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United States Senate

COMMITTEE ON ARMED SERVICES
WASHINGTON, DC 20510-6050

February 1, 1996

The Honorable Hazel R. O'Leary
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585-1000

Dear Secretary O'Leary:

In my letter of November 16, 1995 I urged you to respond promptly to the November 15, 1995 letters sent to you by Mr. John Conway, the Chairman of the Defense Nuclear Facilities Safety Board (DNFSB), and reiterate your full and complete acceptance of the Board's Recommendation #94-1. It has been almost a year and a half since you agreed in writing to carry out that recommendation to implement the stabilization of the Mark 16 and Mark 22 spent fuel rods at the Savannah River Site by chemical processing in the canyons at that site. At this point, the Environmental Impact Statement process has been completed, with the exception of the final Record of Decision. The Congress and the people of South Carolina should not have to wait any longer for DOE to take action by rendering these leaking fuel rods into a safe form.

In this regard, I was encouraged by that part of your November 28, 1995 letter to me which restated your commitment to implementing DNFSB Recommendation #94-1. In that letter, you listed factors which weigh in the direction of chemical processing of the Mark 16 and Mark 22 fuel elements. I agree that this is the correct approach. Also, because DOE's approach to chemical processing involves blending down separated fissionable materials to levels below weapons grade levels, there is no potential nuclear proliferation risk resulting from processing these spent fuel rods in the canyons.

On this basis I can see no reason for further delay in the final Record of Decision to pursue chemical processing of these fuel rods in the canyons at Savannah River. DOE should get on with putting the radioactive material in these spent fuel rods into a safe form.

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U.S. DEPARTMENT OF ENERGY
OFFICE OF THE EXECUTIVE SECRETARIAT
CORRESPONDENCE CONTROL TICKET

ESSENTIAL/CRITICAL
ES NUMBER: ES96-001524
EXTERNAL

DATE OF DOC: 02/01/96 REC'D: 02/02/96 CONTROLLED: 02/02/96 DUE: 02/09/96

FROM: THURMOND, STROM SC O NOTES AREA:
CHAIRMAN
COMMITTEE ON ARMED SERVICES

SUBJECT . REQUESTS IMMEDIATE ACTION RE
SUMMARY: SPENT FUEL AND THE CHEMICAL
PROCESSING FACILITIES AT THE
SAVANNAH RIVER SITE

SOURCE: CONGRESSIONAL

DOCUMENT TYPE: FAX

ADDRESSED TO: SECRETARY
FOR SIGNATURE OF: SECRETARY

ACTION TO: ENVIRONMENTAL MANAGEMENT
ACTION TYPE: Prepare final reply
ACTION OFFICER:

CONCURRENCE COPIES TO: CP EH GC
INFORMATION COPIES TO: DS US DP SP/ACK ES1 TEAM

CONCURRENCES COMPLETED:

REMARKS: FINAL RESPONSE OR INTERIM ACKNOWLEDGEMENT MUST REACH
THE EXECUTIVE SECRETARIAT BY THE DUE DATE. RELATES TO
ES95-018873, AND ES95-09001, COPIES ATTACHED.

EXECUTIVE SECRETARIAT CONTACT: Sheila Jeter

----- EXEC SEC INTERNAL USE -----

SUBJECT CROSS REF: RECOMMENDATION 94-1 SPECIAL INT. CODE:
RELATED CODE/NUMBER: ES95018873,74 SPECIAL INT. DATE:
ACCRTS NUMBER:

FILE CODE: CCTHURMOND-ES96001524 COMPLETION DATE:

However, I am not in agreement with that part of your letter which suggests that you are considering a significant last minute change in the baseline implementation plan for DNFSB Recommendation #94-1 which uses both the F- and the H-Canyons to deal with the Mark 16 and 22 fuel rods. This baseline plan has already been reviewed and endorsed by the Board (e.g., DNFSB/TECH-7, 11/1/95).

Among the reasons for my conclusion are those contained in Mr. Conway's letters of November 15, 1995, and in his letter of January 23, 1996 to you. This latest communication from Mr. Conway makes it clear that the Board still has serious doubts about the DOE staff proposal to use only the F-Canyon while beginning to place the H-Canyon in a status vaguely termed "deinventoried stand-by". The DNFSB has again made it clear that at a minimum DOE needs to maintain the H-Canyon in a fully safe and operational condition to deal with potential future missions. The Board has stated that, " Since the proposed canyon utilization strategy represents a change to the Recommendation 94 1 Implementation Plan, this needs to be formally presented to the Board for review."

For this reason, the Board has given DOE 90 days to present its plans to maintain the appropriate level of H-Canyon operability if DOE proceeds with implementation of the proposed consolidation strategy proposed by DOE staff. I have drawn two conclusions from this turn of events. The first is that it would be a serious error for DOE to include this new strategy as an element of the final Record of Decision before the Board has completed a review and approval of such a change. The second is that it would also be a mistake to further delay the final Record of Decision to process the Mark 16 and 22 spent fuel rods while more months are spent in new deliberations. Therefore, I have determined that the only responsible decision is to immediately issue a final Record of Decision according to the baseline implementation plan already reviewed and approved by the Board.

