

Congress of the United States
House of Representatives
Washington, D.C. 20515

May 13, 1980

Dear Mr. Chairman:

On Wednesday, April 30, the House Committee on Interior and Insular Affairs acted unanimously to amend the NRC authorization for FY1981 to establish a Citizens Advisory Panel for the purpose of consulting and advising the NRC on the decontamination and decommissioning of the Three Mile Island Unit 2 reactor.

As you know, the idea of the Citizens Panel was first proposed in the report of the Special Task Force of the Three Mile Island Cleanup, which was completed on February 28 of this year. The report concluded that "without local public understanding and acceptance of the cleanup operation at TMI-2, an orderly and expeditious cleanup will be difficult, if not impossible, to accomplish."

The Task Force further recommended that the NRC

"...establish formal means to obtain input from the public on the overall cleanup plan and the individual steps to be taken before they are made final and are implemented. This could take the form of a citizens advisory group to contribute to development of the programmatic statement as has been recommended at several scoping meetings."

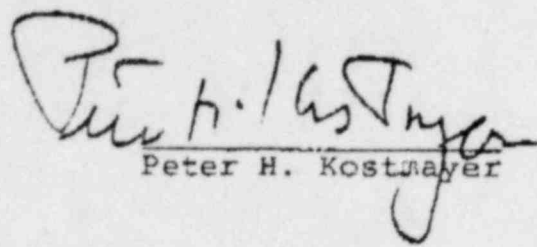
We fully expect that the final version of the legislation will contain a comparable provision. In view of the fact that the cleanup operation is proceeding, we urge you to begin the necessary preparations so that the Panel can be established as soon as possible. The NRC already has the authority to establish advisory panels. As a first step, the NRC should announce its intention to establish the Panel and the process by which Panel members will be selected.

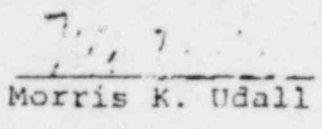
The Committee will provide clarification and guidelines in the legislative report to accompany the bill as approved by the Committee. In the meantime, close cooperation be-

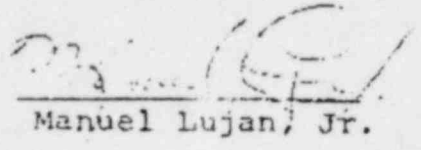
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tween the Committee and the NRC will be important, especially during the planning stage, if the Panel is to achieve its task.

Sincerely,


Peter H. Kostmayer


Morris K. Udall


Manuel Lujan, Jr.

The Honorable John F. Ahearne
Chairman, U.S. Nuclear Regulatory Commission
Washington, DC 20555

AMENDMENT TO H.R. 6628

Offered by Mr. Kostmayer

Page 3, after line 20, insert:

SEC. 105.(a) From the amounts authorized to be appropriated under section 101, the Nuclear Regulatory Commission shall use such sums as may be necessary to establish a Three Mile Island Advisory Panel to consult with and make recommendations to the Commission on matters relating to the decontamination of the Three Mile Island nuclear reactor. Such panel shall consist of not more than 15 members selected by the Commission as follows:

(1) 3 members shall be appointed from among persons representing agencies of State government in the State of Pennsylvania,

(2) 3 members shall be appointed from among persons representing local government authorities in the vicinity of the Three Mile Island nuclear reactor,

(3) 3 members shall be appointed from among persons representing the independent scientific community, and

(4) 3 members shall be appointed from among persons representing members of the general public having their principal place of residence in the vicinity of the Three Mile Island nuclear reactor.

The Commission shall consult with the panel concerning all decontamination activities and related activities authorized, or carried out, by the Commission with respect to the Three Mile Island nuclear reactor.

(b) From the amounts authorized to be appropriated under this Act, the Advisory Committee on Reactor Safeguards shall expend such sums as may be necessary for purposes of furnishing to the Three Mile Island Advisory Panel technical advice and assistance requested by the Panel.

Amendment to h.r.6628

Offered by Mr. -----

Page 3, strike out line 21 and all that follows down
through line 25.

ALLENE E. ERTEL
17TH DISTRICT, PENNSYLVANIA

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AND TRANSPORTATION

COMMITTEE ON SCIENCE
AND TECHNOLOGY

Congress of the United States
House of Representatives
Washington, D.C. 20515

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May 15, 1980

Honorable John F. Ahearne
Chairman
Nuclear Regulatory Commission
1717 H Street, N.W.
Washington, D.C. 20555

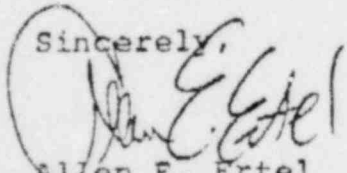
Dear Chairman Ahearne:

I am enclosing a copy of a discussion on the possibility of expediting the installation and use of a cryogenic process which may be applicable for the removal of Krypton-85 from the damaged reactor at Three Mile Island.

It is my understanding that this proposal was offered to the Nuclear Regulatory Commission staff in March and April but that serious consideration was never afforded it by the staff. I believe that this proposal merits better consideration than it has received thus far and am therefore bringing it to your attention. Obviously, it is crucial that you have every piece of relevant information before you as you prepare to make a decision on the best method for removing the radioactive gases contained in Three Mile Island Unit 2.

I hope this report proves useful to you and that it will receive a more fair hearing by your staff than it has had up to this time. I stand ready to be of assistance on this important subject.

