

JUN 11 1979

For: The Commissioners

From: Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Thru: Executive Director for Operations

Subject: LIQUID EFFLUENT RELEASES FROM THREE MILE ISLAND

Purpose: Approval of a letter to Congressman Robert S. Walker

Discussion: On May 7, 1979, Congressman Walker (Enclosure 2) expressed concern over the release of low-level liquid radioactive waste from Three Mile Island (TMI) into the Susquehanna River.

The proposed response to Congressman Walker (Enclosure 1) reflects the NRC responsibilities in reviewing all radiological waste operations at TMI and explains the bases upon which liquid effluents are permitted to be released.

The letter states that 1) NRC staff members on-site at TMI review all radiological waste management operations, 2) the NRC and Commonwealth of Pennsylvania are presently notified of releases, 3) no highly radioactive liquids have yet been processed, and 4) liquid effluents released to date, and those anticipated to be released in the future, will not create a hazard to the health and safety of the public.

Coordination: This has been concurred in by the Executive Legal Director.

Original Signed by
H. R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosures:

- Proposed response to Congressman Walker
- Letter from Congressman Walker dated May 7, 1979

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POOR ORIGINAL

*SEE PREVIOUS YELLOW FOR CONCURRENCE

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OFFICE	DSE:SA:ETSB	DSE:SA:ETSB	DOR:SP	DOR
SURNAME	RBandart:do*	JTCollins*	RHVolmer*	US Bell
DATE	05/22/79	06/5/79	6/5/79	6/11/79

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The Honorable Robert S. Walker
United States House of Representatives
Washington, DC 20515

Dear Congressman Walker:

I am pleased to respond to your letter of May 7, 1979, concerning alternatives to liquid releases from the Three Mile Island (TMI) facility to the Susquehanna River. Before addressing your specific concerns, I wish to assure you that all radiological waste management operations at TMI are reviewed by Nuclear Regulatory Commission (NRC) staff members located onsite, in order to assure that the health and safety of the public is protected.

To date, no highly contaminated water from within the Unit 2 containment or primary system has been processed or released. Prior to any processing or release, Metropolitan Edison will be required to evaluate alternate methods of water cleanup and disposal or discharge. The plans and alternative analysis developed by Metropolitan Edison will receive a detailed review by the NRC in order to ensure that liquid waste processing and disposal or discharge operations will be within the limits specified in our regulations. All of the written material associated with this review will be made available to the public.

Presently, the NRC has approved a TMI procedure which permits the release of liquids containing low or nondetectable levels of radioactivity. The water that has been released using this procedure has originated mainly from Unit 1, which was not involved in the accident. The procedure requires the NRC to be notified prior to such releases and the Commonwealth of Pennsylvania is provided with a summary of releases on a daily basis.

A summary of the liquid releases and resultant environmental impacts and doses to the public from March 28 through May 11, 1979, is attached. These releases have resulted in doses to the public which are far below the applicable annual design objective dose limits of 3 millirem to the whole body or 10 millirem, to any organ, as found in our regulations, Appendix I to 10 CFR Part 50. As a result,

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Congressman R. S. Walker

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the levels of radioactivity in the Susquehanna are indistinguishable from existing background levels at public water supply intakes from the river. This has been confirmed by independent measurements made by the NRC, Environmental Protection Agency (EPA), and the Commonwealth of Pennsylvania.

Sincerely,

Joseph M. Hendrie
Chairman

Enclosure:

1. Summary of liquid releases from Three Mile Island
2. Letter from Congressman Walker

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*SEE PREVIOUS YELLOW FOR CONCURRENCE.

DOR:SP
RHVollmer
06/ /79

[Signature]
VStello
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ONRR
HRDenton
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SURNAME	RBangart:do	JTCollins*	LChandler*	WKreger	RCDeYoung	LVGossick
DATE	05/22/79			for 6/5/79		

prior to processing

initially

described

*miss P.1 at**

~~As described above, you see that no processing of highly radioactive liquids is being conducted or is planned for the immediate future. This procedure allows the concentration of radioactivity in liquids to be reduced through the process of radioactive decay. If discharges of these processed liquids are planned by Metropolitan Edison and approved by the NRC, we will require that the conditions for release to the river will remain the same as for normal operation. Our objective remains to fully assure the health and safety of the public through our review and approval of liquid waste management operations.~~

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Please let me know if you wish any further information.

specified

in the operating license

Joseph M. Hendrie
Chairman

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RB
DSE:SA:ETSB
RBangart:do
05/22/79

ELB for
DSE:SA:ETSB
JTCollins
05/ /79

OELD
05/25/79

WE HANDLED subject to client's satisfaction
DSE:SA
WEKreger
05/ /79

DSE
RCDeYoung
05/ /79

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SURNAME	LVGossick	RHVollmer	VStello	HRDenton	
DATE	05/ /79	0 / /79	0 / /79	0 / /79	0 / /79

TMI EFFLUENT WATER RELEASE FOR THE PERIODS
3/28/79-5/11/79 vs 3/28/78-5/11/79

<u>YEAR</u>	<u>TOTAL VOLUME RELEASED (GALS)</u>	<u>TOTAL ACTIVITY (Ci)</u>	<u>¹³¹I ACTIVITY (Ci)</u>	<u>³H ACTIVITY (Ci)</u>
1978	13 Billion	16.036	MDA	15.870
1979	31 Billion	12.738	0.239	12.433

COMPARISONS OF DOSES TO MAXIMUM INDIVIDUAL DRINKING TREATED SUSQUEHANNA RIVER WATER DOWNSTREAM OF TMI*

Pathway and Nuclide	Critical Organ	Columbia Intake Actual Environmental Sample Downstream Dose 3/28 to 5/11		Upstream Control Dose from Actual Measurements in The Environment 3/28 to 5/11 1979	Calculated From Release Data Downstream Dose 3/28 to 5/11 1979	45 Day Natural Background
		1979	1978			
Drinking Water, ^{131}I	Thyroid	<0.04	<0.05	<0.04	0.011	None
Drinking Water, ^3H	Whole Body	0.002	0.002	0.002	3×10^{-5}	.0004
Eating Fish, ^{131}I	Thyroid	<0.02	<0.02	<0.02	0.004	None
Eating Fish, ^3H	Whole Body	5×10^{-5}	5×10^{-5}	4×10^{-5}	4×10^{-5}	.00001
Boating, ^{131}I	Whole Body	$<7 \times 10^{-7}$	$<2 \times 10^{-6}$	1×10^{-6}	3×10^{-7}	None

*Allowable Technical Specification dose for the period 3/28 to 5/11/79 is 0.6 mrem for all pathways and nuclides.

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