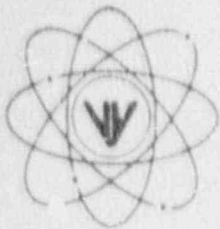


# VERMONT YANKEE NUCLEAR POWER CORPORATION



Ferry Road, Brattleboro, VT 05301-7002

BVY 91-28

REPLY TO  
ENGINEERING OFFICE  
580 MAIN STREET  
BOLTON, MA 01740  
(508) 779-6711

March 13, 1991

U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Attn: Document Control Desk

References:

- a) License No. DPR-28 (Docket No. 50-271)
- b) Letter, VYNPC to USNRC, BVY 91-001, Response to Inspection Report 50-271/90-13, dated 1/4/91
- c) Letter, USNRC to VYNPC, NRC Inspection Report 50-271/90-13, dated 12/5/90

De Sir:

Subject: Supplemental Response to Inspection Report 50-271/90-13

This letter is intended to clarify an apparent misunderstanding regarding unresolved item 90-13-02 which was initially identified in Reference c). During inspection 50-271/91-10, discussion with D. Chawaga and P. O'Connell revealed that our original response apparently did not address the main issue of the unresolved item. The following is intended to clarify our response and confirm our plans to implement the required changes to our bioassay program.

Reference b) described in detail the assumptions we made for concluding the event was an inhalation event and why we determined that the analysis of the actual exposure was conservative. However, our discussion of item B in Reference c) of the unresolved item, the air breathing rate germane to an MPC-hour calculation, did not precisely address the inspector's concerns. Vermont Yankee used data from ICRP 23 and ICRP 30 as well as air sample data in our original analysis but did not specifically perform an MPC-hour calculation. Instead, we used a methodology which calculated the Derived Air Concentration (DAC) and incorrectly assumed that DAC-hours corresponded to MPC-hours. As the NRC pointed out, the reliance on such data coupled with our assumption that DAC-hours roughly equate to MPC-hours can lead to a situation where an intake could exceed 2 MPC-hours in one day or 10 MPC-hours in one week and therefore the dose may potentially not be properly assessed, as required by 10CFR20.103. This lack of a proper MPC-hour calculation is attributable to a lack of a formal procedural process of evaluation. Such a procedure would require this assessment and then define the proper calculation.

Our misdirected response to this item [Reference b)] was due to a misunderstanding of the intent of the specific NRC concern. Although we apologize for the misunderstanding and therefore lack of an accurate response to this unresolved item, we assure you that our intentions were to develop a clear procedure, including the appropriate check of MPC-hours. The particular event which was central to this finding has been analyzed by the Yankee Atomic Environmental Lab and reported as an intake of 0.082 DAC-hours which compare to 2.37 MPC hours, thus, clearly showing the mismatch between DAC-hours and MPC-hours.

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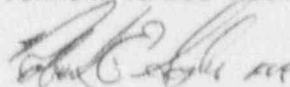
To correct this weakness in our program, we will implement procedural changes to ensure that a programmatic assessment of all positive bioassays is performed in accordance with accepted models and regulatory requirements. This will be completed by May 1991. Additionally, an extensive review is being performed to ensure that a proper MPC-hour calculation is documented for past events. This will be completed by June 15, 1991.

It is our understanding that the concerns regarding the methodology used to assess the type and quantity of intake, as discussed in items A and C of the report [Reference c)] are resolved.

We trust that the information provided adequately addresses your concerns; however, should you have any questions or desire additional information, please do not hesitate to contact us.

Very truly yours,

Vermont Yankee Nuclear Power Corporation



Warren P. Murphy  
Senior Vice President, Operations

/dm

cc: USNRC Regional Administrator, Region I  
USNRC Resident Inspector, VYNPS  
USNRC Project Manager, VYNPS