

55-60755

2/21/88

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This Response To Request For Additional Information is served through the United States mail, 1st class, certified, return receipt requested, as follows:

Secretary of the Commission:

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NUCLEAR REGULATORY COMMISSION

Docket No. 55-6075 Official Exh. No. 3
 In the matter of Alfred Morabito
 Staff _____ IDENTIFIED X
 Applicant X RECEIVED _____
 Intervenor _____ REJECTED _____
 Cont'g Off'r _____
 Contractor HR DATE 2/21/88
 Clerk _____ Witness _____
 Reporter Andrew Emerson

Respectfully submitted this 28th day of January, 1988*Alfred J. Morabito*

Alfred J. Morabito

Morabito Exh 3
 EMFA
 NRC
 2/21/88

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 SECY LIC55 05560755
 PDR

92-19 8- 111 83

Case No.

55-6075

Official Exhibit No.

Morebito Exh 3

Disposition

Rejected

IN 111

Morebito

Date:

2/21/88

Reported by

EMEA

Handwritten:

BEFORE THE ADMINISTRATIVE JUDGE

In the Matter of)	Docket No. 55-60755
)	
Alfred J. Morabito)	ASLBP No. 87-551-02-SP
)	
Senior operator license for)	
Beaver Valley Power Station,)	January 28, 1988
Unit 1)	

Response To Request For Additional Information

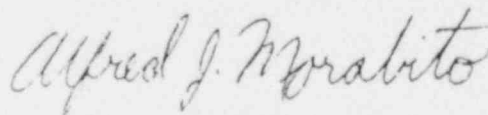
By his Memorandum And Order dated November 24, 1987, Judge Bechhoefer posed a series of questions to the parties in this proceeding. My answers, prepared as accurately as my recollection allows, are presented in the supplement to this cover letter.

By his Order dated December 7, 1987, Judge Bechhoefer directed that both parties should identify, by January 29, 1988, any witnesses they propose to utilize at the oral presentation. In response to that directive, I state that I do not plan to utilize any witnesses. However, Messrs. Lawrence G. Schad, James M. Crum, and David W. Held plan to attend the presentation if their work schedules permit. All of them are licensed SROs at the Beaver Valley Power Station. I request that, subject to their concurrence at the hearing, I be permitted to call on them to corroborate my testimony or refute NRC Staff testimony or state their own pertinent comments or

respond to direct questions from the Administrative Judge(s).

Permission was also granted by the Order of December 7, 1987 allowing me, by January 29, 1988, to supplement my original claims with pertinent new information derived from documents provided by the Staff in response to my Freedom of Information Act appeal. Accordingly, I have attempted to partially supplement my claims by filing, on January 21, 1988, a motion to add those documents to the hearing file and, subsequently, to establish a copy of the hearing file in the local public document room at the Aliquippa, PA library. In that motion, I suggested several questions which I hope will be responded to at the oral presentation. I have included additional questions in Supplement 2 of this letter. I request the Presiding Officer to review and approve these questions and direct that they also be responded to at the oral presentation.

Respectfully submitted this 28th day of January, 1988

A handwritten signature in cursive script, reading "Alfred J. Morabito". The signature is written in dark ink and is positioned above the printed name.

Alfred J. Morabito

SUPPLEMENTAL INFORMATION

(Additional Information Requested by
Memorandum and Order dated November 24, 1987)

A. Written examination

1.b.1) The following examples prove that NRC exam graders do not consistently penalize candidates by ratioing the number of correct answers to the total number of answers given when the total number is more than the number asked for by the question. These examples are from the RC requalification exam taken by Mr. C. Triplett on May 20, 1987. Refer to Attachment 1 pages 1-8.

- a) See question 2.05c. The question asked for two components. The answer listed three components. One of the answer key components was not listed. Points were deducted as prescribed in the key. There was no ratioing.
- b) See question 2.06a. Two reasons were asked for. Three were given. One key answer was not given. Points were deducted as prescribed in the key. There was no ratioing.

c) See question 3.06c. Two conditions were asked for. Three were given. One key answer was not given. Points were deducted as prescribed in the key. There was no ratioing.

