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December 24, 1985

United States Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Mr. Lester S. Rubenstein, Director
PWR Project Directorate No. 2
Office of Nuclear Reactor Regulation

SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
Duquesne Light Company Comments on the Safety Evaluation Report (NUREG-1057)

Gentlemen:

Attached are Duquesne Light Company's (DLC) comments on the Beaver Valley Power Station Unit No. 2 (BVPS-2) Safety Evaluation Report (SER) which was issued by the NRC as NUREG-1057, dated October 1985. DLC proposes to implement a system to track resolution of these comments and any future SER changes identified by DLC. The intent of this system is to provide a mechanism to ensure that the comments or changes are transmitted to the NRC and resolved in a timely manner, and to ensure that all appropriate SER changes are made. The system should be beneficial from the standpoint of maintaining SER accuracy and promoting a more coordinated approach to the issuance of SER supplements. We will be discussing our plans with the Licensing Project Manager in the near future in order to jointly develop this system.

DUQUESNE LIGHT COMPANY

By R. E. Martin for
J. J. Carey
Vice President

JDO/wjs
Attachment

cc: Mr. B. K. Singh, Project Manager (w/a)
Mr. G. Walton, NRC Resident Inspector (w/a)

SUBSCRIBED AND SWORN TO BEFORE ME THIS 24th DAY OF December, 1985.

Anita Elaine Reiter
Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

B001 1/1

AD - J. KNIGHT (ltr Only)
EB (BALLARD)
EICSB (ROSA)
PSB (GAMMILL)
RSB (BERLINGER)
FOB (BENAROYA)

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF ALLEGHENY)

The Manager, Regulatory Affairs, R. E. Martin, being first duly sworn, deposes, and says: that he is Manager, Regulatory Affairs, of Duquesne Light Company, with legal authority to sign official correspondence on behalf of the Vice President, Nuclear Division, J. J. Carey, in relation to licensing for Beaver Valley Power Station, Unit 2, and is therefore authorized to submit the foregoing on behalf of the applicant.

December 24, 1985
Date

R. E. Martin
Manager, Regulatory Affairs

Sworn and subscribed before me this 24th day of December, 1985.

Anita Elaine Reiter
Notary Public

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ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

NO.	PAGE	SECTION	COMMENT
1.	1-9	1.7.2	The last sentence of the resolution of issue (4) should be replaced with: "The applicant has also committed in a letter dated March 27, 1985, to revise the FSAR to correct an erroneous reference to the steam generator high level trip and thereby resolve the conflict with 10CFR50.55a(h). This issue is therefore closed pending resolution of Generic Issue A-47."
2.	1-9	1.7.2	The last sentence of the resolution of issue (7) should be changed to: "To close this issue, the applicant provided justification in a letter dated October 8, 1985, that a hose stream ..."
3.	1-17 1-19	Table 1.2 Table 1.4	Open Item 4: Section 5.2.4.1 should be included with the other SER sections listed. Section 5.4.2.2 should be deleted from the list in Table 1.2 since this is a confirmatory item as stated on Page 5-20. It should be listed as a confirmatory item in Table 1.4.
4.	1-18	Table 1.3	The status of issue (4) should be changed from "A" to "C" to be consistent with the latest NRR monthly status report on plant-specific backfitting activities, dated November 25, 1985. The SER shows this item open pending review of 10CFR50.55a(h). We assume the staff's basis for closure is that they have reviewed our commitment in a letter dated March 27, 1985, to revise the FSAR and that they have determined that 10CFR50.55a(h) is therefore not applicable to this system.
5.	1-18	Table 1.3	The status of issue (7) should be changed from "A" to "C" to be consistent with the latest NRR monthly status report on plant-specific backfitting activities, dated November 25, 1985. The SER shows this item open pending justification showing that a hose stream will reach the dense cable tray array in the northwest corner. We assume the staff's basis for closure is that in a letter dated October 8, 1985, this justification was provided.
6.	1-19	Table 1.4	Confirmatory Issue 2: SER Section 2.5.4.3.3 should be listed in addition to Section 2.5.4.5.
7.	2-7	2.3.1	Second paragraph on Page 2-7: This paragraph should indicate that, with respect to the tornado pressure drop rate, BVPS-2 is consistent with RG 1.76 and WASH 1300 (as discussed in the response to NRC Question 451.2).

