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Docket File

Docket No. 50-309

JAN 13 1981

Mr. Stanley R. Tupper  
Tupper, Bradley and McDowell  
Attorneys at Law  
102 Townsend Avenue  
Boothbay Harbor, Maine 04538

Dear Mr. Tupper:

NRC PDR  
L PDR  
TERA  
NSIC  
ORB#3 Rdg  
EDU Rdg  
D. Eisenhut  
R. Purple  
T. Novak  
R. Tedesco  
G. Lainas  
J. Roe  
J. Heltemes

OELD  
G. Ertter (EDO-09961)  
S. Cavanaugh  
E. Hughes  
M. Stine  
P. Kreutzer (3)  
G. Requa  
R. Clark  
SECY (3) 80-2132  
H. Shapper  
V. Stello  
E. Case  
H. Denton  
PPAS

S. Hanauer  
D. Ross  
B. Snyder  
R. Vollmer  
T. Murley  
Gray File ORB#3  
Green Ticket File  
ORB#3  
ASLB  
R. H. Groce  
C. T. Irwin, Jr.  
J. M. R. Paterson  
Chairman, ASLB

This is in response to your letter of December 4, 1980 to Chairman Ahearne concerning Mr. Glode Requa's comments to questions from Mr. Clark T. Irwin Jr., of the Portland Press Herald, as reported in the Portland Press Herald on December 1, 1980.

You state that Mr. Requa, the NRC staff Project Manager assigned to the Maine Yankee Atomic Power Company application for long term storage of spent fuel, by these comments, has prejudged the outcome of the Maine Yankee Atomic Power Company application to expand their spent fuel storage capacity. You state that Mr. Requa was quoted as backing Maine Yankee's long term storage plan.

I have read the referenced article and while the article is entitled "2 Energy Officials Back Yankee Spent Fuel Plant", the reported comments of Mr. Requa merely reflect staff positions on the generic issue of long term spent fuel storage documented in NUREG-0575, "Handling and Storage of Spent Light Water Power Reactor Fuel." This document was referenced by Mr. Requa throughout his interview with Mr. Clark T. Irwin, Jr. However, this document was not referenced in the article. Mr. Requa's comments in the article do not specifically back or prejudice the instant application.

The decision regarding this application will not be made by Mr. Requa but by appropriate management under my direction following safety and environmental analyses which will be documented in the Safety Evaluation Report and the Environmental Impact Appraisal. Moreover, if the licensing board designated to rule on petitions to intervene grants the hearing requested by Sensible Maine Power, the issues raised by Sensible Maine Power will be addressed and decided by the Atomic Safety and Licensing Board.

A copy of this letter, together with your letter of December 4, 1980 is being furnished to the Atomic Safety and Licensing Board and all petitioners in this proceeding.

Sincerely,

Harold R. Denton  
Director

Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

\*Denotes previous concurrence,  
See attached

NRB  
HDenton  
1/12/81

OFFICE	ORB#3:DL*	ORB#3:DL*	ORB#3:DL*	AD:OR:DL*	OELD*	D:DL*	NRB
SURNAME	PMKreutzer	GRequa:jn	RAClark	TMNovak		B Eisenhut	E Case
DATE	1/ /81	1/ /81	1/ /81	1/ /81	1/ /81	19/81	1/12/81

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Attorneys at Law  
102 Townsend Avenue  
Boothbay Harbor, Maine 04538

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R. Purple	G. Requa	T. Murley
T. Novak	R. Clark	Gray File ORB#3
R. Tedesco	SECY (3) 80-2132	Green Ticket File-ORB#3
G. Lainas	H. Shaper	ASLB

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Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

cc: Letter dated December 4, 1980

NRR  
HDenton  
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OFFICE	ORB#3:DL	ORB#3:DL	ORB#3:DL	AD:OR:DL	OELD	D:DL	NRR
SURNAME	PMKreutzer	GRequa:cf	RAGlark	TNovak		DEisenhut	ECase
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Stanley R. Tupper Tupper, Bradley and Edgewell		COMPL DEADLINE		1/1/1981		09961	
TO:		ACKNOWLEDGMENT				DATE OF DOCUMENT	
Chairman Alperin		INTERIM REPLY				12/14/80	
		FINAL REPLY				PREPARE FOR SIGNATURE	
		FILE LOCATION				<input type="checkbox"/> CHAIRMAN <input type="checkbox"/> EXECUTIVE DIRECTOR OTHER: <u>Section</u>	
DESCRIPTION <input type="checkbox"/> LETTER <input type="checkbox"/> MEMO <input type="checkbox"/> REPORT <input type="checkbox"/> OTHER		SPECIAL INSTRUCTIONS OR REMARKS					
Co-counsel for Sensible Nuclear Power Intervenor opposing NRC's plan to store all of its nuclear waste in its existing fuel pool for the lifetime of plant							
CLASSIFIED DATA							
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				2. Hanner		COMMENTS, NOTIFY:	
						EXT. _____	
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NRC FORM 232  
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		<input type="checkbox"/> Policy Evaluation

