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January 6, 1992

Larry Smukler, Chairman
Nuclear Decommissioning
Financing Committee
N.H. Public Utilities Commission
8 Old Suncook Road
Concord, New Hampshire 03301

RE: NDFC 91-1

Dear Mr. Smukler:

I enclose an Affidavit of Mr. LaGuardia dated December 30, 1991 relating to Unit 1's capacity to store spent fuel on site.

Sincerely,

Edward A. Haffer

EAH:dl

Enclosures

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THE STATE OF NEW HAMPSHIRE
NUCLEAR DECOMMISSIONING FINANCING COMMITTEE

DOCKET NO. NDFC 91-1

I, Thomas S. LaGuardia, under oath affirm as follows:

1. I have read Mr. Boyle's dissent to the Committee's Report and Order dated November 26, 1991, and note that Mr. Boyle says the following at p.53: "[B]y present design the plant has only 12 years of spent fuel storage on-site, which means that by 2002 the cooling pools are full."

2. I respectfully submit that the quoted statement is incorrect.

3. Although this issue was not specifically addressed in NDFC 91-1, it was specifically addressed NDFC 87-1. See New Hampshire Yankee Exhibit 10 in NDFC 87-1, my May 12, 1988 Supplemental Testimony, question and answer 2; a true copy of that Exhibit is attached hereto and incorporated herein.

4. In my attached 1988 Supplemental Testimony, I indicated that there was capacity in the spent fuel pool for 18 years of operation. Under updated projections and current planned fuel cycle lengths, Seabrook Station will not lose its ability to offload a full core of reactor fuel into the spent fuel pool, i.e., its Full Core Reserve (FCR) discharge capability, for 20 years of operation or until the last half of 2010.

5. This information is presented to clarify the record only and does not impact any of the studies, testimony or responses to data requests that I have heretofore sponsored before this Committee.

Date: DECEMBER 30, 1991

Thomas S. LaGuardia

STATE OF CONNECTICUT :
: ss. Bridgewater
COUNTY OF LITCHFIELD :

Subscribed and sworn to before me this 30th day of December, 1991.

Lori M. Canfield
Notary Public
My Commission Expires: 3/31/96

NHY 24.10
NDFC 87-1

May 1988
Supplemental Testimony of
Thomas S. LaGuardia

Q. Mr. Arnold Wight suggested in his testimony that an option of the state of New Hampshire might be to contract for radioactive waste disposal with the Appalachian Compact. Have you evaluated the effect on decommissioning costs if the intended disposal site was located within the Appalachian Compact?

A. TLG based its prompt removal/dismantling cost estimate on a postulated shipping distance of 250 miles assuming New Hampshire would negotiate a radioactive waste disposal agreement with the Northeast Compact. Until firm plans are made, TLG believes its 250 mile assumption is reasonable for estimating the transportation costs associated with decommissioning.

Nevertheless, for purposes of illustrating the effect of shipping distances on decommissioning costs TLG calculated the costs to ship decommissioning waste to Pennsylvania, the designated host state in the Appalachian Compact. The far western regions of Pennsylvania are approximately 750 miles from the Seabrook site. Using the same Tri-State Motor Transit rate schedules relied upon in the 1987 cost study, TLG reran the cost estimate for prompt removal/dismantling with a postulated shipping distance of 750 miles.

The result was a minimal increase in the total decommissioning costs for the Seabrook Station, Unit 1 from $242,429,000, for 250 miles, to $244,222,000 for 750 miles. This 0.7% increase is not great enough to warrant changing the cost basis at this time.

This hypothetical scenario illustrates the non-linear relationship between shipping distance and cost. While the distance increased by a factor of 3, the associated cost rose only 38%. Considering both the distance/cost relationship and that transportation is a minor cost contributor in the total program cost, changes in the ultimate location of the low-level waste disposal site will have little impact on the total cost of decommissioning.

Q. What is the capacity of Unit 1 to store spent fuel on-site?

A. Based upon information from New Hampshire Yankee, the current projected capacity for the Unit 1 spent fuel storage pool is 1236 assemblies. It is expected that approximately one-third of the core (64 assemblies) will be changed out every refueling. This practice would take Seabrook Station through 17 cycles of operation. If a minimum capacity factor of 65 per-

cent with associated outage time is assumed, each cycle would run about 13 months. Therefore, this would result in a minimum of 18 years of operation.

In addition, New Hampshire Yankee (NHY) has the capability to augment this capacity by either rod consolidation or dry cask storage. Rod consolidation, a process where the fuel bundles are repacked, could conservatively increase capacity by a factor of 1.5 to at least 1854 assemblies thereby adding an extra 10 cycles or 11 years of operation.

Dry cask storage is a process whereby "older" spent fuel (minimum of at least 5 years) is taken out of the spent fuel pool and consolidated in dry storage. This option, which is already in use at other facilities in the United States, would meet all applicable regulations.

In summary, present spent fuel storage capacity is 17 cycles or 18 years on a 13 month cycle base. Rod consolidation could extend that capacity by at least 10 years and dry cask storage, whether used alone or combined with rod consolidation, could provide adequate capacity for the full expected operating life of the plant.

Q. If spent fuel cannot be removed immediately following final plant shutdown what impact, if any, would this have on the decommissioning process?

A. The disposition of spent fuel can be both a concurrent and a predecessor activity to decommissioning. The expediency by which the fuel is removed from the site should not interfere with the decommissioning process. Storage of fuel in the Fuel Storage Building can continue after shutdown until such time that the critical path activities associated with the disposition of the structure and integral support systems are affected. This conjunction doesn't occur until late in Period 2, almost 4 years into the decommissioning process. At that time the fuel could be removed from the building such that decommissioning activities could proceed. If when this occurs, off-site disposal is still not a viable alternative, the fuel could be placed in dry storage casks and held on-site until such options become available. However, decommissioning of the Seabrook Unit 1 facility could be completed.