In addition to these considerations, my analysis of the DOE staff report on canyon utilization provided by Mr. Grumbly on December 7, 1995, shows that DOE has not provided a persuasive or reasonable basis for suddenly adopting a strategy which deviates from the original baseline plan for implementing Recommendation #94-1 in both canyons. Primarily, it does not make good management sense to adopt the study's recommendation to begin shutting down the H-Canyon one year before DOE is to begin a study of the full range of future missions for those facilities. DOE must not attempt to force fit a major strategic decision about the future of the canyons into a decision process whose objective is a determination about a single operational campaign. To do so would dilute the purpose of the present decision process and would bias next year's DOE comprehensive study of the future mission of the canyons.

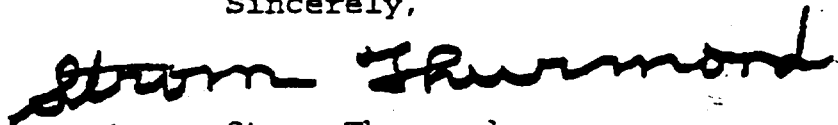
Finally, the DOE staff study does not make a persuasive case on the basis of cost savings. As I have noted, Mr. Conway's letter of January 23, 1996 to Mr. Grumbly makes it clear that the Board continues to be concerned about maintaining the capabilities of the H-Canyon into the future. Because the Board is making it clear that it will insist that DOE fund the H-Canyon in a high state of readiness, it appears that only incremental resources above such funding would be necessary to engage the H-Canyon in potential future campaigns. This position of the Board vitiates the conclusion of the DOE canyon utilization study that significant dollars could be saved by putting H-Canyon on "deinventoried standby". This would be especially true in the near term because most of the savings projected by the DOE staff study would accrue between the fifth and tenth year after the recommended abandonment of H-Canyon operations. Therefore, it does not make sense on a near term funding basis to abandon operations in the H-Canyon now, and then start up operations again to deal with new missions.

As you are well aware, the foreign fuel rods and the domestic fuel rods from other DOE facilities which DOE is forcing on the State of South Carolina are near-term candidates for chemical reduction in the canyons. The canyons can be used to reduce the high level waste constituents of these fuel rods to much safer forms with far smaller volumes while we wait for the opening of an interim or permanent repository outside the State of South Carolina. It is not responsible or programmatically sensible to pre-empt this option by abandoning H-Canyon. It is needed to deal safely with the looming avalanche of spent nuclear fuel rods that this Administration plans to send to the Savannah River Site. The Defense Nuclear Facilities Safety Board has stated this and restated this to DOE. For these reasons, I am adamantly opposed to any course of action which shuts down or plans to shut down the H-Canyon or the F-Canyon, or which impairs or precludes their complete operational availability for current missions and these enormous future missions.

We all know that DOE has recently forced these foreign fuel rods on South Carolina through the Federal Courts. We know that the the Administration opposes the establishment of an interim or permanent repository at the site selected by the DOE on the date promised, despite billions of dollars collected for that purpose by ratepayers. Given these facts, I believe that it would be unconscionable for DOE to now suggest that these foreign fuel rods should be stored at the Savannah River Site for an indefinite period without being processed into a safer form as they are shipped in. They must be made into safer forms as they arrive on site. The tools exist at the Savannah River Site to do this. The Federal government should take action as a result of the upcoming Environmental Impact Statement on foreign fuel rods, and not simply opt to continue further studies while these foreign fuel rods pile up at the site. I strongly urge you to weigh these considerations as you approach the issuance of the Environmental Impact Statement on foreign fuels.

Madam Secretary, I am well aware that you are under increasing pressure from a variety of special interest groups to eliminate the very technological tools necessary to deal with present and future nuclear waste at the Savannah River Site. Their arguments appear to be motivated by a philosophical aversion to things nuclear and by a belief about the psychology of certain foreign governments that chemical processing of fuel rods by the U.S. to render their highly radioactive constituents safe will tempt other countries to produce nuclear materials for weapons. They are entitled to their beliefs. But they certainly have not made a case that their theories outweigh the practical need to use the tools at hand to minimize the risk to the people of South Carolina. I will not stand by and see South Carolinians placed at risk while the DOE bows to special interest groups with their peculiar worldview. I stand ready to work with you to support the budgets required to accomplish real clean up and enhanced safety at the DOE sites. There is no more time for delay and interminable studies. Now is the time for you to do the right thing.

Sincerely,

A handwritten signature in black ink that reads "Strom Thurmond". The signature is written in a cursive, slightly slanted style.

Strom Thurmond,
Chairman



The Secretary of Energy
Washington, DC 20585

January 19, 1996

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Washington, D.C. 20004

Dear Mr. Conway:

Thank you for your November 15, 1995, letter regarding the Board's views on stabilization of the Mark 16 and 22 fuel and the future of the F-Canyon and H-Canyon chemical processing facilities at the Savannah River Site.