NO.	PAGE	SECTION	COMMENT
8.	2-11	2.3.4	Suggest adding to last sentence of Section 2.3.4: "... and has determined that the relative concentrations at the EAB meet the requirements of 10CFR100.11."
9.	2-14	2.4.2.3.1	Last paragraph on Page 2-14 implies that HMR 33 did not include the Smethport Storm. The differences between HMR 33 and HMRs 51/52 are in the methods used to obtain the amount of rainfall.
10.	2-17	2.4.3.1	No Standard Tech. Spec. nor BVPS-1 Tech. Spec. currently requires a plant flood alert be issued for a high river water level. This violates the criteria established by the NRC in the G. Knighton to J. Carey letter issued by the NRC on September 18, 1984, and Chapter 16 of the SER. Therefore, this commitment for such a Tech. Spec. should be withdrawn by the NRC. (BVPS-2 Tech. Specs. do require an increase in surveillance when the Ohio River reaches 690 feet msl. However, they do not mention that a "flood alert" be issued.)
11.	2-30	2.5.1.1	First paragraph on Page 2-30: The 1926 earthquake was excluded from DLC's interpretation of the APTP as stated, but its effect on the design earthquake was considered and discussed in the February 1985 report. As discussed in Section 2.5.2.4.1, this earthquake has been identified as a shallow earthquake and as such does not represent any greater seismic hazard to the site than the design earthquake selected. In fact, for the seismic hazard analysis presented in the February 1985 report, this earthquake was conservatively included within the APTP as a normal focal depth event. Since the NRC staff concurs with DLC's position on shallow events, a brief discussion indicating this concurrence could be included in this paragraph. This could be done by referencing the discussions in Sections 2.5.2.4.1 and 2.5.2.5.1.
12.	2-33	2.5.2.2	Second to last sentence in Section 2.5.2.2: The Cleveland area earthquakes have been included in the APTP, but it could be inferred from this sentence that they were not. (Refer to FSAR Figure 2.5.1-5.)
13.	2-36	2.5.2.6	First sentence of Section 2.5.2.6: The BVPS-2 response spectra have the shape of the Newmark spectra but they are not truly Newmark spectra. With the exception of the value of the acceleration amplification factor for 5 percent damping, the amplification factors used to develop the BVPS-2 spectra were not those suggested by Newmark.

NO.	PAGE	SECTION	COMMENT
14.	2-45	2.5.4.1.2	First paragraph of Item (2): The stiff clay lens was removed from within the containment area and replaced with compacted structural fill. This could be indicated here by referencing the discussion in Section 2.5.4.2.1.
15.	2-46	2.5.4.1.2	Last paragraph of Item (2): The brief description of the soil profile near the main intake is not entirely correct. Refer, for example, to FSAR Figures 2.5.4-54 and 2.5.4-58. The silty clays to the south of the structure and within the excavation for the BVPS-1 and BVPS-2 SWS pipelines were removed and replaced with compacted fill. Similarly, east and west of the structure, within the limits of the wing walls and anchor walls, the upper soils were also removed at least to the level of the anchors and replaced. The statement concerning the susceptibility of soils around the intake to liquefaction should be expanded to demonstrate that the problem has been addressed and resolved. This could be done by referencing the discussion in Section 2.5.4.3.4.
16.	2-49	2.5.4.2.2	Last paragraph on Page 2-49: The properties of compacted structural fill were not determined by laboratory testing. Refer to FSAR 2.5.4.5.2 for details.
17.	2-51 2-54	2.5.4.3.3 2.5.4.5	Last two paragraphs of Section 2.5.4.3.3: In response to Draft SER Open Item 176 (currently SER Confirmatory Item 2), which was provided in DLC letter 2NRC-4-159, dated October 3, 1984, DLC stated that an evaluation of the effect of differential settlements on buried pipelines at the soil-structure interface was being conducted. Differential movements between arbitrary points along the pipeline away from the constraint of the structure penetration are not considered to be a problem. Buried steel pipelines are considered to be flexible enough to move with the soil without causing undue stress in the pipe.
18.	3-3	3.2.2	First paragraph on Page 3-3: DLC has received approval from the NRC Mechanical Engineering Branch in an NRC letter dated September 9, 1985, to implement a proposed program for Safety Class 2 and 3 instrument tubing. This program takes alternatives to the ASME Code as described in DLC letter 2NRC-5-113, dated July 31, 1985.
19.	3-4	3.3.2	First paragraph of Section 3.3.2: With respect to the tornado pressure drop rate, BVPS-2 is consistent with RG 1.76 and WASH-1300 (as discussed in the response to NRC Question 451.2).

NO.	PAGE	SECTION	COMMENT
20.	3-9	3.5.1.1	Third paragraph, first sentence: Add the following words after the word "systems": "have been evaluated and found not to affect the items required for safe shutdown or". The FSAR will be amended.
21.	3-9	3.5.1.1	Third paragraph, fourth sentence: Revise this sentence to clarify that it is past tense as follows: "The method of blade attachment has been investigated to ensure that the blade locknut torque and blade tip angle meet the manufacturer's specification."
22.	3-9	3.5.1.1	Third paragraph, fifth and sixth sentences: "The following sentence should be substituted: "Either a stress analysis has determined that the safety factors against the failure of a fan is acceptable or analyses have been performed which demonstrate that the housing is adequate to retain the fragments." The FSAR will be amended.
23.	3-10	3.5.1.1	First paragraph: Add the following sentence after the first sentence: "In addition, the applicant has performed an analysis that demonstrates that potential missiles from the turbine-driven auxiliary feedwater pump would be contained by the concrete compartment." The FSAR will be amended. Refer to letter 2NRC-4-121, dated August 13, 1984.
24.	3-10	3.5.1.1	Fourth paragraph, second sentence: Change the words "will not cause a missile" to "will not occur, therefore, a missile will not be generated."
25.	3-12	3.5.1.2	First paragraph, second sentence: Change the words "will not cause a missile" to "will not occur, therefore, a missile will not be generated."
26.	3-12	3.5.1.2	Second paragraph, first sentence: Revise this sentence to clarify that it is past tense as follows: The method of blade attachment has been investigated to ensure that the blade locknut torque and blade tip angle meet the manufacturer's specification."
27.	3-12	3.5.1.2	Second paragraph, second and third sentences: The following sentence should be substituted: "Either a stress analysis has determined that the safety factors against the failure of a fan is acceptable or analyses have been performed which demonstrate that the housing is adequate to retain the fragments." The FSAR will be amended.

