

Westinghouse
Electric Corporation

Water Reactor
Divisions

Nuclear Technology Division

Box 355
Pittsburgh Pennsylvania 15230

July 12, 1985

Mr. James M. Taylor, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Taylor:

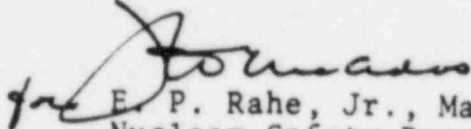
This is to confirm our telephone conversation of July 11, 1985 in which we informed you that on that date we first became aware of a letter dated June 17, 1985 and sent to your office by Mr. John A. Segletes, a former employee of Westinghouse Water Reactor Divisions at the Monroeville Nuclear Center. Mr. Segletes alleges in this letter certain practices and events in which he was involved while an employee which he believes were violations of either "nuclear regulatory law or Westinghouse quality assurance requirements", and requests your investigation and appropriate action.

Please be assured that we shall cooperate fully in this regard, and that we have begun an internal review of the factual matters contained in Mr. Segletes' allegations.

Our preliminary review has revealed no actual safety deficiencies as a result of the alleged incidents and practices. Moreover, we have found no reason to believe that Mr. Segletes or any other employee has been inhibited from raising safety concerns through the established channels as defined in the company's policies and procedures. Our continuing review will place highest priority on verification of the safety of licensed facilities, and our findings will be communicated as appropriate to affected licensees and to your office.

Please call me (412-374-4868) if I can be of further assistance at any time.

Very truly yours,


E. P. Rahe, Jr., Manager
Nuclear Safety Department

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9201 Wedgewood Drive
Pittsburgh, Pennsylvania 15239

June 17, 1985

To:
Director,
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Until July 31st of this year, I will hold the position of Senior Engineer in the Westinghouse Water Reactor Divisions/Nuclear Technology Division/Nuclear Safety Department/Risk Assessment Technology section. Since joining Westinghouse in 1980, I have been located at the Monroeville Nuclear Center, Monroeville, Pennsylvania, where I primarily perform accident analyses.

Over the past year, I have either been involved in or have knowledge of incidents that I believe are violations of either nuclear regulatory law or Westinghouse quality assurance requirements. These incidents have been categorized and are shown as Items 1 through 8 on the attached sheets.

It is requested that you investigate these incidences and take appropriate action where necessary.

If I can be of further assistance, please call me.

Sincerely,

John A. Segletes
John A. Segletes

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1. LOST DIABLO CANYON SAFETY ANALYSES

During a group meeting held in late 1984 for the Plant Transient Analysis and Operating Plant Analysis groups, it was stated by the manager of Operating Plant Analysis, Pat Loftus, that almost all of the calculation notes that support the Diablo Canyon Final Safety Analysis Report are missing. Apparently these supporting analyses were lost when they were to be put on tape in 1974.

To the best of my knowledge, these lost analyses have never been retrieved and no attempt has been made to inform the Westinghouse Water Reactor Divisions Safety Review Committee, the NRC, or the customer of this situation.

Also present at the meeting were the Manager of Plant Transient Analysis, Melita Osborne, and approximately twelve engineers and technicians from both groups.

I believe this is a safety violation since not keeping records that are required by a licensed condition is a violation of 10CFR50.71, Part C.

2. NONDISCLOSURE OF AN UNSAFE PLANT CONDITION AND RETALIATION BY MANAGER

During November of 1984, I was assigned the task of performing an analysis to evaluate the impact of removing the flux rate signal device from the Indian Point 2 nuclear power plant. This device is used to initiate turbine runback to protect against departure from nucleate boiling in case a dropped rod or dropped bank accident occurs. Redundant protection is provided by a rod-on-bottom signal device which also causes a turbine runback. The rod-on-bottom device operates concurrently with the flux rate signal device to provide the redundant protection.

Before I started the Indian Point 2 task, I reviewed a similar study that was done for the Turkey Point units (see CN-TA-82-104). It immediately became apparent to me that deleting the flux rate signal device at Turkey Point violated the single failure criteria as specified in IEEE 279-1971 "Criteria for Protection Systems for Nuclear Power Generating Stations". This is because the rod-on-bottom device, by itself, is not totally redundant. When I informed my manager (and author of the Turkey Point analysis), Melita Osborne, of this violation, she said "John, do not disclose this information or we will be sued." (I presume Melita meant Westinghouse would be sued by Florida Power and Light (FP&L)). After some further discussion on this matter, I dropped the issue because I believed Melita would retaliate against me if I pursued it further.