2) The following is an example of what the NRC exam graders categorize as a "shotgun" answer. This example is from the SRO exam taken by Mr. D. Held on July 22, 1986.

a) See question 6.07.a. The question asked why the operability of the steam generator safety valves was important. The answer key and the examiners' comments in their affidavit of October 9, 1987 (¶¶ 25 - 26) clearly show that they will only accept one specific answer. Four answers were given, the first of which is similar to my answer to this same question. That first answer was even marked as incorrect by the exam graders. However, in this "shotgun" of four answers, the one answer that the key listed was given. Full credit was awarded. No penalty for "shotgunning" was exacted; no creative grading was invoked.

A.1.c. No.

A.1.d. No.

A.1.d.(ii). The question is acceptable. The answer key lacks validity. At the time of the exam review, the BVPS Training Department commented that question 2.09.b. on the RO exam was the same as question 6.03.b. on the SRO exam, but the answer key answers were different. It was commented that the NRC should accept either set of answers for either question. Mr. Edward C. Wenzinger's letter of September 23, 1986, Exhibit 2 in my Specification of Claims, accepted that comment. That in itself suggests a challenge to the validity of any single set of answers. Beyond that, however, the different wording of the two questions does make them different. The RO question specifically asks how the CCW system is protected against an overpressure condition if a thermal barrier rupture occurred. This wording implies that reactor coolant pressure is higher than CCW pressure. The SRO question asks what design features minimize the effects of a thermal barrier rupture. The question does not place bounds on coolant pressure. Thus the candidate is forced to cover a varying range of conditions.

One further comment. In their affidavit of December 21, 1987, the examiners state that "Candidates are directed in the examination guidelines, prior to the start of the written examination, to state all assumptions so that examiners may grade the candidate's response (s) accordingly". (Affidavit ¶7).

Refer to Exhibit J, Specification of Claims, 55th page titled "NRC Rules and Guidelines for License Examinations", guideline 14. That guideline specifically refers to mathematical questions. Question 6.03.b. is not a mathematical question. The examiners have apparently deliberately misrepresented the facts. In my mind that amounts to lying under oath.

A.2.a. Yes, it could refer to a stage during startup.

A.2.b. The overpressure protection system is used during cold, solid plant operation by virtue of being placed in service in accordance with OM 1.51.4. page D2 of 11. It does provide automatic pressure control to limit pressure to safe levels and, to that extent, it is the

method by which pressure would be controlled if operator inattentiveness allowed pressure to get out of control. In addition, other operator actions to control RCS pressure are specified for the case where the OPPS system is inoperable. The PORVs are also used as an alternate means of decreasing RCS pressure during performance of Emergency Operating Procedures FR-P.1., Response To Imminent Pressurized Thermal Shock, which is defined on FR-P.1. page 1 of 18 as a pressure excursion at low temperatures.

In their affidavit of December 21, 1987, the examiners attempt to discredit my characterization of the PORVs as pressure control components. (Affidavit ¶¶ 12, 13, 14, 15). They observe that the date on Attachment pages 3 through 5 is almost one year after the date of my examination. Please note that regardless of the date of the letter, the FSAR analysis that is referred to is dated January, 1982.

My final thought here is that arguing about the description of the PORVs as control or protection components just clouds the issue. The PORVs are relief valves. As such they relieve overpressure conditions, thus protecting the RCS boundary. As protection devices they offer the ultimate in pressure control.

A.3. A deduction of even 0.2 points could be appropriate, but the deduction should have been made either by the exam grader or, as the final backup, by the exam reviewer during the QA review process. I have received documentation that verifies that the QA review of my examination was performed. Yet, no point deduction was made until after I filed my appeal. Any additional point deduction made after an appeal is filed bears the appearance of retaliation, regardless of the supposed independence of the regrader. The NRC should not force the appeal process to replace the examination QA process.

A.4. The Staff's Affidavit of December 21, 1987, submitted in response to my rebuttal comments, serves to document the examiners' lack of understanding of the safety limit curve. This stands as further proof of their lack of qualifications to function as license examiners. If requested, I will discuss the safety limit curve at the February public meeting so that the Administrative Judges may have a better understanding of the curve. The examiners may use that occasion for improving their own knowledge in that area.