NO.	PAGE	SECTION	COMMENT
28.	3-12	3.5.1.3	Confirmatory Item 5: DLC intends to study the results of the probabilistic analysis to be performed using Westinghouse methodologies as recently approved by the NRC before making a final decision on a maintenance program. Refer to the response to Question 251.2 in Amendment 3, dated October 1983.
29.	3-15	3.6.1	Second paragraph: Revise first sentence to the following: "The main steam and feedwater lines and the high energy portion of their branch lines, including the isolation valves, located in the main steam valve house have been classified as part of the break exclusion boundary." Change second sentence words "jet impingement and environmental effects of the postulated pipe break" to "environmental effects of a postulated 1 ft.^{2} nonmechanistic pipe break."
30.	3-15	3.6.1	A commitment has not been made to provide an analysis that confirms that safety-related equipment is properly qualified for the superheated steam condition that may result from a postulated steamline break. DLC intends to utilize the results of the WOG/SBOC subgroup to review impact on environmental qualifications. The results of the Hazards Analyses are scheduled for completion at the end of 1986 and documentation in early 1987.
31.	3-16	3.6.2	The definition of break exclusion zone and the design basis are somewhat different than those outlined in SRP 3.6.2. Refer to T1.9-2, Pages 12 and 12a of 93 of Amendment 10, dated May 1985.
32.	3-17	3.6.2	The criteria for postulating intermediate break locations is 3.0 (S_m) instead of 2.4 (S_m). Refer to T1.9-2, Pages 12 and 12a of 93 of Amendment 10, dated May 1985. DLC Letter 2NRC-5-042, dated March 12, 1985, requested the elimination of arbitrary intermediate pipe breaks for certain piping systems. The NRC approved this request on May 21, 1985.
33.	3-18	3.7.1	Section paragraph on Page 3-18: In the first sentence, it would be more appropriate to state that the damping ratios used for BVPS-2 "comply with RG 1.61" rather than "comply with those in RG 1.61." As stated in FSAR Table 1.8-1, BVPS-2 uses some damping values which are not the same as those recommended in Table 1 of RG 1.61. However, these values do comply with the Regulatory Position delineated in Section C of RG 1.61.

NO.	PAGE	SECTION	COMMENT
34.	3-24	3.8.4	The second paragraph of Section 3.8.4 should read as follows: "The staff has reviewed the responses provided by the applicant and has determined that all nine action items related to this SER section (see Section 3.8.6) are resolved. Item 19 required the applicant to submit ... and Items 20 and 22 required the applicant to provide ..."
35.	3-33	3.9.3.1	Fourth paragraph, third sentence: Revise this sentence to read as follows: "The Code also requires a stress report for ASME Code Class 1 components and stress calculations for ASME Code Class 2 and 3 components."
36.	3-33	3.9.3.1	Confirmatory Item 10: A telecon between the NRR staff and its consultants DLC and Stone & Webster on September 13, 1985, resolved all questions. The questions were formally issued by the staff on November 26, 1985. DLC will be submitting formal responses.
37.	3-35	3.9.3.2	Confirmatory Item 11: The BVPS-2 plant-specific response is covered in Section 5.4.13.4 in Amendment 4, dated December 1983. This item should be closed.
38.	3-36	3.9.3.3	Second paragraph, second sentence: Revise this sentence to read as follows: "The primary loop component supports utilized ASME Code, Subsection NF, as a guide in the design."
39.	3-36	3.9.3.3	Last complete sentence on Page 3-36 should end with the following words (after the word "combined"): "by the square root of the sum of the squares (in accordance with NUREG-0484, Rev. 1)."
40.	3-39	3.9.6	The inservice testing program applies to certain safety-related pumps and valves. Refer to Sections 3.9B.6.1 and 3.9B.6.2.
41.	3-40	3.9.6	The criteria required for pressure isolation valve testing is still under discussion. DLC does not agree with all criteria stated in the first two paragraphs on Page 3-40. This will be resolved through Open Items 1 and 2 on Table 1.2.
42.	3-41	3.10.1	The SER states that DLC has committed to incorporating "the seismic and all other pertinent dynamic loads, including accident loads, in the seismic qualification programs, which should include fatigue cycling effects." DLC has met with the staff on several occasions and discussed the types of loads included in the seismic program. The FDSER

