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EDO Principal Correspondence Control

FROM: DUE: 03/22/00

EDO CONTROL: G20000125
DOC DT: 03/01/00
FINAL REPLY:

Representative John E. Sweeney

TO:

Dennis Rathbun, OCA

FOR SIGNATURE OF : ** GRN ** CRC NO: 00-0163

Travers, EDO

DESC:

INDIAN POINT 2 STEAM GENERATOR TUBE FAILURE
(John P. Shannon)

ROUTING:

Travers
Paperiello
Miraglia
Norry
Blaha
Burns
Collins, NRR
Congel, IRO

DATE: 03/09/00

ASSIGNED TO: CONTACT:

RI Miller

SPECIAL INSTRUCTIONS OR REMARKS:

JOHN E. SWEENEY
22D DISTRICT, NEW YORK

COMMITTEES:
TRANSPORTATION AND INFRASTRUCTURE
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Congress of the United States
House of Representatives
Washington, DC 20515–3222

March 1, 2000

REC'D BY

8 MAR 0

Mr. Dennis K. Rathbun
Director, Office of Congressional Affairs
Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Mr. Rathbun:

Enclosed is a copy of correspondence and documentation I have received from my constituent, John P. Shannon, concerning the Indian Point 2 Steam Generator tube failure.

I would appreciate it if you would review the enclosed and provide me with information that will assist in responding to Mr. Shannon's concerns. Please direct your response to me at 285 Broadway, Saratoga Springs, NY 12866.

I am grateful for any assistance you may be able to provide in this regard.

Sincerely,

John E. Sweeney

JOHN E. SWEENEY
Member of Congress

JES:ss/bhp
Enclosures
cc: New York State Assemblyman Robert D'Andrea

437 CANNON BUILDING
WASHINGTON, DC 20515
202-225-5614

285 BROADWAY
SARATOGA SPRINGS, NY 12866
518-587-9800

560 WARREN STREET
HUDSON, NY 12534
518-828-0181

21 BAY STREET
GLENS FALLS, NY 12801
518-792-3031

February 19, 2000

John P. Shannon
262 Jones Road
Saratoga Springs, NY
12866
518-587-3245

Subj: Re: Indian Point 2
Dear Congressman Sweeney:
518-587-1228 [f]

I would suggest that an Independent group of Nuclear Scientists and Nuclear Engineers be allowed to investigate the Indian Point 2 Steam Generator Tube Failure Problem. It would appear that we are being told only half of the truth by the NRC.

The NRC, by the way, can no longer be considered an independent agency qualified to oversee the utilities. That organization is clearly in bed with Nuclear Industry and has provided virtually no oversight for many years. If oversight did exist the steam generators on the Indian Point 2 Reactor would never have been allowed to deteriorate to their present condition.

Comments on The Steam Generator Tube Failure at Indian Point 2

From various media reports and information on the Internet it appears that either a single steam generator tube, 8 tubes, or perhaps more tubes failed at Indian Point 2. In the NY Times, 2/17/00, the long term leakage rate in this steam generator was reported as having been 2 gal/day (equivalent to 0.0014 gal/min). Then, a week or 10 days before the incident, the leakage rate increased to 2.5 gallons/day and the operators were notified to be alert for any further increase. When the incident occurred, the leakage rate jumped to between 75 and 90 gallons/min. With the primary pressure at 2250 psia and the secondary pressure at something less than 1000 psia, one report indicated that the break would have to be about one square inch in area. The reactor was scrammed from 99% rated power. An Internet report indicated that this brought reactor power to zero in 2 or 3 seconds. This is incorrect. It
would take fission power almost 5 or 10 minutes after scram to decrease below 30 megawatts. At the instant of scram the decay heat would be a 7% of rated power (210 megawatts) and decay more slowly than fission power.

The charging pumps were not able to keep up with the leak rate of 75-90 gal/min. Apparently, the Emergency Core Cooling System (ECCS) did not activate automatically and was not activated by the operators. Instead, immediate(?) pressure reduction in the primary system was initiated by opening a pressure relief valve on the pressurizer. However, the rate of pressure reduction had to be restricted by the allowed rate of temperature reduction of the primary coolant, and must have taken several hours.

Although this incident is identified as a steam generator tube failure, it is essentially a Loss-of-Coolant-Accident (LOCA), or potentially one of the most severe accidents that a nuclear plant can experience. The Three Mile Island accident was a LOCA resulting from a stuck open relief valve on the pressurizer. A steam bubble formed at the reactor outlet and grew in size to eventually

uncover fuel elements. The entire top half of the TMI core fuel rods melted. It is not known what the TMI leak rate was. The above sequence of events at Indian Point 2, although based on fragmented and unverified reports, raises the following questions, which should be put to the NRC.

