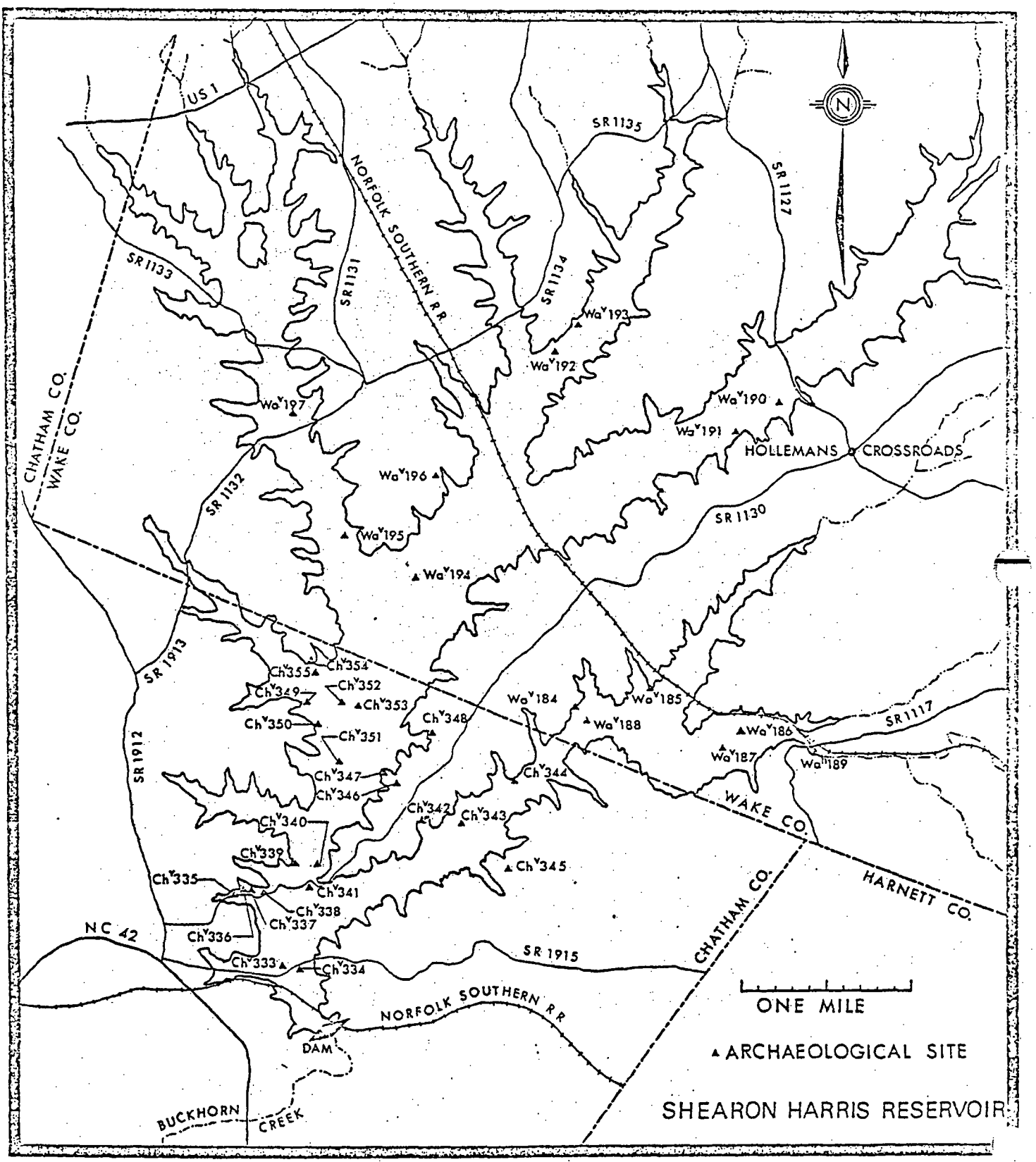


Figure 1
Sites Located in the Survey Area

Ch^{V}336. Three slate flakes and a retouched quartz flake were found in another small cleared area 150' northeast of Ch^{V}335.

Ch^{V}337. An additional five flakes were collected from an eroded patch 200' east of Ch^{V}336. Although there were several bared spots in the vicinity of Ch^{V}337, none contained any evidence of cultural activity.

Ch^{V}338. A fairly large, moderately clear, area approximately 100' by 30' was located 200' east of Ch^{V}337. From here, a quartz Guilford projectile point fragment, one quartz biface, a quartz scraper, one quartz chip and three unmodified slate flakes were retrieved. The projectile point suggests a Middle Archaic (3500 B.C.) date for this site, and given its proximity to Ch^{V}335, Ch^{V}336, and Ch^{V}337, it is not unreasonable to suspect that they, too, resulted from aboriginal activity during this same general time period.

Ch^{V}339. This site was located on a terrace on the east flank of a steep bluff overlooking White Oak Creek some .25 miles northeast of Ch^{V}338. The area here was also covered by secondary growth, but in several places the surface had been scoured by erosion. A Guilford projectile point, an unidentifiable projectile point fragment, one quartz and four slate flakes were collected over an area with a circumference of approximately 350'. Again a Middle Archaic occupation is suggested by the Guilford projectile point.

Ch^{V}340. This site was found on a rise in the flood plain adjacent to White Oak Creek and approximately 650' east of Ch^{V}339. A relatively thin secondary growth of weeds and briers resulted in only moderate surface concealment. One slate biface and fifteen flakes along with three

quartz flakes and one small sherd were found within an area approximately 200' by 200'. The sherd was sand tempered, but surface treatment could not be determined because of its poor state of preservation.

Ch^{V}341. This site was located in an old field south of SR 1914 between White Oak and Buckhorn creeks. One quartz biface, five quartz flakes, and two slate chips were collected from the entire field which was a little less than an acre in extent.

Ch^{V}342. Seven slate and four quartz flakes were found along a logging road off SR 1914, north of Buckhorn Creek. The site was located at the edge of the proposed reservoir on the southern slope of a bluff paralleling the creek. A stand of pine and mixed hardwoods lined the road and created unfavorable collecting conditions. The few specimens that were visible were scattered along the ruts of the road over a distance of about 75'.

Ch^{V}343. This site was discovered in a clearing south of a sawdust pile between SR 1914 and Buckhorn Creek. The artifacts were recovered from an area roughly 100' by 75' along a terrace overlooking the creek. Two Guilford projectile point fragments (Plate V), one side scraper, a re-touched flake, a blade with lateral retouch, all manufactured from slaty material, and ten quartz flakes completed the collection. The Guilford points date the occupation at the site to the Middle Archaic (3500 B.C.) Period.

Ch^{V}344. Another site was discovered in a similar setting northeast of Ch^{V}343. Artifacts were found scattered over a cleared area approximately 100' in diameter immediately east of an old sawdust mound. This site, however, produced only eight slate and five unmodified quartz flakes.

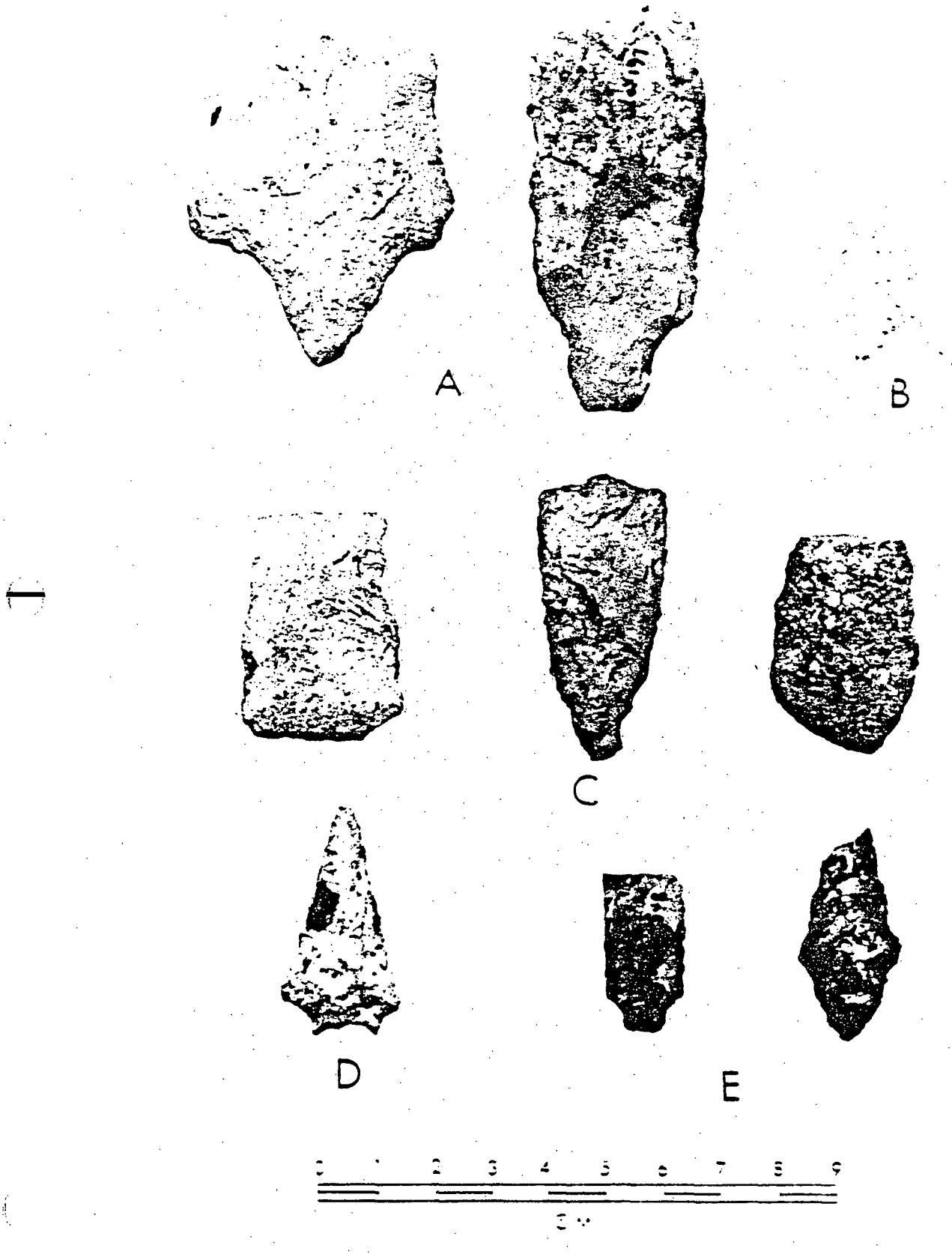


Plate V
Artifacts Collected during the Survey

Ch^{V}345. Four slate and one quartz chips were found in the ruts of a logging road just outside the reservoir limits. The road intersects SR 1915 from the north approximately one quarter of a mile west of the Harnett County line.

Ch^{V}346. This site was also outside the perimeter of the direct impact zone. One unidentifiable projectile point blade fragment, a crude biface, and two unused flakes, all manufactured from slate-like material, were recovered from a clearing adjacent to a logging road that intersects SR 1914 .6 mile southwest of the Wake County line.

Ch^{V}347. A re-touched quartz flake, three unmodified quartz chips, and a slate flake were collected from a small clearing 400' northwest of Ch^{V}346. The material was thinly distributed over an area 75' by 50'. As was the case with Ch^{V}346, this site was also outside the reservoir pool limits.

Ch^{V}348. This site was found at the end of a logging road that intersects SR 1914 .15 mile southwest of the Wake County line. Specimens were widely scattered along the slope of a ravine for a distance of roughly 200'. Because of heavy ground cover, artifacts were found only in the ruts of the logging trail and in a small clearing at the end of trail. Included in the inventory were a Randolph projectile point (Plate V), sixteen quartz and three slate flakes. The Randolph point is an index of the Historic Period (Ca. A.D. 1700).

Ch^{V}349. A small amount of lithic material was found along a terrace west of an unnamed branch of White Oak Creek. Two quartz flakes and four slate chips were restricted to an area roughly 90' in circumference. The site was north of a logging road that intersects

SR 1912 from the west and 600' south of the SR 1912 and SR 1913 intersection. Although the site area had grown up in brush and briers, surface visibility was moderately good because of heavy sheet erosion.

Ch^{V}350. This site was located approximately 300' south of Ch^{V}349 at about the same elevation. A fairly steep ravine separated the two. This was a large site with dimensions measuring some 300' by 100'. Since the ground surface was covered by brush and grass, visibility depended upon the degree of erosion and the thickness of the vegetative growth. In some sections of the site, moderately large expanses were clear, while in others the surface was almost totally ensconced. The collection included a quartz Halifax projectile point (Plate V), four re-touched slate flakes, 33 waste flakes of slaty material, and 34 unmodified quartz flakes. A Middle Archaic date (3000 B.C.) is suggested for the occupation by the presence of the Halifax projectile point.

Ch^{V}351. West of the confluence of White Oak Creek and an unnamed branch, on the toe of a low terrace, a highly dispersed scatter of material was located. Visibility varied considerably over the 300' by 300' site area, and the grass and brush cover was somewhat thicker than that characteristic of the higher slopes. As a consequence, most of the specimens were found along the eroded sides of the terrace. These included a Savannah River projectile point (Plate V), a small end scraper, one crude biface, and thirteen waste flakes, all made from slaty materials. In addition, six quartz chips were also collected. Based on the presence of the Savannah River point, the site dates to the Late Archaic Period (2000 B.C.).

Ch^{V}352. In the southeastern corner of a field on the edge of a bluff directly across an unnamed branch from Ch^{V}349, a relatively large number of artifacts were isolated within an area approximately 200' by 100'. In the field, surface visibility was excellent, but the eastern limits of the site could not be determined accurately because of heavy second growth vegetation. Two Savannah River points, one hammerstone, 25 slate and thirteen quartz flakes were found. Again, a Late Archaic (2000 B.C.) occupation is indicated because of the Savannah River specimens.

Ch^{V}353. Additional specimens were found at the very eastern edge of the bluff some 650' east of Ch^{V}352. Although the material was concentrated in an area approximately 100' by 50', it is likely that this site represents the eastern extremity of Ch^{V}352. The heavy ground cover that obscured the area between the two sites was probably responsible for an arbitrary division. However, severe erosion in the vicinity of Ch^{V}353 provided moderate surface visibility and permitted the discovery of one unifacial scraper, 42 slate and 16 quartz flakes. Although no diagnostic tools were found, the debitage was reminiscent of the Late Archaic and very similar to that from Ch^{V}352.

Ch^{V}354. Two specimens were found on the crest of a bluff in a field west of Ch^{V}352. A Randolph projectile point (A.D. 1700) and one slate flake were all that were recovered although surface visibility was excellent. This site was located just outside the proposed reservoir pool.

Ch^{V}355. This site was located south of Ch^{V}354, within the reservoir. Again surface visibility was good, but only five slate and four quartz chips were recovered from an area approximately 50' by 30'.

Wa^{V}184. One slate scraper and five random slate flakes were recovered from the side of a bluff at the end of a logging road that intersects SR 1130 a half mile northeast of the Wake County line. The specimens were found in the ruts of the road, and because of the dense growth of mixed hardwoods surrounding the road, site dimensions were indeterminant.

Wa^{V}185. This site was located just inside the reservoir pool in a cleared area adjacent to a field road that intersects SR 1130 a quarter mile northeast of the Norfolk Southern Railroad crossing. Surface visibility was fair although the site area, approximately 10,000 square feet, was overgrown with weeds and grass. The artifact inventory included two Guilford projectile points, a preform, a large biface, and 28 unmodified flakes, all manufactured from slaty materials. In addition, a small end scraper and six flakes were produced from quartz. The projectile points date the site to the Middle Archaic Period (3400 B.C.).

Wa^{V}186. This site was located at the east end of a large field in the flood plain of Buckhorn Creek. The ground surface was clear, providing optimum collecting conditions. However, only eight slate and three quartz flakes were gleaned from an area roughly fifty feet in diameter.

Wa^{V}187. This site was located west of Wa^{V}186 in the same field, and it was very similar in terms of size and content. Only one slate flake, a quartz biface fragment, and three quartz chips were recovered. These specimens were sparsely dispersed over an area approximately 40' in diameter.

Wa^{V}188. A small site was found on a prominent rise in the flood plain across Buckhorn Creek from Wa^{V}184. Although the topography defined an ideal location for a substantial Archaic occupation, only a biface, three quartz and four slate flakes were recovered. Surface visibility was excellent, and site dimensions measured 50' by 35'.

Wa^{h}189. A historic site designation was given to the remains of a dam and grist mill complex situated on Buckhorn Creek just off SR 1116. In addition to the dam and mill foundation remains, a race running between the two was also present. The dam was still intact except for a section at the southwestern end that had been perforated to permit the channel to flow freely (Plate VI). The mill house was evidenced by concrete steps, foundation piers, fragments of the mill stone, and a section of concrete facade (Plate VII). The complex appears to date to the early part of this century and was in use until fairly recently. It is located just on the edge of the proposed reservoir pool.

Wa^{V}190. An Early Woodland (500 B.C.) projectile point was found in the west central section of a farily large field off the west side of SR 1127, just south of White Oak Creek (Plate V). Although the ground surface exhibited excellent visibility, no other specimens could be found.

Wa^{V}191. Another site represented by one specimen, a bifacially worked quartz scraper, was located on a natural levee adjacent to the south bank of White Oak Creek in the vicinity of Hollemans Crossroads. Again the surface was clear, but additional specimens were not forthcoming.

Wa^{V}192. Only two artifacts were found at this site located in the southwestern corner of a field between Thomas Creek and Little White Oak Creek. Surface visibility was excellent, but a quartz end scraper and an unmodified slate flake were the only two artifacts recovered after a careful search.

Wa^{V}193. This site was located northeast of Wa^{V}192 in the same field. It, too, produced only two artifacts, another quartz end scraper and a fragment of a bifacially worked quartz tool. But here the only place that it was possible to search for artifacts was in a farm road. The surrounding ground was matted with pasture grass or entangled in briers and brush.

Wa^{V}194. A few pieces of debitage were collected from the ruts of a logging road approximately 1000' northeast of White Oak Creek. The logging road branches off SR 1134 to the south immediately east of the SR 1132 and SR 1134 intersection. The collection included one quartz and five slate flakes.

Wa^{V}195. This site was located on the first terrace on the east side of Tom Jack Creek in the corridor of a natural gas pipeline. The terrace flank was severely eroded providing moderate surface visibility. The collection consisted of twelve unmodified slate flakes and one quartz chip scattered over an area thirty feet in diameter.

Wa^{V}196. This site was located in the north central section of a field that straddles an unnamed branch of White Oak Creek. The field is at the end of a farm road that forks off the logging road leading to Wa^{V}194. A Savannah River projectile point and one flake were all that were present. It was suspected that these eroded from higher elevations

Plate VI
Dam at Wa^{h}189

Plate VII
Remains of the Mill at Wa^{h}189

to the west, but a careful check failed to verify this suspicion. The Savannah River point dates to the Late Archaic Period (2000 B.C.).

Wa^{V}197. In an old field north of SR 1132 and just east of Tom Jack Creek, several artifacts were found widely scattered over an area roughly an acre in extent. The field was overgrown with weeds and a carpet of grass, making conditions less than ideal for surface hunting. Nevertheless, by carefully investigating eroded spots and patches with sparse growth, a Savannah River point, a Guilford preform, and three flakes, all manufactured from slaty material, were retrieved along with two flakes and a Guilford point made of quartz. The co-occurrence of Guilford and Savannah River types suggests a multi-component occupation during the Middle and Late Archaic periods (ca. 3500 - 1500 B.C.).

DISCUSSION

The data collected from the survey conforms generally with the known pattern of occupation and settlement in the North Carolina Piedmont. Most of the sites with temporally diagnostic specimens were occupied during the Archaic Period. Although the majority failed to yield distinctive types, the absence of ceramics, the stone working technology evidenced by the debitage, and the size and overall configuration of these sites also points to an Archaic affiliation.

All of the sites, Woodland as well as Archaic, were apparently occupied for relatively brief intervals. With the exception of the few sites represented by a single specimen, all were probably temporary encampments with some of the larger sites perhaps being inhabited sporadically over an extended time span. This was certainly true for $Wa^{V}197$. The isolated artifacts at $Wa^{V}190$ and $Wa^{V}196$, as well as some of the other sites defined by extremely small numbers of specimens, were results of idiosyncratic or fortuitous behavioral expressions whose explanation can only be imagined.

Although there were considerable differences in site size and some variation in topographic orientation, it is felt that, in many instances, these distinctions are misleading and encourage a false impression of past reality. Differences in erosion, variations in ground cover, plowing history, and a myriad complex of other agents and forces have impacted and interacted with the cultural materials since their deposition. The result of all this has been the creation of considerable non-cultural biases in the extant record. For this reason, only the most general

interpretations can be posited with a reasonable assurance of validity. One thing that does appear certain, however, is that the area was most extensively occupied and utilized by Middle and Late Archaic peoples. From previous experience, we know these migratory bands of hunters and gathers exploited the full range of natural resources available and, in doing so, left a reticular trail throughout North Carolina and the Southeast generally.

TABLE I

	TOPOGRAPHIC ORIENTATION			APPROXIMATE SIZE PER 1000 Ft^2				DIAGNOSTIC SPECIMENS-TEMPORAL RANGE				
Site No.	Terrace	Slope	Flood plain	<1	1-5	5-10	>10	E. Archaic	M. Archaic	L. Archaic	Woodland	None
Ch^V333			X		X						X	
334			X	X								X
335	X			X								X
336	X				X							X
337	X			X								X
338	X				X				X			
339	X					X			X			
340			X				X				X	
341			X				X					X
342		X		X								X
343	X					X			X			
344	X					X						X
345		X		X								X
346	X				X							X
347		X			X							X
348		X			X						X	
349	X			X								X
350	X						X		X			
351	X						X			X		
352	X						X			X		
353	X						X			X		
354		X		X							X	
355		X			X							X
Wa^V184		X		X								X
185	X						X		X			
186			X		X							X
187			X		X							X
188			X		X							X
190			X	X							X	
191			X	X								X
192			X	X								X
19		X		X								

TABLE I (cont'd)

	TOPOGRAPHIC ORIENTATION			APPROXIMATE SIZE PER 1000 Ft^2				DIAGNOSTIC SPECIMENS - TEMPORAL RANGE				
Site No.	Terrace	Slope	Flood plain	<1	1-5	5-10	>10	E. Archaic	M. Archaic	L. Archaic	Woodland	None
Wa^V194	X			X								X
195	X			X								X
196			X	X						X		
197	X						X		X	X		
T: 36	17	8	11	15	10	3	8		6	5	5	21
%	47.2	22.2	30.6	41.7	27.8	8.3	22.2		16.7	13.9	13.9	58.3

RECOMMENDATIONS

The prehistoric sites are represented by thin surface deposits that have been badly disturbed by plowing and erosion. These forces have obliterated whatever contextual relationships that might have been present leaving only a homogeneous mix of specimens. Such data are meaningful only within very general parameters which have been adequately defined by means of the surface survey. The one historic site, the mill complex, is a twentieth century construction that has also been virtually destroyed. The few physical traces that do remain appear to have little historical significance. As a consequence of the absence of sites lacking minimal criteria for nomination to the National Registry, clearance for the project is recommended.

Appendix

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch V 533

Site Name

Photo Nos.

Location Immediately north of SR 1915, roughly 200' west of the Buckhorn Creek crossing

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

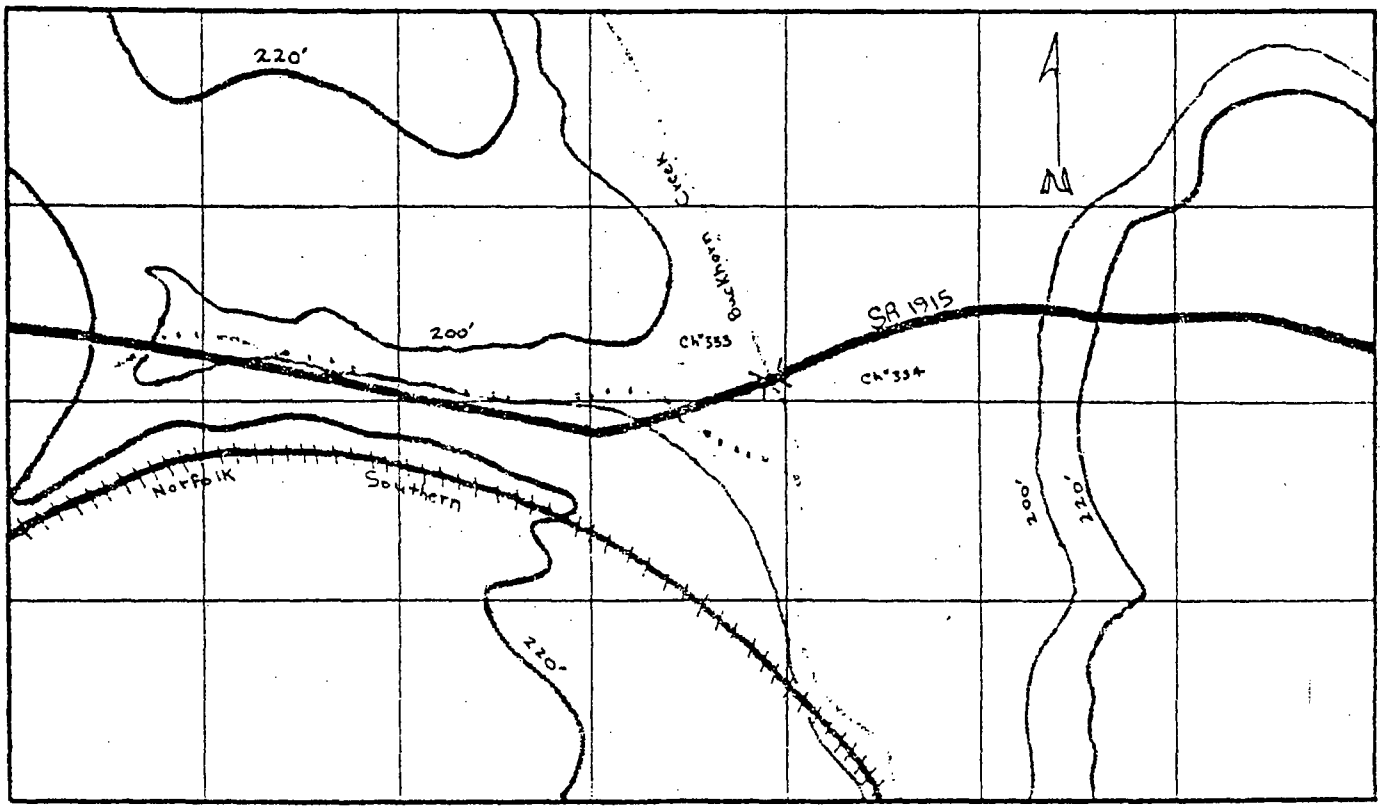
Local history

Plowing history Not plowed within past 10 years Vegetation Briers, scrub

Type of soil loam Erosion slight

Remarks: A moderate amount of material, including two sherds, was collected from an area approximately 75' east-west by 50' north south. The material was concentrated on a small knoll.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^{V}334

Site Name

Photo Nos.

Location South of SR 1915, 150' east of the Buckhorn Creek crossing

Recorded on aI, USGS Cokesbury, N.C.

Owner Address

Local history

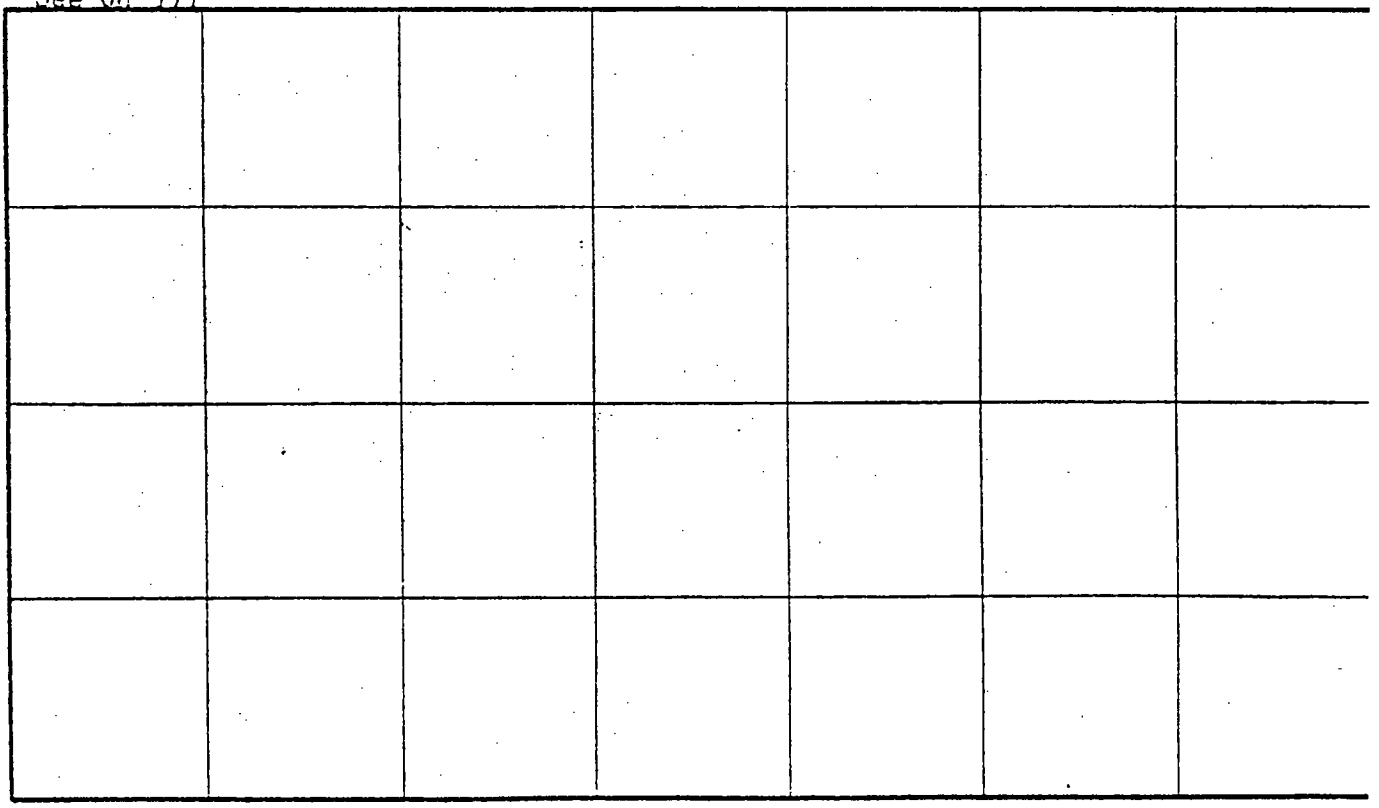
Plowing history Not plowed within the past 10 years Vegetation briers, broomstraw

Type of soil loam Erosion slight

Remarks: A moderate amount of debitage was scattered over an area roughly 30 feet in diameter; however, because of the poor surface visibility, the site is probably larger.

Sketch Map

See Ch^{V}333



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^V335

Site Name

Photo Nos.