Independent of my finding, FP&L later recognized the same unsafe condition existed that I called to Melita's attention in November 1984. In early 1985 FP&L issued an LER to report this problem. This time Melita did not attempt to conceal the problem nor did she inform FP&L that I had previously determined this problem to exist. The Westinghouse response to the FP&L finding was documented in Letter NS-RAT-PTA-85-091 which provides recommendations on how FP&L should modify the existing hardware to make the system redundant.

On the 29th of January 1985, I had my performance appraisal for the year 1984 and was informed by Melita Osborne that I was being terminated from Westinghouse on July 31, 1985. I believe a factor in my termination was retaliation against me for uncovering this faulty Westinghouse recommendation of which Melita was the originator.

3. FEAR OF RETALIATION

As noted in Item 2 shown on the previous page, I was required to perform a safety evaluation for Indian Point 2, similar to the one that Melita had performed for the Turkey Point Units. In the Indian Point 2 analysis, I stated that the rod-on-bottom unit by itself was not completely single failure proof. (see Page 10 of CN-TA-84-202). On the other hand, I did not disclose this fault in the customer report (NS-RAT-PTA-84-171) since disclosing it would result in either the Indian Point 2 and Turkey Point units having to undergo substantial modifications (to make the rod-on-bottom signal device single failure proof) or the flux rate signal device could not be removed from service, which would negate the need for the analysis. Furthermore, based on Melita's response to my finding in the case of the Turkey Point Units, I feared retaliation by Melita if I disclosed this fault to Consolidation Edison of New York City.

I discussed this dilemma with two of my colleagues, Thomas Blackburn and, to a lesser extent, Mark Adler. Thomas Blackburn later checked my calc note.

4. NOT REPORTING APPARENT SAFETY VIOLATIONS TO THE SAFETY REVIEW COMMITTEE

A. Analyses That Raise the Reactor Trip on Turbine Trip Setpoint

In January 1985 a colleague, Mark Grace, pointed out to me that a Comanche Peak plant specific study he had previously checked (CN-TA-84-97) to justify raising the setpoint for deletion of reactor trip on turbine trip above its then existing value was in error. The error was the result of not transferring transient inlet temperatures to the THINC3 computer code where they can be used to calculate the departure from nucleate boiling ratio (DNBR). As a result, the initial (constant) inlet temperature is used to compute DNBR throughout the transient. This is unconservative since in some cases analyzed the transient inlet temperature rises approximately 20 to 30 degrees Fahrenheit above the initial temperature by the time the minimum DNBR is reached.

I reviewed our files and determined that approximately a dozen studies of this type had been done previously and in only one of these studies (CN-RPA-78-66) did THINC3 use the correct inlet temperature history.

I wrote a memo on January 25, 1985 to my manager, Melita Osborne, informing her of the nonconservative computational method currently being used, while pointing out that this error probably exists in several other studies and that the problem should be reported to the Westinghouse Water Reactor Divisions (WRD) Safety Review Committee (SRC). When I later spoke to Melita regarding the note, she criticized me for calling the problem to her attention and said she would take care of it.

No plan for resolution of this problem was quickly set-up as required in Risk Assessment Technology (RAT) procedure NS-RAT-IG-9 nor was the WRD SRC alerted of this potential issue within the first two weeks as required by Item 10 of NS-RAT-IG-9. To the best of my knowledge, this problem has never been reported to the SRC and it has only been corrected in two cases.

B. Dropped Rod Analyses for Turbine-Runback Plants

In early 1985, Glen Hebele, while working on a study to justify an increase in the turbine runback setpoint for Turkey Point Units 3 and 4 (see CN-TA-85-6), discovered an error to exist in the dropped rod methodology as outlined

4.(Continued)

in NS-TA-83-365 which yielded nonconservative results.

Specifically the dropped rod methodology calls for performing the analysis at a turbine runback safety analysis limit 4% less than the turbine runback setpoint. However, the safety analysis limit should be 4% more than the setpoint value. This 8% error was incorporated into the following plant specific safety analyses.

Point Beach 1 and 2
Turkey Point 3 and 4
Indian Point 2 and 3
Ginna
Beznau

Glen Heberle informed me he reported this error to Melita Osborne, but, no plan of resolution of this problem was quickly set-up in accordance with RAT procedure NS-RAT-IG-9 nor was the WRD SRC alerted of this potential issue within the first two weeks as required by Item 10 of NS-RAT-IG-9. To the best of my knowledge, the problem was never reported to the SRC nor have any of the erroneous analyses been corrected.