We appreciate your views on the stabilization of these materials as summarized in your letter and detailed in your report of November 1. While no final determination has been made, there are factors which weigh heavily in the direction of chemical processing of the Mark 16 and 22 fuel elements. While improvements have been made in the fuel storage basins, continued wet storage involves health and safety vulnerabilities. These include the continued release of fission products into the basin water, leak detection and natural phenomenon vulnerabilities, which are of particular concern with the storage of failed fuel. Stabilization of this degrading material in existing facilities would enable the Department to remove it from wet storage several years earlier than other potential alternatives would allow. In light of these facts, processing and blending down to low enrichment was designated as the preferred alternative for stabilizing these fuels as analyzed in the "Interim Management of Nuclear Materials Environmental Impact Statement" (60 F.R. 243, page 65300, December 19, 1995).

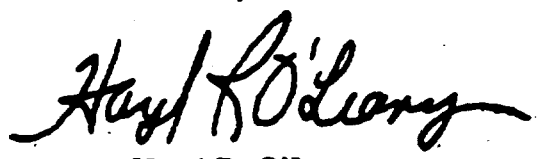
As part of our efforts to show progress in stabilizing materials at the Savannah River Site, we recently completed a study to determine the most suitable strategy regarding the future use of the F and H Canyon facilities. The primary drivers behind this study are the continued pressures on the Department's budget for Environmental Management and the growing recognition that startup of the H-Canyon facilities will require a large infusion of trained and qualified personnel to meet the expectations of the Department and the Board for the safe operation of these nuclear facilities. The report was released for review on December 7 1995.

Based on our preliminary review of the study, we are optimistic that we can develop a strategy that addresses the concerns identified in your letter while reasonably meeting the reality of our budget and resource limitations. We are

looking at a scenario that will focus our resources on operations in F-Canyon, complete operations in the HB-line and transfer solutions to the F-Canyon, after which time H-Canyon could be maintained in a deinventoried standby condition for an appropriate period of time. It appears that this strategy would least affect our ability to achieve 94-1 commitments, including providing the flexibility for potential future missions that may involve use of the canyons. The specifics of such an approach would need to be worked out over the next few months and we would have to come to a clear understanding of the activities that would be performed to maintain the standby condition. I believe our respective staffs have had some productive initial discussions in this regard.

We look forward to working with you to identify an optimum path forward for our facilities at the Savannah River Site. If you have further questions, please contact me or have a member of your staff contact Mr. Thomas P. Grumbly, Assistant Secretary for Environmental Management, at (202) 586-7710.

Sincerely,



Hazel R. O'Leary



The Secretary of Energy
Washington, DC 20585

November 28, 1995

The Honorable Strom Thurmond
Chairman
Committee on Armed Services
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Thank you for your letter of November 16, 1995, expressing concern with the Department's plans for implementing Defense Nuclear Facilities Safety Board Recommendation 94-1 at the Savannah River Site. Specifically, you refer to the recent Board letters concerning the stabilization of the Mark-16 and 22 fuel and the future of the F-Canyon and H-Canyon chemical processing facilities at the Savannah River Site. I continue to support the commitments made in the Department's Implementation Plan for Recommendation 94-1. We have made significant progress in implementing the plan at the Savannah River Site as evidenced by the recent startup of the FB-Line to complete stabilization of the plutonium-239 solutions of most concern at the site and the recent completion of repackaging of plutonium which was in direct contact with plastic.

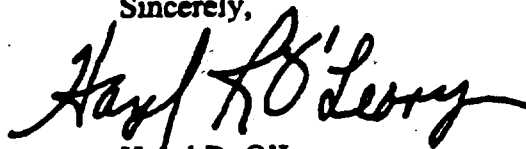
While no final determination has been made, there are factors which weigh in the direction of chemical processing of the Mark-16 and 22 fuel elements. Stabilization of this degrading material in existing facilities will enable the Department to remove it from wet storage in the reactor basins several years earlier than otherwise possible. While interim improvements have been made in the storage basins, continued wet storage of the fuel involves health and safety vulnerabilities. These include the continued release of fission products into the water, leak detection and natural phenomenon vulnerabilities which are of particular concern with the storage of failed fuel.

Let me assure you that no decisions have been made regarding continued operation of the F-Canyon and H-Canyon. Both budgetary pressures and safety requirements make thorough examination of the options for these facilities necessary. In evaluating options, our intention is to support the Board's objectives in Recommendation 94-1 as well as to preserve capability for future missions. The analysis concerning the cost and benefits of operating both canyon facilities, as opposed to consolidation to a single facility such as F-Canyon, will be available in December.

I have asked Assistant Secretary Grumbly to ensure that all relevant information is made available to you and your staff. I want your views, those of the Defense Board, and other interested parties on this analysis before we make a decision. We plan to respond promptly to the Board's letters and will keep you informed on our progress on these issues.

If you have further questions, please contact me or have a member of your staff contact Ms. Carolyn Herr Watts, Acting Assistant Secretary for Congressional and Intergovernmental Affairs, at 202-586-5450.

Sincerely,

A handwritten signature in cursive script that reads "Hazel R. O'Leary". The signature is written in dark ink and is positioned above the printed name.

Hazel R. O'Leary

cc: The Honorable Sam Nunn
Ranking Minority Member