DUKE POWER COMPANY

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L. C. DAIL
VICE PRESIDENT,
DESIGN ENGINEERING

50-491

September 21, 1983

Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Re: Cherokee Nuclear Station
Docket No. 50-491
Files: P81-1412.06, CK-1472.00

On April 29, 1983 Duke Power Company's Board of Directors announced cancellation of Cherokee Unit 1. Cherokee Units 2 and 3 were cancelled on November 2, 1982. Load forecasts based on current and predicted economic conditions indicated that Unit 1 would not be needed until 1995. To stretch construction out to that date would increase the total cost of the unit appreciably due to accumulating interest charges.

The Board of Directors' reassessment of Cherokee Unit 1 led to the following conclusions which necessitate cancellation:

1. Unit 1's generating capacity can probably be provided more economically by other types of generation.

2. Duke's existi coal and nuclear units will probably cover baseload requirements the balance of this century.

We hereby tender to you Construction Permit numbers CPPR-167, CPPR-168, and CPPR-169 for Cherokee Units 1, 2, and 3. We request that you delete these dockets.

We have enclosed six (6) copies of Duke Power Company's stabilization plan for the Cherokee site.

Very truly yours,

L. C. Dail, Vice President
Design Engineering Department

JHM/pam

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Enclosure

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DUKE POWER COMPANY

Cancellation of
The Cherokee Nuclear Station

August 1983

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Cancellation of
The Cherokee Nuclear Station

1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

The Cherokee Nuclear Station site is located near Gaffney in north central South Carolina, approximately 40 miles southwest of Charlotte, N.C., and 21 miles east of Spartanburg, S.C. Duke Power Company announced plans for the three unit Cherokee Nuclear Station on February 26, 1974. After receiving limited work authorization from the Nuclear Regulatory Commission, on May 28, 1976, Duke broke ground on July 1, 1976. The Construction Permits were granted December 30, 1977, and the first concrete pour was made on February 16, 1978.

After several delays in the construction schedule, the Cherokee Nuclear Station was formally cancelled by decision of the Board of Directors on April 29, 1983. Units 2 & 3 were previously cancelled in 1982.

1.2 SCOPE OF PLAN

This plan outlines the existing condition of the Cherokee site and the activities necessary to stabilize the site with respect to erosive forces and unauthorized access. It should not be construed as a plan to restore the site to preconstruction conditions. The plan provides for stabilization of the site for the short-term and control of unauthorized access and prevention of unauthorized use. The plan will remain in effect until the most appropriate long-term use of the site is determined, at which time it will be incorporated into that use.

1.3 LIMITATIONS OF PLAN

At present many activities associated with original construction and licensing

of the Cherokee Nuclear Station are being conducted under several permits issued by State and Federal regulatory agencies. In conjunction with plant cancellation, Duke is now in the process of reviewing the need for these permits and whether action to modify, renew, or cancel will be necessary.

Although detailed descriptions of these activities are not addressed herein, examples of the permits within this category include the following:

NPDES Permit issued by S.C. Department of Health and Environmental Control (SC-DHEC).

Section 404 Permit issued by Corps of Engineers.

Section 10 Permit issued by S. C. Water Resources Commission.

Air Quality Permit issued by SCDHEC.

FAR-Part 77 Permit issued by Federal Aviation Administration.

Site monitoring under Duke's Control Program to Limit Adverse Environmental Effects During Construction is also under review. Commitments agreed upon with the Nuclear Regulatory Commission and the Environmental Protection Agency under this program will be modified as necessary to provide a complete stabilization of all site facilities.

2.0 SITE STABILIZATION PLAN

2.1 STATE OF COMPLETION AT CANCELLATION

Construction activities for Unit 1, including facilities considered common to all three units, were 17.8 percent complete just prior to the cancellation of Units 2 and 3. Except for the partially completed powerhouse excavations, progress on Units 2 and 3 was essentially zero. The following listing indicates the approximate percentage of structural concrete work completed for the major structures for Unit 1 and for common facilities.

Structure	Unit 1	Common*
Reactor Building	53%	
Auxiliary Building	24%	
Turbine Building	73%	
Condenser Cooling Water Pump Structure	95%	
Service Building		51%
Nuclear Service Water Pump Structures		100%
Makeup Intake Structure		100%
Nuclear Service Water Cooling Towers		64%
Nuclear Service Water Spillway		100%
Nuclear Service Water Cable Tunnels		86%
Yard Valve Structures		2%

*Facilities considered common to all three units before cancellation of Units 2 & 3.