NO.	PAGE	SECTION	COMMENT
42. (continued)			was the first time DLC had been requested to address fatigue cycling effects. We disagree because we only consider fatigue on certain equipment.
43.	3-41	3.10.1	The SER states: "The applicant should submit FSAR amendments to document the resolution of the identified FSAR discrepencies." The SER refers to FSAR discrepencies but does not identify them.
44.	3-42	3.10.2	The staff has concluded that the applicant's qualification program meets the requirements of IEEE 323-1974. BVPS-2 is required to meet IEEE 323-1971.
45.	3-43	3.10.2	The staff identified a new concern relating to preoperational testing. Many of the system preoperational tests are to be monitored visually rather than by calibrated instrumentation. Because of this, the applicant should provide justification that preoperational test results will validate the qualification of the system, component, and supports. The concern is directly related to FSAR Open Item 2 and will be addressed by the response to this open item.
46.	3-44	3.11.3	10CFR50.49(k) states that the applicant is not required to requalify electrical equipment to meet 10CFR50.49 if the staff has previously required qualification to NUREG-0588. Part (k) does state that replacement equipment should be upgraded where possible to 10CFR50.49. It appears that the staff in 3.11.3 is now requiring BVPS-2 to address the requirements of 10CFR50.49. In the previous section (3.11.2), the staff stated that BVPS-2 is to be qualified to NUREG-0588, Category II.
47.	3-44	3.11.3	The items required in this section that DLC is expected to provide prior to the audit have all been previously submitted or discussed with the staff. The information being requested is identical to FSAR Question 270.2, dated September 22, 1983. DLC met with the NRC on December 19, 1983, to present our response to Question 270.2 and to notify the staff that DLC would be preparing and submitting a separate submittal for EQ. During this December meeting, DLC identified where the needed information could be found in the FSAR and in the subsequent separate EQ submittal. On June 26, 1984, DLC met with the staff to formally submit the EQ report and to explain its contents. Except for Items 2, 5, and 6 (FDSER 3-44 through 3-46), the information the NRC requested was included in the EQ report. On November 1, 1984, DLC submitted the Mechanical EQ Report which fully satisfied Item 6. The fact that the SER has not recognized any of this information implies that no work has been done in the EQ area since September 22, 1983.

NO.	PAGE	SECTION	COMMENT
48.	4-3	4.2.1	Confirmatory Item 15: The peak pellet design-basis burnup value was confirmed by Letter 2NRC-5-132, dated September 13, 1985.
49.	4-3	4.2.2	Confirmatory Item 16: The corrected fuel values were submitted in Letter 2NRC-5-132, dated September 13, 1985.
50.	4-6	4.2.3.1	Confirmatory Item 17 (Item [6] on Page 4-6): Confirmation of the performance of the rod bowing analysis was provided in Letter 2NRC-4-102, dated July 12, 1984, and FSAR Section 4.4.2.2.5, Amendment 8, dated September 1984.
51.	4-7	4.2.3.1	Confirmatory Item 18 (Item [8] on Page 4-7): Confirmation of the fuel rod internal pressure criterion was provided by Letter 2NRC-5-132, dated September 13, 1985.
52.	4-8	4.2.3.2	Confirmatory Item 19 (Item [2] on Page 4-8): Confirmation of the calculated cladding collapse time was provided by Letter 2NRC-5-132, dated September 13, 1985.
53.	4-10 & 11	4.2.3.3	Confirmatory Item 20 (Item [4] on Pages 4-10 and 4-11): The SRSS methodology was confirmed by Letter 2NRC-4-209, dated December 18, 1984.
54.	4-16	4.3.2.1	Last paragraph: BVPS-1 Tech. Specs. no longer require the use of APDMS. Therefore, in accordance with the G. Knighton to J. Carey letter issued by the NRC on September 18, 1984, and Chapter 16 of the SER, BVPS-2 Tech. Specs. should also not require this.
55.	4-23 4-25	4.4.4 4.4.8	Last paragraph: In accordance with the G. Knighton to J. Carey letter issued by the NRC on September 18, 1984, and Chapter 16 of the SER, BVPS-2 Tech. Specs. should be modeled after the BVPS-1 Tech. Specs. (which do not include a requirement for LPMS) and not like the Standard Tech. Specs. BVPS-2 does not take any licensing credit for the LPMS and therefore an LPMS Tech. Spec. is not "... derived from the analyses and evaluations included in the safety analysis report," pursuant to 10CFR50.36(b). Therefore, DLC will not include the LPMS In the BVPS-2 Tech. Specs. If the staff insists on requiring the LPMS be addressed in the BVPS-2 Tech. Specs., DLC requests that the basis for this requirement be identified and documented in a response to DLC.
56.	4-28	4.6	The CRDM ventilation system fans are seismically designed but are not seismic Category I. FSAR Section 9.4.8.1.3 will be updated to reflect this.