Incoming: Stanley Tupper  
 From: Tupper, Bradley & McDowell

To: Ahearne Date 12/4/80  
 Subject: Matter of MYAPC--applicant modified spent fuel pin storage with new 10.5 center racks

- ☐ Prepare reply for signature of:
- ☐ Chairman
  - ☐ Commissioner \_\_\_\_\_
  - ☐ EDO, GC, CL, SOL, PA, SECY, IA, PE
  - ☐ Signature block omitted
  - ☐ \_\_\_\_\_
  - ☐ Return original of incoming with response

☒ For direct reply\* Suspense: Jan 5

- ☐ For appropriate action
- ☐ For information

Remarks: docket

Rec'd by EDO  
 Date 12/12/80  
 Time 11:00

For the Commission: billie

\*Send three (3) copies of reply to Secy Correspondence and Records Branch

TUPPER, BRADLEY AND McDOWELL

ATTORNEYS AT LAW

102 TOWNSEND AVENUE  
BOOTHBAY HARBOR, MAINE 04538  
(207) 633-4000

STANLEY R. TUPPER  
EDWARD F. BRADLEY, JR.  
JERRY L. McDOWELL

CANAL BANK BUILDING, LONG WHARF  
P.O. BOX 267 DTS, PORTLAND, MAINE 04112  
(207) 773-0788

December 4, 1980

Hon. John F. Ahearne, Chairman  
Nuclear Regulatory Commission  
1717 H St., NW  
Washington, D. C. 20555

Re: Matter of Maine Yankee Atomic Power Company  
(Maine Yankee Atomic Power Station) Applicant  
Modified Spent Fuel Pin Storage with New 10.5"  
Center Racks)

Dear Mr. Ahearne:

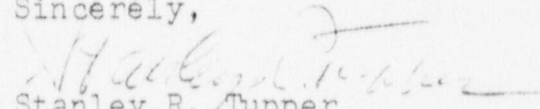
I am writing the Commission as co-counsel for Sensible Maine Power, Intervenor in opposition to MYA's plan to store all of its nuclear waste in its existing fuel pool for the lifetime of that plant.

It is my wish to draw to your attention remarks made by an NRC official, Mr. Glode Requa, to the Portland Press Herald, Dec. 1, 1980 (copy enclosed) as reported by Clark T. Irwin, Jr. Mr. Requa was quoted as backing MYA's long-term storage plan, focusing on one of a number of contentions raised by Intervenor.

I consider these remarks made by Mr. Requa, before even a pre-hearing conference has been ordered, as very unprofessional. When an NRC official prejudges an issue of this importance it does little to assure the public that these matters will receive a fair and objective hearing.

No criticism is implied toward Mr. Irwin, Staff Writer for the Portland Press Herald; he was merely doing his job. However, Mr. Requa did a disservice to the NRC, the State of Maine (a participant in this matter) and the Intervenor.

Sincerely,

  
Stanley R. Tupper

cc: Henry J. McGurren, Esq.  
Counsel for NRC Staff

Clark T. Irwin, Jr.

John Patterson, Esq., Deputy Attorney General, State of Maine

*dupe 8012150070*



# Portland Press Herald

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## 2 energy officials back Yankee spent fuel plan

By CLARK T. IRWIN JR.  
Staff Writer

Two federal energy officials say that the Maine Yankee Atomic Power Co.'s plan to increase its capacity to store spent fuel at its Wiscasset plant is a commonplace and safe procedure.

The reactor, 39 percent owned by Central Maine Power Co., has applied to the Nuclear Regulatory Commission for a permit to concentrate the fuel pellet tubes in its stored spent fuel assemblies and to rack the assemblies closer together underwater in the plant's stainless steel, 38-foot deep storage pool.

The safety review on that application could be concluded this month or early next year, NRC officer Glode Requa told the Press Herald. Public hearings on the idea have not yet been scheduled.

Requa and James J. Fiore of the Depart-

A technician looks down on the spent fuel pool at Maine Yankee, where officials seek to increase storage capacity. The arrow in the larger photograph shows the storage building.

ment of Energy's Office of Spent Fuel Transportation and Storage expressed doubts about the validity of critics' arguments against the racking.