Some equipment has been installed in the plant buildings. This equipment will be removed at Duke's option. Also, buried piping and electrical conduits and trenches, either permanent or temporary, will have ends sealed and be left in place, unless they can be economically salvaged.

2.2 EXISTING SITE CONDITIONS

2.2.1 EXCAVATIONS

Approximately one-half of the land surface of the total 2200 acre plant site is comprised of graded yards or building site excavations, borrow areas, spoil areas, and earth embankments where the original terrain was physically modified in varying degrees during plant construction operations in the period 1976 to 1980.

2.2.2 STORAGE FACILITIES

Approximately 200 acres of the site is currently being used as open storage areas for construction materials. These storage areas generally have been surfaced with gravel. Additionally, two - 200' x 400' and two - 200' x 200' warehouses are used for material and equipment storage. All are equipped with operational fire protection systems. The two larger warehouses are fully heated, and one is also partially cooled.

2.2.3 DAMS/PONDS

Ponds impounded by dams cover approximately 300 acres of the site. Additionally, runoff and groundwater has created ponds in several major excavations. All of the permanent water-retaining earth structures are essentially complete.

2.2.4 PLANT PHYSICAL FACILITIES

The Cherokee site facilities include several partially completed permanent warehouses, and many other temporary construction buildings and facilities already in place and useable. All construction buildings are serviced with utilities.

Six wells of drinking water quality, two temporary electrical substations, approximately 700 acres of graded and graveled parking and storage areas, a permanent fire protection main, and a package sewage treatment system are among the functional on-site facilities.

The CCW Cooling Tower yards are graded and graveled and most of the large diameter underground cooling water pipe located between the tower yards and the turbine buildings is installed.

A permanent aerated lagoon sewage treatment system is partially completed. Some permanent underground storm drainage piping, primarily in the Unit 1 yard area, is in place.

2.2.5 TRANSMISSION CORRIDORS

Transmission corridors associated with the planned high-voltage transmission lines from plant switch yards are sufficiently cleared to accommodate construction of tower structures from the system to the site.

2.2.6 TRANSPORTATION FACILITIES

A newly constructed railroad spur provides rail access to the site. A recently improved paved state highway provides good vehicle access from the major interstate highway, I-85, at Gaffney. Numerous ungraveled, graveled and paved roads provide additional access to areas within the site.

2.3 SITE STABILIZATION ACTIVITIES

2.3.1 EXCAVATIONS

Backfill will be placed in any unstable excavated areas as required and additional grading will be performed to provide drainage for ponded areas if their existence is considered an environmental problem. Grass cover will be established in all areas except gravel surfaced areas, concrete slabs, and buildings. Areas excavated to rock are considered stable and will not require further treatment.

2.3.2 STORAGE FACILITIES

Materials presently located in the open storage areas will be removed from the site as storage is no longer required. These areas are presently graveled and will remain so since no further stabilization is necessary. Warehouses will be treated as detailed in section 2.3.4.

2.3.3 DAMS/PONDS

The slopes of all permanent water retaining earth structures have been provided with erosion protection and will require no further stabilization.

Holding ponds will be retained and used to collect and treat runoff for the duration of site stabilization. NPDES permit limitations for the various discharge points will remain in effect during this period and will govern all discharges from the site. As required, pumping may continue to be used to maintain desirable levels in the ponds. A decision as to the future status of all ponds and associated dams will be made at the conclusion of site stabilization activities consistent with future use of the site.

2.3.4 PLANT PHYSICAL FACILITIES

Current plans are to remove all temporary construction buildings from the site within approximately five years unless a continued need for on-site materials storage is identified or alternate on-site uses for the structures are established. Concrete slabs that remain after removal of the buildings will be left in place.

Partially completed permanent plant structures will be left in place in essentially their present conditions. At this time, Duke's only plans with

regard to these structures are to establish barriers to prevent unauthorized entry and to limit conditions that could constitute a hazard to Duke employees or to the public. These barriers will remain in place until such time as a specific need for the land area or structures has been identified.

2.3.5 TRANSMISSION CORRIDORS

Transmission corridors presently have grass cover and other natural growth and will require no further stabilization.

2.3.6 TRANSPORTATION FACILITIES

The access railroad will be maintained in a serviceable condition with fills and cut slopes stabilized. Parking areas and roadways that are presently gravelled will require no additional stabilization. Ungravelled roadways which are deemed necessary for site access will be maintained in a stable condition. All other roads will be graded for proper drainage and seeded with grass and closed to prevent unauthorized use.