NO.	PAGE	SECTION	COMMENT
57.	5-4	5.2.2.2	The PORV setpoint curve will be developed along with the appropriate Tech. Specs. This should be listed as a confirmatory item.
58.	5-5	5.2.2.2	The BVPS-2 Tech. Specs. will follow the BVPS-1 Tech. Specs. This area of the BVPS-1 Tech. Specs. is still under NRC review.
59.	5-9 6-32	5.2.4.3 6.6.1	Open Item 4: On January 31, 1985, DLC submitted an alternate plan for the preservice examination of ASME Class 2 piping welds. On May 20, 1985, the NRC approved the methodology of the plan.
60.	5-9 6-32 thru 6-35	5.2.4.3 6.6	Open Item 4: NRC comments on the PSI program were received in June 1985. The PSI program document is now scheduled for completion at the end of 1985.
61.	5-10	5.2.5	Sixth paragraph, second sentence: This sentence is incorrect and should be deleted.
62.	5-10	5.2.5	Sixth paragraph, fourth sentence: This sentence should be revised to read as follows: "Leakage collected in these tanks is pumped to the boron recovery system with the overhead processed through the radioactive gaseous waste system."
63.	5-11	5.2.5	First paragraph, first and second sentences: Revise these sentences to the following: "Unidentified leakage is also detected by a containment airborne gas and particulate radioactive monitor. This monitor responds to the increase in airborne radioactivity resulting from leakage."
64.	5-11	5.2.5	Second paragraph, second sentence: After the words "condenser air ejector vent line" add the words "and steam generator blowdown lines".
65.	5-19	5.4.2.2	Second paragraph: First sentence: Change "Specification NDS-0064 (Revision 0)" to "Specification 10080-DMS-002 (Rev. 2)." Second sentence: Add "(Rev. 2)" after "Specification 10080-DMS-002." Third sentence: Change the words "after the field hydrostatic test and before" to the words "prior to."

NO.	PAGE	SECTION	COMMENT
66.	5-24	5.4.7.5	NRC still has not stated why the information submitted by DLC on North Anna test results was not acceptable. DLC would like a reason documented why North Anna information does not meet BTP RSB 5-1 (which was accepted by NRC for North Anna) before DLC will address Diablo Canyon test results.
67.	5-26	5.4.11	Third paragraph, first sentence: Revise to the following: "The contents of the tank can be drained to the degasifiers in the boron recovery system via the primary drains transfer pumps."
68.	5-27	5.4.12	Confirmatory Item 23: As stated in Section 5.4.15.4, inservice inspection will be conducted in accordance with Section 6.6. Operating procedures will address this system. This item should not be confirmatory. It should be either open or closed.
69.	5-27	5.4.12	The SER says that BVPS-2 Tech. Specs. must include Tech. Specs. on the vent system as required by NUREG-0737, Item II.B.1 (NUREG-0737 issued per D. G. Eisenhut letter to all licensees of operating plants and NTOLs on October 31, 1980). However, this was superseded by the H. Denton letter to all NRR employees issued on July 23, 1984, regarding preparation of Tech. Specs. for second units at multi-unit sites. Per that letter, "The only changes that are permitted" (from the first unit's Tech. Specs.) "are those which are absolutely necessary and justified, e.g., actual design difference or new regulatory requirements applicable only to the unit being licensed." The BVPS-2 vent system is not designed differently from BVPS-1, nor is NUREG-0737 only applicable to BVPS-2 and not to BVPS-1. Thus, the BVPS-2 Tech. Specs. for this system (or lack of Tech. Specs.) will be modeled after BVPS-1 Tech. Specs.
70.	6-3	6.1.2	Sixth paragraph, first sentence: After the word "for" add the following words: "major surfaces in".
71.	6-5 6-8	6.2.1.1 6.2.1.3	Confirmatory Item 24: As described in DLC letter 2NRC-4-132, dated August 22, 1984, Westinghouse provided additional information to the NRC in Letter NS-EPR-2948, dated August 14, 1984. DLC requests the schedule for completion of the NRC review.
72.	6-6	6.2.1.2	The following words in the last sentence of the seventh paragraph should be deleted: "contingent on the acceptability of the mechanically constrained limit on the pipe break size (see Section 3.6)." The design basis for the reactor cavity will not be changed by the GDC-4 exemption.

NO.	PAGE	SECTION	COMMENT
73.	6-6	6.2.1.2	As described in DLC Letter 2NRC-4-132, dated August 22, 1984, the SATAN-V Program, which is described in WCAP-8312A, rather than the SATAN-VI Program, was employed in the sub-compartment analyses. Also, see FSAR Amendment 9, dated December 1984.
74.	6-7	6.2.1.2	Fifth paragraph, fourth sentence: Change 360 in.^{2} LDR to 320 in.^{2} LDR.
75.	6-7	6.2.1.2	Sixth paragraph, third sentence: Change 12.9 psid to 15.08 psid.
76.	6-7	6.2.1.2	Seventh paragraph, first sentence: Change "three breaks" to "four breaks" and add the following words to the end of the sentence: "and a simultaneous rupture of three 6-in. safety lines in the upper pressurizer cubicle (which is enveloped by the spray line DER)."
77.	6-8	6.2.1.2	First paragraph, first sentence: Change 18.07 psid to 5.38 psid.
78.	6-9	6.2.1.4	Second paragraph, fifth sentence: This sentence should be revised to indicate that credit has been taken for liquid entrainment in the mass and energy release analysis.
79.	6-10	6.2.2	Sixth paragraph, fifth sentence: Change "with" to "within".
80.	6-12	6.2.2	Confirmatory Item 25: A more descriptive title of this item is "Containment Sump 50% Blockage Assumption." As indicated in response to Question 480.26 in FSAR Amendment 6, dated April 1984, RG 1.82 indicates that an assumed 50% blockage is conservative. If the staff position is that 50% blockage assumption has to be justified as discussed in the draft documents cited in the question response, this issue should be included on Table 1.3. Otherwise, this item should be closed.
81.	6-32	6.6	The methodology for the preservice examination of ASME Class 2 piping as described in DLC Letter 2NRC-5-014, dated January 31, 1985, has been found acceptable by the NRC. NRC comments on the PSI Program were received in June 1985 and the completed program is scheduled for the end of 1985.
82.	7-7	7.2.2.1	Time constants are required by neither the Standard Tech. Specs. nor the BVPS-1 Tech. Specs. BVPS-2 Tech. Specs. will follow the BVPS-1 Tech. Specs. as per the G. Knighton to J. Carey letter issued by the NRC on September 18, 1984, and Chapter 16 of the SER.