Location North of SR 1914, on the south side of a bluff flanking a small unnamed branch of White Oak Creek, .5 mile west of the White Oak Creek crossing

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

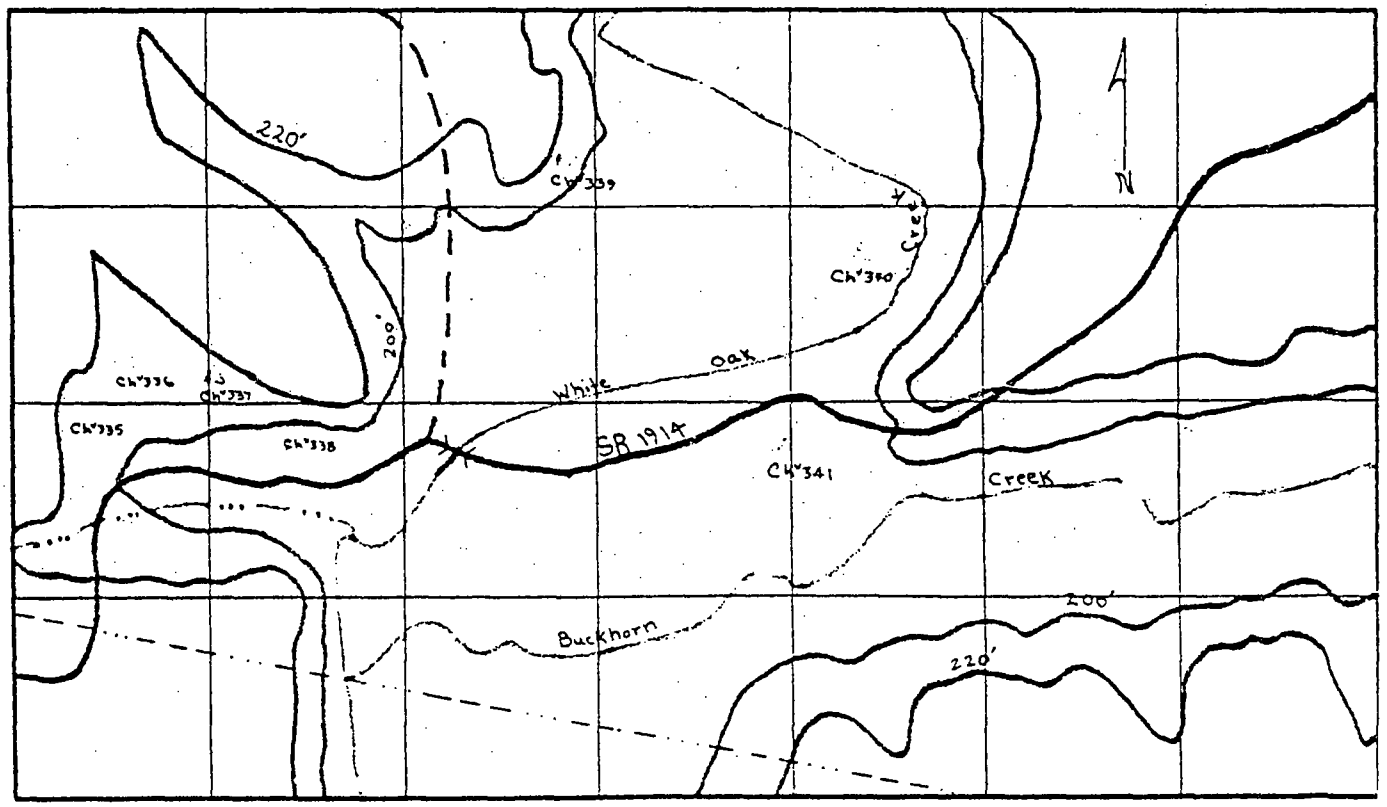
Local history

Plowing history Not plowed within the past 20 years Vegetation Weeds, briers

Type of soil clay loam Erosion Severe

Remarks: A small amount of material was found in cleared patches along the terrace. Because of the paucity of the material and the dense ground cover, surface dimensions could not be determined.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

'ORTH CAROLINA ARCHAEOLOG' 'L SURVEY

Site No. $Ch^{V}336$

Site Name

Photo Nos.

Location 150' northeast of $Ch^{V}335$, north of SR 1914, approximately .25 miles west of the White Oak Creek crossing

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

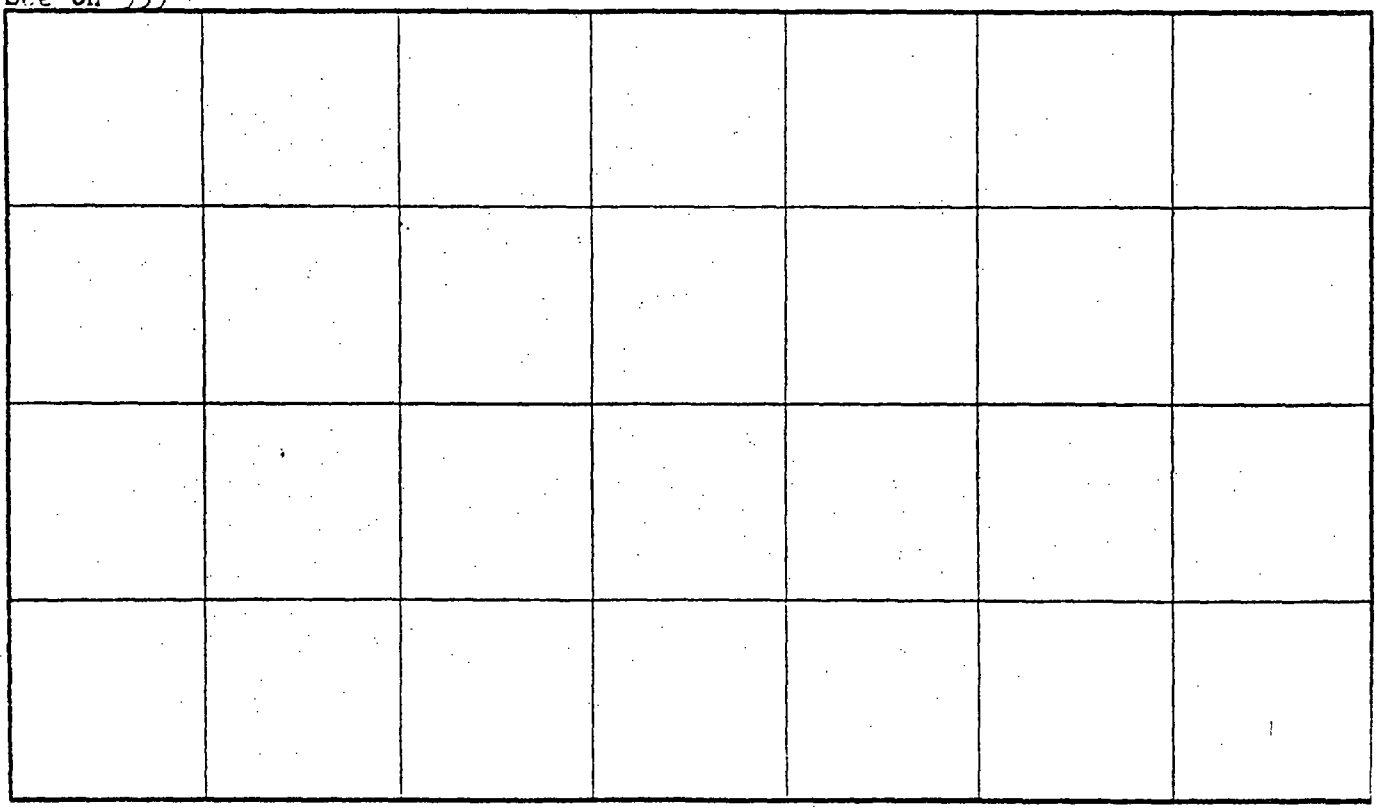
Plowing history Not plowed within the past 20 years Vegetation weeds, briers

Type of soil Clay loam Erosion Severe

Remarks: A light scattering of debitage was collected from an area about 40' in diameter; however, these dimensions would probably be revised if surface visibility improved.

See $Ch^{V}335$

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Warwick Ward and Jack Wilson Date 11/26/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^{V}337

Site Name

Photo Nos.

Location Approximately 200' east of Ch^{V}336 on the bluff terrace flanking a small unnamed tributary of White Oak Creek, north of SR 1914

Recorded on III, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Not plowed within past 20 years Vegetation weeds, briers

Type of soil Clay loam Erosion severe

Remarks: A few undiagnostic chips were found in a small cleared area roughly 30' in diameter. Surface visibility made precise dimensions impossible to determine.

Sketch Map

Ch^{V}335

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^V 338

Site Name

Photo Nos.

Location North of SR 1914, approximately 200' east of Ch^V 337, .15 miles west of the White Oak Creek crossing

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Not plowed within the past 20 years Vegetation weeds, briers

Type of soil clay loam Erosion Severe

Remarks: A thin distribution of artifacts and debitage was collected from and area approximately 100' by 30'. Surface visibility was moderate.

See Ch^V 335

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch 339

Site Name

Photo Nos.

On the east side of a pronounced bluff overlooking White Oak Creek, mately 250' east of a dirt farm road that intersects SR 1914 immediately the White Oak Creek crossing

HI, USGS Cokesbury, N.C.

Recorded on

Address

tory

istory Not plowed within the past 20 years Vegetation weeds, briers

oil clay loam Erosion Severe

A light scatter of lithic material was collected from an area approximately diameter. Surface visibility varied from poor to moderate.

535

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

er Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch V 340

Site Name

Photo Nos.

Location On a rise east of Ch V 339 adjacent to White Oak Creek

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Not plowed within past 20 years Vegetation weeds, briers

Type of soil Sandy loam Erosion slight

Remarks: A moderate scatter of lithic material and one badly eroded sherd were thinly distributed over an area roughly 200' on a side. Surface visibility was moderate.

See Ch V 335

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SITE FORM

Site No. Ch V 341

Site Name

Photo Nos.

Location .15 miles east of the White Oak Creek crossing, south of SR 1914

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

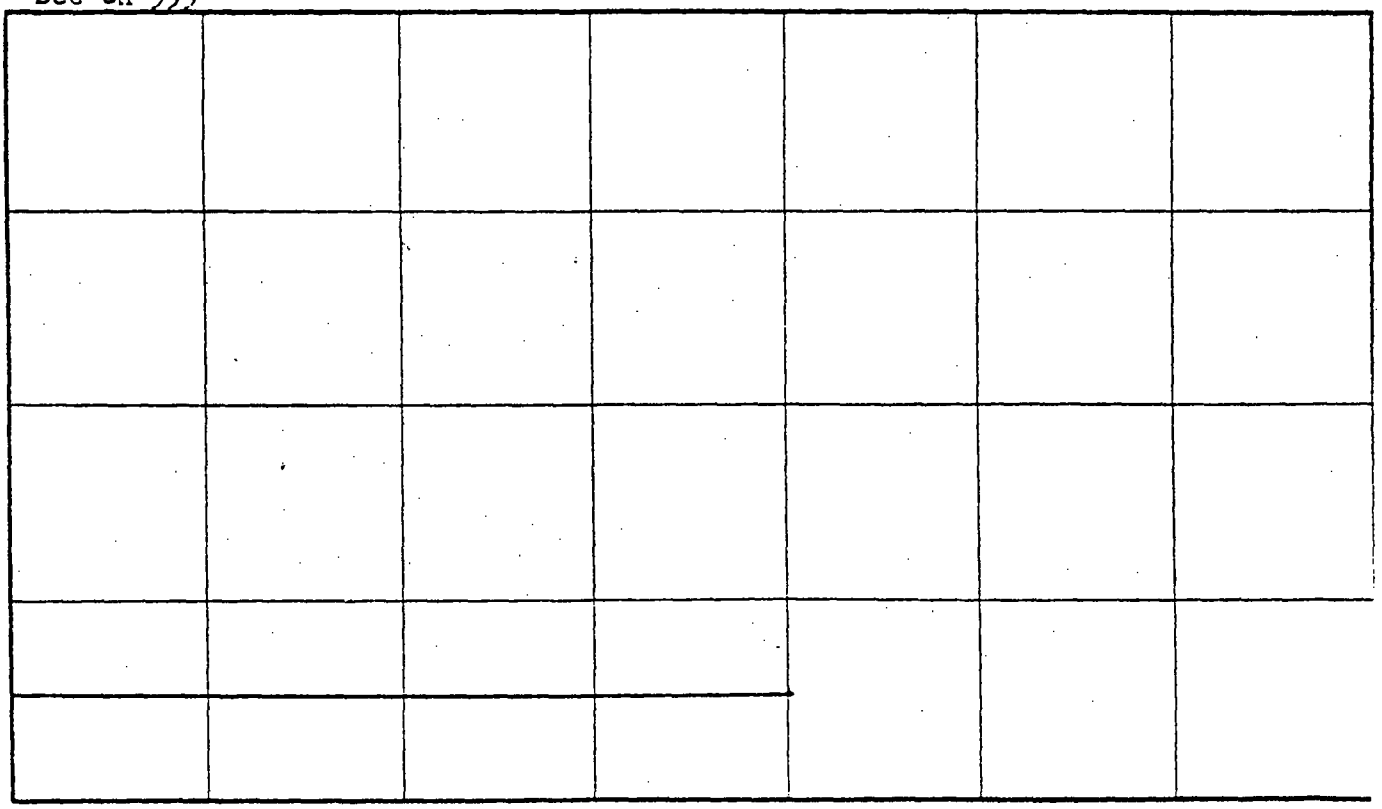
Plowing history Not plowed within past year Vegetation Grass

Type of soil Sandy loam Erosion slight

Remarks: A small amount of lithic material was widely scattered in an old field roughly 1 acre in extent. Surface visibility was fair.

See Ch V 335

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/26/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^{V}342

Site Name

Photo Nos.

Location Southeast of SR 1914 along a logging road that intersects SR 1914 approximately .7 mile SW of the intersection of SR1914 and the Wake Co. line

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

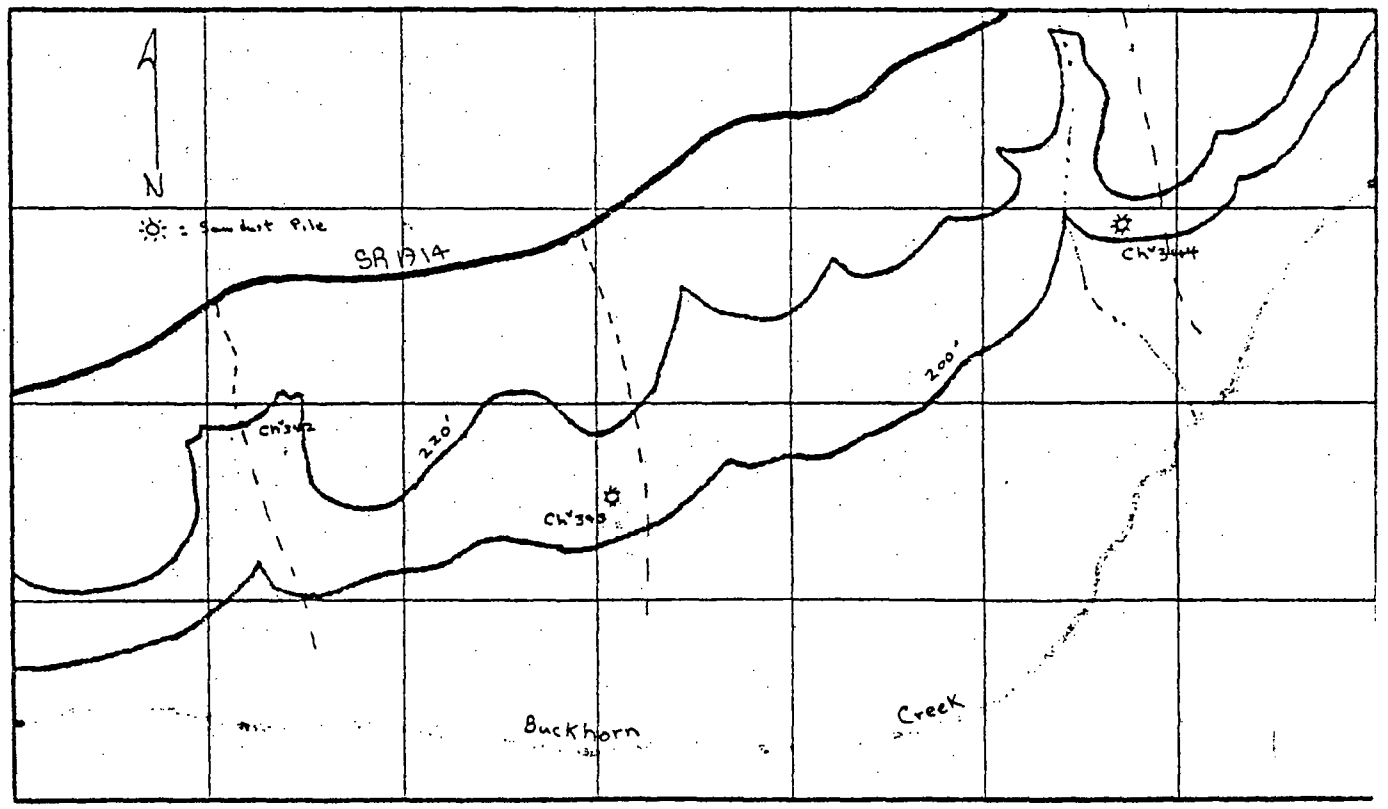
Local history

Plowing history Not plowed within past 30 years Vegetation Pine, mixed hardwoo

Type of soil sandy clay Erosion moderate

Remarks: A few flakes were found for about 75' along either side of a logging road. Surface visibility was poor.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^{V}343

Site Name

Photo Nos.

Location Off a logging road, immediately south of a saw dust pile--the logging road intersects SR 1914 a little over .4 mile west of the intersection of SR 1914 and the Wake County line

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Not plowed within past 30 years Vegetation Pines, mixed hardwo

Type of soil Sandy clay Erosion Severe

Remarks: A moderate amount of material was scattered over an area 100' by 75' on a terrace overlooking the creek.

See Ch^{V}342

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. $Ch^{V}344$

Site Name

Photo Nos.

Location Adjacent to a logging road that intersects SR 1914 from the south approximately 100' east of the Wake County line, in a cleared area between the logging road and an abandoned saw dust pile

Recorded on nI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Not plowed within the past 50 years Vegetation Pine, mixed hardwo

Type of soil Sandy clay Erosion moderate

Remarks: A moderate amount of lithic material was thinly scattered over an area approximately 100' in diameter. Surface visibility was fair.

See $Ch^{V}342$

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch V 345

Site Name

Photo Nos.

Location Along the crest of a bluff at the end of a logging road that intersects SR 1915 from the north, approximately .25 miles west of the Chatham-Harnett County line.

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

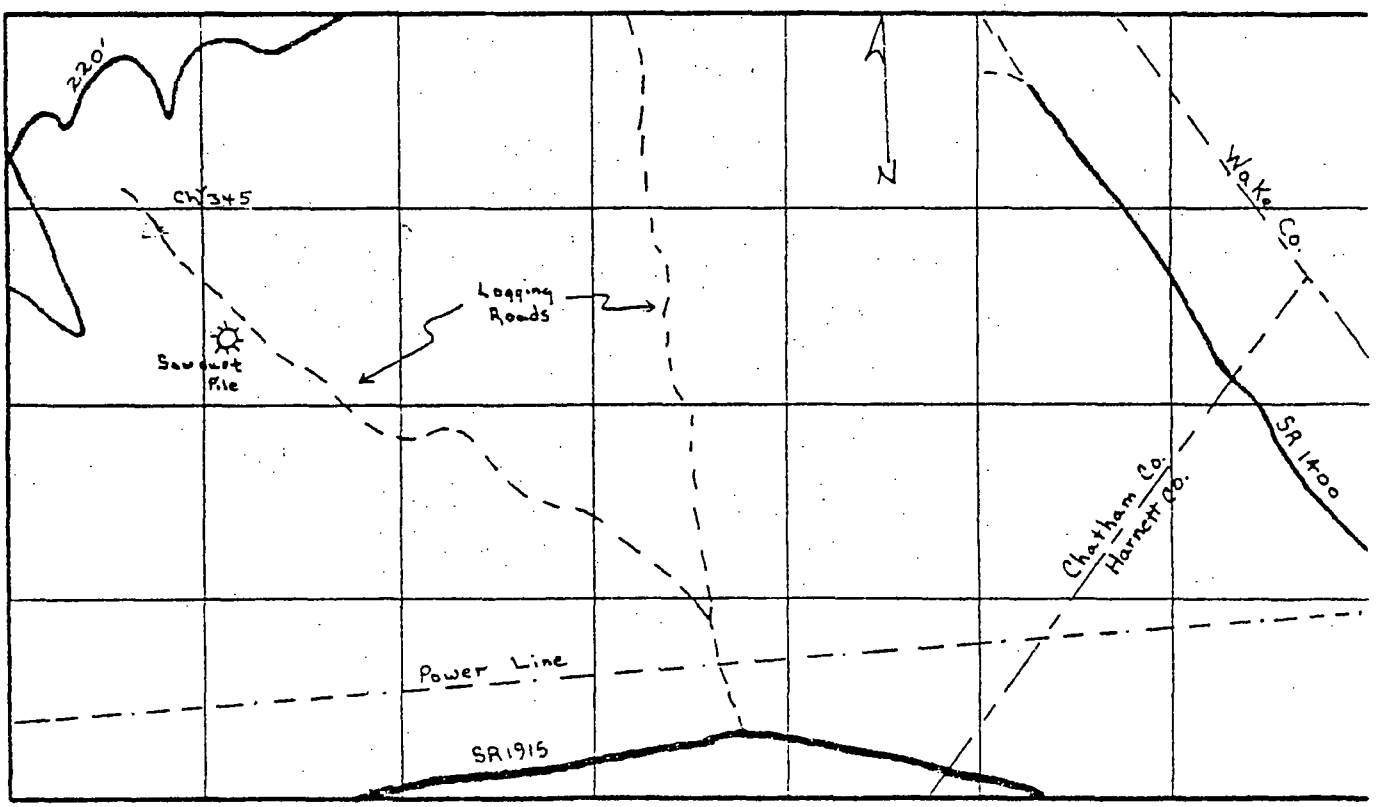
Local history

Plowing history Not plowed within past 10 years Vegetation scrub pine

Type of soil sandy clay Erosion moderate to severe

Remarks: A small amount of lithic debris was collected over a distance of about 30' along the ruts of the logging road. Ground surface visibility was poor.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward Date 12/2/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch V 346

Site Name

Photo Nos.

Location On a bluff in a cleared area adjacent to a logging road that intersects SR 1914 from the northwest .6 of a mile southwest of the Wake-Chatham County line

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

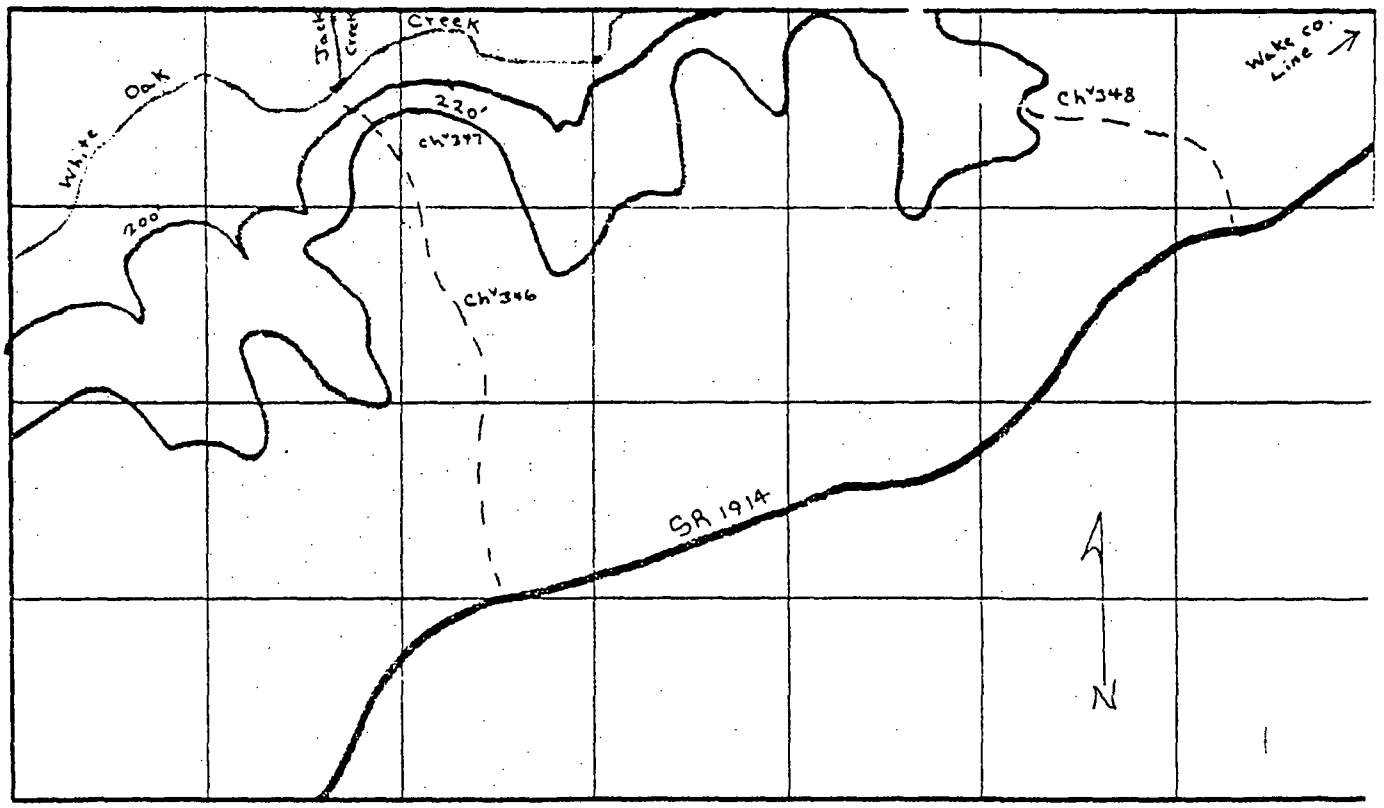
Local history

Plowing history Not plowed within past 30 years Vegetation Mixed hardwoods

Type of soil sandy clay Erosion moderate

Remarks: A thin distribution of lithics were collected from both sides of the logging road over an area roughly 50' by 50'. Surface visibility was moderate.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward Date 12/2/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. $Ch^{V}347$

Site Name

Photo Nos.

Location on the northwest slope of a bluff in a cleared area adjacent to a logging road that intersects SR 1914 from the northwest .6 of a mile southwest of the Wake-Chatham County line, approximately 400' northwest of $Ch^{V}346$

Recorded on hI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history not plowed within past 30 years Vegetation mixed hardwoods

Type of soil clay Erosion severe

Remarks: Sparse scatter of chips were found in a cleared area west of the logging road. Area collected was roughly 75' by 50'; surface visibility was moderate.

See $Ch^{V}346$

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward Date 12/2/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. $Ch^{V}348$

Site Name

Photo Nos.

Location In a cleared area at the end of a logging road that intersects SR 1914 .15 of a mile southwest of the Wake-Chatham County line (from the northwest)

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

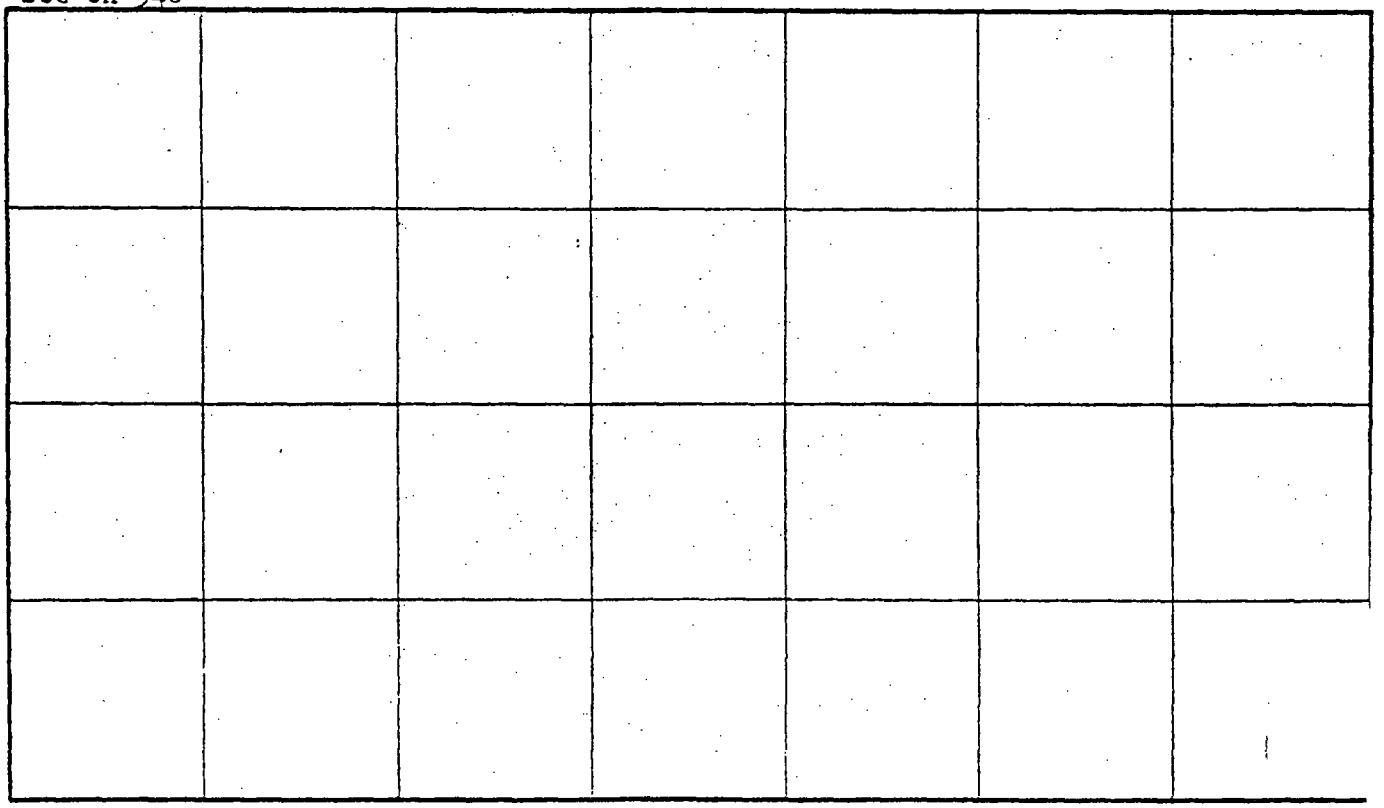
Plowing history Not plowed within the past 50 years Vegetation Pines, Mixed Hardwo

Type of soil clay Erosion severe

Remarks: A moderate amount of material was widely scattered along the slope of a ravine for a distance of some 200' along the logging trail. Surface visibility was poor to moderate.

See $Ch^{V}346$

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward Date 12/2/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. CnV349

Site Name

Photo Nos.

