

DUKE POWER COMPANY

P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

July 18, 1984

Mr. Harold R. Denton
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: McGuire Nuclear Station
Docket Nos. 50-369, 50-370

Dear Mr. Denton:

Please find attached additional information concerning the McGuire Nuclear Station application for disposal of very low level radioactive waste. This additional information is provided in response to a telephone conference call held on July 16, 1984 between Jerry Swift, NRC, and W. H. McDowell and Changfuh Lan, Duke Power Company. If there are further questions regarding this matter, please contact us.

Very truly yours,

H.B. Tucker 1-50

Hal B. Tucker

WHM/rhs

Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Mr. W. T. Orders
NRC Resident Inspector
McGuire Nuclear Station

8407260327 840718
PDR ADOCK 050C0369
X PDR

1001
11

Duke Power Company
McGuire Nuclear Station

Application for Disposal of Low Level Radioactive Waste
Additional Information

This is in response to the concern regarding the chemical behavior of the water treatment waste and potential transfer of ion-exchange resins, diatomaceous earth and residues through ground migration. These questions have been thoroughly analyzed, investigated and approved by the N. C. Department of Natural Resources and Community Development, per NPDES Permit No. NC0024392.

According to this permit, Duke Power is required and committed to effectively maintain and operate the disposal site so that there is no discharge to the surface waters, nor any contamination of ground waters which will render them unsatisfactory for normal use. In order to comply with this, Duke has built a dirt bank around the disposal site to prevent any wind erosion and surface runoff from the waste material application disposal area onto the adjacent property and/or surface waters.

For any potential transfer of this material through ground migration, two test borings (M-1 and M-2) for the Dredge Spoils Area were drilled on June 28, 1982. M-1 was drilled to 32.4 feet and was terminated in the fill. M-2 was drilled to 55.8 feet and was terminated in residual soil which was first recognized in a sample at 50.4 feet. The fill is generally fine sandy silts and silty sands. Rock fragments, gravel and tar was noted in several samples from the fill. The two samples of residual soils are a silty sand and a sandy silty clay. The standard penetration resistance (N) of the fill ranges from 1 to 12 with the average near 5. The water table is at 14 feet in M-1 and at 15 feet in M-2. The water table in M-2 rose to 11.2 feet after drilling the hole to 55.8 feet. Permeability was determined in both test borings at 32.4 feet by the falling water level method (permeability measured is the mean coefficient of permeability). Permeabilities as determined by the tests are:

M-1, 8×10^{-5} cm/sec and M-2, 2×10^{-5} cm/sec

According to these tests and investigations, Duke Power concluded that there will be no impact on ground water usages.