NO.	PAGE	SECTION	COMMENT
83.	7-7	7.2.2.2	Periodic testing of the redundant circuits used to trip the turbine is required by neither the Standard Tech. Specs. nor the BVPS-1 Tech. Specs. Therefore, DLC does not agree that a Tech. Spec. to periodically test these circuits is required, as per the G. Knighton to J. Carey letter issued by the NRC on September 18, 1984, and Chapter 16 of the SER.
84.	7-9	7.2.2.5	DLC will use a value of 70% for P-9 in the BVPS-2 interlock. NRC has not justified why a lower value of 50% is required.
85.	7-12	7.3.1	Item (5c): "Low T_{ave} (2/3) coincident with Reactor Trip," is not an ESFAS as no credit is taken for this in FSAR Chapter 15.
86.	7-13	7.3.1	Item (8): Service water isolation is from CI "A", not safety injection.
87.	7-21	7.3.3.10	Confirmatory Item 27: FSAR Figure 9.2-4 was updated by FSAR Amendment 10 (May 1985) to correct the representation of automatic open signals for valves MOV 113B and C.
88.	7-24	7.3.3.14	This section should incorporate the information included in Letter 2NRC-5-135, dated September 16, 1985.
89.	7-33	7.5.2.2	Confirmatory Item 29: FSAR Table 7.5-1 was revised in FSAR Amendment 9 (December 1984).
90.	7-36	7.6.1.2	Valve position indication for the accumulator isolation valves is provided from both the valve motor operator limit switches and the valve stem limit switches.
91.	7-44	7.7.2.3	Confirmatory Item 32: The documentation of the detailed plant review was submitted to the NRC in Letter 2NRC-5-141, dated October 15, 1985. DLC believes that this item should be closed.
92.	8-5	8.3.1.1	The third sentence in Item (1) is misleading. It should state, "This condition postulates a hypothetical worst case event for analysis purposes, but is not credible as an actual event."
93.	8-6	8.3.1.3	The second sentence of the second paragraph is not accurate. It should state, "... using actual <u>or simulated</u> load ..."

NO.	PAGE	SECTION	COMMENT
94.	8-12	8.3.3.1.2	Editorial: "lighting" should be "lightning".
95.	8-17	8.3.3.3.6	For consistency with the DLC submittal which is discussed: "Configuration No. 2" should be "Configuration No. 3" "Configuration No. 3" should be "Configuration No. 4" "Configuration No. 4" should be "Configuration No. 6" "Configuration No. 5" should be "Configuration No. 7"
96.	9-2	9.1.1	No metal decking will be used in the new fuel area. The FSAR will be revised to reflect this.
97.	9-12	9.2.1.1	Last paragraph, fifth sentence: Sentence should read: "A seismic Category II restricting orifice is provided in the SWS discharge line to the circulating water system."
98.	9-24	9.3.2.2	Last paragraph on Page 9-24: This paragraph should be revised to indicate that the BVPS-2 core damage estimate procedure will be provided before fuel load. The scheduled date for submittal of this procedure is December 31, 1986 (as indicated in Letter 2NRC-5-116, dated August 7, 1985).
99.	9-26	9.3.3	The first sentence of the last paragraph on Page 9-26 should be replaced with the following: "BVPS-2 is designed with a nonseismic floor drainage system and plant flood levels have been calculated without taking credit for drainage through the floor drains. For those areas where safety-related equipment is located, backflow from other areas through the drain lines is considered and all essential equipment will be either qualified for submergence or located above the flood level." (See DLC response to NRC Question 410.24.)
100.	9-31	9.4.1	Second paragraph on Page 9-31: "RG 152" should be "RG 1.52".
101.	9-43 &44	9.5.1.1	The staff is speaking of a need to evaluate the impact of flooding and the inadvertant operation of fire protection on safety-related equipment. The evaluation has already been done and the results were submitted to the NRC in Letter 2NRC-5-054, dated March 27, 1985.