Location On the first terrace north of the end of a logging road that intersects SR1912 600' south of its junction with 1913--overlooking an unnamed branch of White Oak Creek

Recorded on nI, USGS Cokesbury

Owner Address

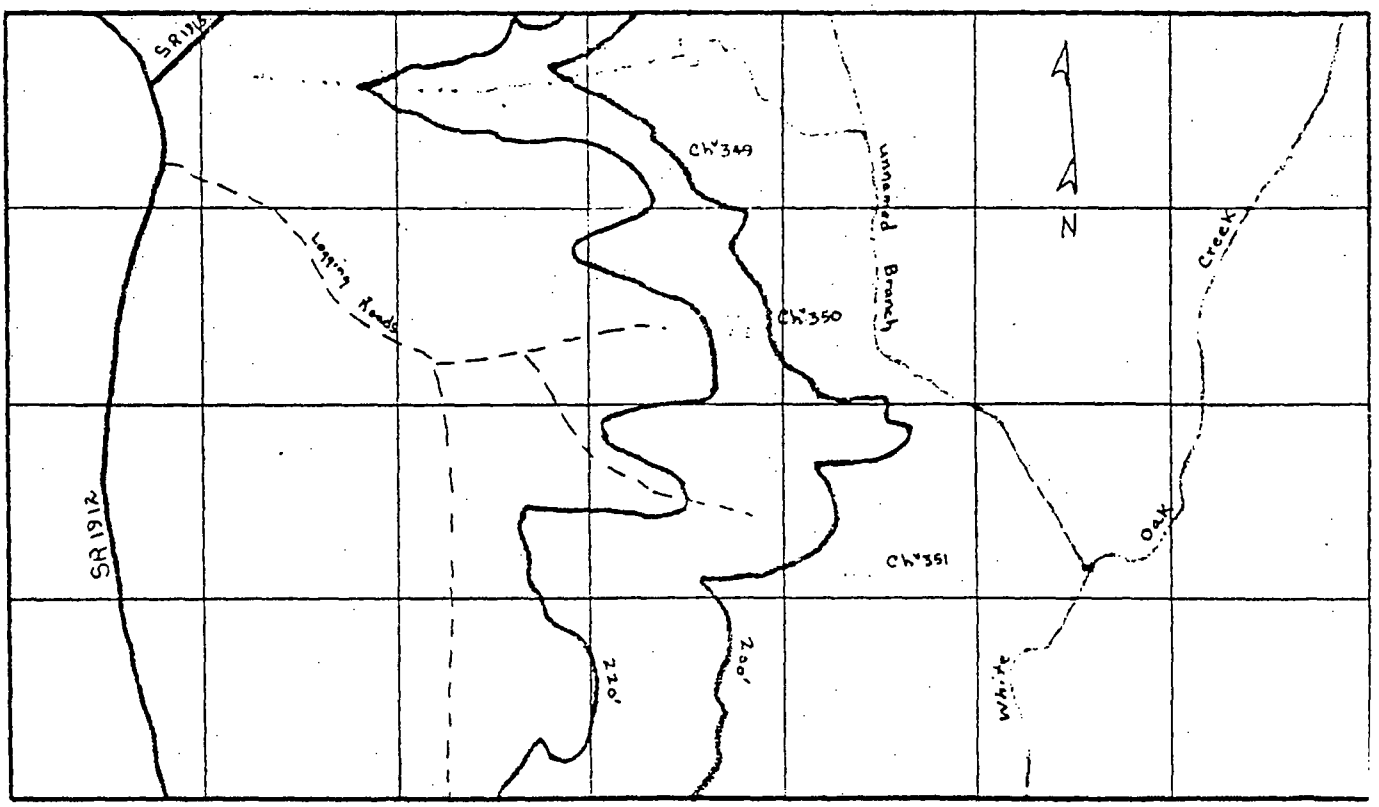
Local history

Plowing history Not plowed within the past 10 years Vegetation scrub

Type of soil clay Erosion Severe

Remarks: A light scatter of material was confined to an area approximately 30' in diameter.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/7/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^V350

Site Name

Photo Nos.

Location At the end of the northern most fork of a logging road that intersects SR 1912 600' south of its junction with 1913--overlooking an unnamed branch of White Oak Creek

Recorded on hl, 1985 Cokesbury

Owner Address

Local history Not plowed within the past 10 years

Plowing history Vegetation Scrub, grass

Type of soil loamy clay Erosion moderate

Remarks: This was one of the more productive sites within the reservoir. Material was scattered over an area approximately 500' by 100'. Visibility varied from moderate to poor.

See Ch^V349

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/7/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^{V}351

Site Name

Photo Nos.

Location At the end of the south fork of a logging road that intersects SR 1912 600' south of its junction with SR 1913 -- along a terrace west of the confluence of White Oak Creek and an unnamed tributary

Recorded on HI, USGS Cokesbury

Owner Address

Local history

Plowing history Not plowed within the past 10 years Vegetation Scrub, briers

Type of soil clay loam Erosion moderate

Remarks: Material was widely scattered along the terrace and its slopes over an area roughly 300' by 300'--visibility was primarily restricted to patches bared by erosion.

See Ch^{V}349

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/7/77

Site No. Ch^{V}352

Site Name

Photo Nos.

Location In the southeastern corner of a field at the end of a farm road that intersects SR 1132 from the southeast .6 miles from the Wake County line (north of the county line)

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

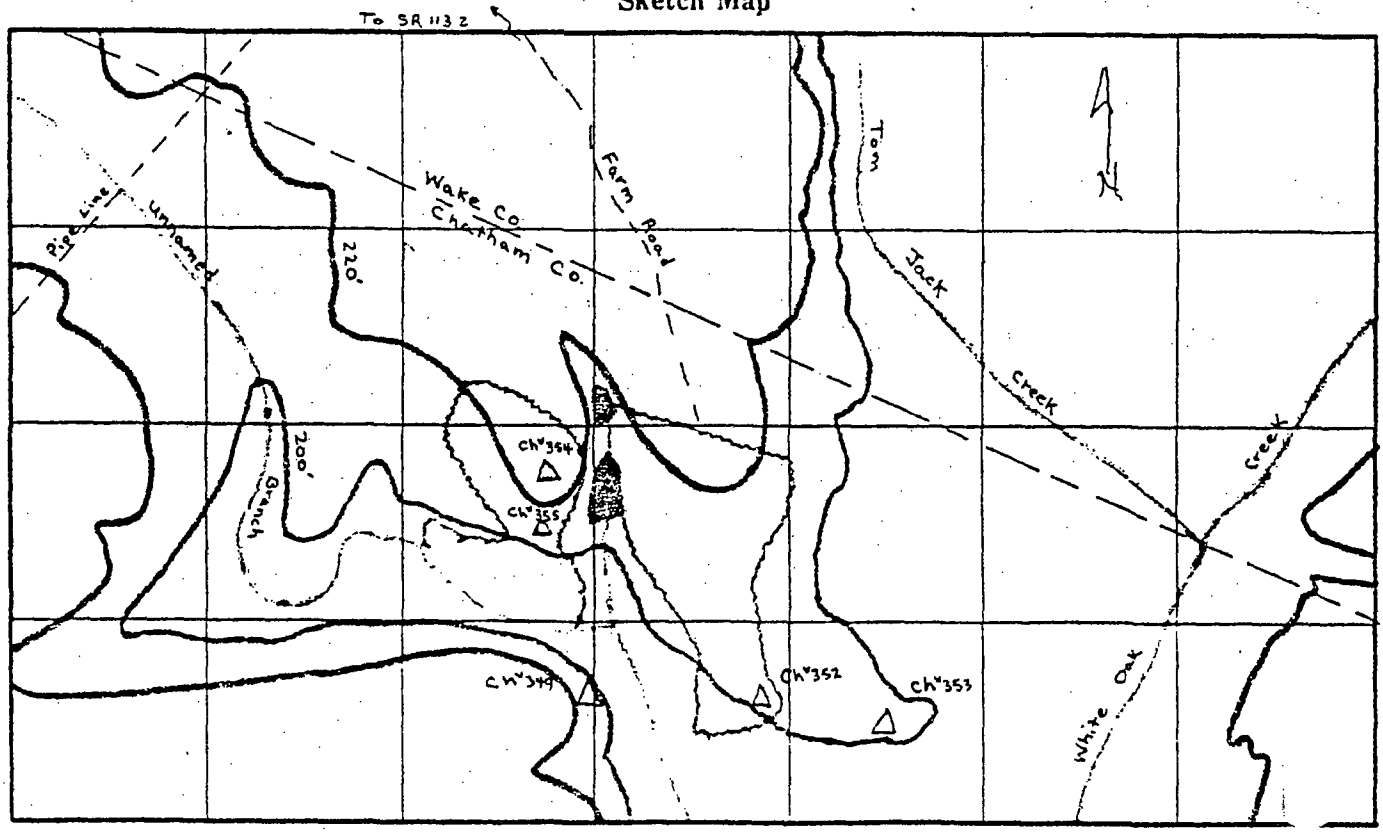
Local history

Plowing history Plowed last year Vegetation Soy bean stubble

Type of soil clay loam Erosion Moderate

Remarks: Site produced a fairly large amount of lithics over an area approximately 200' by 100'--however, the site probably extends father to the east. Surface conditions prevented establishing the precise dimensions. In the field collecting conditions were optimum.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Prawick Ward and Jack Wilson Date 12/12/77

Form No. 786

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. $Ch^{V}353$

Site Name

Photo Nos.

Location On the toe of a bluff overlooking White Oak Creek--at the end of a farm road that intersects SR 1132 from the southeast .6 miles north of the Wake County line

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

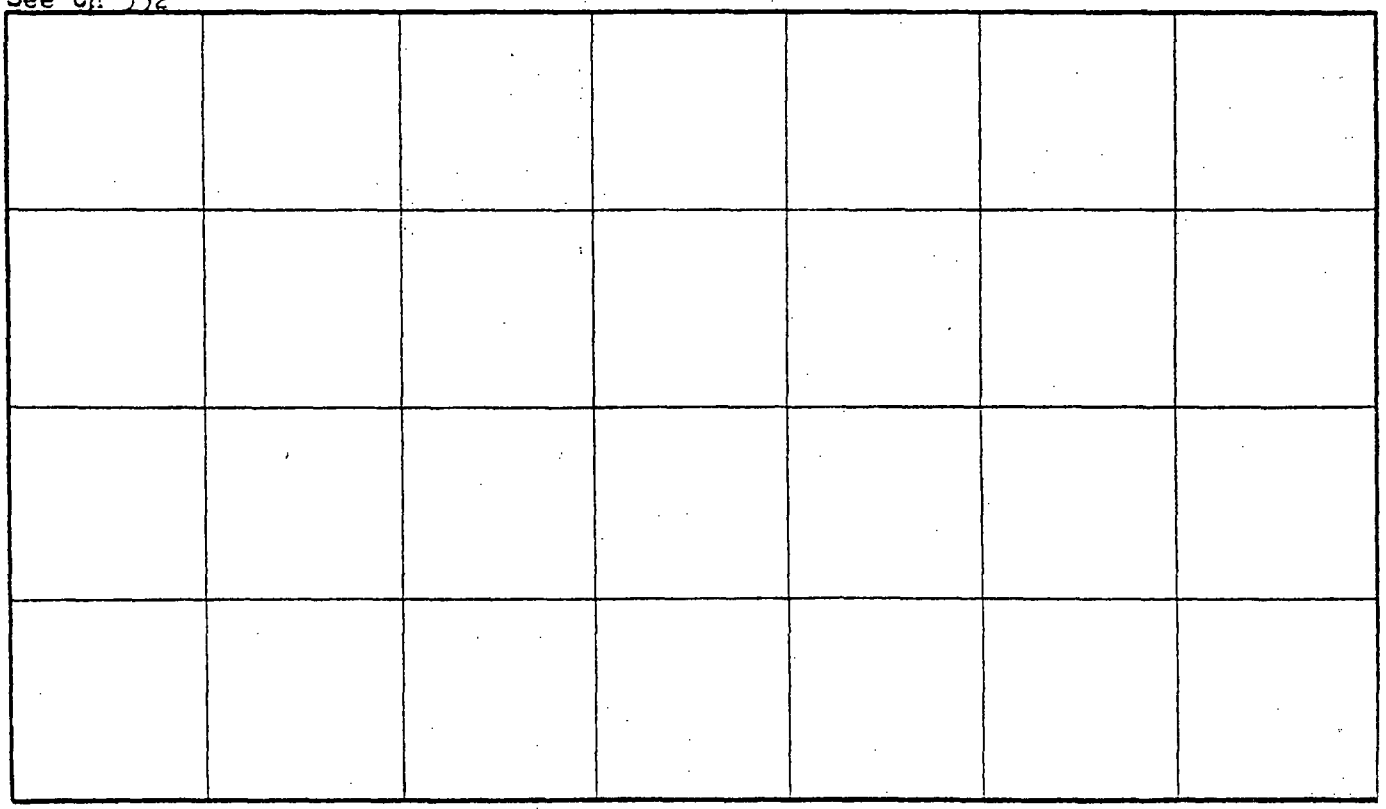
Plowing history Not plowed within past 10 years Vegetation brush, grass

Type of soil rocky clay loam Erosion severe

Remarks: material was found fairly concentrated on the very tip of the bluff toe (100' by 50') and may represent the eastern extreme of $Ch^{V}352$. Surface visibility was moderate.

See $Ch^{V}352$

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/12/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^{v} 354

Site Name

Photo Nos.

Location On the slope of a bluff in the northeastern section of a field east of a farm road that intersects SR 1132 from the southeast .6 miles north of the Wake Coun line.

Recorded on Hl, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Plowed last year Vegetation soy bean stubble

Type of soil rocky clay Erosion severe

Remarks: Only two specimens were found approximately 50' apart.

See Ch^{v} 352

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick ward and Jack Wilson Date 12/12/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. $Ch^{V}355$

Site Name

Photo Nos.

Location Approximately 400' south of $Ch^{V}354$, in the center of a field east of a farm road that intersects SR 1132 from the southeast .6 miles north of the Wake County line.

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

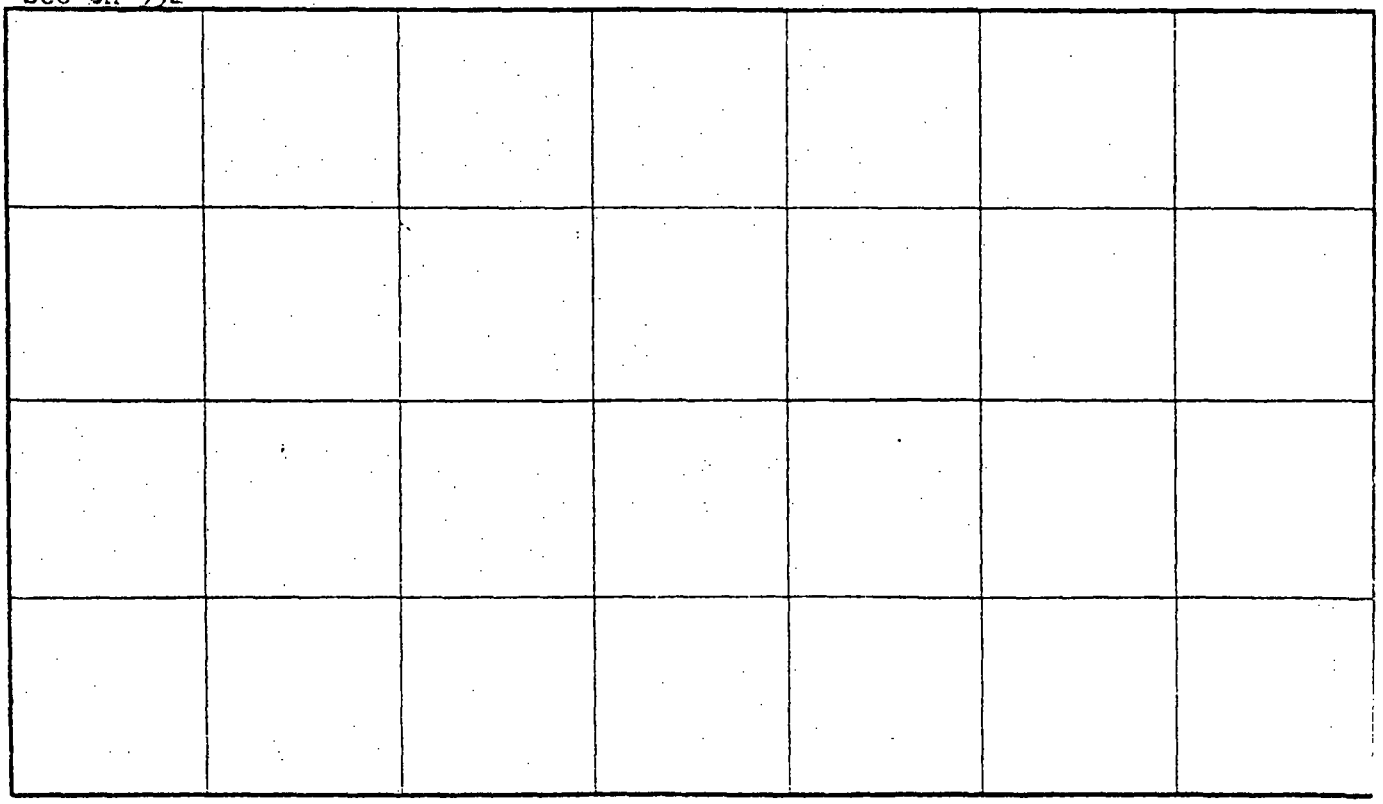
Plowing history Plowed last year Vegetation Soy bean stubble

Type of soil Rocky clay Erosion moderate

Remarks: Specimens were thinly scattered over an area 30' by 50'. Visibility was moderately good.

Sketch Map

See $Ch^{V}352$



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/12/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. 31Wa184

Site Name

Photo Nos.

Location On a bluff at the end of an old logging road which intersects SR 1130 .5 mile northeast of the Wake County line

Recorded on N.I., USGS Cokesbury, N.C.

Owner Address

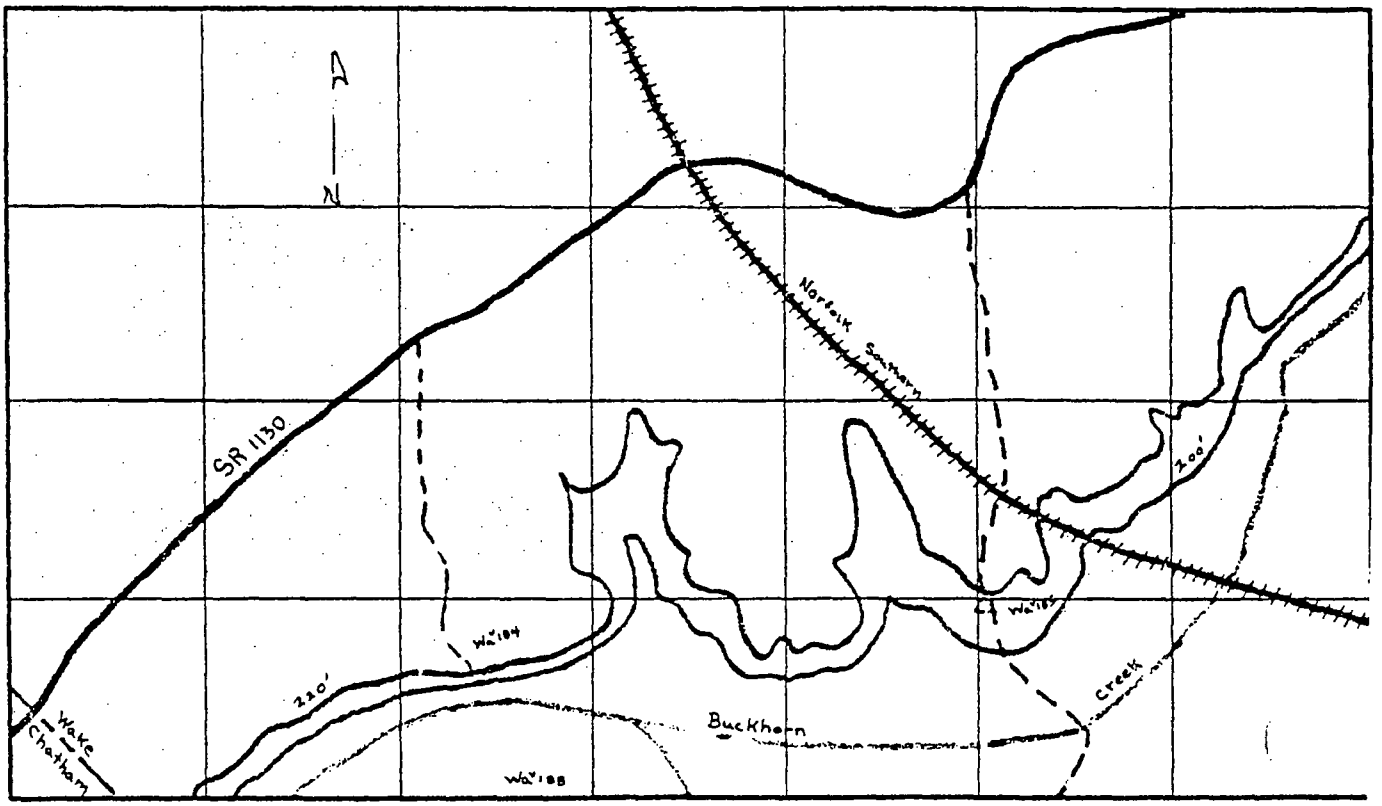
Local history

Plowing history Not plowed within the past 50 years Vegetation Mixed hardwoods

Type of soil Clay Erosion Severe

Remarks: A small amount of lithic material was recovered at the end of the road along the side of the bluff. Because of poor visibility, site dimensions could not be determined.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. 31Wa185

Site Name

Photo Nos.

Location Along a field road that intersects SR 1130 .25 miles northeast of the Norfolk Southern Railroad crossing - site is approximately 600' south of the point where the field road crosses the railroad, opposite an old saw dust pile

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Not plowed within past five years Vegetation Grass, weeds

Type of soil sandy clay Erosion moderate

Remarks: Several artifacts and a number of flakes were collected from an area measuring roughly 200' by 50' on the west side of the field road. Surface visibility was moderate.

See 31Wa184

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 11/28/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Wa V 186

Site Name

Photo Nos.

Location At the east end of a large field south of Buckhorn Creek, reached by turning north on a field road that intersects SR 1116 .15 miles west of the Buckhorn Creek crossing

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

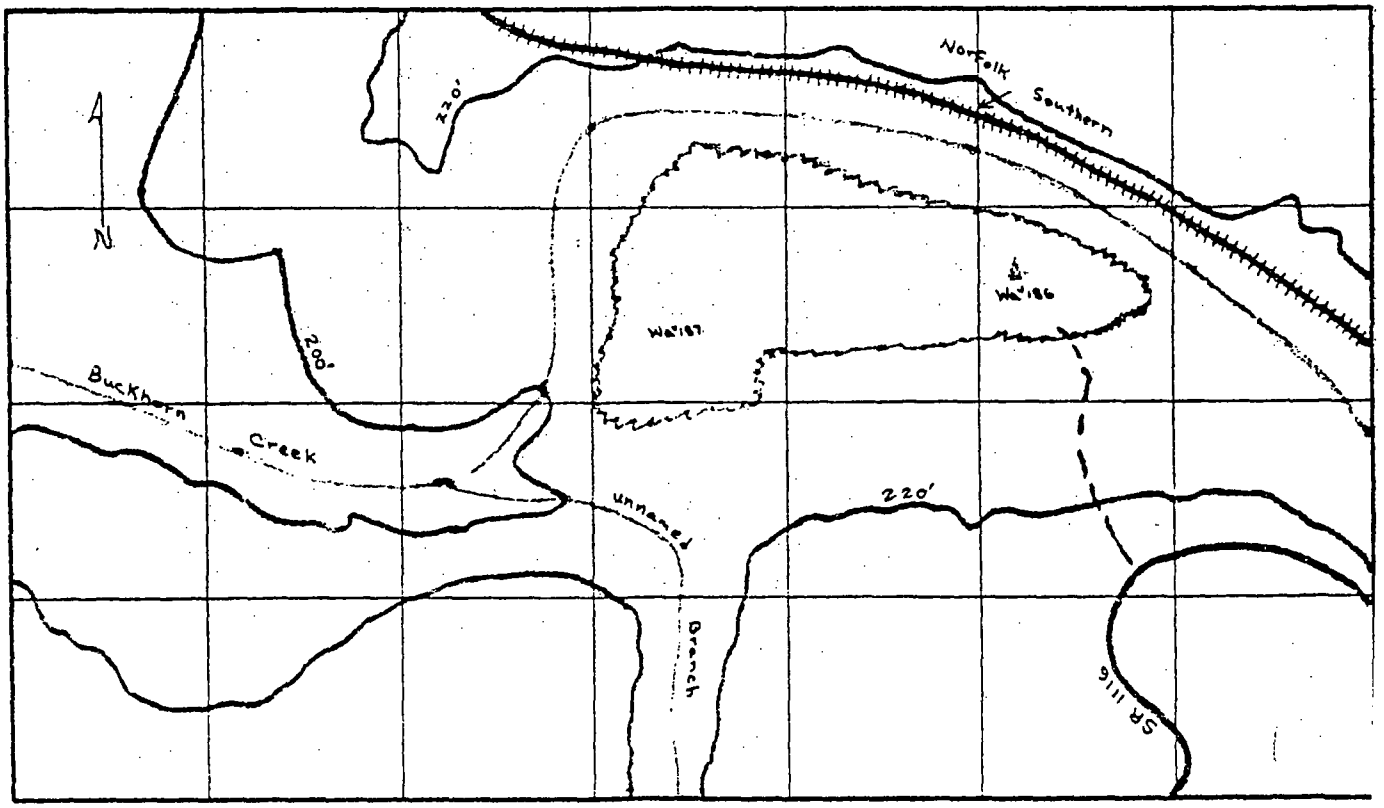
Local history

Plowing history Cultivated annually Vegetation Corn stubble

Type of soil Sandy loam Erosion Deposition

Remarks: A thin distribution of debitage was found scattered over an area some 50' in diameter; visibility was excellent.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Michael Trinkley Date 11/30/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Wa^{V}187

Site Name

Photo Nos.

Location At the west end of a large field south of Buckhorn Creek, reached by turnir north on a field road that intersects SR 1116 .15 miles west of the Buckhorn Creek crossing, approximately 1000' west of Wa^{V}186

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Cultivated annually Vegetation corn stubble

Type of soil Sandy loam Erosion deposition

Remarks: A small amount of lithic material was collected from an area 40' in diameter; surface visibility was excellent.

Sketch Map

See Wa^{V}186

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Michael Trinkley Date 11/30/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Wa^V188

Site Name

Photo Nos.

Location Proceed on SR 1400 (Harnett Co.) into Chatham Co. where road dead-ends but farm road continues, follow farm road until it dead-ends in a field adjacent to Buckhorn Creek (now in Lake Co.)-site is situated on the slope of a rise in the NE section of the field

Recorded on HI, USGS Cokesbury, N.C.

Owner

Address

Local history

Plowing history Plowed annually

Vegetation Millet stubble

Type of soil clay loam

Erosion severe

Remarks: Topography looked excellent for substantial Archaic occupation, however, only a small amount of lithic material was present within an area roughly 30' by 50'. Surface conditions were excellent for collecting.

Sketch Map

See Wa^V184

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Michael Trinkley

Date 11/30/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Wah 189

Site Name

Photo Nos.

Location Approximately 200' south of SR 1116 at the point where it crosses Buckhorn Creek

Recorded on MI, USGS Cokesbury, N.C.

Owner Address

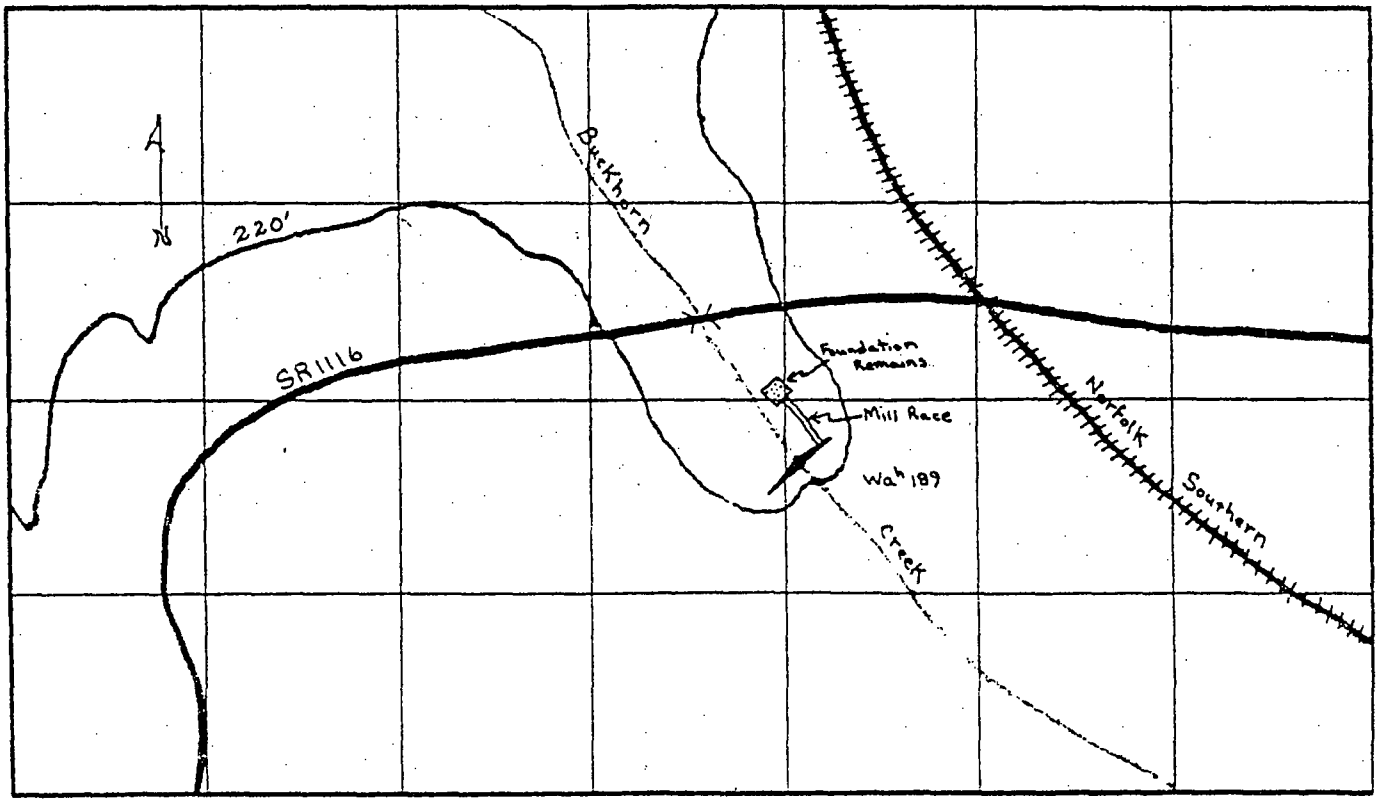
Local history

Plowing history Probably never cultivated Vegetation Mixed hardwoods

Type of soil silt Erosion -

Remarks: This site consists of a dam across Buckhorn Creek and an associated mill race as well as foundation and structural remains of a grist mill. The complex probably dates to the early years of this century and appears to have been in use until relatively recently. Concrete steps, foundation piers, fragments of the mill stone, and a section of the concrete superstructure evidence the mill site today.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Michael Trinkley Date 11/30/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Wa V 190

Site Name

Photo Nos.