A.5.a.
and b.

The examiners' affidavit of December 21, 1987 attempts to define the difference between the words "reason" and "conditions" by reference to a dictionary. This is a ridiculous response for at least the following two reasons:

- 1) The Administrative Law Judge has indicated in his Memorandum And Order, November 24, 1987, Attachment pages 3 and 4, that my answers appear to provide different reasons why the MSIV shuts (emphasis provided) thus showing that he, as well as I, could certainly accept my answers as reasons.
- 2) A dictionary is not a normal reference supplied to candidates during the examination.

I can also play this ridiculous game. The word "condition" is defined in The Lexicon Webster Dictionary, copyright 1977 by "The English Language Institute of America" as a "circumstance indispensable to some result". In order for the NRC key answers to be correct, the MSIVs would have to be inoperable because the NRC answers are conditions which are indispensable circumstances associated with the inoperability of the MSIVs.

The Staff correctly points out that I had no reason to assume that the MSIVs were inoperable.

(Affidavit, December 21, 1987, ¶ 27.) Since I had no reason to assume the MSIVs were not operable, why would I list as answers to the question, conditions which are indispensable circumstances associated with failure of the MSIVs to operate? The NRC answer is illogical and incorrect. My answers are logical, correct and supported by the FSAR.

B. Simulator Examination

2.a.(i). There are 4 power range channels. Each channel consists of a top detector and a bottom detector. The output of all 8 detectors is recorded on 4 recorders located on the instrument panel behind the control console. Refer to Specification of Claims, Exhibit F, Attachment 3, Supplemental pages 1 and 2 and the supporting explanation on the 1st page of Attachment 3. The 4 top detectors were showing decreasing traces. The 4 bottom detectors were showing increasing traces. This variation was due to an upset in the equilibrium reactivity condition in the core, which caused the

axial power peak to shift lower in the core, i.e. closer to the bottom detectors and farther from the top detectors. This effect caused the 1st two sets of recorder tracings (top detectors) to show decreasing trends while the last two sets of recorder tracings (bottom detectors) showed increasing trends. One of the reasons for this situation occurring is a homogeneous change in the reactivity condition of the core. This was a good clue to the occurrence of a dilution but I and the other operators failed to recognize it; though after some time, the BOP operator did ask if a dilution might be occurring. When that question was asked, the reactor operator did check for indications of unintended charging flow or valve mispositions. No such anomalies were evident. I directed conservative action, 10% power reduction, to maintain the operating parameters within limits and, when problems occurred in the turbine steam control system which we couldn't solve (this was intended by the scenario) I judged that we were facing a potential loss of control and again ordered conservative action, Reactor trip, to protect the plant and the health and safety of the public.

At this time it is appropriate to point out that there really were not two channels reading differently than two others. There were actually 4 top half detectors reading consistent with each other but different from the 4 bottom half detectors. The examiners are apparently unaware of this as indicated in their affidavits of October 9, 1987 (#39) and December 21, 1987 (#31). They never questioned me on this. I became aware of the situation through my own research on the day after the examination. I explained it to Region I in my appeal dated December 16, 1986. The subject recorders are not normally used in operating procedures. Their general function is to provide historical record.

2.a.(ii) No.

2.a.(iii) A surveillance procedure is a type of test procedure which is performed periodically to ensure the operability of various components important to safety.

2.a.(v) Since there is no procedure that covers this particular situation and since small power level changes without

reference to a procedure are permitted by administrative rules, this comment by itself will not justify a grade of U. In fact, this comment should not even have been made.

2.b.(i) If a final sentence were added that said "Candidate took proper procedural action in response to the operator's response". Then the comment is applicable and meets the guidance of ES-303 for an evaluation of S.

2.c.(i) It is a minor event. As mentioned in my rebuttal statement, it is normal practice for the SRO to commence reading the immediate actions out loud after approximately step 7. The purpose of the SRO reading the steps out loud is to ensure that the operators do not forget any of the required actions. Even though each person could sit in the relatively calm atmosphere of a written exam and write out the 20 immediate actions and manipulate the order until it was correct, few people have the ability to do that same thing in actuality under the stress of a real life situation. That's why we train as a team and operate as a team.