Dr. Gordon Thompson of the Union of Concerned Scientists in Cambridge, Mass., told the Press Herald recently that a drop in the water level in a reactor's spent fuel pool could cause overheating from the fuel assemblies' residual heat.

That, he said, could release hydrogen gas as zirconium tube coverings melt, and a gas explosion could spread radioactive vapors.

An airplane crash or a severe earthquake might trigger the water loss, Thompson said. He prefers storing the 12 foot-long fuel assemblies in heavy shipping casks, allowing air currents to cool them.

"This scenario has been gone over many times," the NRC's Requa said, "but it keeps coming up."

The safety issue already has been addressed in applications from more than 60 other commercial reactors, Requa said, and "I would say that most others have completed the process."

Maine Yankee, however, was the first commercial reactor company to develop a method for increasing the number of fuel tubes that can be stored in each fuel assembly, Requa said.

As used in the reactor, each fuel assembly contains 176 fuel tubes; the Maine Yankee plan calls for reassembling the units underwater to increase the number of tubes to 285 per assembly for storage.

Thompson's preferred route, storing the used fuel assemblies in shipping casks weighing between 22 and 97 tons each, suffers from a number of drawbacks, Requa said.

There are fewer than two dozen such casks in the country, according to the DOE, with a total capacity of about 60 fuel assemblies for pressurized water reactors like Maine Yankee.

But Maine Yankee alone already has 505 fuel assemblies stored in its spent fuel pool — the number withdrawn from the reactor core since it became operational in 1972.

The pool as presently racked can hold 963 assemblies. That capacity would grow by 500 to 600 from the proposed racking and another 700 to 800 from the proposed fuel pellet tube concentration within the assemblies.

That raises another point, Requa said: Building either a new pool or an air-cooled storage facility would be "very, very expensive" compared to the plan submitted by Maine Yankee.

And if the government should, meanwhile, ready a central AFR (Away From Reactor) storage plant or a "permanent" disposal site, as called for by current plans, that investment could be both short lived and costly to ratepayers of the utilities that draw power from Maine Yankee.

The proposed plan would cost "a few million dollars," according to Maine Yankee director of nuclear engineering and licensing John H. Garrity, while alternatives would cost "tens of millions."

Another problem, Requa adds, is that while the casks are inspected, tested and licensed for shipping, they are not licensed for use as storage devices.

Maine Yankee will exhaust its spent fuel storage capacity by 1987 — the reason for its petition to the NRC — and Requa said it's his "gut feeling" that dry storage with casks couldn't be licensed before that time.

But the central question is safety.

"We think that water-basin storage is safe," said the DOE's Fiore. As to Thompson's assumed accident stemming from an airplane crash or earthquake, Fiore said, "Anyone can come up with a what-if scenario, but we don't see dry (storage) as having a storage safety advantage (over wet storage)."

And in any event, he added, "The spent fuel there right now — racking doesn't increase the extent of a catastrophic accident, if one should happen."

Garrity, who has worked at the Wiscasset reactor for 10 years, similarly argues that racking might add "a few percentage points of seriousness" to any accident that might happen to the pool — but he doubts the premise that one would.

The pool is a stainless steel tank backed by concrete, mostly below ground level, he said. So its response to an earthquake would likely be to bend rather than rupture.

Even if the liner broke open, Garrity said, the building has a ventilation and filter system to remove radioactive particles from the air. The same filters, he said, would scrub potentially explosive hydrogen gas from the air.