Sincerely,


Allen E. Ertel
MEMBER OF CONGRESS

AEE/mcb

Enclosure

The MITRE Corporation
Metrek Division

15 May 1980

W85-069

QA Chairman

Honorable Allen E. Eruel
Congressman, 17th District, Pennsylvania
1030 Longworth House Office Building
Washington, D. C. 20515

Subject: Krypton 85 Removal
Three Mile Island, PA.

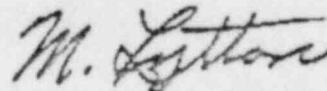
Dear Congressman:

We appreciate the opportunity to meet with your Staff Assistant, Bob Hall, and to acquaint your office with The MITRE proposal to remove Krypton 85 from the Three Mile Island nuclear reactor containment building. We are aware of your efforts to inform NRC of feasible alternatives to venting.

Enclosed is a copy of our letter of April 9, 1980 to Richard H. Vollmer, Director, Division of Engineering, Nuclear Reactor Regulation, NRC Bethesda Office, outlining The MITRE proposal. Also, we have enclosed our 1978 and 1979 Annual Reports to acquaint you with the activities of The MITRE Corporation as a Federally Funded Research and Development Center. Kindly note the references to a project for OTA on radioactive waste disposal on page 15 of the 1979 Report, and environmental projects for EPA on page 23 of the 1978 Report.

We would appreciate the opportunity to meet and discuss with you the Krypton 85 removal which is of vital concern to your constituents.

Sincerely,



Milton Lytton
Technical Staff
Energy Conversion Systems

ML:njo

Enclosures (3)

The MITRE Corporation
Metrex Division

April 9, 1980

W85-049

Richard H. Vollmer, Director
Division of Engineering
Nuclear Reactor Regulation
Nuclear Regulatory Commission
Bethesda Office, Room 542
Washington, D.C. 20555

Dear Mr. Vollmer:

Confirming my process disclosure to you in our meeting of March 21st and my prior meeting on March 10th with Messrs. Sydney Miner, Mark Greenberg and Jerrold Carter of your staff, I have developed a cryogenic separation process for the removal of radioactive Krypton 85 from the Three Mile Island nuclear reactor containment building. The process will reduce the estimated 57,000 curies radiation content to a total of 5 curies or 2.5 microcuries per SCF vent air.

The engineering and design details of my process disclosure are shown in:

- Figure 1: "Proposed Process Schematic Diagram for Krypton 85 Removal..."
- Table I: "Basic Process Scheme, Derivation of Kr^{85} Reduction Equation and Calculation of TMI Containment Building Reduction"
- Figure 2: "Reduction of Krypton 85 Curies Radiation..."

The basic process scheme is to link a cryogenic air separation plant to the containment building radioactive atmosphere in a closed recycle. The cryogenic plant will separate the atmosphere into its constituents: oxygen, nitrogen, argon, and enriched Kr + Kr^{85} fraction. All the constituents, except for this enriched fraction, will be recycled to the containment building. The Kr + Kr^{85} fraction will be filled into shielded metal gas cylinders, and the 57,000 curies removed for burial in a remote location. Depending on removal efficiency, the clean-up will require 3.6 to 16.2 days of continuous operation. The cryogenic separation technology has been known for more than 40 years (see M. Ruheman, "The Separation of Gases," 2nd Ed., Oxford Univ. Press, 1949, p. 228-236). The proprietary patentable features of my process are (1) use of a normal krypton fresh make-up feed to enable the delicate, complex vapor-liquid equilibria to function at

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Richard E. Vollmer
April 9, 1980
Page Two

low krypton solute concentrations in the distillation columns and to sweep out the Kr⁸⁵ and (2) a process combination of air separation plant, krypton distillation column, and molecular sieve filter bed to remove the radioactive Krypton 85.

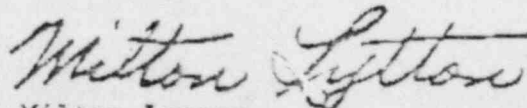
A 50 Tons/Day oxygen air separation plant will be required. The entire installation, including modifications to add a krypton distillation column, molecular sieve filter bed, supplementary cryogenic refrigeration, and a centrifugal compressor, will cost between \$10 to \$20 Million. A used air separation plant can be obtained on short notice from Union Carbide (Linde Div.) or Air Products. The fresh make-up gas feed (about 900 liters) can be readily obtained for about \$0.70 per liter from three U.S. suppliers: Union Carbide (Linde Div.), Air Products, and AIRCO. Other equipment and installation materials can be purchased new or used from a variety of suppliers. The project schedule would require 11 months: procurement, fabrication modifications and installation - 9 months; start-up, debugging and optimization - 1 month; and removal of the Kr⁸⁵ from the building - 1 month.

My credentials for the validity of the proposed process and project engineering details are as follows:

- Employed 1955-1969 with AIRCO, Inc., second largest cryogenic air separation plant gases manufacturer in U.S. Engaged in process engineering, design, project engineering, construction and capital investment planning for sixteen plants.
- Developed AIRCO engineering and design for proposed Krypton 85 removal from U.S.S. Savannah nuclear reactor, and installation of krypton recovery units in air separation plants.

The MITRE Corporation would be pleased to offer a proposal to NRC for consulting services to carry out the proposed process and project engineering/management details. We look forward to the opportunity to meet with Mr. Harold R. Denton, Director of NRC Nuclear Reactor Regulation, to discuss our proposal which you indicated that you will try to arrange. Should you want additional information or clarification, please telephone me at (703) 827-7198.

Sincerely,


Milton Lytton

Enclosures

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