2.c.(iii) We do require each license candidate to know the immediate actions from memory. We do not test individual candidates for sequential performance of all 20 steps as individuals, nor do we restrict them from helping each other; in fact we encourage it.

3.a.(i) No. The comment is actually incorrect. I did not misread 1600 psig as 1040 psig. I misread the major division on the wide range meter in back of the control console as 1000 psig rather than 1500 psig. Since the indicator was pointing to the small division above the major division, I concluded that RCS pressure was 1100 psig. I then properly asked the BOP operator what the secondary steam pressure was. He responded 1040 psig. A pressure differential of ≈ 145 psig between RCS pressure and secondary pressure during a steam generator tube rupture requires tripping the RCP's. I told the SRO that we met the criteria for tripping the RCP's and requested concurrence to trip them. The SRO knew the scenario, knew that RCS pressure was actually 1600 psig, knew that we didn't have to trip the RCP's, but he was restricted from providing me with any help. He stated that if we

meet the criteria for tripping the pumps, go ahead and trip them. Several minutes later, when all parameters were stabilizing and with natural circulation progressing nicely, I took time to review the pressure recorder tracing. I realized that the lowest pressure that had been reached was 1600 psig. I was about to announce that fact to the SRO and request permission to restart the RCPs. The scenario ended just then. I then informed the examiner that I had prematurely tripped the pumps. This was with no prompting from the examiner. This fits the criteria in ES-303 for evaluation as M.

- 3.b.(i) It is a minor comment. It does illustrate good teamwork.
- 3.c.(i) It is a minor comment. It does illustrate good teamwork.
- 3.d.(i) No. I recognized the problem with little prompting from the examiner and correctly performed the reset action in front of him after correctly analyzing the fact that CIA train A had not been reset. This action is consistent with the ES-303 guidance for evaluation as M.

- 4.a.(i) The comment is irrelevant to the "Supervisory Ability" competency and it is misleading! There are 2 subtle indications of this malfunction. These are:
1. The green "closed" indicating light went out.
 2. The demand indication for the main feedwater regulating valve decreased.

The bypass valves have dual indication. This means that between 10% and 90% of valve stroke, both the green "closed" indication and the red "open" indication are lit simultaneously. At the start of the scenario, the bypass valves were positioned to their normal operating position which is approximately 10% open. Both position indicating lights were lit. When the valve failed open, the only change in indication that occurred was the quiet, subtle extinguishment of the green "closed" indication! It is almost illogical to require a candidate to catch a failed open valve by noticing that it no longer has a closed indication. Exactly what was it that the examiners expected me to observe? We, the operating crew, did catch the major indication of this failure, spiking on the recorder feedflow and level traces. This was, as the examiners state in their affidavit of December 21, 1987, the first malfunction that occurred in this scenario (§ 38). We had just completed a scenario in which similar instrument spiking had occurred. That

spiking, we had been informed, was due to a simulator malfunction caused by a thunder storm that had occurred the previous evening. It was just natural for us to conclude that we were experiencing more of the same. In spite of that, we didn't just write it off as a simulator problem. We responded to the spike as if it were an actual problem. We called for instrument repair support and took manual control of the feedwater flow control. If this had really occurred in the plant, we would have gotten feedback from the instrument repairmen that there was a real valve position problem. We would then have investigated further and we would have found the problem. We never got this feedback from the examiners or the simulator operator. Nevertheless, we maintained excellent control and never challenged the plant.

- 4.a.(ii) Yes. Refer to Exhibit J, page 24, Specification of Claims (ES-302-5, scenario No. SB-2, event No. 1). Inspection of the level trace shows that the level deviation never reached the 5% deviation required to trip the alarm bistable. Since the time of this examination, this malfunction has been revised to be

more consistent with the way the reference plant operates. Now, when this failure occurs, the level deviation alarm actuates 2 minutes after the failure occurs.