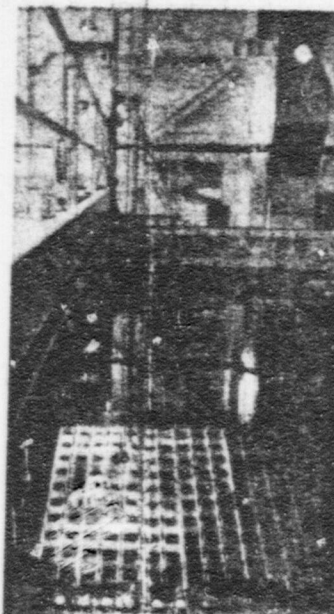
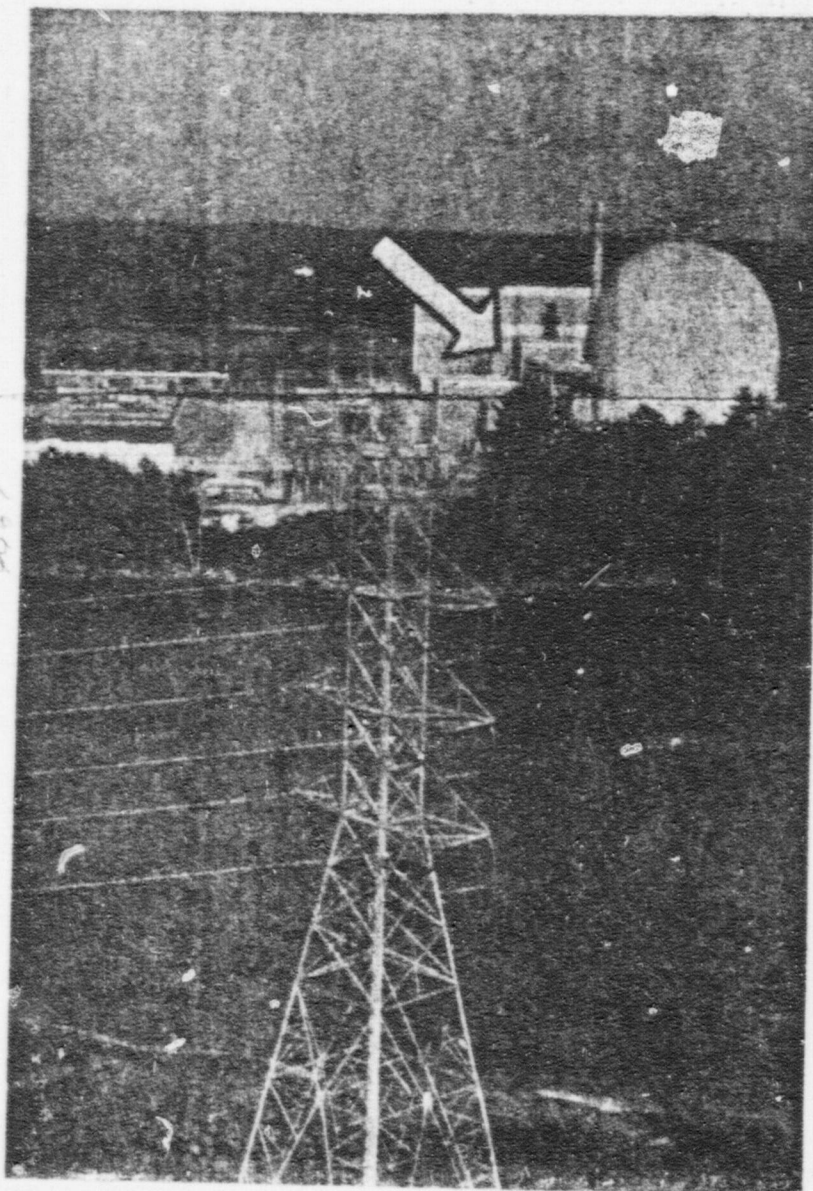
Apart from the plant's mechanical cooling systems, Garrity said, an emergency response to a water-level drop in the pool could draw on a multi-million gallon pond built outside for firefighters' use.

Most of the 505 assemblies in the pool, he said, couldn't generate enough heat to melt their zirconium tubes and release the hydrogen and radioactive compounds essential to Dr. Thompson's assumed accident.

Once withdrawn from the reactor core, the DOE calculates, fuel assemblies lose about 90 percent of their residual heat within a year.

Since the Maine Yankee plant opened in 1972 and refueled more often at the outset than it has lately, the average fuel assembly stored in the pool has been out of the reactor for four to five years.

See YANKEE  
Back page this section



# Yankee

FROM PAGE 1

Documents filed with the NRC say the pool water temperature cannot rise beyond 154 degrees Fahrenheit "for the most adverse condition." Water boils at 212 degrees Fahrenheit.

Requa said that Maine Yankee has been "very conservative" in designing its spent fuel pool operation. NRC regulations require 95 percent statistical confidence that the stored fuel assem-

blies cannot come closer than 95 percent of the way to "criticality" — a self-sustaining reaction — under the worst operating conditions.

Maine Yankee has demonstrated the same statistical confidence level that its pool cannot exceed 90 percent of criticality, Requa said, "way below technical specifications."

Finally, he said, spent fuel assembly

reracking at Maine Yankee "has already been done once."

When the plant opened, its spent fuel pool racks were centered 20 inches apart, giving a pool capacity of 318 assemblies.

But it soon became apparent that government plans for accepting custody of used reactor fuels would be delayed. So with NRC approval, Maine Yankee re-

uilt its storage racks in 1975 on 12-inch spacing.

The pool at Maine Yankee, Requa said, "was intended only for temporary storage," until fuel could be disposed of or reprocessed, as is the practice in Europe.

The reracking application came, he noted, because "Like every other reactor in the country, Maine Yankee is running out of storage space."