1. What was the total amount of primary coolant lost through the leak?
2. How much time transpired between the tube failure and reactor scram?
3. Was the faulty steam generator immediately isolated from the primary system?
4. How much time was required to equalize primary and secondary pressure?
5. Did the pressurizer go dry, i.e. drain completely?
6. Did a steam bubble form in the reactor outlet plenum?
7. Were fuel rods uncovered by a steam bubble in the reactor outlet plenum?
8. Was there damage to any fuel rods during this incident?
9. Were all primary pumps providing core cooling throughout the depressurization?
10. Did the primary pumps cavitate during depressurization?
11. Why was the ECCS not used to maintain primary system water inventory?
12. Was the NRC notified when the leak rate increased from 2 to 2.5 gallons/day?
13. How many tubes on the four Indian Point 2 steam generators had already been plugged?
14. How many tubes are there in each steam generator?
15. Why isn't a steam generator tube failure identified as a Loss-of-Coolant-Accident?
16. What is the worst steam generator tube failure incident in U.S. PWR history?
17. How many incidents similar to Indian Point 2, with scram, have occurred on U.S. Pwr's.

John P. Shannon
Nuclear Physicist/Nuclear Engineer

(Former Supervisor for the Design of the High Speed Nuclear Attack Submarine [HSNAS] Nuclear Reactor for the United States Navy
Presently [and for the past twenty years] the most widely used Nuclear Power Plant in the United States Navy
Used on all HSNA Submarines and Nuclear Powered Cruisers)

To Congressman Sweeney 518-587-1228 [f]

Admiral Rickover's Statement

The following statement was signed by Jane Rickover, daughter-in-law of Admiral Hyman Rickover, "father" of the nuclear navy. It was notorized by William Lamson July 18, 1986. Jane Rickover has verified the authenticity of the document and the events described in it.

"In May, 1983, my father-in-law, Admiral Hyman G. Rickover, told me that at the time of the Three Mile Island nuclear reactor accident, a full report was commissioned by President Jimmy Carter. He [my father-in-law] said that the report, if published in its entirety, would have destroyed the civilian nuclear power industry because the accident at Three Mile Island was infinitely more dangerous than was ever made public. he told me that he had used his enormous personal influence with President Carter to persuade him to publish the report only in a highly "diluted" form. The President himself had originally wished the full report to be made public.

In November, 1985, my father-in-law told me that he had come to deeply regret his action in persuading President Carter to suppress the most alarming aspects of that report.

[Signed] Jane Rickover

Jane Rickover appeared before me and swore as to the truth of the above statement.

Dated at Toronto this 18th day of July A.D. 1986

[Signed] William F. Lamson

William F. Lamson Q.C.
Notary Public for the Province of
Ontario

To: Congressman Sweeney [518-587-1228 [f]]
Assemblyman D'Andrea [518-584-5475 [f]]
Saratogian [518-587-7750 [f]]
Secretary Richardson [202-586-4403 [f]]
Senator Schumer [202-228-3027 [f]]
From: John P. Shannon, [518-587-3245]

Who should we believe an eminent Medical Doctor or some Political Science appointee from the DOE, who's only concern is his job? Want to guess or should I give you the answer? Let me know.

Eminent nuclear chemist and cardiologist Dr. John Gofman wrote the following letter, May 11, 1999:

UNIVERSITY OF CALIFORNIA, BERKELEY
BERKELEY, CALIFORNIA 94720

LETTER OF CONCERN

To Whom It May Concern,

During 1942, I led "The Plutonium Group"at the University of California, Berkeley, which managed to isolate the first milligram of plutonium from irradiated uranium. [Plutonium-239 had previously been discovered by Glenn Seaborg and Edwin McMillan]. During subsequent decades, I have studied the biological effects of ionizing radiation---- including the alpha particles emitted by th decay of plutonium.

By any reasonable standard of biomedical proof, there is no safe dose, which means that just one decaying radioactive atom can produce permanent mutation in a cell's genetic molecules [Gofman 1990: "Radiation Induced Cancer from Low-Dose Exposure"]. For alpha particles, the logic of no safe dose was confirmed experimentally in 1997 by Tom K. Hei and co-workers at Columbia University College of Physicians and Surgeons in New York [Proceedings of the National Academy of Sciences [USA] Vol. 94, pp. 3765-3770, April 1997, "Mutagenic Effects of A Single and an Exact Number of Alpha Particles in Mammalian Cells."]

It follows from such evidence that citizens worldwide have a strong biological basis for opposing activities which produce an appreciable risk of exposing humans and others to plutonium and other radioactive pollution at any level. The fact that humans cannot escape exposure to ionizing radiation from various natural sources ---which may well account for a large share of humanity's inherited afflictions- is no reason to let human activities INCREASE exposure to ionizing radiation. The fact that ionizing radiation is a mutagen was first demonstrated in 1927 by Herman Joseph Muller, and subsequent evidence has shown it to be a mutagen of unique potency. Mutation is the basis not only for inherited afflictions, but also for cancer.

Very truly yours,

[signed]
John W. Gofman, M.D., Ph D
Professor Emeritus of Molecular and Cell Biology