The examiners state, in their affidavit of December 21, 1987 (§ 38), that this was the first malfunction of the scenario; therefore, there were no competing events to distract our attention. This is another apparent misrepresentation of facts. The bypass valve failure was the first malfunction to become active. But, the plant was under the influence of several serious control malfunctions that were active at the start of the scenario. These were certainly distractions by their very nature and by the fact that we, not knowing the scenario, were anticipating malfunctions that built on the existing failed components. Refer to Attachment 2 for a profile of control problems existing at the start of the scenario.

4.a.(iii) The simulator malfunctioned during the first scenario. See the discussion under 4.a.(i).

4.a.(v) My recollection is that I stood behind the BOP operator while she pointed out the feedwater spike. I cannot

controvert the statement of the examiners in their affidavit of December 21, 1987 that my view was not obstructed. They must have access to notes that I do not have. The examiners also commented in their affidavit (¶ 38), that I, along with the other two crew members stood directly in front of the feed-water portion of the control board..... This tells me that the reactor operator was also aware of the perturbation to the feedwater flow. It also tells me that he failed to see any indication of a failed open bypass valve. By BVPS administrative procedures the reactor operator is responsible for operating or being aware of the operation of any controls which can affect the reactivity of the reactor. This includes the feedwater controls. If failure to recognize the failed bypass valve were serious enough to generate comments leading to an unsatisfactory rating for both myself and the BOP operator, why was there no comment generated against the reactor operator?

5.a.(ii) No. The symptoms for loss of all AC power are quite evident. Neither operator objected to my clear direction to perform the immediate actions of ECA 0.0.

The 30P operator verified one AC bus to be energized when I directed him to do so in accordance with immediate action step 8.a. of ECA 0.0. When he responded that one bus was energized, I personally verified his response and then directed the transition to E-0, step 1. This was done in accordance with and as permitted by ECA 0.0, step 8.d. The emergency procedures recognize this possible situation and properly account for it. I followed the procedure perfectly.

5.a.(iii) The initial symptoms were symptoms of a loss of all AC power. I entered the Emergency Operating Procedures based on those symptoms. When those symptoms no longer existed, I transitioned to the reactor trip procedure as required by the procedure for loss of all AC. This was a great demonstration of working through the applicable procedures. This is also the operating philosophy of symptom based emergency operating procedures. It is a shameful waste of time and energy that I even have to argue this point.

5.a.(iv) No immediate diagnosis is required or expected. The EOPs are symptom based. If they are invoked based on symptoms, they will properly direct the attainment of stable plant conditions. If diagnosis is attempted

first, the validity of the EOPs may be jeopardized. The EOPs direct the necessary diagnosis when it is time for such diagnosis to be performed.

5.a.(v) No. It should be regarded as an S⁺⁺ comment.

5.b.(i) Not that I am aware of.

5.b.(ii) No. The use of hand signals is not inappropriate. The communication between me and the BOP operator was verbal and face to face. The hand signals were used to draw a picture describing the actual deviation of a meter reading compared to a pre-established background mark on the meter face. The emergency operating procedure asked if radiation levels were consistent with pre event values. The answer to that question required my supervisory judgement. I formed that judgement on the basis of the BOP's finger symbolism and the responses to my additional questions about symptoms of a tube rupture.

5.b.(iii) Yes, by answering the question "Did he draw the correct conclusion and perform the correct procedure based on his understanding of the hand signal?".

5.b.(iv) No. The comment should never have been made.

5.c.(i) No. In fact we encourage "thinking out loud" in our training programs.

5.c.(ii) It should not justify an unfavorable comment.

5.c.(iv) No. Nobody was misled. No improper actions were taken.

5.c.(v) No. The comment, at worst, meets the criteria for evaluation as M per ES-303.

QUESTION 2.05 (2.20)

- a. What three gases are retained in the charcoal delay beds? (0.75)
- b. What two gases present in the Waste Gas System must be maintained within limit? (0.6)
- c. List the two components that can be used to relieve an overpressure condition in the Surge Tank (1GW-TK-2) and, indicate whether actuation of these components will result in a direct release to the atmosphere. (0.85)

QUESTION 2.06 (3.00)

- a. Give two reasons (NOT CONDITIONS) why the MSIV's are required to close during a steam line rupture.
- b. Which mode (HSB, HZP, HFP) AND what time in cycle (BOL, MOL, EOL) will have the most severe effect on a main steam line break accident. Explain each separately.