Location In field adjacent and on the west side of SR1127 just before it crosses White Oak Creek

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

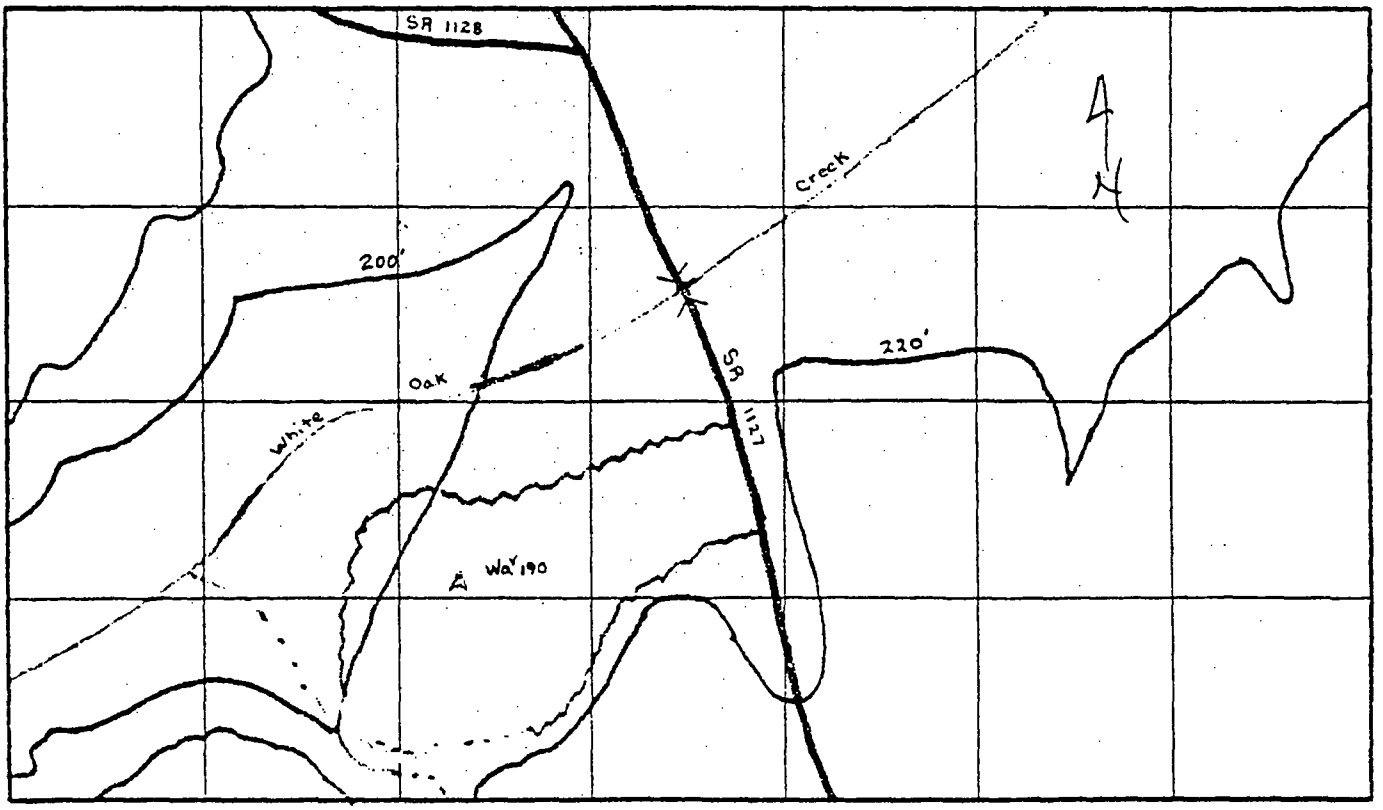
Local history

Plowing history Cultivated annually Vegetation corn stubble

Type of soil silt loam Erosion deposition

Remarks: A single early Woodland projectile point was found in the west central section of the field. No other cultural material was in evidence although surface conditions were optimum for collecting purposes.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Michael Trinkley Date 11/30/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Wa^V 191

Site Name

Photo Nos.

Location On a levee adjacent to White Oak Creek (south bank) in a cleared corridor for the Sheron Harris plant make-up water system; corridor intersects SR 1130 .55 miles west of Hollemans Crossroads

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

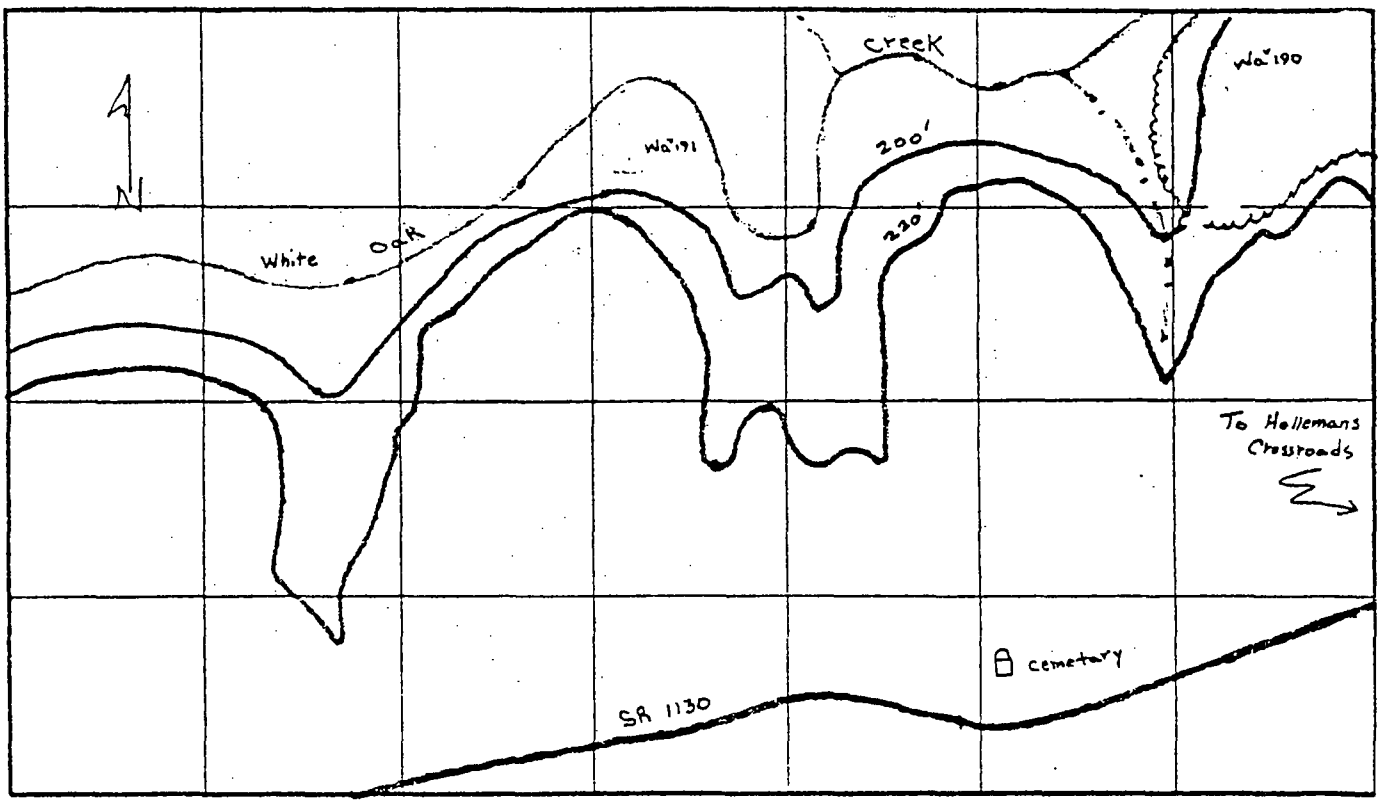
Local history

Plowing history Recently cleared Vegetation none

Type of soil clay loam Erosion moderate

Remarks: Only a single specimen was found although surface collecting conditions were excellent.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward Date 12/2/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. wa Vly2

Site Name

Photo Nos.

Location In the southwestern corner of a field south of SR 1128 and .4 miles south of SR 1128 and SR 1134

Recorded on HI, USGS Cokesbury

Owner Address

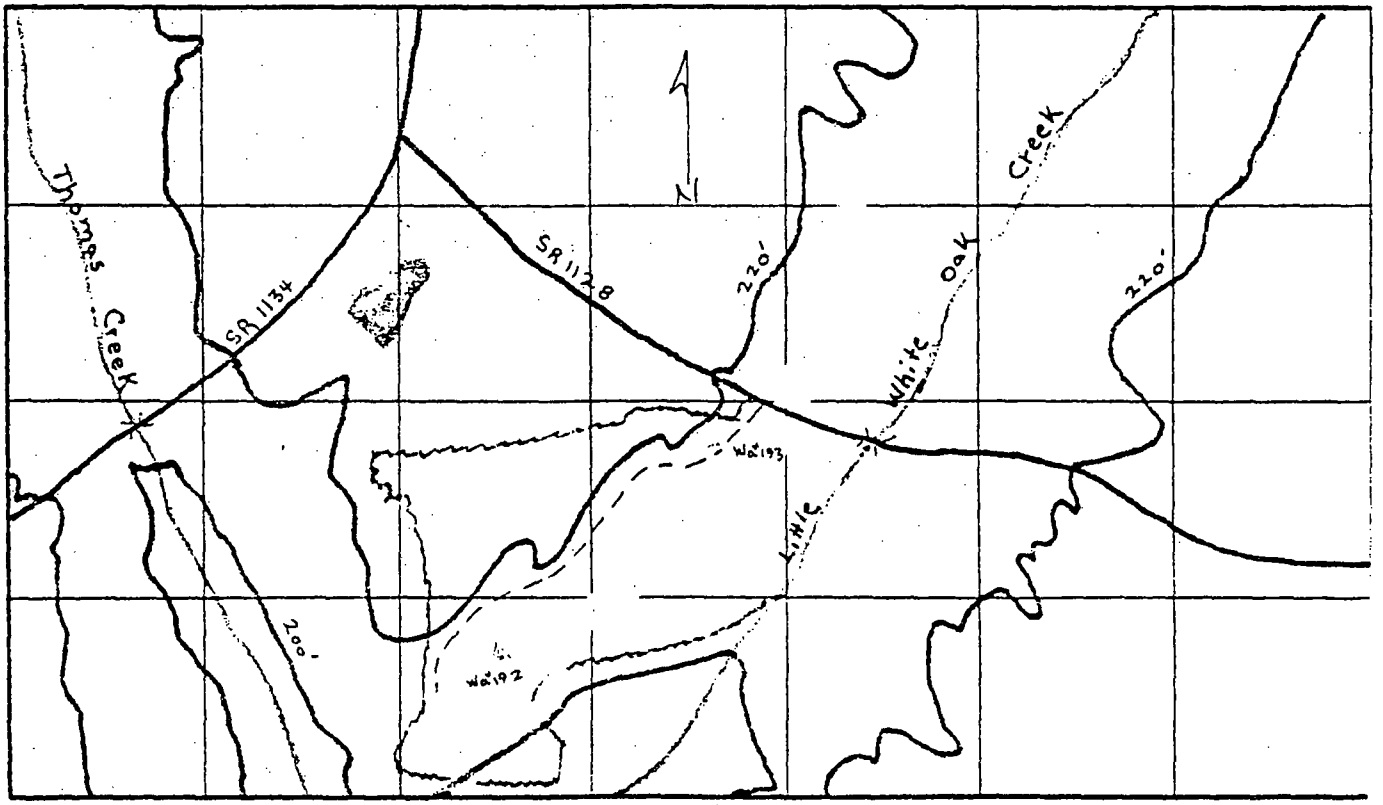
Local history

Plowing history Plowed last year Vegetation soy bean stubble

Type of soil loam Erosion slight

Remarks: Only two specimens were found, roughly 100' apart--surface visibility was good.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/7/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. 31Wa193

Site Name

Photo Nos.

Location In a farm road at the northeastern corner of a field south of SR 1128 and .4 miles south of the SR 1128 and SR 1134 intersection

Recorded on HI, USGS New Hill

Owner Address

Local history

Plowing history Plowed last year Vegetation grass

Type of soil clay loam Erosion severe

Remarks: Two specimens were found in the farm road some 30' apart; however, visibility was poor because of heavy ground cover on either side.

See 31Wa192

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/7/77

Site No. 31Wa194

Site Name

Photo Nos.

Location Along a logging road 1000' northwest of White Oak Creek--logging road intersects SR 1134 from the south at a point immediately east of the SR 1152 intersection.

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

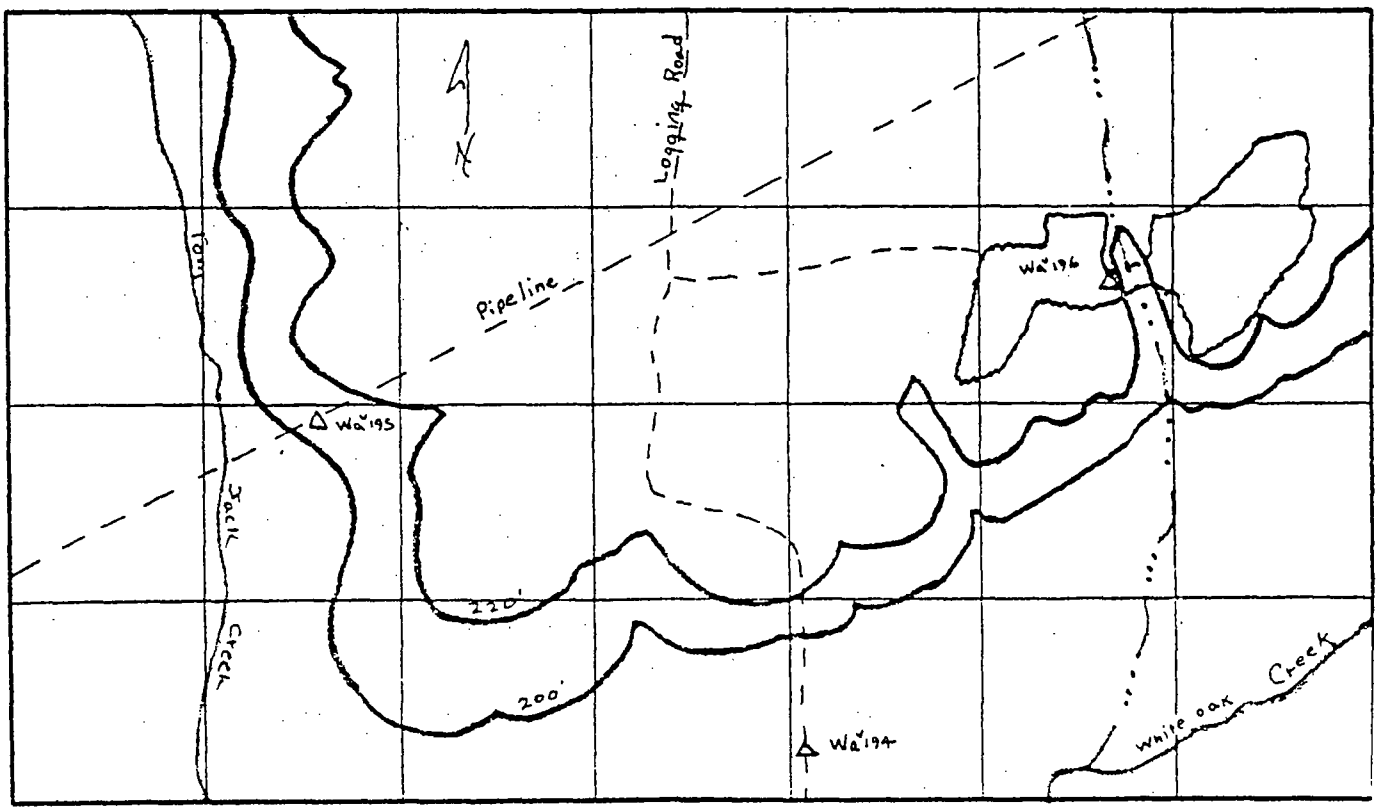
Local history

Plowing history Not plowed within the past 30 years Vegetation mixed hardwoods

Type of soil clay Erosion severe

Remarks: A few specimens were widely scattered along the logging road on the first terrace of White Oak Creek. Visibility was poor and site dimensions could not be discerned.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date. 12/12/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. 31Wa195

Site Name

Photo Nos.

Location Along a natural gas pipeline 200' northeast of Tom Jack Creek--pipeline crosses logging road that intersects SR 1134 from the south at a point immediately east of the SR 1132 and SR 1134 intersections.

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Not plowed within past 30 years Vegetation pines, mixed hardw

Type of soil Clay Erosion severe

Remarks: A moderate scatter of lithic were consentrated within an area roughly 30' in diameter on the 1st terrace of the creek. Surface visibility was generally good.

See 31Wa194

Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/12/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Wa^V 196

Site Name

Photo Nos.

Location On the west bank of an unnamed branch of White Oak Creek; field can be reached by turning west on the first fork of a logging road [illegible] a natural gas pipeline. The main logging road intersects SR 1134 from the south at a point immediately east of the SR 1132 intersection.

Recorded on AI, USGS Cokesbury, N.C.

Owner Address

Local history

Plowing history Plowed last year Vegetation Soy bean stubble

Type of soil Clay Erosion severe

Remarks: Only two specimens were collected from the edge of the field--it is possible that these eroded from a higher elevation; however, a check father up-slope failed to return additional material.

See Wa^V 194 Sketch Map

Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/12/77

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Wa V197

Site Name

Photo Nos.

Location In an old field adjacent to and north of SR 1132, approximately .15 miles east of the Tom Jack Creek Crossing

Recorded on HI, USGS Cokesbury, N.C.

Owner Address

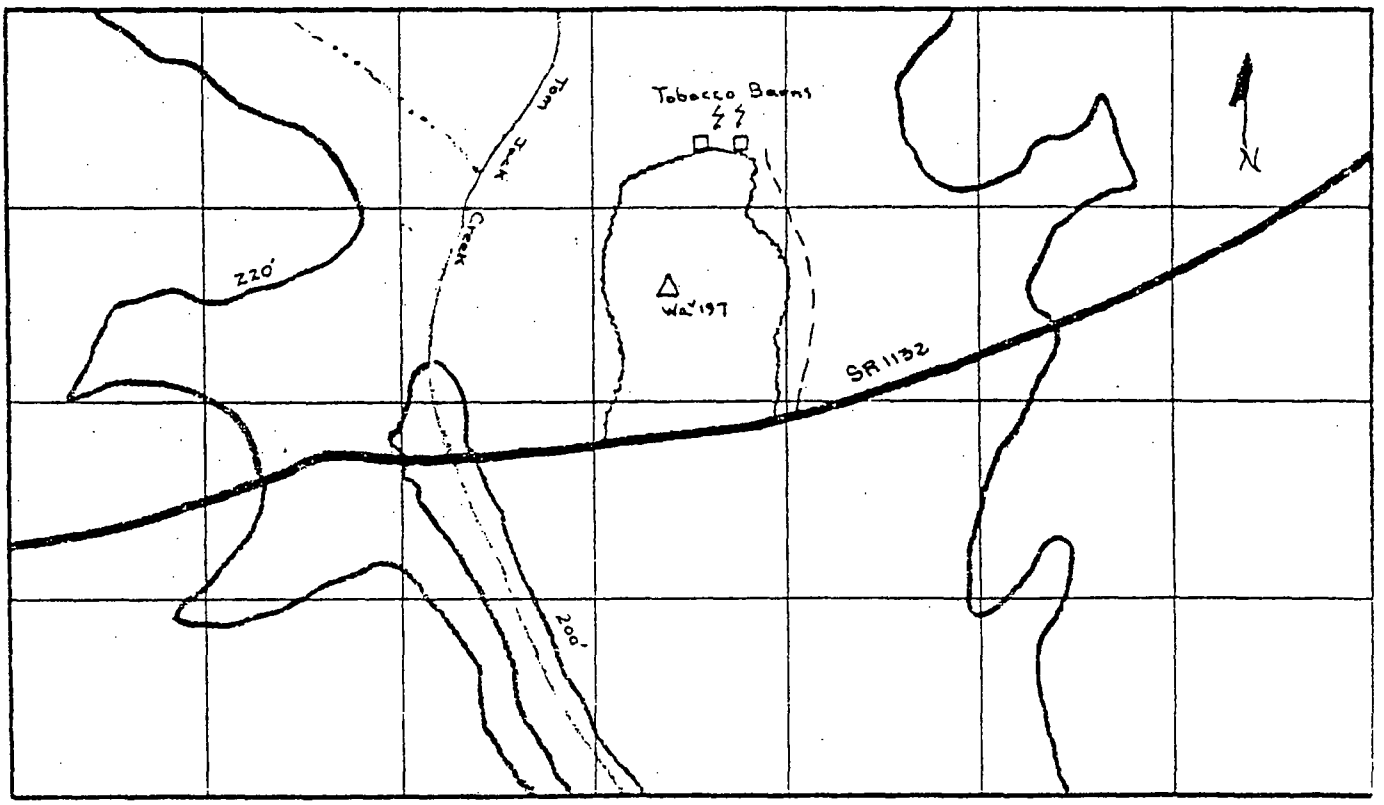
Local history

Plowing history Not plowed within past 5 years Vegetation weeds and grass

Type of soil Clay loam Erosion moderate

Remarks: Specimens were widely scattered over roughly an acre; surface visibility was poor.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Jack Wilson Date 12/12/77

MEMO TO: Dr. Joffre L. Coe

FROM: Trawick Ward

SUBJECT: Archaeological Survey and Evaluation of the Carolina Power and Light Shearon Harris Nuclear Power Plant Main Dam Site, Intake Pump Station and Makeup Water System.

DATE: June 18, 1977

1. The Projects. The main dam is to be constructed on Buckhorn Creek in Chatham County south of the SR 1915 bridge and immediately north of the Norfolk Southern Railroad crossing. It will be approximately 1500' long, stretching between two steep bluffs on either side of the creek, and average roughly 350' wide. The intake pump station will be located on the north bank of the Cape Fear River, immediately northwest of the existing Buckhorn Dam. It will measure approximately 137' long and 35' wide. The makeup water system will consist of approximately 4.6 miles of buried pipe and open channel. There will be some two miles of pipe, eight feet in diameter, running from the intake structure to the site of the Norfolk Southern Railroad relocation. From this point, an open channel, a little less than three miles in length, will be cut to the Tom Jack Creek area where the system will terminate by emptying into the proposed Shearon Harris Reservoir. The impact zone of the makeup water system varies in width depending upon whether the pipe is laid or the channel is cut. Variation in topography will also affect the width. After discussing this matter with engineers at the plant site, it was determined that a survey area 100' wide along the pipe line would more than cover the potential construction impact while a corridor 150' wide would be sufficient for the channel route.

2. The Survey. Because of the steep V-shaped creek valley at the main dam site, the most likely location for significant prehistoric or historic sites was the crests of the bluffs flanking the creek. The bluff top on the spillway side had been cleared, making surface visibility excellent. This area was carefully walked over, and although a considerable amount of vein quartz was present, none showed any evidence of having been modified or used by prehistoric people. A logging road ran parallel to the long axis of the dam, down the steep bluff slope to the creek bed. Here, too, surface visibility was good, but no prehistoric or historic remains were in evidence. The bluff top on the opposite side of the creek was partially cleared and could also be adequately assessed by surface inspection. The slope down the side of the bluff to the creek channel was forested; however, there were several gulleys and cleared patches bared by erosion. All areas were carefully checked with negative results. The topography at the main dam site is such that even if prehistoric or historic archaeological remains had been encountered, it is extremely doubtful that any meaningful contextual relationships could have been preserved.

Initially the makeup water system route was walked over to appraise its archaeological potential. The entire corridor was forrested, and the tpography was marked by moderate to steep hills and valleys. Except at the intake pump station site on the Cape Fear River and the terminus at Tom Jack Creek, there were no nearby water sources. Because of the topography, the general lack of available water sources, and the dense ground cover, it was decided to concentrate the survey efforts in locations that offered the highest potential for producing archaeological sites. These areas included

the crests of the hills, the expanse around the intake pump station, and the terminus site at Tom Jack Creek. To supplement this coverage, all road crossings were also investigated. All these areas were intensively surveyed, and where necessary the surface was raked clear to provide adequate visibility. Only one small site, $Ch^{V}332$, was discovered which was located on a bluff north-northeast of the existing Buckhorn dam. The site produced a light scatter of severely disturbed nondiagnostic debitage probably dating to the Late Archaic Period (2000 B.C.).

Approximately one acre around the intake pump station was investigated. Here the ground was low and swampy and partially covered by heavy grass and weeds. However, a logging road and a relatively large area that had been cleared for a boat dock were clear. A surface inspection of the entire site failed to produce any evidence of archaeological remains.

3. Recommendations. Because of the total absence of historic sites and the small, disturbed nature of $Ch^{V}332$, no significant cultural resources will be adversely affected by the construction of the main dam on Buckhorn Creek, the intake pump station, or the makeup water system. Consequently, approval for all projects is recommended.

NORTH CAROLINA ARCHAEOLOGICAL SURVEY

Site No. Ch^V332

Site Name

Photo Nos.

Location Site is situated 750 feet north-northeast of existing Buckhorn Dam Generating Station, on top of a bluff ; 500 feet south of Buckhorn Creek and 100 feet west of SR 1921 Recorded on Chatham County Highway Index

Owner Carolina Power & Light Address

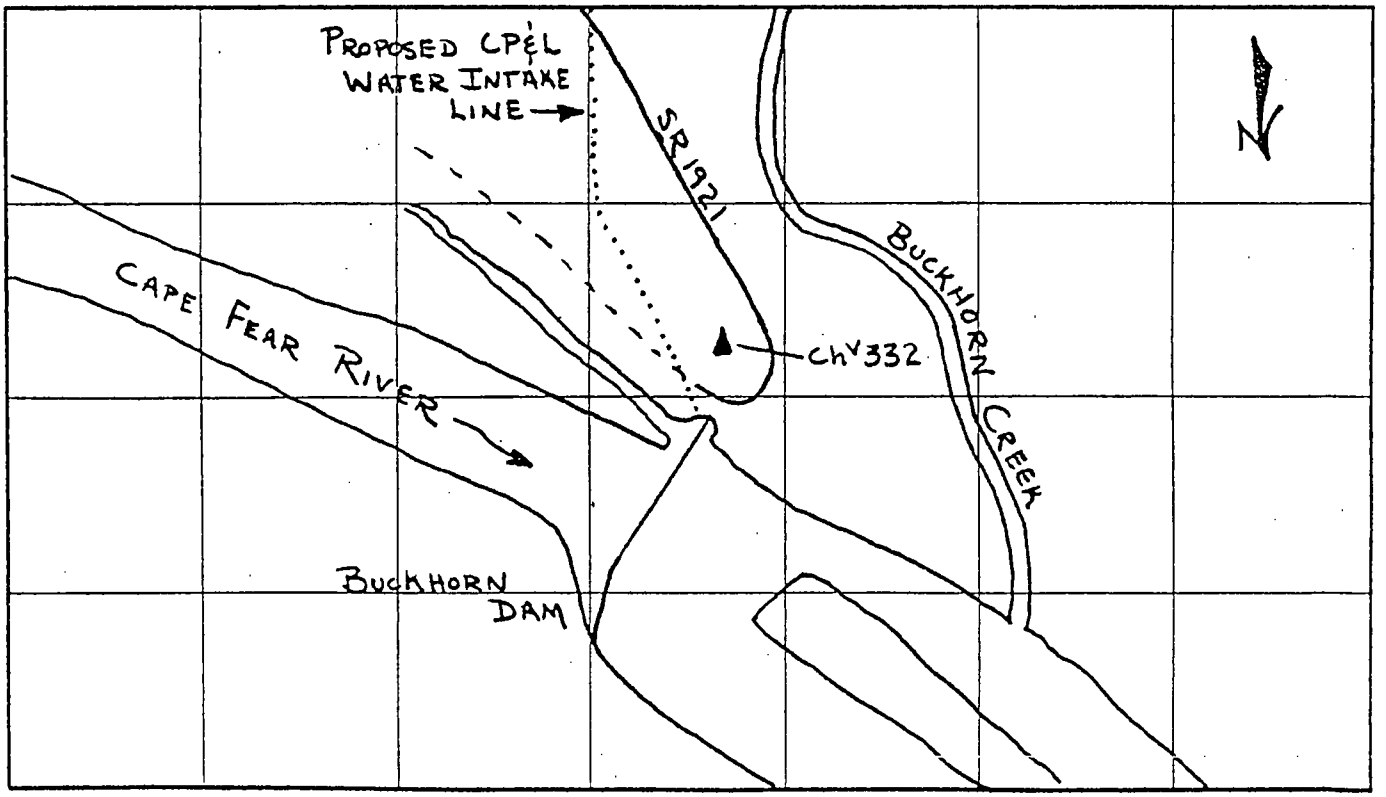
Local history

Plowing history Vegetation scrub pines

Type of soil mottled tan clay overlying red clay Erosion moderate

Remarks: A slight scatter of flakes was found in a 75 by 100 foot area. This site probably represents a short-term encampment during the Archaic Period. No deposition has occured in the site vicinity, therefore no material is likely to be found in situ; no further investigation of this site is required.

Sketch Map



Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer Trawick Ward and Michael Trinkley Date 6.14.77

MEMO TO: Dr. Joffre L. Coe

FROM: Trawick Ward

SUBJECT: Re-Survey of a Segment of the Shearon Harris Nuclear Power Plant Makeup Water System

DATE: December 4, 1979

1. The Project. The makeup water system was originally surveyed in June, 1977. At this time the entire corridor had not been staked out, and all the impact zone was ensconced by heavy woods. Recently a segment of the corridor extending from the Cape Fear River to N.C. 42 was cleared. Because of the adverse conditions encountered during the initial survey, it was felt that a re-survey of this area, particularly the bluffs along the Cape Fear River and Buckhorn Creek, would be beneficial.

2. The Survey. The cleared segment was walked by a two-man team, and the surface was inspected for evidence of aboriginal or historic activity. Although rye grass had been sowed, surface visibility was good because of erosion and the recent frosts. Conditions were significantly better than those encountered during the first survey.

3. Survey Results. Surprisingly only one small lithic scatter consisting of 4 random rhyolite flakes was found. A careful inspection of the high bluffs between Buckhorn Creek and the Cape Fear River failed to turn up any traces of prehistoric activity. The one site that was found was located on the flank of a fairly wide bluff west of and adjacent to S.R. 1921, overlooking the Buckhorn Creek bottoms. This sparse evidence of prehistoric activity was predicted from the results of the original survey, however, it

was believed that the improved ground surface conditions would lead to the discovery of more than one small lithic scatter.

The reason for the lack of sites may be attributed to the fact that vein quartz outcrops were everywhere exposed creating a rocky, uneven surface. It has been noted in other areas that there is usually a negative correlation between such outcrops and the location of prehistoric sites. Either the quartz indicates severe erosion, and most of the cultural materials have been scoured out and re-deposited elsewhere or such areas were simply not attractive to aboriginal populations--for whatever reasons.

3. Recommendations. Because of the failure to uncover additional significant sites, the original recommendations are reinforced and further investigations are not warranted.

REPORT OF INVESTIGATION OF SUSPECTED REVOLUTIONARY WAR ENTRENCHMENT

Holly Springs, North Carolina

By L. E. Babits
Archaeology Section

On 29 April 1974, an archaeologist from the Archaeology Section, Department of Cultural Resources investigated reputed revolutionary war earthworks near Holly Springs, North Carolina.

Accompanied by Calvin Ragan and Mrs. Irma Ragan Holland, the archaeologist crossed Norris Creek on foot about 2½ miles northeast of the junction of Federal Road and Avent Ferry Road.

