

February 18, 1992

Docket No. 50-271

Mr. L. A. Tremblay
Senior Licensing Engineer
Vermont Yankee Nuclear Power Corporation
580 Main Street
Bolton, Massachusetts 01740-1398

Dear Mr. Tremblay:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION ON THE VERMONT YANKEE
REQUEST TO USE ALTERNATE METHODS FOR DISPOSAL OF LOW LEVEL
RADIOACTIVE CONTAMINATED SOIL (TAC NO. M82152)

In conducting our review of your 10CFR20.302(a) application, dated November 18, 1991, for the in-place disposal of low level radioactively contaminated soil, the staff has determined that the additional information identified in the enclosure is needed to complete our review.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P. L. 96-511.

Sincerely,

Original signed by
Patrick M. Sears, Project Manager
Project Directorate I-3
Division of Reactor Projects I/11
Office of Nuclear Reactor Regulation

Enclosure:
Request for Additional Information

cc w/enclosure: see next page

OFC	:LA:PDI-3	:PM:RDI-3	:BC:RPB:DREP	:(A)DIR:PDI-3
NAME	:MRushbrook	:PSears:sk	:LCunningham	:AJMendiola
DATE	:2/13/92	:2/13/92	:2/14/92	:2/18/92

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Mr. L. A. Tremblay, Senior Licensing
Engineer

Vermont Yankee

cc:

Mr. J. Gary Weigand
President & Chief Executive Officer
Vermont Yankee Nuclear Power Corp.
P.D. 5, Box 169
Ferry Road
Brattleboro, Vermont 05301

G. Dana Bisbee, Esq.
Office of the Attorney General
Environmental Protection Bureau
State House Annex
25 Capitol Street
Concord, New Hampshire 03301-6937

Mr. John DeVincentis, Vice President
Yankee Atomic Electric Company
580 Main Street
Bolton, Massachusetts 01740-1398

Mr. James Pelletier
Vice President - Engineering
Vermont Yankee Nuclear Power Corp.
P. O. Box 169, Ferry Road
Brattleboro, Vermont 05301

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Resident Inspector
Vermont Yankee Nuclear Power Station
U.S. Nuclear Regulatory Commission
P. O. Box 176
Vernon, Vermont 05354

R. K. Gad, III
Ropes & Gray
One International Place
Boston, Massachusetts 02110-2624

Chief, Safety Unit
Office of the Attorney General
One Ashburton Place, 19th Floor
Boston, Massachusetts 02108

Mr. W. P. Murphy, Senior Vice President,
Operations
Vermont Yankee Nuclear Power Corporation
R.D. 5, Box 169
Ferry Road
Brattleboro, Vermont 05301

Mr. David Rodham, Director
Massachusetts Civil Defense Agency
400 Worcester Road
P.O. Box 1496
Framingham, Massachusetts 01701-0317
ATTN: James Muckerheide

Mr. Richard P. Cedano, Commissioner
Vermont Department of Public Service
120 State Street, 3rd Floor
Montpelier, Vermont 05602

Public Service Board
State of Vermont
120 State Street
Montpelier, Vermont 05602

Chairman, Board of Selectmen
Town of Vernon
Post Office Box 116
Vernon, Vermont 05354-0116

Mr. Raymond N. McCandless
Vermont Division of Occupational
and Radiological Health
Administration Building
Montpelier, Vermont 05602

RADIATION PROTECTION BRANCH

REQUEST FOR ADDITIONAL INFORMATION (RAI)
ON VERMONT YANKEE REQUEST
FOR DISPOSAL OF LOW LEVEL RADIOACTIVE
CONTAMINATED SOIL
TAC NO. M82152

Section 2.1 Physical Properties

1. Provide additional information (i.e., calculations) to support the assumption that 58,500 cubic feet of soil may be contaminated.

Section 2.4 Radiological Properties

2. Clarify the basis for reporting the radionuclide concentration on a "wet" basis instead of a "dry" basis. Provide the concentration on a "dry" basis, if available.

3. There is an unusually large distance gap between the sample taken at 37.5 inches and the next one at 85.5 inches compared to the relatively uniform spacing of the other samples. Since the 37.5 inch sample has the highest concentration, it would seem prudent to have taken samples above and below that level to obtain a more detailed profile of the spatial distribution of the contamination. Provide justification for this gap or provide data on soil boring sample results for depths closer to the 37.5 inch level, and revise the appropriate data tables.

Section 2.5 Estimate of Total Activity

4. Provide the basis for assuming that disposal of 10 liters/week of radioactive material is a conservative value. Provide information on sample analysis and frequency of routines to support your answer.

5. The graph titled "BORING MW-1" presents a misleading representation of the distribution of contamination. The X-axis plots the sample depth in a linear manner, which it is not. Additionally, as discussed in question 3, the large gap of missing data between the highest concentration sample and the next sample skews the data representation. Provide a revised graph (including data from question 3) that appropriately reflects actual scale.

Section 5.2.1 Approach to Analysis

6. Due to methodology errors that were found in the January 1990 draft of NUREG/CR-5512, use of that methodology is not appropriate. Provide a reanalysis using other available methodology.

7. Provide a discussion on the correlation between the actual sample concentrations and the estimated concentrations to demonstrate that using the actual concentrations would not result in higher doses. Include the data on samples taken at the point immediately below where the pipe penetrates the floor, which had a peak Co-60 concentration of $1.1E+05$ pCi/kg.

General

8. Provide a legible map of the disposal site with compass direction and scale, that includes local land use (e.g., buildings, nearby residences, wells, etc.).
9. Describe any physical or administrative barriers to prevent present and/or future intrusion into the disposal site (i.e., during building modification, repair of drain line, and decommissioning activities).
10. What controls are in place to prevent the use of the failed drain line?
11. What plans, if any, are being considered to repair or replace the failed drain line?

DISTRIBUTION:

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NRC & Local PDRs

PDI-3 Reading

S. Varga

J. Calvo

A. Mendiola

P. Sears

M. Rushbrook

OGC

L. Cunningham

ACRS (10)

J. Linville, Region I

R. Lobel