(ATTACHMENT 1)

(page 1 of 9)

(***** END OF CATEGORY 02 *****)

RS -- BEAVER VALLEY 1&2

-87/05/18-SILK, D.

ANSWER 2.04 (3.00)

- a. 1. Immediately following reactor trip, the RCS rapidly depressurizes since only a fraction of the heat previous to the trip is now being transferred to the primary fluid [0.75]
2. Equilibrium pressure is achieved when decay heat product and removal are matched [0.4] and SI flow matches leak flow [0.35]
- b. The operator would use the atmospheric steam dumps to cool down and depressurize the RCS [0.7]
Accumulators will inject water into the core [0.4]
LHSI will inject water into the core [0.4]

REFERENCE

Module 1, Loss of coolant transients, LP-LRT-VII-70, pgs 3-7; EO-4
Recovery from loss of Rx coolant w/o HHSI, LP-LRT-VII-74, pgs 11,12
EO-3,6

3.3 000 009 EK 3.06 3.9
3.11 4.4
3.27 3.6

ANSWER 2.05 (2.20)

- a. Xenon, Krypton, Iodine (0.25 pts each)
- b. Hydrogen, Oxygen (0.3 pts each)
- c. Pressure control valve and Rupture disc (0.5 pts each)
~~No release~~ (0.25 pts)
PASS LOOP SEAL AND WD VENT STACK

REFERENCE

Module 4, Gaseous Waste System Review, LP-LRT-V-55, pgs 2,4,15; EO-3b,4,
BVPS OM 1.19.1, pg 18 8,12,14

3.11 071 000 K 1.06 3.1
4.04 2.9
4.06 2.7
System Generic K&A 5 2.4

(ATTACHMENT 1)

(page 2 of 9)

⑧

2.1 Major Recovery actions are to

- 1) Try to restore hi head SL flow
- 2) Depressurize ~~SL~~ to attempt to get Accumulators to inject and to get low heads to inject
- 3) Failing the above start RCP's to pump cooler Loop fluid through Core
- 4) If all else fails open PRP PORV to attempt to depressurize RCS

2.5 A) Xe, Iodine, Krypton

B) Hydrogen and Oxygen to prevent combustion or explosion

0.3 C) Line up decay tanks to fill ^{no release} or relief VALVE and Rupture disk could cause release to Atmosphere ok.

(ATTACHMENT 1)

(page 3 of 9)

-- BEAVER VALLEY 1&2

-87/05/18-SILK, D.

ANSWER 2.06 (3.00)

- a. 1. Minimize positive reactivity effects of RCS cooldown associated with the blowdown ~~[0.75]~~ ⁵⁷⁶⁷
2. Limit pressure rise within containment during a steam break in containment [0.75]
- b. Hot Zero Power [0.35] because of the greatest mass in the SG results in the largest RCS cooldown [0.4]
EOL [0.35] because MTC is at its maximum negative value [0.4]

REFERENCE

Module 2, LOSC Transients, LP-LRT-VII-78, pgs 17,23-26; EO-3
MS & SGFW system, LP-LRT-V-50, pgs 12-14; EO-4
T/S B 3/4 7-1
T/S B 3/4 7-3
FSAR 14. 35 to 38

3.5 000 040 EK 3.01 4.5
EK 2.01 2.5
EK 1.05 4.4
3.5 039 000 K 4.05 3.7

(ATTACHMENT 1)

(page 4 of 9)

⑨

A) 1) Prevents complete depressurization of S/G if break is downstream of MSIV.

This limits cooldown and ~~tp~~ insertion in core.