The site is mostly overgrown with young timber. There are also several large oaks which appear to be approximately 100 years old. There is widespread poison ivy and poison oak but few brambles along the creek. Toward the slope of the south side of the creek, the trees thin out. There is an old road still visible crossing the creek and ascending the bluff.

On the south side of Norris Creek there are more than 20 depressions about three feet wide and varying from five feet to eight feet in length. The orientation varies with the slope of the hill but the broad side of these pits usually faces the creek in a north to northwest direction. They are found at varying altitudes and on both sides of the old road.

Some of these pits have trees over six inches in diameter growing in them, indicating some age. As children the Ragan's played in them and recovered "minie" balls. From descriptions of these bullets, they were probably conical bullets of the minie pattern, rather than round balls.

No digging was done and no artifacts were recovered.

Several possibilities present themselves when interpretation is considered. There is a possibility that the features are natural. This is very unlikely given their location at various elevations, the sharp configuration of the sides and corners, and the piled earth on the downhill side.

A second possibility was offered that the pits could be from prospecting activities as there is a large amount of quartz in the area. This is also unlikely as the line of pits does not follow any observable outcrop of quartz but appears to have been cut into dirt rather than a mineral vein.

A third possibility is that the pits are remnants of graves. This does not appear likely since there is a graveyard at the top of the bluff along the old road. The graves observed in this cemetery do not conform to the pits on the bluff. The graves are shallow depressions, wider than the pits, and obviously sunken. The pits, however, are dug out and filled with leaves.

The fourth possibility is that the pits are entrenchments. Since entrenments were uncommon during the Revolutionary War, except in sieges which did not occur in North Carolina, and since there was no activity in this area relating to the War of 1812, it is suspected that the pits date from the Civil War.

Since the bullets found on the site some time ago were minie balls, it would seem that the Civil War is the period of origin. During the Revolution, bullets were ball shaped rather than conical.

The orientation of these pits across an old road, facing north would seem to suggest that they are of Federal, rather than Confederate, construction. During 1865, Federal forces did more through the area in a general northwestward direction, heading toward Durham. The pits are not in a position to fire south, but are fairly well suited to fire northward.

It is the opinion of the investigating archaeologist that the pits represent the remains of a small Union army outpost covering the approaches

to a f. . over Norris Creek during April 1865. Further research would b necessary before this could be confirmed, but any such activity would probably have been included in the Official Records of the War of Rebell

Site No.....

Site Name.....

Photo Nos.....

Location South of State Road 1115, midway between Hollemans Crossroads and the junction of SR 1115 on Wake County DOT map. At the point of the road number between the two junctions, head due south across an open corn field and cross the creek. Climbing the slope to the 35 foot level puts one on the line of pits.

Recorded on 27 April 1974

Owner ..... Address.....

Local history Traditionally thought to be Revolutionary War trenches

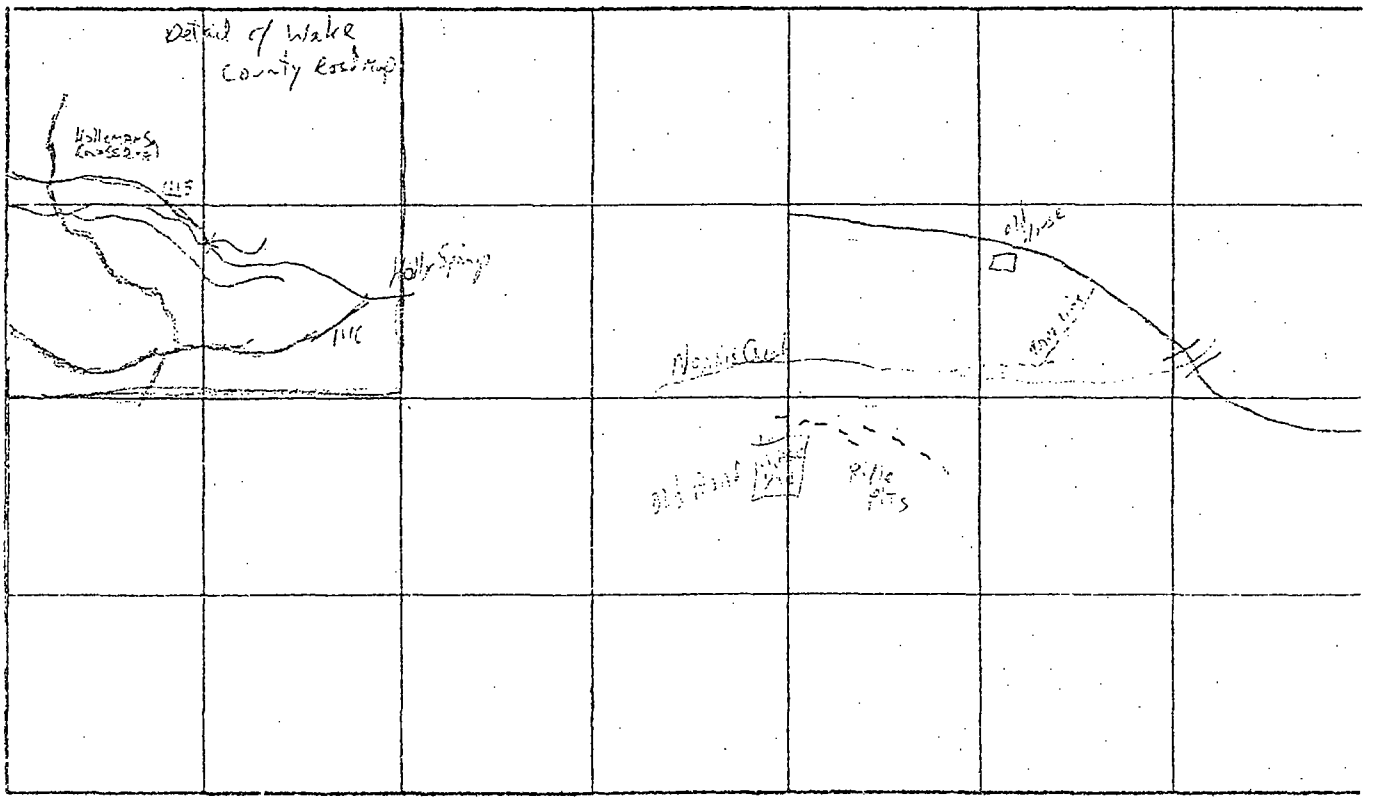
Plowing history none apparent. Vegetation 2nd rate timber

Type of soil rocky Erosion moderate

Remarks: The site consists of a series of pits filled in with leaves and some erosion dirt along the north face of a bluff on the south side of Norris Creek. The dirt from these pits is on the downhill side. An old road runs through the midpoint of the line of pits heading southeast. The regular shape of the pits, as well as their positions along the tactical crest of the slope, the downhill deposition of fill, and the lack of other evidence of mining suggests the pits may be rifle pits.

Since there was no Revolutionary War activity in the area and, since the projectiles recovered were of the conical type, I would be pretty certain that the pits are of the Civil War. Since they face north, they are probably Union from April 1865.

Sketch Map



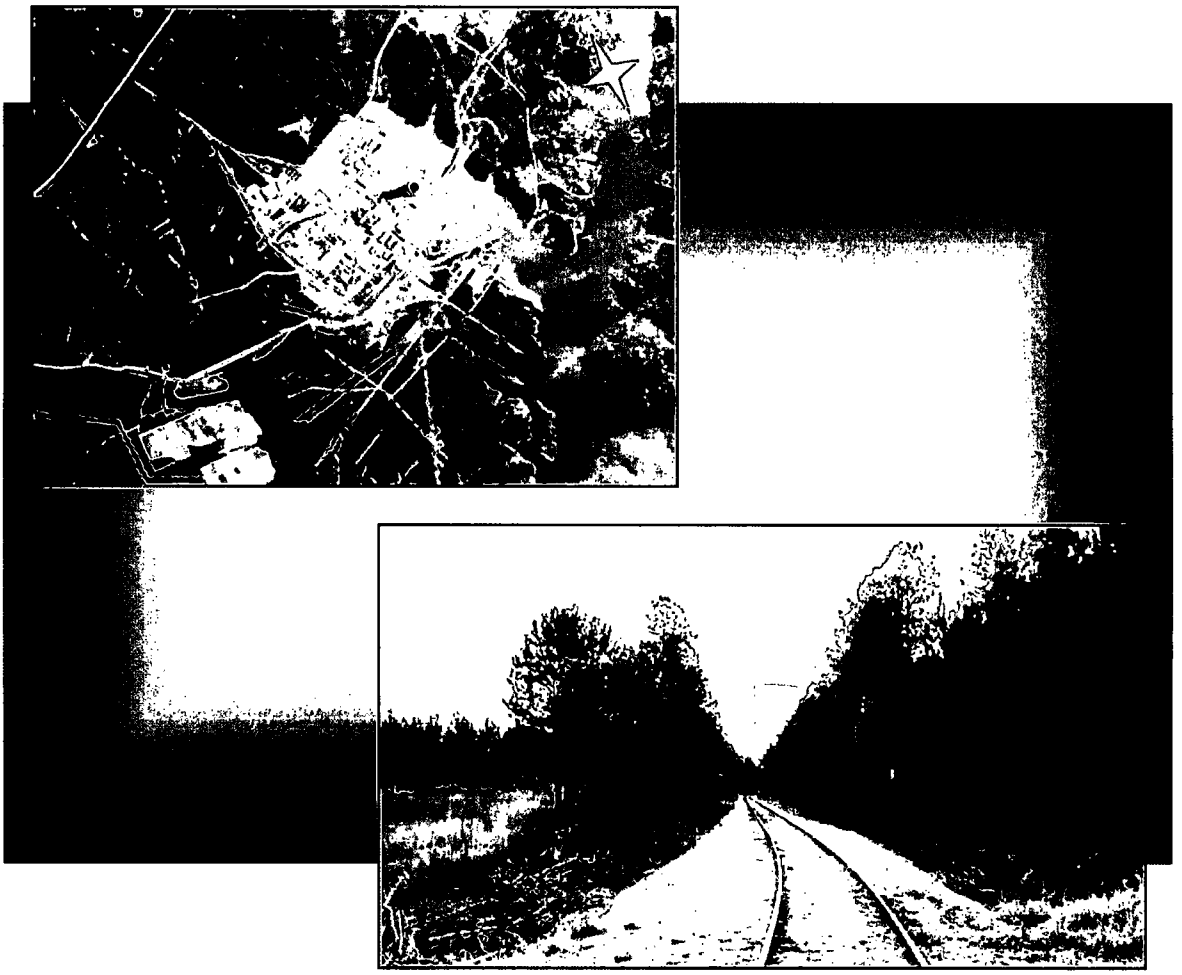
Show relationship to nearby sites, access roads, streams, and major landmarks.

Observer ..... Date.....

An Archaeological Survey of Portions of the

Shearon Harris Nuclear Plant

Wake & Chatham Counties, North Carolina



NEW SOUTH ASSOCIATES
PROVIDING PERSPECTIVES ON THE PAST

An Archaeological Survey of Portions of the

SHEARON HARRIS NUCLEAR PLANT

Wake and Chatham Counties, North Carolina

Report submitted to:
TETRA TECH NUS, Inc.• 900 Trail Ridge Road • Aiken, SC 29803

Report prepared by:
New South Associates • 6150 East Ponce de Leon Avenue • Stone Mountain, Georgia 30083

Shawn Patch – Principal Investigator
and Author

July 17, 2006 • Final Report
New South Associates Technical Report #1372

MANAGEMENT SUMMARY

From June 5-9, 2006, New South Associates conducted an archaeological survey of portions of the Shearon Harris Nuclear Plant (SHNP) in Wake and Chatham Counties, North Carolina. SHNP is proposing to construct two new reactors and associated support facilities in the immediate vicinity of the current facility. The area of potential effect (APE) for this undertaking included approximately 180 acres of land in and around the existing nuclear facility where new construction is proposed. The vast majority of this area was severely disturbed from construction activities in the 1970s. In this area two archaeological sites (31WA1599 and 31WA1600) and three isolated finds (31WA1601, 31WA1602, and 31WA1603) were located and identified. None of these resources meet the criteria for listing in the National Register of Historic Places (NRHP) and are recommended not eligible.

In addition, the plant is also in the process of renewing its operating license with the Nuclear Regulatory Commission (NRC). The APE for this undertaking included an assessment of 13 archaeological sites that have been recorded by avocational archaeologists along the shoreline of Harris Lake since the time of the lake's impoundment in the 1970s. All of these sites are currently submerged with the exception of 31WA538. Portions of this site were successfully revisited. This site does not meet the criteria for the NRHP and is recommended not eligible.

As a result, neither expansion of the existing facility nor license renewal will have an adverse effect to significant archaeological sites. No further archaeological work is recommended.

ACKNOWLEDGEMENTS

This project would not have been possible without the assistance of several key individuals, particularly those at Progress Energy, all of whom went out of their way to support our work. Paul Snead provided technical assistance, guidance, and several maps of the project area, Jim Nevill shared his knowledge of the construction history of the plant, and Mike Swing made available a boat and his time to ferry us to a remote site location. Phil Moore, of Tetra Tech NUS, also provided guidance and offered many useful suggestions.

Fieldwork was conducted with the assistance of Josh Blackmon, Sally Huber, and Adam Green, all of whom were enthusiastic, energetic, and dedicated despite some of the challenging conditions.

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I. INTRODUCTION

This report presents the results of an intensive archaeological survey of portions of the Shearon Harris Nuclear Plant (SHNP) located in Wake and Chatham Counties, North Carolina (Figure 1). This project was conducted in compliance with the National Historic Preservation Act (NHPA) of 1966, as amended, and its corresponding implementing regulations found at 36 CFR 800. Briefly, these regulations require federal agencies to consider the effects of their proposed actions and undertakings (e.g. licensing, permitting, or funding) on historic properties, and provide the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. Historic properties are defined as districts, sites, buildings, objects, or structures that are listed in, or eligible for listing, in the National Register of Historic Places (NRHP).

Two separate, but related, undertakings were addressed for this project. First, SHNP is currently in the process of renewing its operating license issued by the Nuclear Regulatory Commission (NRC) for the existing facility. The plant's operation would remain essentially unchanged and no new effects would occur. However, because 13 previously recorded sites are present along the shoreline of Harris Lake, some effort was required to assess their eligibility for the NRHP and potential effects to significant resources.

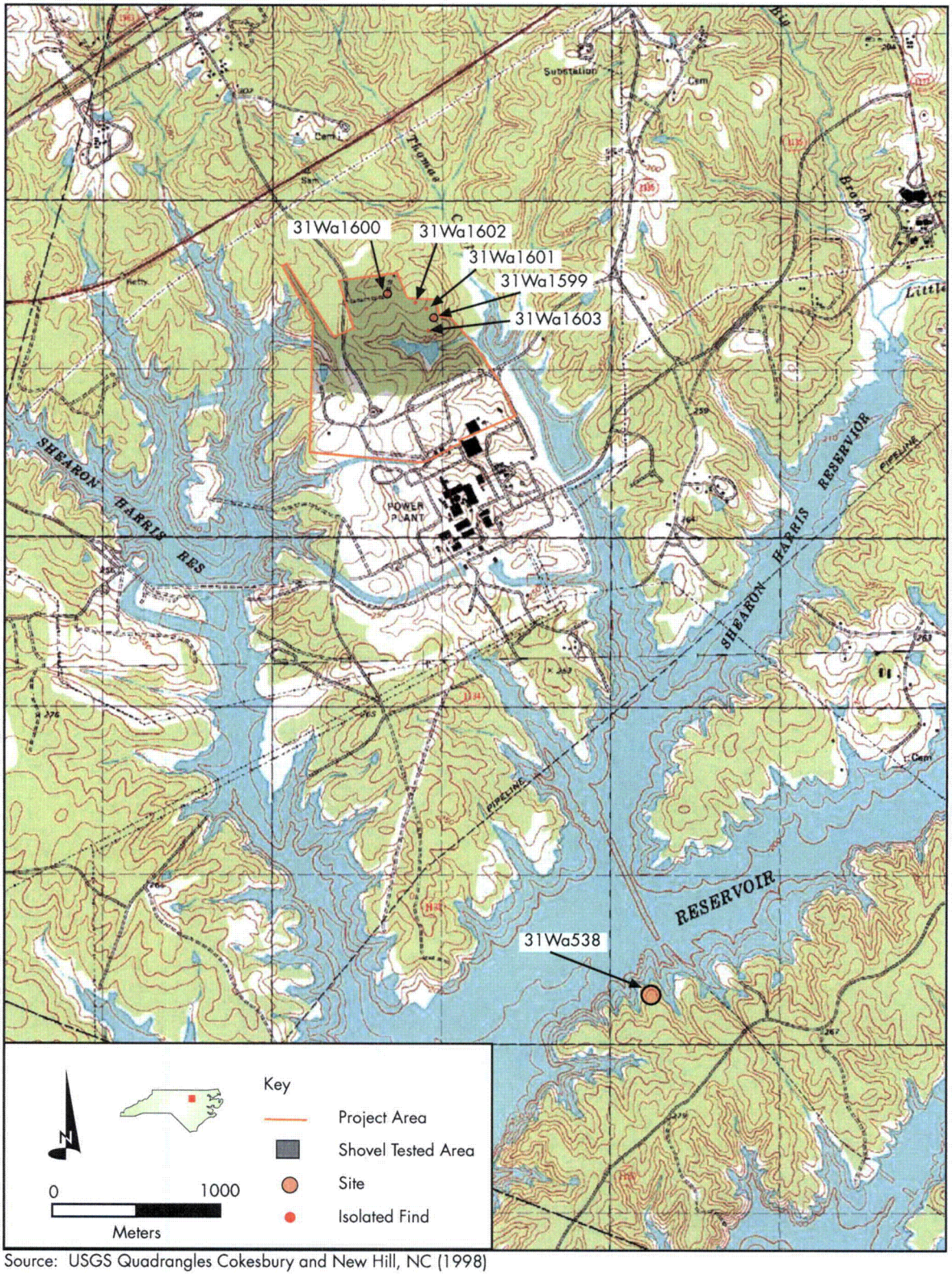
Second, SHNP is proposing to construct two new reactors and associated support facilities in the immediate vicinity of its main reactor. The area of potential effect (APE) for this undertaking is approximately 180 acres, all within the boundaries of the existing plant (Figures 2-3). Large portions of this area were cleared, graded, and filled at the time of initial construction in the 1970s (Figure 4). However, approximately 100 acres of land was determined to be relatively intact and undisturbed, with the possibility of intact archaeological sites.

The purpose of this survey was to locate and identify archaeological sites within the proposed project's APE, evaluate their significance for inclusion in the NRHP, and then consider the possible effects to these resources.

Fieldwork was conducted from June 5-9, 2006 under the direction of Shawn Patch, with assistance from Josh Blackmon, Sally Huber, and Adam Green. Shawn Patch returned to the project area on June 13, 2006 to revisit site 31WA538. Because of its remote location access to this site required the use of a boat provided by Harris Nuclear Plant and piloted by Mike Swing.

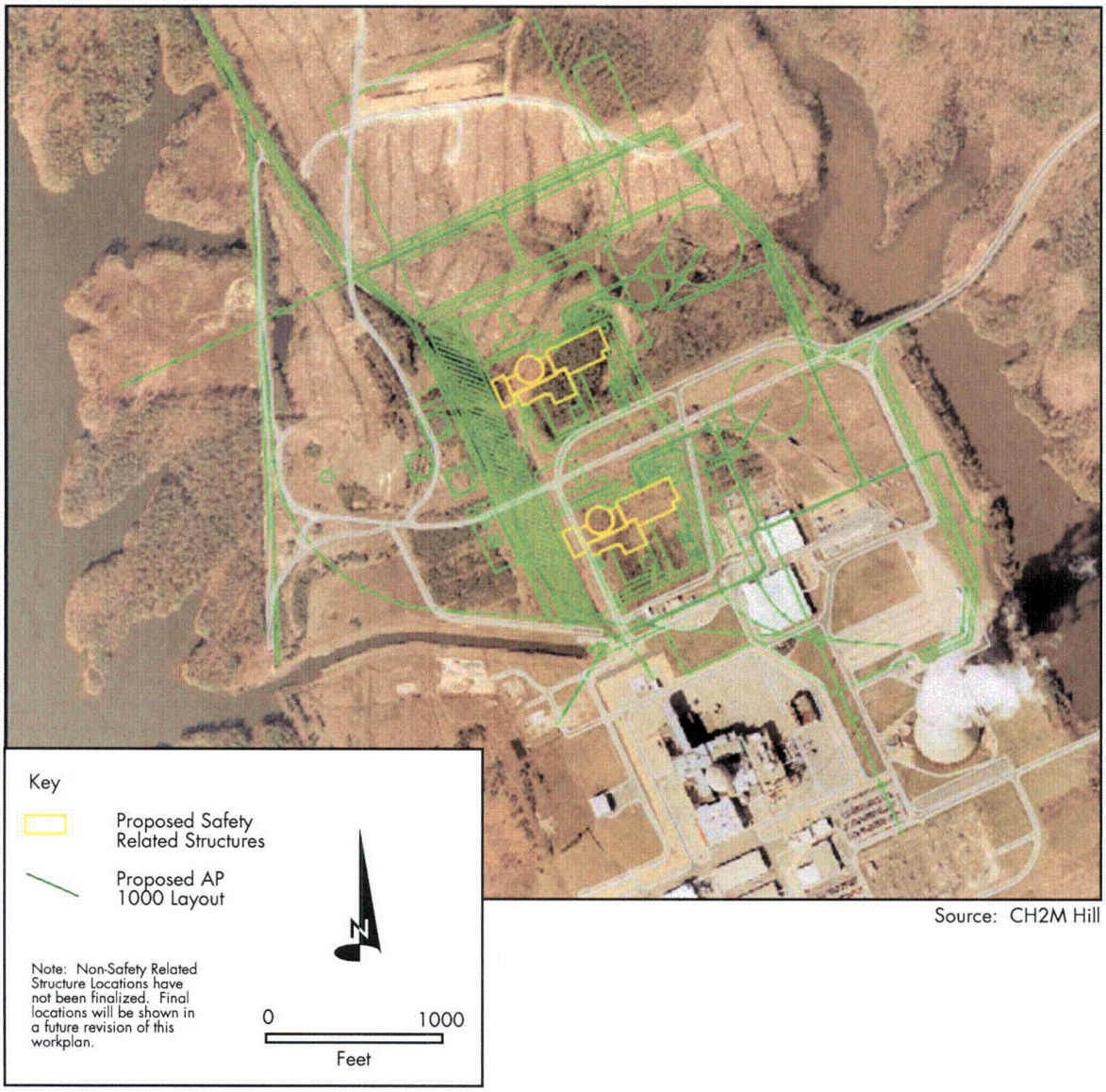
The remainder of this report discusses the environmental context (Chapter 2), cultural contexts (Chapter 3), methods (Chapter 4), results (Chapter 5), and recommendations (Chapter 6). Appendix A includes an artifact catalog.

Figure 1
Location of Project Area in Wake County, North Carolina



Source: USGS Quadrangles Cokesbury and New Hill, NC (1998)

Figure 2
Proposed New Construction Showing Reactors and Support Facilities



Source: CH2M Hill

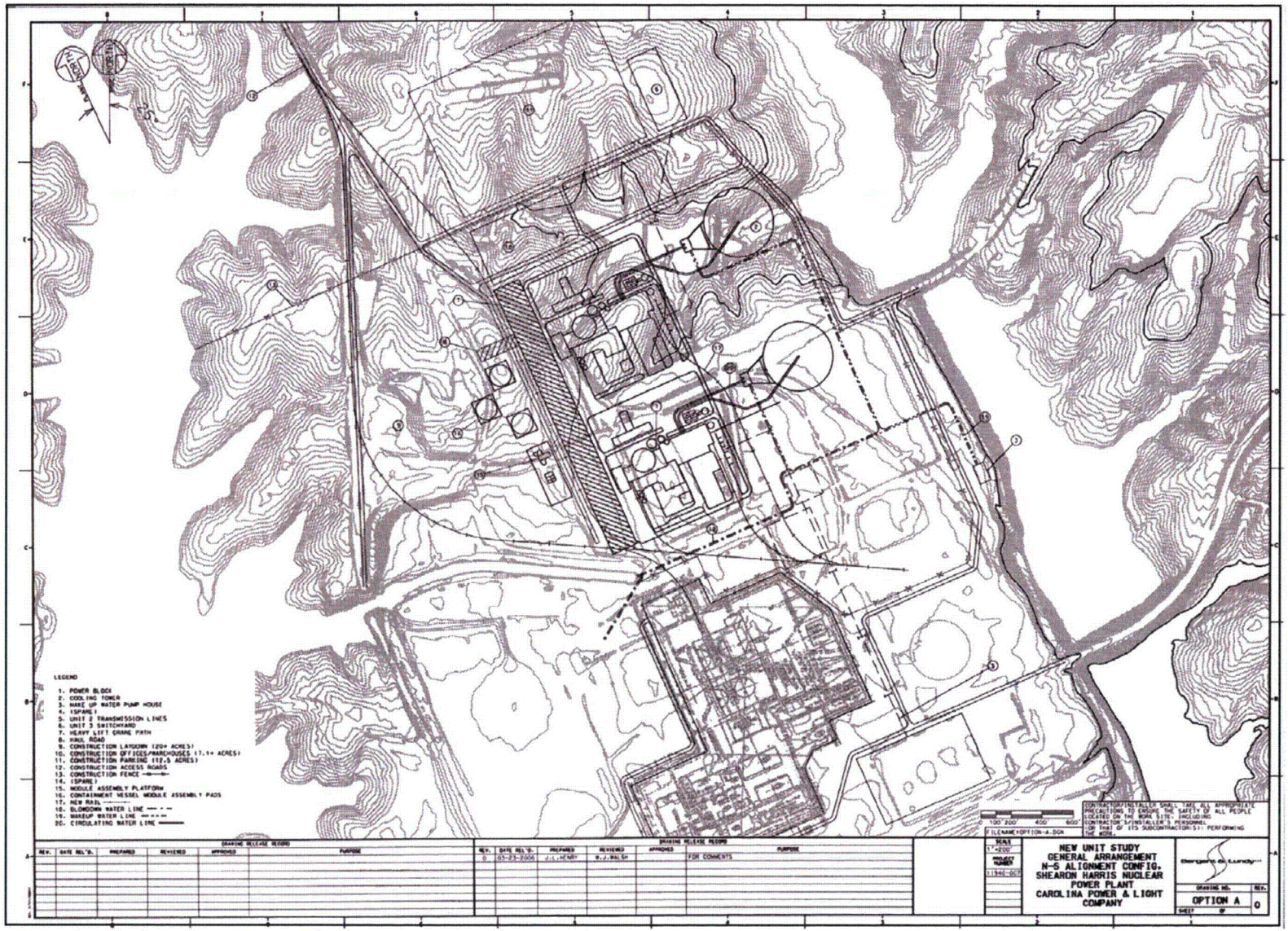


Figure 3
Detail of Proposed New Construction

Source: CH2M Hill

Figure 4
Aerial Photograph of Construction

Source: Progress Energy

II. ENVIRONMENTAL CONTEXT

Wake County is located in the eastern Piedmont physiographic province, an area of approximately 20,000 square miles between the Coastal Plain and Blue Ridge Escarpment. The Piedmont is essentially a highly dissected plateau dominated by well-rounded hills and ridges that trend northeast-southwest, with elevations ranging from 400' in the east to 2000' in the west. The characteristic topography of rounded and rolling hills is a direct result of stream action on rocks of unequal hardness. Three major river systems are present: the Dan River, which drains the northern portion; the Tar, Neuse, and Cape Fear Rivers, which drain the southern and eastern portions; and the Yadkin, Catawba, and Broad Rivers, which drain the western portion (Stuckey 1965:16). Of particular importance to the project area is the Cape Fear River, located only a few miles southwest of Harris Lake.

The Piedmont is well known for its diversity of lithic resources that were important to, and exploited by, prehistoric groups. The Carolina Slate Belt occupies much of the eastern Piedmont and is composed of volcanic and sedimentary rocks, most notably rhyolite, argillite, fine grained basalt and silicified slate. These rocks can be found in either primary outcrops (often related to quarrying activities) and as cobbles in secondary stream deposits. Quartz is also common and was widely used.

Soils in the project area belong to the Creedmoor-White Store association (Cawthorn 1970). These are found in gently sloping to hilly settings, are deep to moderately deep, and moderately well drained. They have a firm clayey subsoil and are derived from sandstone, shale, and mudstone. Both series are dominant in the western portion of the county and are typically found in forest conditions.

Soil conditions today are the result of destructive cultivation practices in historic times that have substantially altered the landscape. Soil depletion and land clearing led to severe erosion, particularly in the 1800s. By the 1930s conservation measures were introduced that helped restore soil productivity and stability. Ward (1983) points out the need to consider these factors when assessing Piedmont archaeological sites, particularly with respect to spatial and associational integrity. Upland sites may be the most susceptible to erosion and deflation, while floodplain and alluvial sites may be deeply buried under modern deposition.

Current understanding of paleoclimatic conditions is based on inferences from research outside the Piedmont and generalized reconstructions for the eastern United States (Delcourt and Delcourt 1981). Cooler and wetter conditions at the end of the Pleistocene yielded to a marked warming trend that also led to changes in vegetation and forest cover. Northern coniferous forests, dominated by spruce and pine, were slowly replaced by mixed hardwood forests, dominated by oaks and hickory, with pines common as conditions warmed further.

The modern climate is characterized by long, hot summers and short, cool winters. Highs in the summer average in the upper 80s while lows in the winter average in the upper 20s. Annual precipitation typically exceeds 45 inches, with afternoon thunderstorms common in the summer months.

III. CULTURAL CONTEXTS

Consideration of archaeological sites for the NRHP requires that they be evaluated within an appropriate historic context (Savage and Pope 1998:7). For an archaeological property evaluated for its information value, the historic context is the analytic framework within which the property's importance can be understood (Hardesty and Little 2000:13). To that end, a brief overview of the major cultural developments throughout prehistory and history for the project area is presented below, and provides the framework for assessing the significance of archaeological resources located and identified during this project. This overview has been drawn from a variety of sources including management documents, published historic contexts, and relevant regional research. Table 1 presents a generalized overview of major cultural periods in the project area.

Table 1. Major Cultural Developments in the North Carolina Piedmont.

Period		**Dates**	**Key Components/Phases**
Historic		A.D. 1700-	Euroamerican
Protohistoric		A.D. 1500-1700	Caraway
Woodland			
	Late	A.D. 800-1600	Uwharrie, Haw River, Dan River, Donnaha, Hillsboro, Early Saratown, Pee Dee
	Middle	300 B.C.-A.D. 800	Yadkin
	Early	500-300 B.C.	Badin
Archaic			
	Late	3000-500 B.C.	Savannah River
	Middle	6000-3500 B.C.	Stanly, Morrow Mountain I and II, Guilford, Halifax
	Early	8000-6000 B.C.	Hardaway, Palmer, Kirk
Paleoindian		10,000-8000 B.C.	Clovis, Cumberland, Quad, Simpson, Dalton, Hardaway

PREHISTORIC OVERVIEW

PALEOINDIAN

The Paleoindian period is commonly dated from 10,000 to 8000 B.C. Traditional hypotheses regarding human entrance into the New World have focused on access over the Bering Land Bridge and the corresponding ice-free corridor (Anderson et al. 1990:3).

However, in recent years there has been wider agreement in the professional community that early models of "Clovis first" need to be revised in the face of a growing body of evidence for earlier occupations (Cactus Hill in Virginia and Topper in South Carolina).