NO.	PAGE	SECTION	COMMENT
102.	9-44	9.5.1.3	The fire brigade is not shared between BVPS-1 and BVPS-2. However, three of the five dedicated members are common to both units with the remaining two being specific to either BVPS-1 or BVPS-2. The fire brigade room and its equipment is shared by both units.
103.	9-45	9.5.1.4	Fifth paragraph: Two 1.5-hour fire rated dampers were placed in series in common sleeves to provide the equivalent 3-hour rated damper. This deviation/justification was submitted to the NRC in Letter 2NRC-5-054, dated March 27, 1985, and preliminarily approved by the staff at the October 22, 1985, meeting. Fifth paragraph: The fire dampers do not have UL labels. These dampers were all purchased as UL-rated dampers. In most cases, the UL label was removed due to the installed configurations, which were previously UL tested. The NRC was informed of this deviation, and justification was provided by Letter 2NRC-5-054, dated March 27, 1985. During a meeting with the staff on October 22, 1985, preliminary approval was obtained on this issue.
104.	9-46	9.5.1.4	Fourth paragraph: Fourth sentence should be changed to read: "The turbine building south exterior wall adjacent to the transformer is 2-hour rated."
105.	9-47	9.5.1.4	Under the topic "Electrical Cable Construction, Cable Trays, and Cable Penetrations," the second and third paragraphs are incorrect. First, all areas containing cable trays are provided with an early warning smoke detection system. However, there are three fire areas where the requirements of Section C.5.e of BTP CMEB 9.5-1 are exceeded and automatic fire suppression is not provided. 1. Reactor Containment (RC-1) 2. Auxiliary Building (PA-3) 3. Auxiliary Building (PA-4) These areas have been laid out such that all trays can be effectively reached by a hose stream and contain early warning smoke detection. Safe shutdown analysis is provided for these areas and the rest in the FPER. (See Letter 2NRC-5-054, dated March 27, 1985.)

NO.	PAGE	SECTION	COMMENT
106.	9-53	9.5.1.6	Seventh paragraph on Page 9-53: The NRC has committed DLC to implement the recommendations of the DLC human factors expert (April 15, 1985, letter). DLC is presently reviewing all of these recommendations. However, some of these recommendations will not be implemented. A letter will be sent to the NRC discussing the human factors improvements and explaining why some of the recommendations will not be implemented.
107.	9-53	9.5.1.6	Eighth paragraph on Page 9-53: The Director, DL, identified the northwest corner of the cable spreading room as a deviation, in that a hose stream could not reach all parts of this area. DLC believes that this area (northwest corner) can be reached by a hose stream and is not a deviation. Letter 2NRC-5-137, dated October 8, 1985, was sent to the NRC stating DLC's position and identifying further steps DLC will take to improve the fire fighting capabilities in this area.
108.	9-55	9.5.1.8	The cable spreading room is a backfit, not an open item.
109.	9-67	9.5.3.3	The fourth sentence on the page should state: "... extended period of <u>accumulated</u> time (i.e., <u>greater than</u> 24 hours) ..."
110.	9-71 9-81 & 82	9.5.4.2 9.5.7	BVPS-2 Tech. Specs. will be modeled after the BVPS-1 Tech. Specs. as per Chapter 16 of the SER and in accordance with the Standard Tech. Specs. Therefore, the BVPS-2 Tech. Specs. for emergency diesel engine fuel oil and lubricating oil will be the same as used in the BVPS-1 Tech. Specs.
111.	9-72	9.5.4.2	The last sentence on the page should be deleted because the staff has received the information and closed the items.
112.	10-3	10.2	In FSAR Amendment 8, DLC did <u>not</u> commit to follow the Standard Tech. Specs. for inservice inspection of the turbine valves. Item 4 should be classified as the same status as Items 1-3. BVPS-2 Tech. Specs. will be written to be like BVPS-1 Tech. Specs., not like the Standard Tech. Specs., as discussed in Chapter 16 of this SER. A copy of the proposed BVPS-2 Tech. Specs. was provided to NRR in a letter issued September 14, 1984.
113.	10-5	10.3	For clarity, the fifth sentence on the page should state, "... close on <u>low</u> pressure ..." and a comma should be placed after "steamline".

NO.	PAGE	SECTION	COMMENT
114.	10-5	10.3	The third sentence of the third paragraph is not accurate and should be terminated after "signal". It should be followed by the following: "The valves are sized to maintain hot standby for 10 hours, followed by a 26-hour cooldown, and have a required capacity of 26,200 lb/hr per valve with a 100 psia inlet pressure."
115.	10-16	10.4.9	The fourth sentence from the end of the page should have "motor operated isolation valve" deleted to be accurate.
116.	10-17	10.4.9	The sixth sentence of the second full paragraph on the page should begin with "Pneumatic hydraulic operated."
117.	10-17	10.4.9	The eighth sentence of the second full paragraph on the page should be replaced with, "No nonsafety-related piping is directly connected to the tank below the dedicated water level."
118.	10-17	10.4.9	The ninth sentence of the second full paragraph on the page should be supplementd with, "... are seismic Category I, except connection N4, which is associated with a nonsafety-related transmitter. This instrument and tubing and valves are designed as Seismic Category II and will not fail in a manner that will cause a loss of pressure boundary in the event of an SSE."
119.	10-17	10.4.9	The tenth sentence of the second full paragraph on the page should state, "... Category II ..." to be accurate.
120.	10-18	10.4.9	The third sentence of the third paragraph on the page describes an "open item" which was closed based on a letter dated August 13, 1984. (Refer also to comment No. 23 on SER Page 3-10, Section 3.5.1.1). This should state, "separate cubicle enclosure ... from the turbine-driven pump. The applicant has provided ..."
121.	10-18	10.4.9	The seventh sentence of the fourth paragraph on the page should state, "... has solenoid operated valves that open ..."
122.	10-18	10.4.9	The eighth sentence of the fourth paragraph on the page should be replaced with, "the solenoid valves are powered from the emergency busses and fail in the open position on loss of power to the valves."