2) Also prevents release of any activity from S/G in case of tube rupture

3) Backs up non return valve to prevent back flow from other S/G if break is inside

-0.75 MSIV

LIMITS PRESSURIZATION OF CTMT

B) HZP AND EOL

At HZP AND HSB there is greatest ~~mass~~ in S/G's will cause largest cooldown to the primary, I chose HZP because temp is 547° while this is not necessarily so in HSB.

At EOL the moderator coefficient is the largest negative value which will lead to the largest ~~tp~~ insertion on cooldown.

End of Category 2

(ATTACHMENT 1)

(page 5 of 9)

6.75

QUESTION 3.05 (2.50)

- a. What will be the effect on the following major systems by a loss of vital bus VB2? (2.0)
1. Condenser Dumps
 2. Manual Atmospheric Dumps
 3. MFW
 4. Makeup
 - 5 Charging
- b. How will the loss of 125 VDC Switchboard #2 affect the Safety Injection System? (0.5)

QUESTION 3.06 (3.00)

- a. Under what conditions, if any, will the Quench Spray Pump Cut Back Control Valves open when a Motor Electrical Protection Trip is present? (0.9)
- b. Under what conditions, if any, will the Chemical Injection Pump Discharge Valves automatically open? (1.2)
- c. What TWO conditons should be met before the Quench Spray Pumps are secured following a Design Based Accident? (0.8)

(ATTACHMENT 1)

(page 6 of 9)

WERS -- BEAVER VALLEY 1&2

-87/05/18-SILK, D.

ANSWER 3.05 (2.50)

- a. 1. Not available [0.4]
2. Available [0.4]
3. A + C available [0.1]: A in manual [0.1]
B in auto-hold [0.1]
C in auto/manual [0.1]
4. Auto not available [0.3]
no flow indication [0.1]
5. AM-CH-122 in manual [0.2] (FAILS OPEN)
Master controller to auto hold [0.2]
- b. CCR to RWST Refrigeration Unit will isolate [0.1]
BIT recirculation isolation Valve SHUT [0.2]
Nitrogen supply to SI Accumulators fails shut [0.2]
SI EQUIPMENT BECOMES INOPERABLE DUE TO LOSS OF CONTROL POWER TO BREAKERS

REFERENCE

Electrical Dist. Review, LP-LRT-V-59, p 21, 51; EO 4, 7
000057A219 000058A203 ... (KA'S)

ANSWER 3.06 (3.00)
(VALVE NORMALLY OPEN)

- a. CIB actuated (0.5) and RWST not at low-low level (0.4)
- b. CIB signal present
Chemical addition tank not low-low
Motor electrical protection trip not present (0.4 pts each)
- c. CNMT pressure < -1.0 psig (0.5) and CIB reset (0.4)

REFERENCE

Module 1, SI & CNMT Depress. systems, LP-LRT-V-48, pgs 1', 15; EO-6
BVPS EOP E-1 step 10

3.6 026 000 K 4.02 3.1
4.04 3.7

(ATTACHMENT 1)

(page 7 of 9)

(12)

1) ^{OK} Condenser Dumps work only in MANUAL

2) ~~A~~ A' ATMs work only on Pop gen, 'B' works only in MANUAL, C works normally

-0.2

3) 'A' Feed Reg to Auto Hold ^{MANUAL} 'B' Feed Reg to ^{AUTO HOLD} MAN
'C' ^{AUTO/MANUAL} unaffected

4) ~~Make up~~ ^{OK} Flow must be controlled manually
~~CHARGING~~

5) PCV-CH-122 Charging flow control only works in MANUAL

B) ^{OK} Loss of control voltage for components on DF & 9P buses and Loss of DC to No 2 Diesel Gen

3.6

-0.9

A) X MANUALLY ASSUMING MERT is on Valve
CIB ACTUATED AND
RWST NOT AT LOW-LOW LEVEL

B) ~~CIB~~ signal
Flow in QS Header
Associated Chem Injection Pump Running
~~No~~ Low Level in Chem injection TK.

C) RWST At Low Level cut off point
Chem Injection Tank fully injected
Recirc Spray System controlling Containment
Pressure Subatmospheric
CIB RESET

End of Category

-0.4

block valves S. ...

OPEN.