The most easily recognized artifacts from this period are the large, lanceolate, and often fluted projectile points, including Clovis (early) and Hardaway-Dalton (later). They are typically well made and it appears that these groups deliberately selected high quality stone for tool production. Other artifacts such as endscrapers, burins, and blades may also be diagnostic, although context is critical. Direct evidence for megafauna exploitation is rare in the Southeast, and it is likely that these groups actually practiced a much more generalized subsistence strategy. Few details are known about the settlement and subsistence systems of these groups, although they are frequently assumed to have been highly mobile, moving seasonally in response to different resources, and relatively low in population.

ARCHAIC

The Archaic period is dated from approximately 8000 to 500 B.C., and is frequently divided into early, middle, and late subperiods based on specific projectile point types. Its timing coincides with the onset of Holocene climatic conditions, a period that was warmer and wetter than the late Pleistocene. In addition to changes in temperature and precipitation, sea levels rose dramatically as continental glaciers began to melt. Human responses to these changes included increased population, expansion into new environmental zones, and regional variations in point styles.

Archaic groups are frequently assumed to have been highly mobile in response to seasonally available resources. Site types are typically divided into base camps (residential) and resource extraction or task specific sites (Ward 1983). The increase in tool diversity and locations of sites are often interpreted as an expression of an expanded subsistence and settlement system. Several models have been proposed for the Archaic period settlement and subsistence. Anderson and Hanson (1988) have proposed a drainage-based system, with bands of 50-150 people that roamed an entire drainage system throughout the year exploiting a variety of resources. Daniel (1998) has offered a competing model based on the presence and availability of high quality stone used in tool production.

Definition of the Archaic period sequence is largely due to Coe's (1964) work at several well-known and stratified sites. Projectile point types for the Archaic period include Palmer and Kirk (early), Stanly, Morrow Mountain (I and II), Guilford, and Halifax (middle) and Savannah River (late). During the Late Archaic two important technological innovations were added: soapstone, used for cooking slabs and vessel manufactures, and fiber tempered pottery. It is also during the Late Archaic that more permanent settlements are established and there is some evidence for intensive occupations.

WOODLAND

The Woodland period is dated from approximately 500 B.C. to A.D. 1600 and differs from the preceding Archaic period in several important ways. Hallmarks of this period are generally considered to be the appearance of pottery production on a large scale, more semi-sedentary settlements, and horticulture (Ward and Davis 1999:76). Our understanding of the Archaic to Woodland transition is somewhat muddy largely due to a high incidence of sites with artifacts from both periods.

In general, the Woodland is a time of increased sedentism with adaptive strategies focused on mixed hunting and intensive collecting. More permanent settlements are common in alluvial settings with structural remains, storage pits, and burials, all of which indicate an increase in social complexity and stratification. Ward (1983) indicated that there is little direct evidence for the presence of widespread maize agriculture and suggests it was not of major importance until the Late Woodland. Cultural developments were slow, gradual, and internal, with few outside influences (Ward and Davis 1999:78). As agriculture grew in importance so too did village life and social complexity, although hunting and gathering continued as a supplemental dietary force. This continuity is referred to as the Piedmont Village Tradition (Ward and Davis 1999:78-79).

Temporal divisions within the period frequently rely on changes in pottery styles, which are believed to be chronologically sensitive. The Early Woodland is typically characterized by the Badin series, with cord and fabric marked, net impressed, and plain types. Yadkin series ceramics, distinguished by quartz temper, are also present at this time but become more prevalent during the Middle Woodland along with large triangular projectile points. The Badin and Yadkin series are not always easily distinguished and may represent variation within an assemblage or different points along a technological continuum. By the Late Woodland large and small sites are focused on the floodplains of major streams and small triangular points such as Uwharrie, Caraway, and Pee Dee types are common.

Throughout the larger Southeast the classic Mississippian period is marked by the appearance of large villages, often times palisaded, public architecture, earthworks, a reliance on maize agriculture, the development of a ruling elite, and a hierarchical structure within territorially defined chiefdoms. Temple mounds are common along with associated minor ceremonial centers, villages, hamlets, and small farmsteads. With the exception of the Town Creek Mound in Montgomery County, however, these aspects are typically not found in the North Carolina Piedmont.

While the rest of the Southeast may have experienced a full-blown Mississippian adaptation, groups in the Piedmont appear to have maintained Late Woodland adaptive strategies, although the Pee Dee culture likely did exert some influence in the area. The Pee Dee were heavily influenced by the South Appalachian Mississippian tradition rather than the Piedmont Village Tradition (Coe 1995; Ward and Davis 1993). The distinctive pottery, with plain, complicated stamped, simple stamped, and cord-marked types, show a strong connection with other Mississippian cultures to the south and west.

By approximately A.D. 1500 Siouan groups were present along the Haw, Eno, and Flat Rivers. This native group was the first to experience contact with European traders and sites from this period often contain glass beads, clay pipes, gunflints, iron axes, and copper bells (Ward 1983; Ward and Davis 1993).

HISTORIC OVERVIEW

Between the 1620s and 1670s there was a marked increase in contact between Native American groups and Europeans. By that time traders from Virginia were making regular visits to the Piedmont. In 1701 John Lawson visited the area and by the 1730s there was an increasing flow of immigrants from Virginia, Maryland, Pennsylvania, and the North Carolina Coastal Plain. Wake County was established by an act of the North Carolina Legislature in 1771 (Corbitt 1987). By 1792 the capital city of Raleigh had been chosen and laid out, although growth was slow for several decades. There was no direct military action in the Wake County area during the Civil War because the war ended as Sherman approached Raleigh from Goldsboro.

Due to the rural nature of the area, agriculture was the dominant activity through the 18th and 19th centuries, with all suitable alluvial and upland environments in cultivation. Until the 1820s subsistence farming prevailed, with a focus on corn, dairy, and hogs. With the establishment of transportation routes and infrastructure, however, the emphasis changed to market-oriented production. After the Civil War, with the emergence of the tenant farming system, production changed dramatically toward cash crops like cotton and tobacco. These practices in turn led to severe soil depletion and erosion. Toward the end of the 19th and beginning of the 20th centuries demographic patterns changed as people left farms and headed for urban areas.

PREVIOUS RESEARCH IN THE AREA

The area around Harris Lake has been the subject of numerous archaeological projects over the last 40 years. Several intensive studies were conducted prior to the inundation and construction of B. Jordan Reservoir, located just a few miles northwest of the project area (Clagget and Cable 1982; Fitting 1979; McCormick 1969, 1970). Ward (1978, 1979) conducted the original survey for the Shearon Harris cooling lake. In more recent years several additional compliance related projects have been undertaken in close proximity to Harris Lake including a regional airport (Lautzenheiser 1988), a low-level radioactive waste disposal site (Webb 1992), and portions of the Western Wake Expressway (Millis and Pickett 2002).

Ward's (1978) original work in what was to become Harris Lake covered approximately 4000 acres of land up to the 220' contour. At the time of this work more than 95% of the survey area was heavily wooded. It is clear that survey methods then were focused almost exclusively on surface inspection.

In fact, Ward (1978:3) clearly indicated that despite the vegetation and heavy forest cover, there "was a complex of logging roads and farm trails [that] allowed access and provided transects with good surface visibility" and that "in areas of dense ground cover that prevented surface inspection large patches were raked clear in an attempt to reveal any concealed artifact clusters". From a critical and modern perspective, Ward's work was limited in both its methodological rigor and intensity.

Despite the limited scope of this work, Ward successfully identified 37 sites, all but one of which was prehistoric. These sites represent a wide range of periods and settings, although most were interpreted as Archaic because of the lack of ceramics and high frequencies of lithics. None of these sites were recommended for additional work.

Lautzenheiser (1988) performed a survey of approximately 440 acres just east of Harris Lake for a regional airport expansion. The survey area included uplands between Utley Creek and Norris Branch. Of the 13 sites identified as a result of this project, eight were prehistoric (all lithic artifacts) and five dated to the historic period. Despite strong evidence for widespread use of this area, the prehistoric sites were found to be in poor condition with their spatial and depositional integrity highly compromised by historic farming practices. In addition, no diagnostic artifacts were recovered.

Of the archaeological work conducted to date in the immediate vicinity of Harris Lake, Webb's (1992) is probably the most systematic. This survey of approximately 847 acres included a wide range of ecological and topographic zones and resulted in the identification of 73 sites. Of these 57 were recommended not eligible for the NRHP, 10 were avoided, and six were recommended for additional testing to firmly evaluate their eligibility.

In a survey for a 12.5 mile segment of the Western Wake Expressway, Millis and Pickett (2002) identified 14 sites, 11 isolated finds, and one cemetery. The vast majority of these were prehistoric, low-density, non-diagnostic lithic scatters located on deflated/eroded landforms. Interestingly, the survey strategy focused specifically on high probability areas with limited investigation of other areas, although the results were somewhat unexpected because most sites were identified in the low probability areas. Millis and Pickett (2002:87) concluded that simply focusing on high probability targets is probably insufficient for the identification of archaeological sites.

PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL RESOURCES

A review of the site files maintained at the North Carolina Office of State Archaeology (NCOSA) revealed the presence of 50 archaeological sites within the boundaries of the existing pool (Tables 2-3). Ward (1978) identified 37 sites, all of which are now submerged in Harris Lake. Thirteen additional sites were recorded in 1982, while the lake was filling (Table 3). They were not recorded by professional archaeologists and have not been previously evaluated for inclusion in the National Register of Historic Places (NRHP). Very few details for these sites are available beyond general locations and in some cases indications of cultural affiliation. We attempted to revisit these sites and these efforts will be discussed in the Results section of the report.

Table 2. Sites Identified During Ward's (1978) Archaeological Survey, Prior to the Inundation of Harris Lake.

Site	Date Recorded	Type	Component(s)	NRHP Status
31CH333	1977	prehistoric	Woodland	Not Eligible
31CH334	1977	prehistoric	unknown	Not Eligible
31CH335	1977	prehistoric	unknown	Not Eligible
31CH336	1977	prehistoric	unknown	Not Eligible
31CH337	1977	prehistoric	unknown	Not Eligible
31CH338	1977	prehistoric	Archaic	Not Eligible
31CH339	1977	prehistoric	Archaic	Not Eligible
31CH340	1977	prehistoric	unknown	Not Eligible
31CH341	1977	prehistoric	unknown	Not Eligible
31CH342	1977	prehistoric	unknown	Not Eligible
31CH343	1977	prehistoric	Archaic	Not Eligible
31CH344	1977	prehistoric	unknown	Not Eligible
31CH345	1977	prehistoric	unknown	Not Eligible
31CH346	1977	prehistoric	unknown	Not Eligible
31CH347	1977	prehistoric	unknown	Not Eligible
31CH348	1977	prehistoric	Protohistoric	Not Eligible
31CH349	1977	prehistoric	unknown	Not Eligible
31CH350	1977	prehistoric	Archaic	Not Eligible
31CH351	1977	prehistoric	Archaic	Not Eligible
31CH352	1977	prehistoric	Archaic	Not Eligible
31CH353	1977	prehistoric	unknown	Not Eligible
31CH354	1977	prehistoric	Protohistoric	Not Eligible
31CH355	1977	prehistoric	unknown	Not Eligible
31WA184	1977	prehistoric	unknown	Not Eligible
31WA185	1977	prehistoric	Archaic	Not Eligible
31WA186	1977	prehistoric	unknown	Not Eligible
31WA187	1977	prehistoric	unknown	Not Eligible
31WA188	1977	prehistoric	unknown	Not Eligible
31WA189	1977	prehistoric	Historic	Not Eligible
31WA190	1977	prehistoric	Woodland	Not Eligible
31WA191	1977	prehistoric	unknown	Not Eligible
31WA192	1977	prehistoric	unknown	Not Eligible
31WA193	1977	prehistoric	unknown	Not Eligible
31WA194	1977	prehistoric	unknown	Not Eligible
31WA195	1977	prehistoric	unknown	Not Eligible
31WA196	1977	prehistoric	Archaic	Not Eligible
31WA197	1977	prehistoric	Archaic	Not Eligible

Table 3. Sites Identified by Advocational Archaeologists Before Harris Lake Reached Full Pool.

Site	Date Recorded	Elevation	Site Type	Component(s)	NRHP Status
9CH605	2/17/82	195′	unknown	unknown	unknown
9WA528	2/3/82	210′	prehistoric	Archaic, Woodland	unknown
9WA529	2/3/82	225′	prehistoric	Archaic, Woodland	unknown
9WA530	2/17/82	215′	prehistoric	Archaic, Woodland	unknown
9WA531	2/17/82	210′	unknown	unknown	unknown
9WA532	2/17/82	205′	prehistoric	Woodland	unknown
9WA533	2/17/82	198′	prehistoric	Archaic, Woodland	unknown
9WA534	2/17/82	210′	prehistoric	Archaic, Woodland	unknown
9WA535	2/17/82	220′	prehistoric	Archaic, Woodland	unknown
9WA536	2/17/82	200′	prehistoric	Archaic	unknown
9WA537	2/17/82	210′	prehistoric	Woodland	unknown
9WA538	2/17/82	215′	prehistoric	Archaic	unknown
9WA539	2/17/82	220′	prehistoric	Archaic	unknown

These sites are all prehistoric and range in size from a few artifacts to much larger assemblages. The Archaic period is probably the best represented with numerous projectile points of the Palmer, Kirk, Morrow Mountain (I and II), Guilford, and Savannah River types, and other lithic artifacts. Many sites also have strong Woodland components, including ceramics, with the Badin and Yadkin series most common.

The forms for these sites do not include any reporting information so it is difficult to evaluate the quality and accuracy of the locations. However, based on the recording dates, locations, and information from HNP regarding the lake impoundment rates, it appears that these sites were all identified in clear-cut areas along the shoreline as the lake was filling and well before it reached full pool in 1983. This would help explain why they were not identified during Ward's original work in the 1970s and why they are submerged today. It does not appear that any of the sites were investigated beyond surface inspections so it is almost impossible to draw any conclusions about their spatial and depositional integrity.

When considered together these studies clearly indicate an overwhelming occupation of the area throughout the prehistoric period. Although occupations no doubt varied and fluctuated through time it does appear relatively constant. Many of the known sites are in upland settings and likely reflect task specific and resource extraction activities.

IV. METHODS

ARCHIVAL METHODS

Prior to beginning fieldwork we conducted a literature review and historical research. In May 2006 staff from New South Associates (NSA) visited the NCOSA to review information on existing archaeological sites and previous work in and around the project area. At that time we discussed the project with John Mintz of the NCOSA.

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY CRITERIA

The significance of historic properties is evaluated according to the criteria established in 36 CFR Part 60.4, Criteria for Evaluation. 36 CFR 60.4 states that the quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the distinctive characteristics of a type, period, or method of construction, or that may represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

Assessing significance is probably the most difficult part of the Section 106 process because there are different types of significance (Schiffer and Gummerman 1977:239-247) Under Criteria A, B, and C, an archaeological property must have demonstrated its ability to convey its significance, while under Criterion D, only the potential to yield information is required (Hardesty and Little 2000:33; King 1998:77-80). Criterion D is frequently used for the evaluation of archaeological sites. Archaeological sites identified within the project's APE were evaluated according to the criteria outlined above, with particular emphasis on their potential to contribute new and significant information to local, regional and national research. The quality of archaeological information must be addressed in terms of historic contexts, research questions, and data requirements needed to answer specific questions. Integrity, artifact density, and potential for intact features and subsurface deposits are some of the key factors that ordinarily are considered during the evaluation of a site for inclusion in the NRHP.

FIELD METHODS

An intensive pedestrian survey was conducted for the project area by a four-person crew. Efforts to locate and identify archaeological resources in the field relied on a combination of two primary methods: shovel testing and surface inspection of exposed areas. In the new construction area systematic shovel tests were placed at 30 meter intervals in areas identified as having high site potential, such as terraces above creeks, ridge tops, and gently sloping or level areas. In most cases crew members walked in parallel transects spaced approximately 30 meters apart. Additional shovel tests were excavated in a judgmental fashion as field conditions warranted. The first positive shovel test was designated 0N0E and radial tests were then excavated in a 15 meter interval grid along the major axes (typically oriented in the cardinal directions). Shovel tests were not excavated on steeply sloping terrain (greater than 20 degree slope), low lying/wet areas, highly disturbed areas or areas with more than 25% surface visibility. Shovel tests consisted of approximately 30 centimeter diameter holes excavated to subsoil, with all fill screened through 0.25" (0.64 centimeter) mesh hardware cloth. For site revisits we used the same methods but also focused on the shoreline areas.

For this project, an archaeological site was defined as any shovel test producing three or more artifacts or any two shovel tests in close proximity (less than 30 meters) producing at least one artifact each, or any surface collection with more than three artifacts. To more precisely define site boundaries, additional shovel tests would be excavated in a cruciform pattern at close intervals (5-15 meters). Two or more negative shovel tests define a site boundary.

LABORATORY METHODS

All artifacts recovered were examined in the laboratory at the conclusion of field research. The artifacts were cleaned and analyzed at NSA's Stone Mountain office. The analysis of the collection followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains. All artifacts were prepared for curation according to North Carolina standards.

V. RESULTS

ARCHAEOLOGICAL SURVEY

Because of the nature of the two undertakings, separate areas are included here and discussed individually: the proposed new construction around the existing facility and the shoreline of Harris Lake. In the area designated for new construction two archaeological sites and three isolated finds, were identified (Table 4).

Table 4. Archaeological Resources Located and Identified in the New Construction Area.

Official Number	Resource Type	Component	NRHP Recommendation
31WA1599	Site	Prehistoric	Not eligible
31WA1600	Site	Prehistoric	Not Eligible
31WA1601	Isolated Find	Prehistoric	Not Eligible
31WA1602	Isolated Find	Prehistoric	Not eligible
31WA1603	Isolated Find	Prehistoric	Not eligible

Initial work began inside the existing plant facility, known as the "Owner Controlled Area" (OCA). This area includes all buildings and infrastructure associated with the nuclear plant itself and is best described as highly developed. When the plant was originally constructed in the 1970s most of the land was graded and filled, as needed, to achieve a consistent and level contour at approximately 260' (Jim Nevill, personal communication 2006).

All of the proposed new construction will occur north and west of the existing facility, an area roughly bisected by an access road that runs east-west. Immediately south of this access road is land that was obviously graded in the 1970s; it is flat, uniform, and there are railroad tracks running from the plant (Figure 5). West of the tracks has also been impacted as shown on an aerial photograph from the 1970s and verified in the field (Figure 6). These areas were not subjected to intensive field survey.

The focus of our field investigations was the northern sections. Landforms in these areas are relatively intact, although it does appear that they have been logged at some time over the past 30 years. Vegetation varies considerably, with mixed hardwoods and planted pine the most common. In those areas that were logged and cleared undergrowth is thick and heavy, consisting largely of briars. There is a large pond located approximately in the center of the survey tract fed by a small stream and laced with a series of beaver dams. The far northern portion of the survey area is a private landfill used by HNP that is no longer in service (Figures 7-8).

Figures 5 and 6

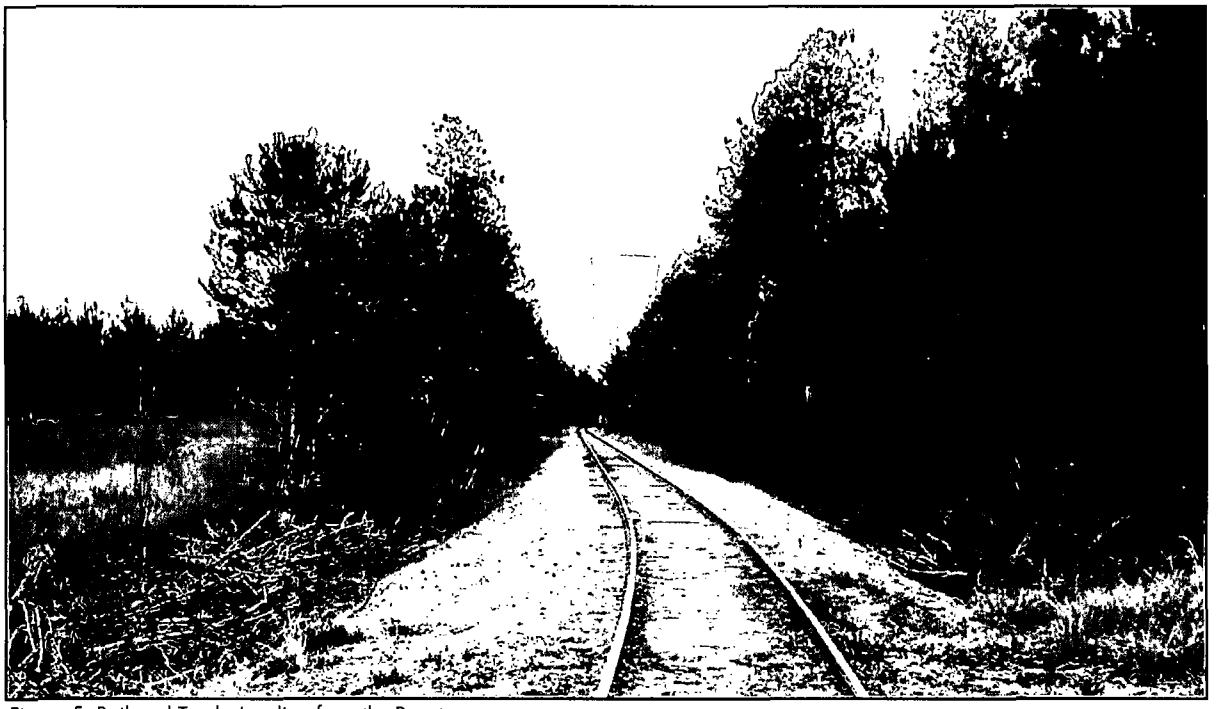


Figure 5. Railroad Tracks Leading from the Reactor

Figure 6. Western Portion of the Existing Plant

Figures 7 and 8

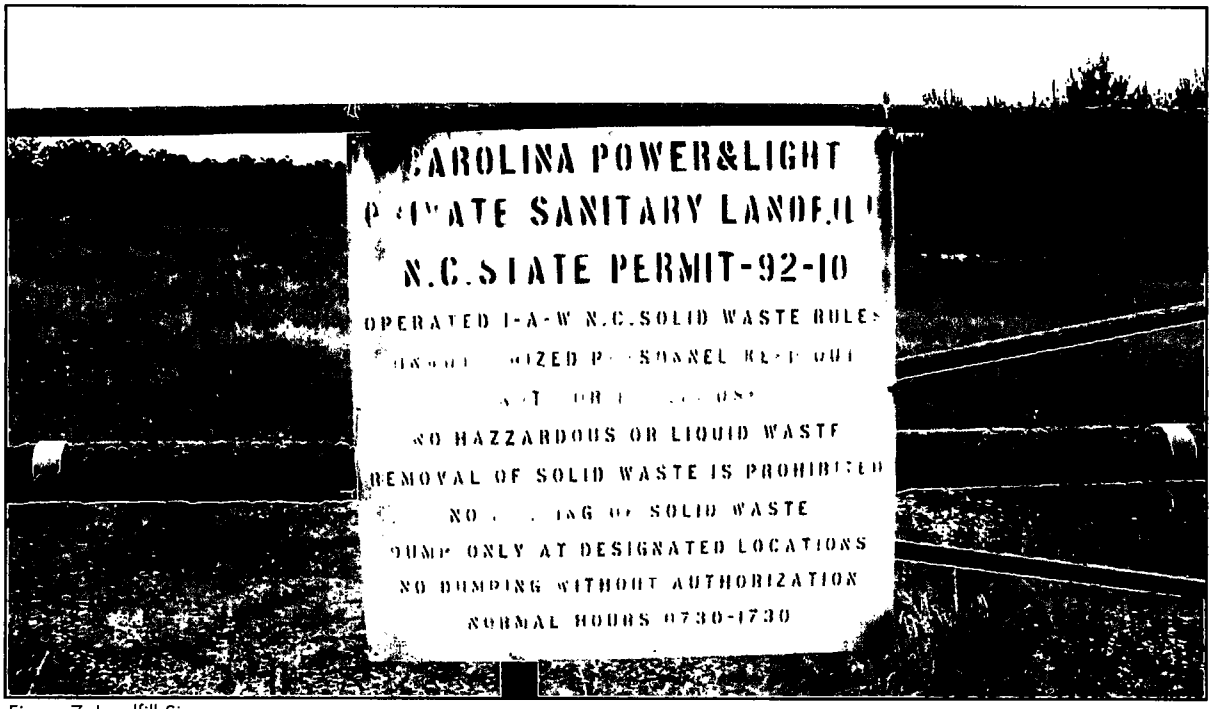


Figure 7. Landfill Sign

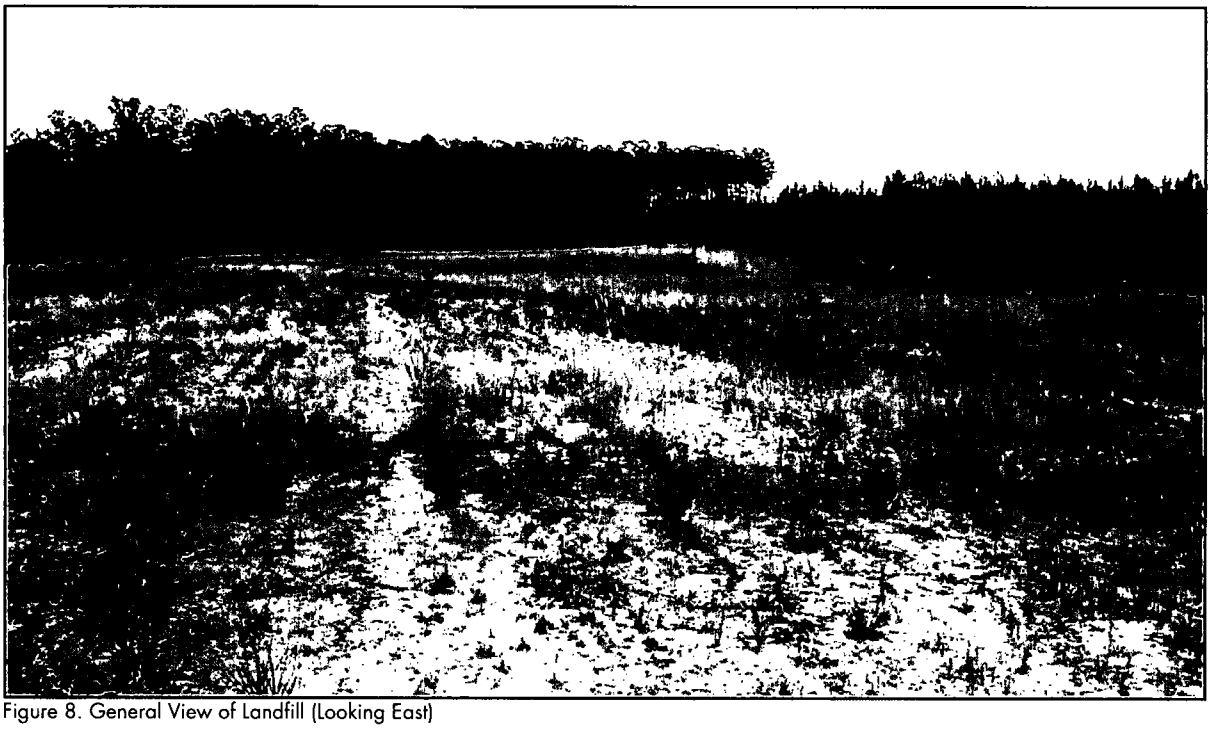


Figure 8. General View of Landfill (Looking East)

ARCHAEOLOGICAL SITES

Site 31WA1599 was identified while shovel testing in parallel transects (Figure 9). The site is located in an upland setting on a relatively minor slope. Of the 14 STs, only two were positive. In general, each ST was relatively shallow (20-30cm) and a typical profile consisted of 10-15 cm of dark brown loam (humic layer) underlain by light brown silty sand (subsoil).

The artifact assemblage (n=2) from this site is extremely small and consists solely of quartz flakes. With no diagnostic artifacts it is virtually impossible to assign this site to a particular temporal period. However, non-diagnostic lithic scatters like this one are extremely common throughout the Piedmont, and numerous, better-preserved examples with larger artifact samples, are known to exist elsewhere. This site has virtually no information potential beyond what has already been learned from the current study. The artifact count is too low to permit detailed analyses that might be relevant to regional research questions and the presence of features is not expected given the site's setting and context. Therefore, site 31WA1599 should be considered not eligible for the NRHP and no further archaeological work is recommended for this site.

Site 31WA1600 was identified on the surface of an old field road and adjacent landfill (Figure 10). A few lithic artifacts were present in this area and observed during a general walkover of exposed ground. They occurred in a clearly eroded/deflated setting with poorly sorted rocks and gravels directly on hard clay. Just north of the fence is an old landfill that was used by HNP until fairly recently. Although surface visibility is excellent in this area it is largely because of the recent fill brought in to cap the trash.

The artifact assemblage (n=4) from this site is very small and includes a rhyolite biface (in 3 separate fragments) and a single rhyolite core. The core was recovered from the landfill area north of the fence. Overall this site has poor context and no spatial or depositional integrity. Its formation is either the result of severe erosion or re-deposition, or some combination of both. For these reasons features are not expected and it has no information potential beyond what has been learned from this study. Therefore, site 31WA1600 should be considered not eligible for the NRHP and no further work is recommended for this site.

In support of the license renewal, and at the request of the NCOSA, we attempted to revisit 13 previously recorded sites to verify their locations, assess their condition, and, if possible, evaluate them for inclusion in the NRHP. Inspection of the USGS maps clearly revealed that up to seven of the 13 sites were submerged while six appeared to be along the current shoreline. Field efforts were focused on identifying those sites along the shoreline. They were recorded by avocationals in 1982 after large portions of the new reservoir had been clear-cut, but prior to inundation. As a result of fieldwork, and after further review of the site forms, we can safely conclude that most of these sites, as originally recorded, appear to be submerged below the 220' contour.

Although we attempted to revisit six of the 13 previously recorded sites within the existing pool we could only tentatively identify site 31WA538 (Figures 11-12). This site is located on the northern edge of a large peninsula on White Oak Creek. There is a modern boat landing just east of the site that served as an access point and we walked the shoreline to get to the site. This is a multi-component site with both prehistoric and historic artifacts. No artifacts were recovered along the shoreline, where the site was expected to be based on the original site form location. However, because we did locate artifacts on the same landform it made sense to retain the same site number.

