



Duquesne Light

435 Sixth Avenue
Pittsburgh, Pa.
15219

(412) 456-6000

October 30, 1979

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Attn: Boyce H. Grier, Regional Director
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Reference: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334
Response To IE Bulletin 79-14 (120 Day Report)

Dear Mr. Grier:

We are transmitting herewith our 120 day report in response to IE Bulletin 79-14. As was mentioned in earlier correspondence and discussions, Duquesne Light Company performed an as-built walkdown of a portion of the lines covered by IE Bulletin 79-14 as part of the Beaver Valley Unit No. 1 Show Cause Order of March 13, 1979. This field investigation was not as detailed as our current effort, which fully complies with the latest revision of IE Bulletin 79-14, but the information gathered is of a sufficient sample that reasonable conservative conclusions can be made. The detailed statistical summary is attached.

The attached verification summary data was developed from a general dimensional check of piping and hangers that were readily accessible in the plant. Piping spool piece lengths, hanger locations, piping and hanger configurations were covered in the initial walkdown sufficiently to permit a check of the piping seismic analysis.

Duquesne Light Company is utilizing 16 engineers and piping designers to perform the as-built verification in total compliance with IE Bulletin 79-14. The initial field investigation by this task group will cover those piping isos not previously verified in order to expand our data base. Upon completion of these lines, the task group will review those lines originally reviewed to provide the same basis for the entire as-built investigation. Our schedule for this effort continues to be as discussed in our September 27, 1979, letter to you. We intend to maintain this level of effort or expand it as required for timely completion.

Thus far the findings, prior to engineering evaluation, appear to be essentially similar to the earlier walkdowns and therefore, we would anticipate a similar pattern of deviations as discussed in the statistical summary of our earlier walkdowns.

C/29

Item# 29

5

Several modifications to existing safety-related piping systems were made but are not yet included on the as-built drawings. However, these modifications to the piping were analyzed consistently with the original piping seismic analysis, and therefore, these deviations from as-built are considered satisfactory.

In summary, the report indicates that 50 percent of the piping isometrics were field walked with no modifications required as a result of discrepancies found that were required to be input into the reanalysis effort. We believe that this finding is sufficiently significant to justify our assuming a high level of confidence for the condition of Beaver Valley Unit No. 1 as-built drawings. The marked-up drawings from the walkdown are available for your review in our Central Engineering Office.

We believe that the early as-built walkdown results indicate a sufficient level of confidence with our as-built record drawings to justify continued operation of the plant. Although we previously indicated a scheduled outage beginning early in November, we are now planning to extend the start of that outage to mid-December to gain enough time to fully resolve an engineering problem associated with one of the modifications which must be installed during the refueling outage.

A tabular summary of the results of the inspection to which have been completed is attached. A total of 1346 supports have been inspected. Only 65 (4.8%) exhibited discrepancies of some kind. Thirty-six (36) of these have been judged by qualified stress analysis engineers to be insignificant. A total of 29 (2.2%) were considered to be significant enough to be input to the reanalysis effort. No modifications have been found to be necessary as a result of the 21 support discrepancies which have presently been reanalyzed.

Engineering judgment has been exercised to determine which discrepancies are significant enough to warrant reanalysis. This judgment is based on familiarity with the detailed results of many computer analyzed pipe stress problems. The evaluation of piping configuration and support location discrepancies considers the effect of changes in span length between supports, the function of the affected supports and the inherent capability of the affected section of pipe or the support to accommodate increased loads. The support configuration discrepancies are judged considering the support function basic design such as number and size of members, bolt size, bolt spacing, weld size and the inherent design conservatism.

Should we determine the existence of a condition that could cause a safety related component to become inoperable should a seismic event occur, we shall declare that component to be inoperable. In all such cases, the necessary modifications to restore the component to operable status shall be completed within seven days or the plant will be brought to the cold shut down condition until the modifications are completed.

Beaver Valley Power Station, Unit No. 1
Docket No. 50-334
Response To IE Bulletin 79-14 (120 Day Report).
Page 3

Since no modifications have been determined to be necessary as a result of the relatively small number of discrepancies found on over 50% of the safety related piping systems, it is our firm belief that continued operation of the Beaver Valley Power Station will not threaten the health and safety of the general public. The piping systems which are presently being inspected are installed in locations that require considerable working time to obtain access. The conduct of these inspections will continue as described until the inspections are completed.

We, therefore, request that the 120 day period for completion as required by the bulletin be extended to permit a complete burnup of the nuclear core at the present power level of 30%.

We anticipate that complete burnup will be achieved by no later than December 15, 1979.

Very truly yours,


C. N. Dunn
Vice President, Operations

cc: United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, D.C. 20555

DUQUESNE LIGHT COMPANY - Beaver Valley Power Station
Summary Of Results Of As Built Isometric Verification Program

	DLC Inspected	S&W Inspected	Grand Total
Total Number of ISOs	60	43	103
Total Number of Supports	893	453	1346
Total Number of Piping Discrepancies	32	0	32
Number of Piping Dimensional Discrepancies	26	0	26
Number Considered Insignificant	25	0	25
Input To Reanalysis	1	0	1
Total Number of Piping Configuration Discrepancies	6	0	6
Number Considered Insignificant	4	0	4
Input To Reanalysis	2	0	2
Total Number of Support Discrepancies	51	14	65
Support Configuration Discrepancies	40	10	50
Number Considered Insignificant	32	0	32
Input To Reanalysis	8	10	18
Support Location Discrepancies	6	0	6
Number Considered Insignificant	4	0	4
Input To Reanalysis	2	0	2
Number of Missing Supports	5	3	8
Input To Reanalysis	5	3	8
Support Installed Not Shown On ISO	0	1	1
Input To Reanalysis	0	1	1
Total Number of Reanalysis Req'd	18	14	32
Number of Reanalysis Completed	18	14	32