Also Assumes 1 P2A Safety 2 Operator

ONLY 1 CRG pump in 1470 on line

of ...

I ...

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07

(a) Provide protection against exceeding RCS Safety limit (curve through low power (up to ~ 60-70%) operations. Assures Secondary Heat Sink if MSIV's close & Rx doesn't trip. Prevents overpressurizing Secondary Side. Heat Sink in NAT circ? Condition & NO SG ATM Dumps Available?

(ATTACHMENT 1)

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ATTACHMENT 2

SIMULATOR SCENARIO FORM

Facility/Simulator: Beaver Valley-1 Scenario No. 7/23/86 B

Examiners: <u>B. Norris (D. Silk)</u>	Candidates: <u>A. Morabito (SRO)</u>
<u>R. Gruel</u>	<u>S. Neuder (BOP)</u>
<u>S. Barber</u>	<u>R. Scheib (RO)</u>

Time	Malif. No.	Description
	IC-18	MCL 100% power. Eg. Ye.
		"A" Diesel generator inoperable
		"B" Charging pump inoperable
		"A" spray valve closed (inoperable); "B" spray valve
		closed due to excessive leakage--tagged for emergency
		use only
000	PRS-4A	PORV 455C fails to close when open, block valve fails
		to close
	PRS-9B	"B" spray valve fails closed
	HSS-7	Yave input to dumps fails low (dumps inoperable in
		Yave mode)
005	FWM-8B	"B" loop feed reg. bypass valve fails open
015	RCS-14E	Loop 2 T-hot RTD fails high (control channel)
020	TUR 1A, B, C, D	Turbine governor valves fail closed (load rejection)

SUPPLEMENT #2

(Additional Questions Suggested For Discussion
At The Oral Presentation)

1. Regarding the QA review of the written examination:
 - a. When such a large number of comments are considered, those forwarded by J.J. Carey's letter of July 29, 1986 to R.M. Keller and my comments in Attachment E of my letter to Mr. Victor Stello, Jr. dated Sept. 11, 1987, how is it possible to claim that an adequate review for clarity of intent, item 1 in the QA checkoff list, was performed?
 - b. Did the examiners realize that one of Mr. D. Held's answers to question 6.07 a. was similar to my answer?
 - 1) If so, why didn't the examiner request the training people at BVPS to provide a reference by which the examiner could verify the answer?
2. Regarding the Qualification Notebook for Mr. Barry S. Norris:
 - a. Qualification Card #1 shows that Mr. Norris completed 6 items on 5/15/85 and 1 on 5/16/85; Qualification Card #2 shows that he completed 1 item on 5/15/85 and 10 items on 5/16/85 along with taking a 218 question test; Qualification Card #3 shows that he completed

5 items on 5/15/85 and Qualification Card #4 shows that he completed his entire review of the examiner standards and policy statements for "...complete understanding..." on 5/15/85 and 5/16/85. How did he ever accomplish so much, so thoroughly, in two days?

b. Would the NRC's expert QA auditors approve of self-signoff of Section A on Qualification Card #4?

c. Were the deficiencies and weaknesses, identified in the written examination and the observed oral examination, discussed with the prospective examiner and corrected prior to certification, as required by NUREG 1021, ES-105, B.6.?

1) Is the documentation of that review available?

2) Were any of the deficiencies associated with ES-107, 108, 301, 302, 305, 401, 402, or 403?

a) What were those deficiencies?

Is there any relationship between those deficiencies and the questions which I have raised in this proceeding?

3. Regarding the Qualification Manual for Mr. David M. Silk:

a. Answer all of the questions in 2 above as applicable to Mr. Silk's qualification program.

4. Regarding my earlier appeal submittals:

The Staff should be directed to answer or respond to the

questions and comments in my appeal submittals of Sept. 11, 1986 and Dec. 16, 1986 which were not responded to because the Staff claimed that the responses would not affect the pass/fail decision. In this regard, I note that the more times I can prove that the Staff erred in their assessment of my answers, the more likely it is that I will be able to prove they erred in their subjective judgement of my simulator performance. In some cases, their responses will further substantiate my claims of vindictive, retaliatory grading during the review process.