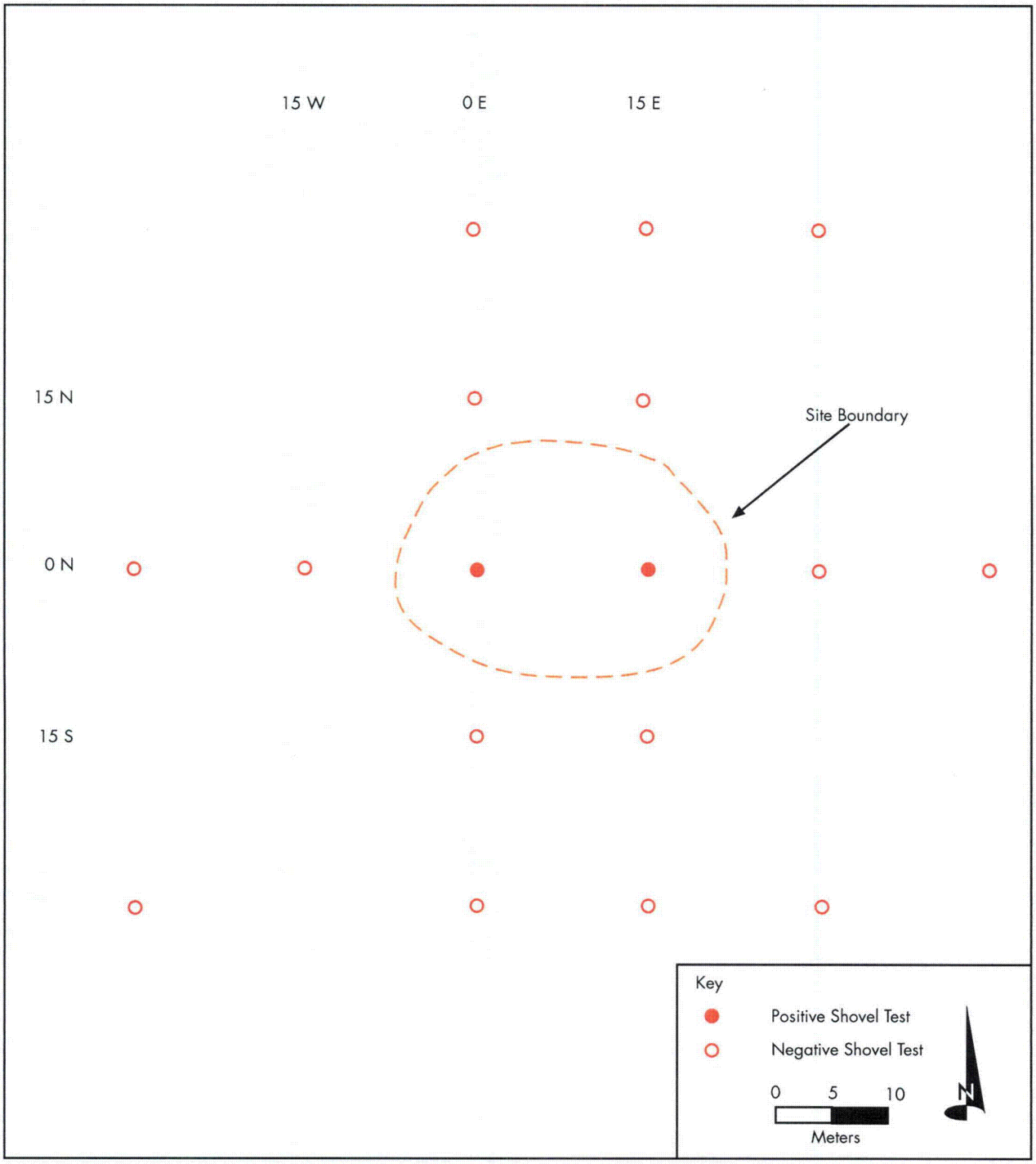
Seven of the 27 STs were positive. Stratigraphic profiles were generally shallow (i.e. less than 30 cm) and consisted of a well-defined organic layer (5-10cm) underlain by brown silty clay. Vegetation varies but is the area is generally wooded with pines and mixed hardwoods and thick undergrowth.

The artifact assemblage is small (n=13) with debitage, bottle glass, milk glass, whiteware, and ironstone (Table 5). The historic artifacts likely reflect a dumping episode as there are no architectural remains and structures do not appear on the USGS map. The presence of an old logging road lends support to this interpretation. The prehistoric component is essentially non-diagnostic and limited in diversity. Its formation is likely the result of a resource extraction or task specific activity.

Table 5. Artifacts Recovered from Site 31WA538.

Shovel Test	Quantity	Artifact Class	Artifact Type
30S 15E	2	Debitage	Quartz Flake - Interior Fragment
30S 0E	2	Debitage	Quartz Flake - Interior Fragment
45S 30W	2	Kitchen Group	Olive Green Machine Made Bottle Glass
0N 0E	2	Debitage	Quartz Flake - Interior Fragment
15W 45S	1	Kitchen Group	Plain Top Lamp Chimney
15W 30N	1	Kitchen Group	Bottle Glass, Milk Glass
45S 0E	1	Kitchen Group	Polychrome Decal on White Granite/Whiteware
60S 15E	1	Kitchen Group	Amethyst Color Bottle Glass
	1	Kitchen Group	Plain White Granite

Figure 9
Sketch Map of Site 31WA1599



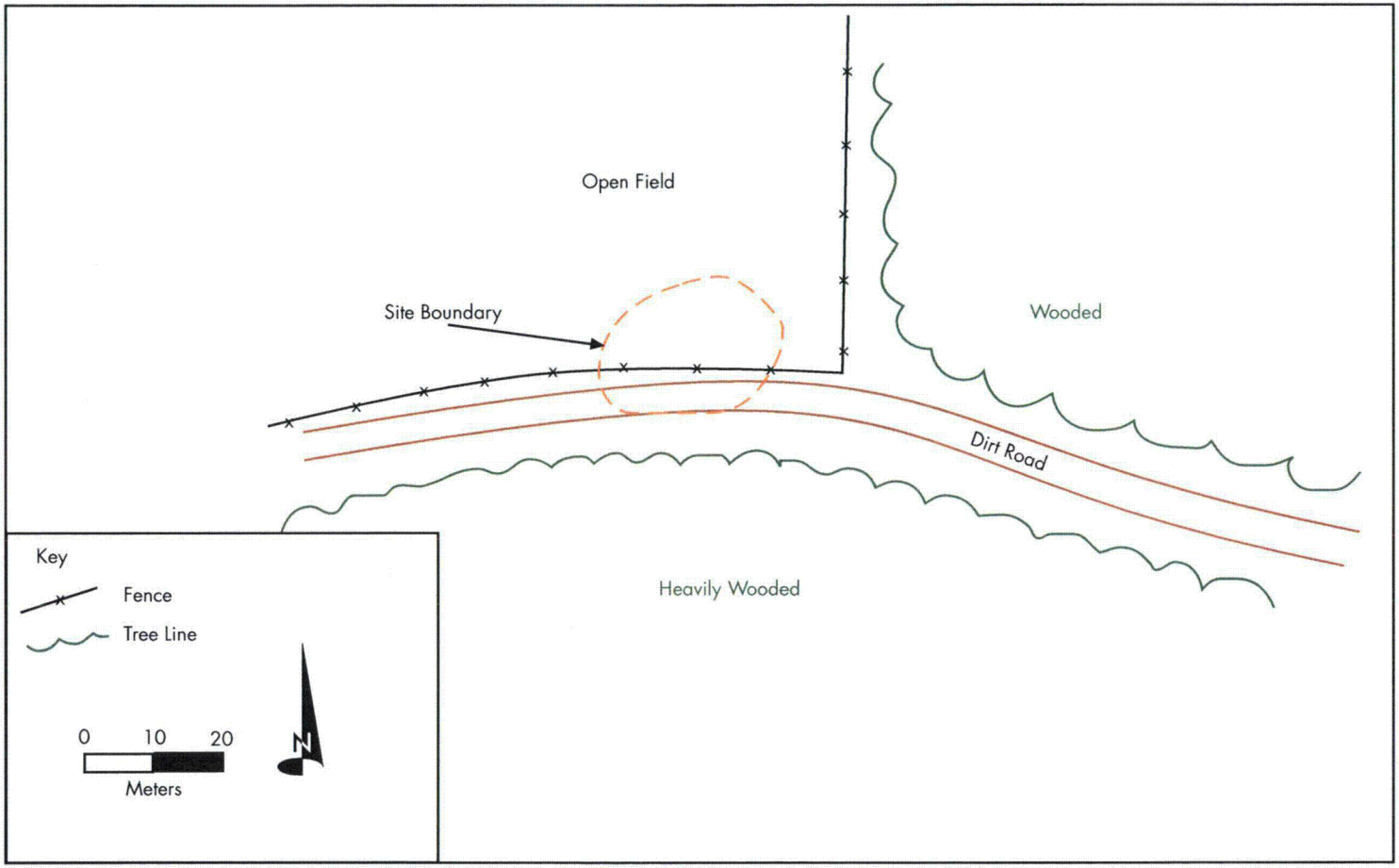


Figure 10
Sketch Map of Site 31WA1600

Figure 11
Sketch Map of Site 31WA538

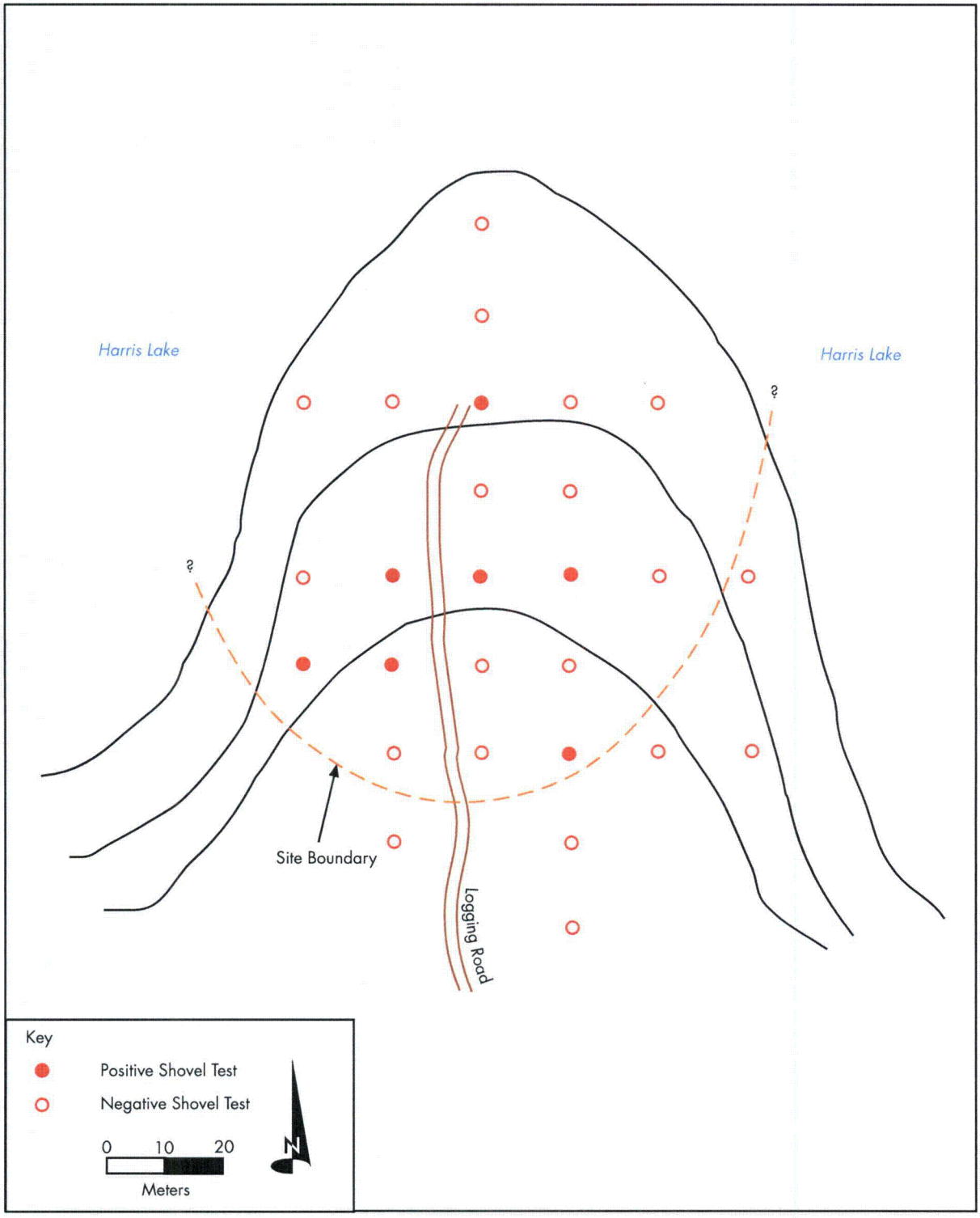


Figure 12
Photograph of Site 31WA538 Showing Logging Road and Vegetation

Based on the portion of this site above the water level its information potential is severely limited and features are not expected to occur. The artifact assemblage is limited in both sample size and diversity. No significant research questions could be addressed with additional study. For these reasons site 31WA538 should be considered not eligible for the NRHP and no further work is recommended.

ISOLATED FINDS

Three isolated finds were also identified during the course of this project. Isolated finds are typically defined as single artifacts or small clusters that do not meet the definition of an archaeological site and are rarely considered eligible for the NRHP. However, their location is important to a more comprehensive understanding of human use of the landscape.

31WA1601 (IF #1) consists of two quartz flakes found on the surface of a road/clearing in the northern portion of the new construction area. A general walk over of the exposed area did not reveal any additional artifacts. This is an area that has experienced severe erosion and the artifacts were present on a hard red clay subsoil with no associated context.

31WA1602 (IF #2) consists of a single quartz biface fragment on the surface of the same road/clearing as IF #1, but located approximately 40 meters to the west. No additional artifacts were identified in a general walkover and surface visibility was excellent. Again, this is an area of severe erosion and the biface was resting directly on top of a hard clay subsoil.

31WA1603 (IF #3) consists of a single quartz flake identified while shovel testing in the proposed new construction area. Additional shovel tests were excavated in a 15 meter grid oriented in the cardinal directions, all of which were negative.

VI. CONCLUSIONS

This project focused on an archaeological survey of portions of the Shearon Harris Nuclear Plant to address the effects of two separate undertakings on significant archaeological resources. Each undertaking required a distinct APE and slightly different field methods.

With respect to the proposed new construction area, two archaeological sites and three isolated finds were located and identified. Based on assemblage size, context, integrity, and prevailing research questions, none of these resources is recommended eligible for the NRHP. The proposed new construction will not have an adverse effect to significant archaeological resources and we recommend that this undertaking proceed with no further work.

With respect to the license renewal, fieldwork focused on trying to revisit, define, and evaluate the 13 sites recorded in 1982 along the Harris Lake shoreline prior to its inundation to full pool. Only site 31WA538 was tentatively identified because the remaining sites are now submerged. Based on assemblage size, context, integrity, and prevailing research questions, this site is recommended not eligible for the NRHP. The proposed license renewal will not have an adverse effect to significant archaeological resources and we recommend that this undertaking proceed with no further work.

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APPENDIX A

Specimen Catalog

County: Wake County
State: North Carolina
Project: Shearon Harris NP Survey

New South Associates, Inc.

Field Bag #	Field Site #	State Site #	Excavation Unit	Horizontal Location	Vertical Location	Description	QTY	Field Date
1	FS-1	31WA1599	Transect 10 STP	N0 E0		Quartz Flake - Interior Fragment	1	6/6/06
2	FS-1	31WA1599	Transect 10 STP	N0 E15		Quartz Flake - Interior Fragment	1	6/6/06
3	IO- 3	31WA1603	Transect 11 STP 8	N0 E0		Quartz Flake - Interior Complete	1	6/6/06
4	IO-1	31WA1601			Surface # 1 (on north road)	Quartz Biface - Stage 1 Complete	1	6/6/06
4	IO-1	31WA1601			Surface # 1 (on north road)	Quartz Flake - Interior Fragment	1	6/6/06
5	IO-2	31WA1602			Surface # 2 (on north road)	Porphyritic Rhyolite Biface - Stage 1 Fragment	1	6/6/06
6	FS-2	31WA1600	Transect 19		Surface (on north road)	Porphyritic Rhyolite Core	1	6/6/06
6	FS-2	31WA1600	Transect 19		Surface (on north road)	Rhyolite Tuff Biface - Stage 1 Fragment	3	6/6/06
6	FS-2	31WA1600	Transect 19		Surface (on north road)	Sandstone Biface - Stage 1 Fragment	1	6/6/06
7		31WA538	Transect 3 STP 3+30mS;15mE	E15		Quartz Flake - Interior Fragment	2	6/8/06
8		31WA538	STP 4+30mS;0mE	E0		Quartz Flake - Interior Fragment	2	6/8/06
9		31WA538	STP 4+45mS;30mW			Olive Green Machine Made Bottle Glass	2	6/8/06
10		31WA538	Transect 3 STP 4			Quartz Flake - Interior Fragment	2	6/8/06
11		31WA538	Transect 3 STP 3+15mW;45mS		Strat 2	Plain Top Lamp Chimney	1	6/8/06
12		31WA538	Transect 3 STP 3+15mW;30mN	N30 E		Bottle Glass, Milk Glass	1	6/8/06
13		31WA538	STP 4+45mS;0mE	E0		Polychrome Decal on White Granite/Whiteware	1	6/8/06
14		31WA538	STP 60mS;15mE	E15		Amethyst Color Bottle Glass	1	6/8/06
14		31WA538	STP 60mS;15mE	E15		Plain White Granite	1	6/8/06

Response to RAI No. 3

S. Lane
Progress Energy

HARRIS NUCLEAR PLANT FACILITY-WIDE EMISSIONS

CRITERIA POLLUTANT ACTUAL EMISSIONS FOR CY2005 (in tons/year)*

	BOILERS		LARGE DIESEL ENGINES			SMALL DIESEL ENGINES			
	Boiler B		Gen A and B	GenC				HEEC Generator	TONS/YEAR TOTAL
PM	0.02		0.36	0.0081				0.021	0.4091
PM10	0.008		0.36	0.0081				0.021	0.3971
PM2.5	0.002		0.36	0.0081				0.021	0.3911
SO2	0.044		0.15	0.0033				0.02	0.2173
NOx	0.2		11.4	0.26				0.3	12.16
CO	0.04		3	0.068				0.064	3.172
VOC	0.002		0.3	0.0066				0.024	0.3326
LEAD (in lbs/yr)	2.E-02								2.E-02

*Only emission sources with actual emissions ≥0.1 tons/year of a criteria pollutant are listed in the spreadsheet.

Harris Nuclear Plant
Boiler Emissions Calculations

Boiler B CY2005 Actual Emissions, Harris Nuclear Plant

Fill in BLUE Boxes

Text in FUCHSIA shows the Equation being performed to calculate that particular value

Boxes Highlighted in YELLOW show your Potential to Emit for Each Pollutant

Enter fuel type	No. 2 Fuel Oil	
Enter size of unit in Btu/hr	88,400,000	Btu/hr
Heat value of the fuel	137030	Btu/gal
gal/hr for unit = Btu/hr X 1 gal/Heat Value	645.11	gal/hr
gal/yr for unit = recorded CY2005 usage	15646.00	gal/yr
Enter sulfur content as a percent (S)	0.04	weight percent

Btu = British thermal unit

Potential to Emit

	B	C	D	E	F	G	H	I
	gallons burned/yr of No. 2 Fuel Oil	Sulfur Dioxide (SO2)	Nitrogen Oxides (NOX)	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Particulate Matter (PM)	Particulate Matter (PM10)	Particulate Matter (PM2.5)
		ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr	ton/yr
	15646.00	B X EF / 2000	B X EF / 2000	B X EF / 2000	B X EF / 2000	B X EF / 2000	B X EF / 2000	B X EF / 2000
Actual Tons/year		4.44E-02	2.E-01	2.E-03	4.E-02	2.E-02	8.E-03	2.0E-03

Trace Metals Emissions (AP-42, Table 1.3-10)

Element		Actual Emissions (pounds/year)
Lead	(9 lbs/10E+12 Btu)(137030 Btu/gal)(15646 gal/yr) =	2.E-02

Emissions based on CY2005 fuel use data of 15,646 gallons/year
Emissions factors from AP-42 1.3 "Industrial Boilers" (10 - 100 MMBtu/hr)
Heat value for No. 1 and No. 2 fuel oil are based on conservative fuel value of 137,030 Btu/gal (19,300 Btu/lb @7.1 lbs/gal) per AP-42, Table 3.4-1
VOC emission factor is for non-methane VOC

Large Diesel and All Dual-Fuel Engines Emissions Calculator LGD2000 Revision C

Instructions: Please provide the information shown in blue below. The applicability of this spreadsheet is limited to diesel engines larger than 600 hp and all dual-fuel (diesel/natural gas) engines. Please note that, when used in conjunction with permit applications, any value entered for annual operations of these engines may become a permit limit.

User Input	
Company Name:	Harris Nuclear Plant
Plant County:	Wake
Plant City:	New Hill
Permit Number:	08455R03
User:	Emission ID: Generator A
Fuel Sulfur	
Diesel Fuel Sulfur Content (%):	0.04
NG Fuel Sulfur Content (gr/mm cu ft):	0

DISCLAIMER: This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Fuel Input Rates	Diesel (gal)	NG (cu ft)	Heat Input Rates	Diesel	NG
Hourly Fuel Usage:	450.00	0	Hourly Fuel Usage (mmBtu):	61.66	0.00
Annual Fuel Usage:	26,220	0	Annual Fuel Usage (mmBtu):	3,593	0
Fuel Heat Content:	137,030	0	(Btu/gal for diesel, Btu/cu. ft for NG)		

Emissions Output for Diesel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	6.2E+00	3.6E+02	1.8E-01	1.00E-01	B
PM-10	6.2E+00	3.6E+02	1.8E-01	1.00E-01	B
PM-2.5	6.2E+00	3.6E+02	1.8E-01	1.00E-01	B
NO_x, uncont.	2.0E+02	1.1E+04	5.7E+00	3.20E+00	B
NO_x, cont.	1.2E+02	6.8E+03	3.4E+00	1.90E+00	B
TOC (as CH_4)	5.5E+00	3.2E+02	1.6E-01	9.00E-02	C
NMTOC	5.1E+00	2.9E+02	1.5E-01	8.19E-02	E
CO	5.2E+01	3.1E+03	1.5E+00	8.50E-01	C
SO_x	2.5E+00	1.5E+02	7.3E-02	4.04E-02	B
Total HAP	9.7E-02	5.7E+00	2.8E-03	1.57E-03	NA
Largest HAP	4.8E-02	2.8E+00	1.4E-03	7.76E-04	NA

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	1.6E-03	NA	9.1E-02	2.52E-05	E
Acrolein	4.9E-04	NA	2.8E-02	7.88E-06	E
Benzene	4.8E-02	NA	2.8E+00	7.76E-04	E
Benzo (a) pyrene	1.6E-05	NA	9.2E-04	2.57E-07	E, <
Formaldehyde	4.9E-03	NA	2.8E-01	7.89E-05	E
Napthalene	8.0E-03	NA	4.7E-01	1.30E-04	E
PAH	1.3E-02	NA	7.6E-01	2.12E-04	E, <
Toluene	1.7E-02	4.2E-01	1.0E+00	2.81E-04	E
Xylenes	1.2E-02	2.9E-01	6.9E-01	1.93E-04	E

NO_x control is via ignition timing retard.

Emissions Output for Dual-fuel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	NA	NA	NA	ND	NA
PM-10	NA	NA	NA	ND	NA
PM-2.5	NA	NA	NA	ND	NA
NO_x, uncont.	1.7E+02	9.7E+03	4.9E+00	2.70E+00	D
NO_x, cont.	NA	NA	NA	ND	NA
TOC (as CH_4)	4.9E+01	2.9E+03	1.4E+00	8.00E-01	D
NMTOC	1.2E+01	7.2E+02	3.6E-01	2.00E-01	E
CO	7.2E+01	4.2E+03	2.1E+00	1.16E+00	D
SO_x	1.2E-01	7.2E+00	3.6E-03	2.00E-03	B

There are no Toxic/Hazardous Air Pollutant emission factors for dual-fuel engines.

LGD2000 Revision C dated March 27, 2000

Pollutants in red are federally regulated hazardous air pollutants (HAPs) only. Pollutants in purple are NC regulated toxic air pollutants (TAPs) only.
All other pollutants are regulated as both HAPs and TAPs.
Factor quality ratings containing "<" indicate an AP-42 emission factor based on test results being below detection.
Emission factors are from AP-42 Chapter 3, Section 3, Gasoline and Diesel Industrial Engines, dated October 1996.
Hourly emission rates for all pollutants are based on the hourly engine output. Annual emissions are based on the annual engine output.
Daily emissions are based on operation at the hourly input rate for 24 hours.

NCDENR

Recorded CY2005 fuel use (52,439 gal) was combined between Generator A and B. Fuel use was split evenly (26,220 gal) between both units for actual emissions based on the the units being identical.
Emissions for duel-fuels are not applicable.

Large Diesel and All Dual-Fuel Engines Emissions Calculator LGD2000 Revision C

Instructions: Please provide the information shown in blue below. The applicability of this spreadsheet is limited to diesel engines larger than 600 hp and all dual-fuel (diesel/natural gas) engines. Please note that, when used in conjunction with permit applications, any value entered for annual operations of these engines may become a permit limit.

User Input	
Company Name:	Harris Nuclear Plant
Plant County:	Wake
Plant City:	New Hill
Permit Number:	08455R03
User:	Emission ID: Generator B
Fuel Sulfur	
Diesel Fuel Sulfur Content (%):	0.04
NG Fuel Sulfur Content (gr/mm cu ft):	0

DISCLAIMER: This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Fuel Input Rates	Diesel (gal)	NG (cu ft)	Heat Input Rates	Diesel	NG
Hourly Fuel Usage:	450.00	0	Hourly Fuel Usage (mmBtu):	61.66	0.00
Annual Fuel Usage:	26,220	0	Annual Fuel Usage (mmBtu):	3,593	0
Fuel Heat Content:	137,030	0	(Btu/gal for diesel, Btu/cu. ft for NG)		

Emissions Output for Diesel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	6.2E+00	3.6E+02	1.8E-01	1.00E-01	B
PM-10	6.2E+00	3.6E+02	1.8E-01	1.00E-01	B
PM-2.5	6.2E+00	3.6E+02	1.8E-01	1.00E-01	B
NO_x, uncont.	2.0E+02	1.1E+04	5.7E+00	3.20E+00	B
NO_x, cont.	1.2E+02	6.8E+03	3.4E+00	1.90E+00	B
TOC (as CH_4)	5.5E+00	3.2E+02	1.6E-01	9.00E-02	C
NMTOC	5.1E+00	2.9E+02	1.5E-01	8.19E-02	E
CO	5.2E+01	3.1E+03	1.5E+00	8.50E-01	C
SO_x	2.5E+00	1.5E+02	7.3E-02	4.04E-02	B
Total HAP	9.7E-02	5.7E+00	2.8E-03	1.57E-03	NA
Largest HAP	4.8E-02	2.8E+00	1.4E-03	7.76E-04	NA

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	1.6E-03	NA	9.1E-02	2.52E-05	E
Acrolein	4.9E-04	NA	2.8E-02	7.88E-06	E
Benzene	4.8E-02	NA	2.8E+00	7.76E-04	E
Benzo (a) pyrene	1.6E-05	NA	9.2E-04	2.57E-07	E, <
Formaldehyde	4.9E-03	NA	2.8E-01	7.89E-05	E
Napthalene	8.0E-03	NA	4.7E-01	1.30E-04	E
PAH	1.3E-02	NA	7.6E-01	2.12E-04	E, <
Toluene	1.7E-02	4.2E-01	1.0E+00	2.81E-04	E
Xylenes	1.2E-02	2.9E-01	6.9E-01	1.93E-04	E

NO_x control is via ignition timing retard.

Emissions Output for Dual-fuel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	NA	NA	NA	ND	NA
PM-10	NA	NA	NA	ND	NA
PM-2.5	NA	NA	NA	ND	NA
NO_x, uncont.	1.7E+02	9.7E+03	4.9E+00	2.70E+00	D
NO_x, cont.	NA	NA	NA	ND	NA
TOC (as CH_4)	4.9E+01	2.9E+03	1.4E+00	8.00E-01	D
NMTOC	1.2E+01	7.2E+02	3.6E-01	2.00E-01	E
CO	7.2E+01	4.2E+03	2.1E+00	1.16E+00	D
SO_x	1.2E-01	7.2E+00	3.6E-03	2.00E-03	B

There are no Toxic/Hazardous Air Pollutant emission factors for dual-fuel engines.

LGD2000 Revision C dated March 27, 2000

Pollutants in red are federally regulated hazardous air pollutants (HAPs) only. Pollutants in purple are NC regulated toxic air pollutants (TAPs) only.
All other pollutants are regulated as both HAPs and TAPs.
Factor quality ratings containing "<" indicate an AP-42 emission factor based on test results being below detection.
Emission factors are from AP-42 Chapter 3, Section 3, Gasoline and Diesel Industrial Engines, dated October 1996.
Hourly emission rates for all pollutants are based on the hourly engine output. Annual emissions are based on the annual engine output.
Daily emissions are based on operation at the hourly input rate for 24 hours.

NCDENR

Recorded CY2005 fuel use (52,439 gal) was combined between Generator A and B. Fuel use was split evenly (26,220 gal) between both units for actual emission calculations based on the units being identical.
Emissions for duel-fuels are not applicable.

Large Diesel and All Dual-Fuel Engines Emissions Calculator LGD2000 Revision C

Instructions: Please provide the information shown in blue below. The applicability of this spreadsheet is limited to diesel engines larger than 600 hp and all dual-fuel (diesel/natural gas) engines. Please note that, when used in conjunction with permit applications, any value entered for annual operations of these engines may become a permit limit.

User Input	
Company Name:	Harris Nuclear Plant
Plant County:	Wake
Plant City:	New Hill
Permit Number:	08455R03
User:	Emission ID Generator C

DISCLAIMER: This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Fuel Sulfur	
Diesel Fuel Sulfur Content (%):	0.04
NG Fuel Sulfur Content (gr/mm cu ft):	0

Fuel Input Rates	Diesel (gal)	NG (cu ft)	Heat Input Rates	Diesel	NG
Hourly Fuel Usage:	24.00	0	Hourly Fuel Usage (mmBtu):	3.29	0.00
Annual Fuel Usage:	1,175	0	Annual Fuel Usage (mmBtu):	161	0
Fuel Heat Content:	137,030	0	(Btu/gal for diesel, Btu/cu. ft for NG)		

Emissions Output for Diesel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	3.3E-01	1.6E+01	8.1E-03	1.00E-01	B
PM-10	3.3E-01	1.6E+01	8.1E-03	1.00E-01	B
PM-2.5	3.3E-01	1.6E+01	8.1E-03	1.00E-01	B
NO_x, uncont.	1.1E+01	5.2E+02	2.6E-01	3.20E+00	B
NO_x, cont.	6.2E+00	3.1E+02	1.5E-01	1.90E+00	B
TOC (as CH_4)	3.0E-01	1.4E+01	7.2E-03	9.00E-02	C
NMTOC	2.7E-01	1.3E+01	6.6E-03	8.19E-02	E
CO	2.8E+00	1.4E+02	6.8E-02	8.50E-01	C
SO_x	1.3E-01	6.5E+00	3.3E-03	4.04E-02	B
Total HAP	5.2E-03	2.5E-01	1.3E-04	1.57E-03	NA
Largest HAP	2.6E-03	1.2E-01	6.2E-05	7.76E-04	NA

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	8.3E-05	NA	4.1E-03	2.52E-05	E
Acrolein	2.6E-05	NA	1.3E-03	7.88E-06	E
Benzene	2.6E-03	NA	1.2E-01	7.76E-04	E
Benzo (a) pyrene	8.5E-07	NA	4.1E-05	2.57E-07	E, <
Formaldehyde	2.6E-04	NA	1.3E-02	7.89E-05	E
Napthalene	4.3E-04	NA	2.1E-02	1.30E-04	E
PAH	7.0E-04	NA	3.4E-02	2.12E-04	E, <
Toluene	9.2E-04	2.2E-02	4.5E-02	2.81E-04	E
Xylenes	6.3E-04	1.5E-02	3.1E-02	1.93E-04	E

NO_x control is via ignition timing retard.