1175 AS-1 DWG. EPP02

1174 BPS-UNIT 1

EST. CHARLES

INVENTORY MFD

FILE

DATE	BY
DATE	BY
DATE	BY
DATE	BY

1979	OCT	NOV	DEC	1980	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
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INVENTORY

1978 79-14

FIELD VERIFICATION

S/W REVIEW & REVISIONS

OF FIELD VERIFIED DATA

PREPARATION OF AS-BUILT

DWG. FROM FIELD DATA

1978-79-12 AS-BUILT CORRECTIONS

DWG. INFO RE DWG. CORRECTIONS

DWG. REVISIONS TO DWGS

APPROVAL FOR AS-BUILT CASE

STATION MODIFICATION APPROVAL

IN ANY CASE RETURNED PRIOR TO DWG. CASE

INFORM ON OTHER THAN CMT. SYSTEM

MODIFICATIONS APPLIED TO DWGS.

EXDLE REVISED

TOTAL AS-BUILT DWG. UPDATE

SHOW CHASE ORDER LOGS

EXC. AND ANKERS PIPE

EXC. LOGS



Duquesne Light

435 Sixth Avenue
Pittsburgh, Pennsylvania .
15219

(412) 471-4300

October 4, 1979

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania . 19406

ATTENTION: MR. BOYCE H. GRIER, DIRECTOR

SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
Response to IE Bulletin 79-14

Gentlemen:

The following information is provided in response to I&E Bulletin 79-14, issued July 2, 1979, revised July 18, 1979 and supplemented on August 15, 1979 and September 7, 1979 as it applies to Beaver Valley Power Station - Unit No. 2. The item numbers listed below correspond to numbered items in IE Bulletin 79-14.

Item (1)

No significant portions of safety-related piping systems have been erected to date at Beaver Valley Power Station - Unit No. 2. Therefore, the inspections/field verification requested by NRC IE Bulletin 79-14 cannot be implemented at this time. The following information, however, is provided as requested.

All safety-related piping systems at BVPS-2 are designed, fabricated, and erected to meet the requirements of the 1971 Edition and addenda through the Winter 1972 Addendum of the ASME III Code. As required by Section NA-3252 of the Code, these piping systems are designed in accordance with a Design Specification. This Design Specification - Piping, Engineering, and Design (Spec. No. 2BVS-939), Revision I, dated July 10, 1974, includes all appropriate design requirements to assure that these safety-related piping systems are designed to meet the requirements of the Code. In conjunction with the Design Specification, the following input documents are used to provide specific design data in the seismic analysis as specified in 2BVS-939 for safety-related piping systems.

Item # 30

930

3

- a. RP/RB series drawings: Provide piping geometry, pipe support and valve locations and orientations, line designation numbers, etc.
- b. Line Designation Tables: Provide line numbers and the associated pipe properties, insulation type and thickness, etc.
- c. RC and RS series drawings: Structural steel and concrete drawings used in pipe support design.
- d. Amplified Response Spectra and Seismic Displacements of Buildings.
- e. Vendor Drawings and Seismic Reports for Valves: Provide valve and operator weights, center of gravity, orientation, etc.
- f. Piping and Pipe Support Specifications:
 1. 2BVS-58, Specification for Shop Fabricated Pipe, Revision 1, dated December 31, 1973.
 2. 2BVS-59, Specification for the Design and Fabrication of Power Plant Pipe Supports, Revision I, dated January 31, 1977.
 3. 2BVS-920, Specification for the Field Fabrication and Erection of Piping, Revision 3, dated August 22, 1978.
- g. Vendor Component Drawings/Date: Provides component geometry, acceptable nozzle loadings, etc.

The results of the final pipe stress analysis calculated using the above are documented in the following documents:

- a. AX series documents: Pipe stress analysis summary sheets
- b. RZ/BZ series drawings: Pipe support loading summaries and support detail drawings

The stress analysis and the input documents used in the analyses are based on approved documents/procedures which are governed by Stone & Webster Engineering Assurance Procedures and technical guidelines. Allowable construction tolerances, where appropriate, are specified in the appropriate drawings and specifications.

United States Nuclear Regulatory Commission
Mr. Boyce H. Grier
Page 3

The Quality Assurance program in effect at the BVPS-2 jobsite assures that all safety-related piping and pipe supports are installed in accordance with approved documents which were used as a basis for the final stress analyses. After installation/fabrication, an inspection program (which includes the Authorized Nuclear Inspector - ANI) assures conformance to approved documents. All deviations identified during fabrication, installation, and verification inspection phases are reported to the Engineers through Engineering and Design Coordination Reports or Nonconformance and Disposition Reports for resolution. Changes resulting from the disposition of these reports are included in a revised stress analysis of the piping system, as appropriate, and are included in the final as-built drawings.


Items 2, 3, and 4

As discussed under Item 1, inspection/field verification of safety-related piping systems at BVPS-2 is premature; therefore, the action requested under items 2, 3, and 4 of NRC IE Bulletin 79-14 are not applicable to BVPS-2.

Should you have any additional questions regarding this matter, please contact us.

DUQUESNE LIGHT COMPANY

By


E. U. Woolever
Vice President