5. NONUNIFORM PROCEDURES WITHIN WESTINGHOUSE FOR REPORTING POTENTIAL SAFETY VIOLATIONS

Information provided by Westinghouse management shows three different sets of procedures that should be followed in reporting potential safety violations to the Westinghouse Water Reactor Divisions (WRD) Safety Review Committee (SRC).

In my opinion, the procedures that are specified by first and second level managers (see B and C below) can, and do, lead to intimidation as discussed in Item 2 and "burying" potential safety problems as discussed in Item 4. Also, I think it is the intent of the NRC that one, and only one, set of procedures be used within Westinghouse to report potential safety violations.

A. Posted in the main lobby of the Monroeville Nuclear Center, Monroeville, Penna.

- (1.) Report violation to supervisor, or-
- (2.) Report violation to Manager's Representative on the WRD SRC, or-
- (3.) Report violation to R.A. Wesemann, Secretary of the WRD SRC.

B. Stated in the Radiological Assessment Technology Instruction Guidance Material

- (1.) Report violation to supervisor, then
- (2.) Get supervisors approval, then
- (3.) Provide plan for resolution of the problem to the SRC.

If the supervisor disapproves your request to report the potential safety item, you may

- (4.) Report directly to the WRD SRC.

C. Stated in undated memo provided to members of Plant Transient Analysis and Operating Plant Analysis during a meeting in late 1984 and also provided in a Nuclear Safety Department handout to all members of the Nuclear Safety Department in early 1985.

- (1.) Get supervisors approval.

Note: I have asked for clarification regarding this issue in letter NS-RAT-PTA-85-047. The response to my request (see Letter NS-RAT-PTA-85-051) states the memo referred to in Item C above was only intended to be a "guideline", but there is nothing on the memo to indicate it was only intended to be a guideline.

6. VIOLATION OF QUALITY ASSURANCE PROCEDURES

A. Transmittal of Preliminary Draft Reports

Letter NS RAT-83-036 dated November 29, 1983 states the requirements to be followed within the Risk Assessment Technology (RAT) section with regards to transmitting preliminary draft reports outside the RAT group. The requirements are the following:

- (1) The transmittal letter should state the information is preliminary.
- (2) The report should be stamped "PRELIMINARY".
- (3) First level manager's approval is required.

On December 16, 1983, a preliminary copy of the Italian Reference Plant functional requirements were sent out (see Letter NS-TA-83-520) without any of the above requirements implemented. Note that these functional requirements did not go through the normal in-house review but rather were to be reviewed by the customer (NIRA/SOPREN).

B. Assigning a Competant Independent Verifier Within the Risk Assessment Technology (RAT) Section

Westinghouse Nuclear Technology Division procedure NTD-DPP-3B, Rev. 2 dated 7/24/81 and RAT section procedure NS-RAT-IG-2 state that the cognizant (or Appropriate RAT) manager shall assign an engineer to act as the independent (or RAT independent) reviewer. This procedure is rarely if ever followed in the Plant Transient Analysis or Operating Plant Analysis groups. In fact, I requested that my manager, Melita Osborne, assign an independent checker to check one of my calculations (CN-TA-85-29) when I had difficulty in finding an independent reviewer. Melita returned the calc note later with an attached note stating that I should find my own independent reviewer. Tom Blackburn did check CN-TA-85-29 when I asked him to do so and recalled seeing the note that Melita wrote when I called the incident to his attention on March 25, 1985.

7. THREATENED RETALIATION FOR SENDING WRITTEN MESSAGES

On Thursday morning, February 14, 1985, my manager, Melita Osborne, called me into her office and told me she would terminate my employment with Westinghouse with two months notice if I continued to harass her. What she considered harassment included only the following items.

1. Writing Letter NS-RAT-PTA-85-047 which requested clarification on the correct procedure to use to report potential safety problems to the Westinghouse Water Reactor Divisions Safety Review Committee.

2. An informal memo dated 2/7/85 from me to Melita asking why the normal in-house review and comment procedure was not followed for the Italian Reference Plant's Functional Requirements (Letter NS-TA-83-520).

3. An informal memo from me to Melita stating that I planned to give the Italian Reference plant's Back-up Protection System Functional Requirements a PRELIMINARY status until they were checked by the customer since this would conform with NS-RAT-83-036.