NO.	PAGE	SECTION	COMMENT
123.	10-20	10.4.9	The third sentence of the third full paragraph on the page should end with, "... during hot standby or cold shutdown conditions."
124.	10-20	10.4.9	Fourth paragraph: The first four sentences should be revised to the following: "The 140,000 gallon PPDWST is maintained with at least 127,500 gallons of usable water by Technical Specification. This volume is adequate for maintaining hot standby for at least nine hours following a loss of normal feedwater. The PPDWST has connections to the 600,000 gallon demineralized water storage tank, which will contain approximately 543,000 gallons of usable volume that can be transferred to the PPDWST. The connection between the two tanks is above the 127,500 gallon level in the PPDWST." The FSAR will be amended.
125.	10-20	10.4.9	The BVPS-2 Tech. Spec. is being revised to require a lower value of gallons of water be stored in the PPDWST (e.g., approximately 127,000 gallons). A FSAR change is being developed to correct this information in the FSAR. Due to the tank instrumentation design limitations (e.g., minimum possible instrumentation error) the tank itself won't allow a Tech. Spec. requiring 140,000 gallons. Therefore, the statement on PPDWST required volume should be altered to say "later." Upon final evaluation, the NRC will be notified of the final value for this Tech. Spec. criteria. The design basis is being changed for the PPDWST to be 9 hours at hot standby, rather than 3 hours in hot standby plus 4 hours to cooldown, in order to be consistent with the BVPS-1 Tech. Specs. (in accordance with Chapter 16 of this SER).
126.	11-9	11.4.2	Second paragraph on Page 11-9: The confirmatory item on the Solid Waste Process Control Program will be addressed in a topical report which will be submitted directly to the NRC by the system vendor (Stock Equipment Company). This report will be submitted to the NRC before initial reactor heatup. The scheduled submittal date is March 31, 1986, as indicated in Letter 2NRC-5-116, dated August 7, 1985.
127.	13-3	13.2.1.3	The "loss of coolant" item should be corrected as follows to be consistent with the Denton letter and to be correct: loss of coolant including: - significant PWR steam generator leaks - inside primary containment - large and small, including leak-rate determination - saturated reactor coolant response

NO.	PAGE	SECTION	COMMENT
128.	13-12 & 13	13.3.2.4	The SER deficient emergency action levels have been reviewed by DLC. Where appropriate, changes have been made in Issue 7, Rev. 6, of the BVPS-1 plan.
129.	13-18	13.3.2.12	The EPP (Issue 8, Rev. 1) has been revised to state that the letters of agreement will be certified to be current on an annual basis.
130.	13-22	13.3.3	The BVPS-2 EPP and implementing procedures addressing the SER open items will be submitted to the NRC for review at least 180 days before fuel load.
131.	14-3	14	The sentence above Item (1) should end with, "... initial test program or its description." Some of the changes did not affect the test, only the FSAR.
132.	14-3	14	Item (1) should be deleted since nothing new was added to the FSAR or the table. The reviewer was merely referred to a table which already existed.
133.	14-3	14	Item (4) should state, "Describing testing to ..." since the tests were not expanded, just their descriptions.
134.	15-4	15.1.4	First paragraph: BVPS-2 does not have a Boron Injection Tank. The third sentence should read: "The safety injection system (SIS) injects borated water (2,000 ppm) from the refueling water storage tank into the primary coolant system ..."
135.	15-6	15.2.6	The statement regarding sufficient water in the PPDWST to cool the plant to 350°F is not correct. DLC is planning to revise this statement that the volume in the PPDWST is able to hold the plant at hot standby and safety grade backup water source from the Service Water System is provided to cool the plant down.
136.	15-20	15.7.3	Last paragraph of Section 15.7.3: The fifth sentence indicates that in the case of an RWST rupture, the dilution factor at the Chester intake is 2,000. FSAR Table 15.7-4 indicates that this dilution factor is 476. The SER should be changed to read a dilution factor of 476.
137.	15-22 15-24	15.9.2 15.9.3 15.9.11	Confirmatory Items 41b and 41d: These items should be closed based on DLC's commitment to do this. Procedures do not need to be submitted for this.

NO.	PAGE	SECTION	COMMENT
138.	18-2	18.1	The SER states that the summary report "will be submitted on June 1, 1985." This is incorrect. The actual submittal date was December 2, 1985 (Letter 2NRC-5-147). This date was negotiated with the NRC prior to the original scheduled submittal date.
139.	22-1	22.2	In accordance with 10CFR140.13, financial protection in the amount of $160,000,000 has been obtained from NELIA. Copies of the policies are on file with the NRC.