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ACCESSION NBR: 8405150396      DOC. DATE: 84/05/11      NOTARIZED: NO      DOCKET #  
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 50-269 Oconee Nuclear Station, Unit 1, Duke Power Co.      05000269  
 50-270 Oconee Nuclear Station, Unit 2, Duke Power Co.      05000270  
 50-287 Oconee Nuclear Station, Unit 3, Duke Power Co.      05000287  
 50-369 William B. McGuire Nuclear Station, Unit 1, Duke Powe      05000369  
 50-370 William B. McGuire Nuclear Station, Unit 2, Duke Powe      05000370  
 50-413 Catawba Nuclear Station, Unit 1, Duke Power Co.      05000413  
 50-414 Catawba Nuclear Station, Unit 2, Duke Power Co.      05000414

AUTH. NAME      AUTHOR AFFILIATION  
 TUCKER, H.B.      Duke Power Co.  
 RECIP. NAME      RECIPIENT AFFILIATION  
 DENTON, H.R.      Office of Nuclear Reactor Regulation, Director  
 EISENHUT, D.G.      Division of Licensing

SUBJECT: Requests approval of proposed disposal method for very low level radwaste, per IE Circular 81-07, "Control of Radioactively Contaminated Matl." Procedure applies to products containing radioactivity levels less than 500 dpm.

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May 11, 1984

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

Attention: Mr. D. G. Eisenhut, Director  
Division of Licensing

Subject: Catawba Nuclear Station  
Docket Nos. 50-413, -414  
McGuire Nuclear Station  
Docket Nos. 50-369, -370  
Oconee Nuclear Station  
Docket Nos. 50-269, -270, -287

Dear Mr. Denton:

In 1981 the NRC issued IE Circular 81-07 entitled "Control of Radioactively Contaminated Material." The purpose of this circular was to provide guidance on the control of radioactive contamination at nuclear power reactor facilities.

Duke Power has reviewed the information contained therein and desires to establish a disposal procedure at each of our nuclear stations that is based on this circular. The procedure would be specifically for wood and/or wood products that may contain radioactivity levels of less than 5000 dpm/100 cm<sup>2</sup> at ½" (contact) and no alpha contamination.

It would seem that based on review of the discussions presented in IE Circular 81-07, that items which are contaminated to less than 5000 dpm/100 cm<sup>2</sup> and have no alpha contamination are releasable to an unrestricted area and would not be governed by 10 CFR 20. On the other hand, 10 CFR 20, §20.302 states that any licensee may apply for approval of proposed procedures to dispose of licensed material in a manner not otherwise authorized in the regulations. A conservative interpretation of this regulation would be that any material, no matter how minutely contaminated, needs to be disposed of in an approved manner.

Thus, Duke Power Company hereby requests NRC approval of the proposed disposal method described in the attached. This method is generic to all three Duke nuclear stations and is based to a large extent on the technical analysis contained in IE Circular 81-07. Duke also requests that the NRC consider that if a licensee controls radioactively contaminated material in accordance with 10 CFR 20 and IE Circular 81-07, that NRC approval of the attached disposal method may not be required by the regulations, in that implicit approval has already been provided by the circular.

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Based on an initial review, Duke has determined that no license fees are warranted. We are requesting approval for an action, pursuant to a regulation, for which acceptability appears to have been previously established. Duke Power requests that the NRC review and consider this request in a timely manner.

Very truly yours,

*H. B. Tucker / BTU*

Hal B. Tucker

RLG/php

Attachment

cc: Mr. James P. O'Reilly, Regional Administrator  
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Duke Power Company  
Catawba Nuclear Station  
McGuire Nuclear Station  
Oconee Nuclear Station

Request for Approval to Dispose of  
Very Low Level Radioactive Waste

Pursuant to 10 CFR 20, §20.302 Duke Power Company requests NRC approval of the following proposed disposal procedure governing wood and/or wood products which have been contaminated or which contain radioactivity levels of less than 5000 dpm/100 cm<sup>2</sup> at ½" (contact). It is proposed that such products be disposed of in normal sanitary landfills. The following paragraphs address the specific informational requirements contained in §20.302.

- 1) Description of the licensed material and any other radioactive material involved:

The normal surface contamination of wood and/or wood products is predominantly Co58, Co60, Mn54 with possibly Cs137.

- 2) Quantities and kinds of such material:

The sources of wood and/or wood products include scaffold boards, step ladders, plywood, and boards used for pallets and/or bracing of equipment. The estimated quantity is 400 to 700 cubic feet per year per station.

- 3) Levels of radioactivity involved:

The maximum level of radioactivity will be less than 5000 dpm/100 cm<sup>2</sup> at ½" (contact). Items with activity levels above this will be considered contaminated or radioactive, and will be controlled in accordance with applicable regulations.

- 4) Proposed manner and conditions of disposal:

- a. Wood and/or wood products that may contain radioactivity from a nuclear power reactor will be surveyed and evaluated.
- b. The survey shall be determined by the use of an instrument, such as a calibrated portable G-M survey instrument, using a thin pancake detector (window thickness 1-2 mg/cm<sup>2</sup>).
- c. All measurements to assure that the total activity as described above is met shall be performed in a low background area (i.e., less than 100 cpm) as indicated by the use of an instrument that is and has been checked for current calibration standards.

- d. Items with radioactivity levels of less than 5000 dpm/100 cm<sup>2</sup> at ½" (contact) will be transferred to an unrestricted area. If alpha contamination is suspected, appropriate surveys shall be performed to assure that such contamination is less than 100 dpm/100 cm<sup>2</sup>.
  - e. Wood and/or wood products that meet this criterion will then be disposed of in a normal sanitary landfill.
- 5) Analysis and evaluation of pertinent information as to the nature of the environment:

For this proposed disposal method, an analysis and evaluation of topographical, geological, meteorological, and hydrological characteristics of the environment are not necessary. The technical analysis of IE Circular 81-07 concludes

"that for the potentially undetected contamination of discrete items and materials at levels below 5000 dpm/100 cm<sup>2</sup>, the potential dose to any individual will be significantly less than 5 mrem/yr even if the accumulation of numerous items contaminated at this level is considered."

- 6) Nature and location of other potentially affected facilities:

No other facilities are potentially affected by this disposal means due to the minute levels of radioactivity involved.

- 7) Procedures to be observed to minimize the risk of unexpected or hazardous exposures:

The existing radiation protection program at each station addresses the procedures observed to minimize risk of unexpected or hazardous exposures in the surveying and evaluation of potentially radioactive items. The disposal method proposed herein cannot be utilized unless the items have been properly surveyed and the radioactivity levels have been determined to be below 5000 dpm/100 cm<sup>2</sup>. Thus, no additional special procedures are necessary to minimize the risk of unexpected or hazardous exposures.