4. An informal memo from me to E.P. Rahe and D.C. Richardson regarding a complaint by Consolidated Edison of New York City that Westinghouse had never called back when they (Consolidated Edison) requested a meeting between Consolidated Edison and Westinghouse a month earlier. I also expressed my concern that our good business relationship with Consolidated Edison was being strained because of this incident.

Melita demanded that any future communication I have with her be limited to verbal communications.

8. POOR CALCULATION NOTE CHECKING WHICH RESULTED IN QUALITY ASSURANCE VIOLATIONS AND NONCONSERVATIVE COMPUTER INPUT DATA

A review was made of CN-TA-84-63, "CGE Deletion of Reactor Trip on Turbine Trip Below 50% Power (P-9)" by E. Kurt Hackman and checked by M.P. Osborne. Numerous errors were found to exist in the analysis. Most, if not all, of these errors should have been detected by the independent reviewer.

The following errors were noted:

- a. The Model 51 steam generator is simulated in this study. It does not have a preheater, but the input data (MODEPH=1) indicates a preheater exists. (One or the other of these inputs is in error.)
- b. The buoyancy calculations were to be turned off for conservatism (ZCORE=ZRVO=ZSGT=ZSGP=0) per page 9, but ZCORE was in fact set to 120.0. (This error is in the nonconservative direction.)
- c. The transient vessel inlet temperature, as computed by the LOFTRAN code, increases with time but this data never got into the THINC3 calculation of departure from nucleate boiling ratio. (This error is in the nonconservative direction.)
- d. The front page of CN-TA-84-63 is not completely filled out. (Violates NS-RAT-IG-3 procedure.)
- e. The checklist shows CN-TA-84-63 to contain a purpose and results near the front. In fact, a purpose and results are not shown near the front of the calc note.
- f. The Introduction section (page 3) states four cases were analyzed, but only three cases are shown.
- g. The Table of Contents on Page 2 is not completed.
- h. Information that should appear in the "Analysis Method and Calculations" or "Input Listing" sections (pages 2 to 40) are actually put into the Introduction section.
- i. No sample calculation is shown, but the checklist shows the calc note to contain one.
- j. The checklist page is not numbered nor is the calc note number shown on the checklist page. (If this page were separated from the calc note, there would be no way to identify the calc note it came from.)

8.(Continued)

- k. The input listing for the third case is not shown. (violates NS-RAT-IG-3 procedure)
- l. The microfiche identification numbers are not on the cover sheet. (violates NS-RAT-IG-3 procedure)
- m. The cover sheet requires a managers signature, but there is none.
- n. Microfiche identification numbers are not shown anywhere in the calc note. (violates NS-RAT-3 procedure)
- o. The P-9 uncertainty already includes a nuclear flux uncertainty. It is not necessary to account for this uncertainty twice as is done in this analysis.
- p. The 2% uncertainty noted on page 47 is a nuclear flux uncertainty, not a LOFTRAN uncertainty.
- q. On page 11, 5 lines from the bottom, the last term should be 4 degrees Fahrenheit uncertainty, not 4% uncertainties.
- r. Use of GEND3 indicates a Model D3 steam generator should be used. The LOFTRAN input assumed the Model 51 steam generator. (One of the two calculations is in error.)
- s. On page 16, DKSCRA= -.04 is not shutdown margin, it is a trip reactivity.
- t. On pages 28 and 29, the statement is made that modifications were made for 52% power, but they were in fact made for 60% power.
- u. On page 28, no numerical value is given for NORDER.
- v. QFINTL requires an input for each loop. The proper input should be QFINTL=3*1.0, not QFINTL=1.0.
- w. On page 56, third paragraph; "-- a rapid increase in coolant temperature" probably was intended to be "-- a rapid increase in coolant pressure"
- x. On page 62, middle of second paragraph: the power operated relief valves are actuated, not the safety valves.

8.(Continued)

y. On page 63, last paragraph: "-- pressure PORVS --" should be "-- pressurizer PORVS --".

z. There is no indication where the two typos referred to in Revision 1 are located. They should be clearly marked by a bar in the right margin along with the appropriate revision number, but I don't see any such marking. (violates NS-RAT-IG-3 procedure.)

A review made of analyses which justify raising the setpoint for reactor trip on turbine trip above the typical 10% power level has shown the independent reviewer, Melita Osborne, has never previously performed this type of analysis. Therefore Melita, or her manager, should have disqualified her from being the independent reviewer of this calc note.