Emissions Output for Dual-fuel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	NA	NA	NA	ND	NA
PM-10	NA	NA	NA	ND	NA
PM-2.5	NA	NA	NA	ND	NA
NO_x, uncont.	8.9E+00	4.3E+02	2.2E-01	2.70E+00	D
NO_x, cont.	NA	NA	NA	ND	NA
TOC (as CH_4)	2.6E+00	1.3E+02	6.4E-02	8.00E-01	D
NMTOC	6.6E-01	3.2E+01	1.6E-02	2.00E-01	E
CO	3.8E+00	1.9E+02	9.3E-02	1.16E+00	D
SO_x	6.6E-03	3.2E-01	1.6E-04	2.00E-03	B

There are no Toxic/Hazardous Air Pollutant emission factors for dual-fuel engines.

LGD2000 Revision C dated March 27, 2000

Pollutants in red are federally regulated hazardous air pollutants (HAPs) only. Pollutants in purple are NC regulated toxic air pollutants (TAPs) only.
All other pollutants are regulated as both HAPs and TAPs.
Factor quality ratings containing "<" indicate an AP-42 emission factor based on test results being below detection.
Emission factors are from AP-42 Chapter 3, Section 3, Gasoline and Diesel Industrial Engines, dated October 1996.
Hourly emission rates for all pollutants are based on the hourly engine output. Annual emissions are based on the annual engine output.
Daily emissions are based on operation at the hourly input rate for 24 hours.

NCDENR

Recorded CY2005 fuel use is 1,175 gallons.
Duel-fuel engine emissions are not applicable to this source.

HEEC Emergency Diesel Generator
2005 AEI Emission Calculations

S. Lane
Progress Energy

Internal Combustion Engines Emissions Calculator ICE2000 Revision B

Instructions: Please provide the information shown in blue below. The applicability of this spreadsheet is limited to gasoline engines up to 250 hp and diesel engines up to 600 hp. Please note that, when used in conjunction with permit applications, any value entered for annual operations of these engines may become a permit limit.

For annual emissions enter either: (1) Annual Electrical Output, (2) Engine Output and Annual Operation (leave the formula for calculating Annual Electrical Output unchanged) or (3) Generator Output (kW) and Annual Operation (remember to copy the resulting Annual Electrical Output to the appropriate cell to the left).

User Input	
Company Name:	Harris Nuclear Plant
Plant County:	Wake
Plant City:	New Hill
Permit Number:	08455R03
User:	HEEC Emerg. Generator
Engine Output (hp):	266
Annual Electrical Output (kW-hr):	12,568
Annual Output (hp-hr):	19,152

This section can be used to calculate kW-hr output from hours of operation and engine hp output. This can be useful for operators with hour meters but no Watt-hour meters. It assumes full load operation resulting in conservative emission estimates.

Annual Operation (hours):	72
Generator Output (kW):	175
Annual Electrical Output (kW-hr):	**12,600**

<----- Copy results to "Annual Output (kW-hr)" at left if desired.

DISCLAIMER: This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Emissions Output for Gasoline Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/hp-hr)	Factor Quality Rating
PM	1.9E-01	1.4E+01	6.9E-03	7.21E-04	D
PM-10	1.9E-01	1.4E+01	6.9E-03	7.21E-04	D
PM-2.5	1.9E-01	1.4E+01	6.9E-03	7.21E-04	D
NOx	2.9E+00	2.1E+02	1.1E-01	1.10E-02	D
TOC, Exhaust	4.0E+00	2.9E+02	1.4E-01	1.50E-02	D
TOC, Evaporative	1.8E-01	1.3E+01	6.3E-03	6.61E-04	E
TOC, Crankcase	1.3E+00	9.3E+01	4.6E-02	4.85E-03	E
TOC, Refueling	2.9E-01	2.1E+01	1.0E-02	1.08E-03	E
TOC, Total	5.7E+00	4.1E+02	2.1E-01	2.16E-02	E
CO	1.2E+02	8.4E+03	4.2E+00	4.39E-01	D
SO_x	1.6E-01	1.1E+01	5.7E-03	5.91E-04	D
Total HAP	3.8E-03	2.7E-01	1.4E-04	1.43E-05	E
Largest HAP	2.3E-03	1.7E-01	8.3E-05	8.65E-06	E

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	1.5E-03	NA	1.1E-01	5.62E-06	NA
Formaldehyde	2.3E-03	NA	1.7E-01	8.65E-06	NA
Aldehydes	1.3E-01	NA	9.3E+00	4.85E-04	D

Acetaldehyde and formaldehyde emission factors calculated from the ratio of the respective diesel fuel aldehyde emission factor to the total aldehydes diesel fuel factor. There are no separate T/HAP emission factors for gasoline fueled engines.

ICE2000 Revision B dated March 23, 2000

Emissions Output for Diesel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/hp-hr)	Factor Quality Rating
PM	5.9E-01	4.2E+01	2.1E-02	2.20E-03	D
PM-10	5.9E-01	4.2E+01	2.1E-02	2.20E-03	D
PM-2.5	5.9E-01	4.2E+01	2.1E-02	2.20E-03	D
NOx	8.2E+00	5.9E+02	3.0E-01	3.10E-02	D
TOC, Exhaust	6.6E-01	4.7E+01	2.4E-02	2.47E-03	D
TOC, Evaporative	0.0E+00	0.0E+00	0.0E+00	0.00E+00	E
TOC, Crankcase	1.2E-02	8.4E-01	4.2E-04	4.41E-05	E
TOC, Refueling	0.0E+00	0.0E+00	0.0E+00	0.00E+00	E
TOC, Total	6.7E-01	4.8E+01	2.4E-02	2.51E-03	E
CO	1.8E+00	1.3E+02	6.4E-02	6.68E-03	D
SO_x	5.5E-01	3.9E+01	2.0E-02	2.05E-03	D
Total HAP	1.4E-02	1.0E+00	5.1E-04	5.32E-05	E
Largest HAP	4.8E-03	3.5E-01	1.7E-04	1.81E-05	E

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	1.4E-03	1.0E-01	1.0E-01	5.37E-06	E
Acrolein	1.7E-04	1.2E-02	1.2E-02	6.48E-07	E, <
Benzene	1.7E-03	1.3E-01	1.3E-01	6.53E-06	E
Benzo (a) pyrene	3.5E-07	2.5E-05	2.5E-05	1.32E-09	E, <
1,3-Butadiene	2.2E-03	1.6E-01	1.6E-01	8.26E-06	E, <
Formaldehyde	2.2E-03	1.6E-01	1.6E-01	8.26E-06	E
Napthalene	1.6E-04	1.1E-02	1.1E-02	5.94E-07	E
PAH	3.1E-04	2.3E-02	2.3E-02	1.18E-06	E, <
Propylene	4.8E-03	3.5E-01	3.5E-01	1.81E-05	E
Toluene	7.6E-04	1.8E-02	5.5E-02	2.86E-06	E
Xylene	5.3E-04	1.3E-02	3.8E-02	2.00E-06	E

Pollutants in red are federally regulated hazardous air pollutants (HAPs) only. Pollutants in purple are NC regulated toxic air pollutants (TAPs) only. All other pollutants are regulated as both HAPs and TAPs.
Factor quality ratings containing "<" indicate an AP-42 emission factor based on test results being below detection.
Emission factors are from AP-42 Chapter 3, Section 3, Gasoline and Diesel Industrial Engines, dated October 1996.
Hourly emission rates for all pollutants are based on the hourly engine output. Annual emissions are based on the annual engine output.
Daily emissions are based on operation at the hourly input rate for 24 hours.

NCDENR

The unit operated 72 hours in CY2005.
Gasoline engine emissions are not applicable to this source.

S. Lane
Progress Energy

HARRIS NUCLEAR PLANT FACILITY-WIDE EMISSIONS

CRITERIA POLLUTANT ACTUAL EMISSIONS FOR CY2006 (in tons/year)*

	BOILERS		LARGE DIESEL ENGINES			SMALL DIESEL ENGINES			
	Boiler B		Gen A and B	Gen C		Temp Compressor		HEEC Generator	TONS/YEAR TOTAL
PM	0.8		0.86	>0.1		0.16		0.02	1.84
PM10	0.4		0.86	>0.1		0.16		0.02	1.44
PM2.5	0.095		0.86	>0.1		0.16		0.02	1.135
SO2	2.2		0.35	>0.1		0.15		0.018	2.718
NOx	7.6		28	>0.1		2.3		0.28	38.18
CO	2		7.3	>0.1		0.51		0.06	9.87
VOC	0.08		0.7	>0.1		0.19		0.023	0.993
LEAD	5.E-04								5.E-04

*Only emission sources with actual emissions >0.1 tons/year of a criteria pollutant are listed in the spreadsheet.

Harris Nuclear Plant
Boiler Emissions Calculations

Boiler B Criteria Pollutant Emissions, Harris Nuclear Plant CY2006 Actual Emissions

Enter fuel type	No. 2 Fuel Oil	
Enter size of unit in Btu/hr	88,400,000	Btu/hr
Heat value of the fuel	137030	Btu/gal
gal/hr for unit = (Btu/hr)(gal/Heat Value)	645.11	gal/hr
gal/yr for unit = gal/hr X 1180 hr/yr	761234.77	gal/yr
Enter sulfur content as a percent (S)	0.04	weight percent

Btu = British thermal unit

Potential to Emit

	B	C	D	E	F	G	H	I
	gallons burned/yr of No. 2 Fuel Oil	Sulfur Dioxide (SO2) ton/yr	Nitrogen Oxides (NOX) ton/yr	Volatile Organic Compounds (VOC) ton/yr	Carbon Monoxide (CO) ton/yr	Particulate Matter (PM) ton/yr	Particulate Matter (PM10) ton/yr	Particulate Matter (PM2.5) ton/yr
	761234.77	B X EF/2000	B X EF/2000	B X EF/2000	B X EF/2000	B X EF/2000	B X EF/2000	B X EF/2000
Tons/year (controlled 1180 hrs/yr)		2.2E+00	7.6E+00	8.E-02	2.E+00	8.E-01	4.E-01	9.5E-02

Trace Metals Emissions (AP-42, Table 1.3-10)

Element		Permit-limited and Uncontrolled (lbs/hr)	Permit-limited Annual (lbs/yr)	Permit-Limited Annual [lbs/yr ÷ 2000 lbs/tn] (tns/yr)	Uncontrolled Annual [8760 hrs/2000 lbs/tn] (tns/yr)
Lead	(9 lbs/10E+12 Btu)(88.4 mmBtu/hr) =	8.E-04			4.E-03
	(9 lbs/10E+12 Btu)(88.4 mmBtu/hr)(1180 hrs/yr) =		9.E-01	5.E-04	

Emissions factors from AP-42 1.3 "Industrial Boilers" (10 - 100 MMBtu/hr)
Heat value for No. 1 and No. 2 fuel oil are based on conservative fuel value of 137,030 Btu/gal (19,300 Btu/lb @7.1 lbs/gal) per AP-42, Table 3.4-1
VOC emission factor is for non-methane VOC

HNP GENERATORS A AND B ACTUAL EMISSION ESTIMATES

CY2006

Large Diesel and All Dual-Fuel Engines Emissions Calculator LGD2000 Revision C

Instructions: Please provide the information shown in blue below. The applicability of this spreadsheet is limited to diesel engines larger than 600 hp and all dual-fuel (diesel/natural gas) engines. Please note that, when used in conjunction with permit applications, any value entered for annual operations of these engines may become a permit limit.

User Input	
Company Name:	Harris Nuclear Plant
Plant County:	Wake
Plant City:	New Hill
Permit Number:	HNP Backup Generators
User:	CY2006 EDG 1A and 1B
Fuel Sulfur	
Diesel Fuel Sulfur Content (%):	0.04
NG Fuel Sulfur Content (gr/mm cu ft):	0

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Fuel Input Rates	Diesel (gal)	NG (cu ft)	Heat Input Rates	Diesel	NG
Hourly Fuel Usage:	900.00	0	Hourly Fuel Usage (mmBtu):	123.33	0.00
Annual Fuel Usage:	125,523	0	Annual Fuel Usage (mmBtu):	17,200	0
Fuel Heat Content:	137,030	0	(Btu/gal for diesel, Btu/cu. ft for NG)		

Emissions Output for Diesel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	1.2E+01	1.7E+03	8.6E-01	1.00E-01	B
PM-10	1.2E+01	1.7E+03	8.6E-01	1.00E-01	B
PM-2.5	1.2E+01	1.7E+03	8.6E-01	1.00E-01	B
NO_x, uncont.	3.9E+02	5.5E+04	2.8E+01	3.20E+00	B
NO_x, cont.	2.3E+02	3.3E+04	1.6E+01	1.90E+00	B
TOC (as CH_4)	1.1E+01	1.5E+03	7.7E-01	9.00E-02	C
NMTOC	1.0E+01	1.4E+03	7.0E-01	8.19E-02	E
CO	1.0E+02	1.5E+04	7.3E+00	8.50E-01	C
SO_x	5.0E+00	6.9E+02	3.5E-01	4.04E-02	B
Total HAP	1.9E-01	2.7E+01	1.4E-02	1.57E-03	NA
Largest HAP	9.6E-02	1.3E+01	6.7E-03	7.76E-04	NA

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	3.1E-03	NA	4.3E-01	2.52E-05	E
Acrolein	9.7E-04	NA	1.4E-01	7.88E-06	E
Benzene	9.6E-02	NA	1.3E+01	7.76E-04	E
Benzo (a) pyrene	3.2E-05	NA	4.4E-03	2.57E-07	E; <
Formaldehyde	9.7E-03	NA	1.4E+00	7.89E-05	E
Napthalene	1.6E-02	NA	2.2E+00	1.30E-04	E
PAH	2.6E-02	NA	3.6E+00	2.12E-04	E; <
Toluene	3.5E-02	8.3E-01	4.8E+00	2.81E-04	E
Xylenes	2.4E-02	5.7E-01	3.3E+00	1.93E-04	E

NO_x control is via ignition timing retard.

Emissions Output for Dual-fuel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	NA	NA	NA	ND	NA
PM-10	NA	NA	NA	ND	NA
PM-2.5	NA	NA	NA	ND	NA
NO_x, uncont.	3.3E+02	4.6E+04	2.3E+01	2.70E+00	D
NO_x, cont.	NA	NA	NA	ND	NA
TOC (as CH_4)	9.9E+01	1.4E+04	6.9E+00	8.00E-01	D
NMTOC	2.5E+01	3.4E+03	1.7E+00	2.00E-01	E
CO	1.4E+02	2.0E+04	1.0E+01	1.16E+00	D
SO_x	2.5E-01	3.4E+01	1.7E-02	2.00E-03	B

There are no Toxic/Hazardous Air Pollutant emission factors for dual-fuel engines.

LGD2000 Revision C dated March 27, 2000

Pollutants in red are federally regulated hazardous air pollutants (HAPs) only. Pollutants in purple are NC regulated toxic air pollutants (TAPs) only.
All other pollutants are regulated as both HAPs and TAPs.
Factor quality ratings containing "<" indicate an AP-42 emission factor based on test results being below detection.
Emission factors are from AP-42 Chapter 3, Section 3, Gasoline and Diesel Industrial Engines, dated October 1996.
Hourly emission rates for all pollutants are based on the hourly engine output. Annual emissions are based on the annual engine output.
Daily emissions are based on operation at the hourly input rate for 24 hours.

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HNP GENERATOR C ACTUAL EMISSIONS CY2006

Large Diesel and All Dual-Fuel Engines Emissions Calculator LGD2000 Revision C

Instructions: Please provide the information shown in blue below. The applicability of this spreadsheet is limited to diesel engines larger than 600 hp and all dual-fuel (diesel/natural gas) engines.
Please note that, when used in conjunction with permit applications, any value entered for annual operations of these engines may become a permit limit.

User Input	
Company Name:	Harris Nuclear Plant
Plant County:	Wake
Plant City:	New Hill
Permit Number:	HNP Security Generator C
User:	CY2006 Actual Emissions
Fuel Sulfur	
Diesel Fuel Sulfur Content (%):	0.04
NG Fuel Sulfur Content (gr/mm cu ft):	0

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Fuel Input Rates	Diesel (gal)	NG (cu ft)	Heat Input Rates	Diesel	NG
Hourly Fuel Usage:	24.00	0	Hourly Fuel Usage (mmBtu):	3.29	0.00
Annual Fuel Usage:	322	0	Annual Fuel Usage (mmBtu):	44	0
Fuel Heat Content:	137,030	0	(Btu/gal for diesel, Btu/cu. ft for NG)		

Emissions Output for Diesel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	3.3E-01	4.4E+00	2.2E-03	1.00E-01	B
PM-10	3.3E-01	4.4E+00	2.2E-03	1.00E-01	B
PM-2.5	3.3E-01	4.4E+00	2.2E-03	1.00E-01	B
NO_x, uncont.	1.1E+01	1.4E+02	7.1E-02	3.20E+00	B
NO_x, cont.	6.2E+00	8.4E+01	4.2E-02	1.90E+00	B
TOC (as CH_4)	3.0E-01	4.0E+00	2.0E-03	9.00E-02	C
NMTOC	2.7E-01	3.6E+00	1.8E-03	8.19E-02	E
CO	2.8E+00	3.7E+01	1.9E-02	8.50E-01	C
SO_x	1.3E-01	1.8E+00	8.9E-04	4.04E-02	B
Total HAP	5.2E-03	6.9E-02	3.5E-05	1.57E-03	NA
Largest HAP	2.6E-03	3.4E-02	1.7E-05	7.76E-04	NA

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	8.3E-05	NA	1.1E-03	2.52E-05	E
Acrolein	2.6E-05	NA	3.5E-04	7.88E-06	E
Benzene	2.6E-03	NA	3.4E-02	7.76E-04	E
Benzo (a) pyrene	8.5E-07	NA	1.1E-05	2.57E-07	E, <
Formaldehyde	2.6E-04	NA	3.5E-03	7.89E-05	E
Napthalene	4.3E-04	NA	5.7E-03	1.30E-04	E
PAH	7.0E-04	NA	9.3E-03	2.12E-04	E, <
Toluene	9.2E-04	2.2E-02	1.2E-02	2.81E-04	E
Xylenes	6.3E-04	1.5E-02	8.5E-03	1.93E-04	E

NO_x control is via ignition timing retard.

Emissions Output for Dual-fuel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	NA	NA	NA	ND	NA
PM-10	NA	NA	NA	ND	NA
PM-2.5	NA	NA	NA	ND	NA
NO_x, uncont.	8.9E+00	1.2E+02	5.9E-02	2.70E+00	D
NO_x, cont.	NA	NA	NA	ND	NA
TOC (as CH_4)	2.6E+00	3.5E+01	1.8E-02	8.00E-01	D
NMTOC	6.6E-01	8.8E+00	4.4E-03	2.00E-01	E
CO	3.8E+00	5.1E+01	2.6E-02	1.16E+00	D
SO_x	6.6E-03	8.8E-02	4.4E-05	2.00E-03	B

There are no Toxic/Hazardous Air Pollutant emission factors for dual-fuel engines.

LGD2000 Revision C dated March 27, 2000

Pollutants in red are federally regulated hazardous air pollutants (HAPs) only. Pollutants in purple are NC regulated toxic air pollutants (TAPs) only.
All other pollutants are regulated as both HAPs and TAPs.
Factor quality ratings containing "<" indicate an AP-42 emission factor based on test results being below detection.
Emission factors are from AP-42 Chapter 3, Section 3, Gasoline and Diesel Industrial Engines, dated October 1996.
Hourly emission rates for all pollutants are based on the hourly engine output. Annual emissions are based on the annual engine output.
Daily emissions are based on operation at the hourly input rate for 24 hours.

NCDENR

HNP TEMPORARY COMPRESSOR ACTUAL EMISSIONS
CY2006
Internal Combustion Engines Emissions Calculator ICE2000 Revision B

Instructions: Please provide the information shown in blue below. The applicability of this spreadsheet is limited to gasoline engines up to 250 hp and diesel engines up to 600 hp.
Please note that, when used in conjunction with permit applications, any value entered for annual operations of these engines may become a permit limit.

User Input	
Company Name:	Harris Nuclear Plant
Plant County:	Wake
Plant City:	New Hill
Permit Number:	Temp Compressor
User:	CY2006 Actual Emissions

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Fuel Input Rates	
Hourly Fuel Usage (gallons):	23.53
Annual Fuel Usage (gallons):	7,765

Heat Input Rates	Gasoline	Diesel
Hourly Fuel Usage (mmBtu):	0.00	3.22
Annual Fuel Usage (mmBtu):	0	1,064

Fuel Heating Values (Btu/gallon)	
Gasoline	0
Diesel	137,030

Emissions Output for Gasoline Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	0.0E+00	0.0E+00	0.0E+00	1.00E-01	D
PM-10	0.0E+00	0.0E+00	0.0E+00	1.00E-01	D
PM-2.5	0.0E+00	0.0E+00	0.0E+00	1.00E-01	D
NOx	0.0E+00	0.0E+00	0.0E+00	1.63E+00	D
TOC, Exhaust	0.0E+00	0.0E+00	0.0E+00	2.10E+00	D
TOC, Evaporative	0.0E+00	0.0E+00	0.0E+00	9.00E-02	E
TOC, Crankcase	0.0E+00	0.0E+00	0.0E+00	6.90E-01	E
TOC, Refueling	0.0E+00	0.0E+00	0.0E+00	1.50E-01	E
TOC, Total	0.0E+00	0.0E+00	0.0E+00	3.03E+00	E
CO	0.0E+00	0.0E+00	0.0E+00	6.27E+01	D
SO_x	0.0E+00	0.0E+00	0.0E+00	8.40E-02	D
Total HAP	0.0E+00	0.0E+00	0.0E+00	1.95E-03	E
Largest HAP	0.0E+00	0.0E+00	0.0E+00	1.18E-03	E

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	0.0E+00	NA	0.0E+00	7.67E-04	NA
Formaldehyde	0.0E+00	NA	0.0E+00	1.18E-03	NA
Aldehydes	0.0E+00	NA	0.0E+00	7.00E-02	D

Acetaldehyde and formaldehyde emission factors calculated from the ratio of the respective diesel fuel aldehyde emission factor to the total aldehydes diesel fuel factor.
There are no separate T/HAP emission factors for gasoline fueled engines.

ICE2000 Revision B dated March 23, 2000

Emissions Output for Diesel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/mmBtu)	Factor Quality Rating
PM	1.0E+00	3.3E+02	1.6E-01	3.10E-01	D
PM-10	1.0E+00	3.3E+02	1.6E-01	3.10E-01	D
PM-2.5	1.0E+00	3.3E+02	1.6E-01	3.10E-01	D
NOx	1.4E+01	4.7E+03	2.3E+00	4.41E+00	D
TOC, Exhaust	1.1E+00	3.7E+02	1.9E-01	3.50E-01	D
TOC, Evaporative	0.0E+00	0.0E+00	0.0E+00	0.00E+00	E
TOC, Crankcase	3.2E-02	1.1E+01	5.3E-03	1.00E-02	E
TOC, Refueling	0.0E+00	0.0E+00	0.0E+00	0.00E+00	E
TOC, Total	1.2E+00	3.8E+02	1.9E-01	3.60E-01	E
CO	3.1E+00	1.0E+03	5.1E-01	9.50E-01	D
SO_x	9.4E-01	3.1E+02	1.5E-01	2.90E-01	D
Total HAP	2.4E-02	8.1E+00	4.0E-03	7.59E-03	E
Largest HAP	8.3E-03	2.7E+00	1.4E-03	2.58E-03	E

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	2.5E-03	NA	8.2E-01	7.67E-04	E
Acrolein	3.0E-04	NA	9.8E-02	9.25E-05	E, <
Benzene	3.0E-03	NA	9.9E-01	9.33E-04	E
Benzo (a) pyrene	6.1E-07	NA	2.0E-04	1.88E-07	E, <
1,3-Butadiene	3.8E-03	NA	1.3E+00	1.18E-03	E, <
Formaldehyde	3.8E-03	NA	1.3E+00	1.18E-03	E
Napthalene	2.7E-04	NA	9.0E-02	8.48E-05	E
PAH	5.4E-04	NA	1.8E-01	1.68E-04	E, <
Propylene	8.3E-03	NA	2.7E+00	2.58E-03	E
Toluene	1.3E-03	3.2E-02	4.4E-01	4.09E-04	E
Xylene	9.2E-04	2.2E-02	3.0E-01	2.85E-04	E

Pollutants in red are federally regulated hazardous air pollutants (HAPs) only. Pollutants in purple are NC regulated toxic air pollutants (TAPs) only.
All other pollutants are regulated as both HAPs and TAPs.
Factor quality ratings containing "<" indicate an AP-42 emission factor based on test results being below detection.
Emission factors are from AP-42 Chapter 3, Section 3, Gasoline and Diesel Industrial Engines, dated October 1996.
Hourly emission rates for all pollutants are based on the hourly engine output. Annual emissions are based on the annual engine output.
Daily emissions are based on operation at the hourly input rate for 24 hours.

NCDENR

HEEC Emergency Diesel Generator
2006 Actual Emissions

S. Lane
Progress Energy

Internal Combustion Engines Emissions Calculator ICE2000 Revision B

Instructions: Please provide the information shown in blue below. The applicability of this spreadsheet is limited to gasoline engines up to 250 hp and diesel engines up to 600 hp.
Please note that, when used in conjunction with permit applications, any value entered for annual operations of these engines may become a permit limit.

For annual emissions enter either: (1) Annual Electrical Output, (2) Engine Output and Annual Operation (leave the formula for calculating Annual Electrical Output unchanged) or (3) Generator Output (kW) and Annual Operation (remember to copy the resulting Annual Electrical Output to the appropriate cell to the left).

User Input	
Company Name:	Harris Nuclear Plant
Plant County:	Wake
Plant City:	New Hill
Permit Number:	08455R03
User:	HEEC Emerg. Generator
Engine Output (hp):	266
Annual Electrical Output (kW-hr):	11,800
Annual Output (hp-hr):	17,982

This section can be used to calculate kW-hr output from hours of operation and engine hp output. This can be useful for operators with hour meters but no Watt-hour meters. It assumes full load operation resulting in conservative emission estimates.

Annual Operation (hours):	68
Generator Output (kW):	175
Annual Electrical Output (kW-hr):	11,830

<----- Copy results to "Annual Output (kW-hr)" at left if desired.

DISCLAIMER: This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

Emissions Output for Gasoline Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/hp-hr)	Factor Quality Rating
PM	1.9E-01	1.3E+01	6.5E-03	7.21E-04	D
PM-10	1.9E-01	1.3E+01	6.5E-03	7.21E-04	D
PM-2.5	1.9E-01	1.3E+01	6.5E-03	7.21E-04	D
NOx	2.9E+00	2.0E+02	9.9E-02	1.10E-02	D
TOC, Exhaust	4.0E+00	2.7E+02	1.3E-01	1.50E-02	D
TOC, Evaporative	1.8E-01	1.2E+01	5.9E-03	6.61E-04	E
TOC, Crankcase	1.3E+00	8.7E+01	4.4E-02	4.85E-03	E
TOC, Refueling	2.9E-01	1.9E+01	9.7E-03	1.08E-03	E
TOC, Total	5.7E+00	3.9E+02	1.9E-01	2.16E-02	E
CO	1.2E+02	7.9E+03	3.9E+00	4.39E-01	D
SO_x	1.6E-01	1.1E+01	5.3E-03	5.91E-04	D
Total HAP	3.8E-03	2.6E-01	1.3E-04	1.43E-05	E
Largest HAP	2.3E-03	1.6E-01	7.8E-05	8.65E-06	E

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	1.5E-03	NA	1.0E-01	5.62E-06	NA
Formaldehyde	2.3E-03	NA	1.6E-01	8.65E-06	NA
Aldehydes	1.3E-01	NA	8.7E+00	4.85E-04	D

Acetaldehyde and formaldehyde emission factors calculated from the ratio of the respective diesel fuel aldehyde emission factor to the total aldehydes diesel fuel factor.
There are no separate T/HAP emission factors for gasoline fueled engines.

ICE2000 Revision B dated March 23, 2000

Emissions Output for Diesel Engines

Criteria Pollutants

Pollutant	lb/hr	lb/yr	tpy	Emission Factor (lb/hp-hr)	Factor Quality Rating
PM	5.9E-01	4.0E+01	2.0E-02	2.20E-03	D
PM-10	5.9E-01	4.0E+01	2.0E-02	2.20E-03	D
PM-2.5	5.9E-01	4.0E+01	2.0E-02	2.20E-03	D
NOx	8.2E+00	5.6E+02	2.8E-01	3.10E-02	D
TOC, Exhaust	6.6E-01	4.4E+01	2.2E-02	2.47E-03	D
TOC, Evaporative	0.0E+00	0.0E+00	0.0E+00	0.00E+00	E
TOC, Crankcase	1.2E-02	7.9E-01	4.0E-04	4.41E-05	E
TOC, Refueling	0.0E+00	0.0E+00	0.0E+00	0.00E+00	E
TOC, Total	6.7E-01	4.5E+01	2.3E-02	2.51E-03	E
CO	1.8E+00	1.2E+02	6.0E-02	6.68E-03	D
SO_x	5.5E-01	3.7E+01	1.8E-02	2.05E-03	D
Total HAP	1.4E-02	9.6E-01	4.8E-04	5.32E-05	E
Largest HAP	4.8E-03	3.2E-01	1.6E-04	1.81E-05	E

Toxic/Hazardous Air Pollutants

Pollutant	lb/hr	lb/day	lb/yr		
Acetaldehyde	1.4E-03	9.7E-02	9.7E-02	5.37E-06	E
Acrolein	1.7E-04	1.2E-02	1.2E-02	6.48E-07	E, <
Benzene	1.7E-03	1.2E-01	1.2E-01	6.53E-06	E
Benzo (a) pyrene	3.5E-07	2.4E-05	2.4E-05	1.32E-09	E, <
1,3-Butadiene	2.2E-03	1.5E-01	1.5E-01	8.26E-06	E, <
Formaldehyde	2.2E-03	1.5E-01	1.5E-01	8.26E-06	E
Napthalene	1.6E-04	1.1E-02	1.1E-02	5.94E-07	E
PAH	3.1E-04	2.1E-02	2.1E-02	1.18E-06	E, <
Propylene	4.8E-03	3.2E-01	3.2E-01	1.81E-05	E
Toluene	7.6E-04	1.8E-02	5.1E-02	2.86E-06	E
Xylene	5.3E-04	1.3E-02	3.6E-02	2.00E-06	E

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NCDENR

The unit operated 72 hours in CY2005.
Gasoline engine emissions are not applicable to this source.

NRC Document Control Desk
SERIAL: HNP-07-105

Response to RAI No. 4

Solid Waste Generation at the Harris Plant
2002-2006

	2002	2003	2004	2005	2006
Hazardous Waste	2.46	0.48	0.54	0.46	0.56
Harris Plant Landfill Year = July through June	2.97	409.81	Landfill was closed	Landfill was closed	Landfill was closed
Wake County Landfill	241.09	320.75	201.48	182.99	233.17
Totals (tons)	246.52	731.04	202.02	183.45	233.73

Note: The numbers do not include Universal Waste, recycled material or non-hazardous chemical processing.