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United States Senate

COMMITTEE ON
GOVERNMENTAL AFFAIRS

WASHINGTON, DC 20510-8250

December 2, 1987

Vice Admiral Lendo W. Zech Jr.
Chairman
Nuclear Regulatory Commission
1717 H Street N.W.
Washington, D.C. 20555

Dear Chairman Zech:

As Chairman of the Committee on Governmental Affairs, I am writing to express my concern regarding an issue which could potentially affect public safety. Reports have come to my attention which indicate that a high purity ferritic stainless steel product identified as E-Brite 26-1, as well as by other trade names, is a defective material, and that this product probably has been used in critical parts of nuclear reactors in commercial nuclear power plants.

According to court documents from a case in U.S. District Court for the Northern District of Texas, the manufacturer of E-Brite 26-1, Airco Vacuum Metals (AVM), fraudulently concealed dangerous properties of the metal from inspectors and customers. These properties include failure of the material when rapidly cooled. There is reason to believe, based on AVM documents reviewed by my staff, that E-Brite 26-1 may currently be used in nuclear power facilities.

In June, 1986 allegations to this effect were made to the NRC. Subsequently, NRC staff apparently took the allegations seriously enough to conduct a review of the matter. For example, I have received NRC Report NO. 99901063/86-01, investigating E-Brite shipments. This report concluded that E-Brite was not used in nuclear power plants. I am concerned, however, that this report did not sufficiently investigate all possibilities of E-Brite use in nuclear facilities.

Aside from the report mentioned above, has the NRC undertaken further investigation to determine whether E-Brite 26-1 was used in nuclear power generation plants? If not, does the NRC plan to do so in the future?

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PDR COMMS NRCC
CORRESPONDENCE PDR

Do you feel confident that E-Brite 26-1 is not currently in use at any nuclear power generation plant in the U.S.? If you do, what is the basis for your confidence?

If you have undertaken further efforts, or plan to do so, what do they include? Is there any plan to contact the builders of nuclear facilities or components to determine whether they have knowledge of having used E-Brite 26-1?

I appreciate your assistance in this matter and look forward to your response. I have designated Committee Counsel

Stephen Ryan (224-4751) to coordinate this matter for me.

Sincerely yours,


John Glenn
Chairman

Cathy

2. An NRC staff member thought that Arkansas Nuclear One, Unit 2 (ANO-2) might have E-Brite 26-1 in some heat exchangers. An inquiry determined that the two shutdown cooling heat exchangers had been retubed in 1981 with E-Brite 26-1, furnished by Allegheny Ludlum. The staff is currently reviewing this use of E-Brite 26-1 and has scheduled an inspection of the Allegheny Ludlum production facility. If other utilities are identified as a result of that inspection, followup action will be taken.

E-Brite 26-1 has been used in various applications within chemical process plants, oil refineries and food processing plants. The alloy was developed to give protection against general pitting, crevice, intergranular and stress corrosion. At this time, the NRC staff does not consider the use of E-Brite 26-1 in nuclear power plants a threat to the public health and safety. The staff has and will continue to followup on any reports on the use of E-Brite 26-1 at specific nuclear plants to determine its suitability until this matter is further resolved.

If ASME determines that E-Brite 26-1 is not suitable for applications for which it was previously approved, the NRC will require licensees to identify all uses of E-Brite 26-1 and take appropriate corrective actions. ASME's review of the validity of the data should be completed in about two months.

In summary, the NRC staff has not been able to substantiate any safety problem to date as a result of the possible use of E-Brite 26-1 in nuclear power plants. However, the staff has taken and will continue to take prudent actions to determine the validity of the fraud allegations and to follow leads on the use of E-Brite 26-1 at specific plants. Should the ASME or our own investigation conclude that the advertised properties of E-Brite 26-1 are in question, further steps to query all licensees as to the use of E-Brite 26-1 would be taken. At this time, the NRC staff is developing an Information Notice to alert the industry to the issues raised regarding E-Brite 26-1.

In a telephone conversation on December 18, 1987, the NRC staff briefed Mr. Stephen Ryan of the staff of the Government Affairs Committee on the status of the NRC actions on this matter. We will continue to keep him informed of any significant new information. Let me assure you that we are taking this matter seriously and we are continuing our ongoing efforts to ensure that the public health and safety are protected. Please let me know if we can be of any further assistance.

Sincerely,

Lando W. Zech, Jr.

cc: Senator William V. Roth, Jr.