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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.

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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 inatalled 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 conservatisms.

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.

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

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BVPS - UNIT 1
SCHEDULE
MED
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MET DATE: 8/9/79
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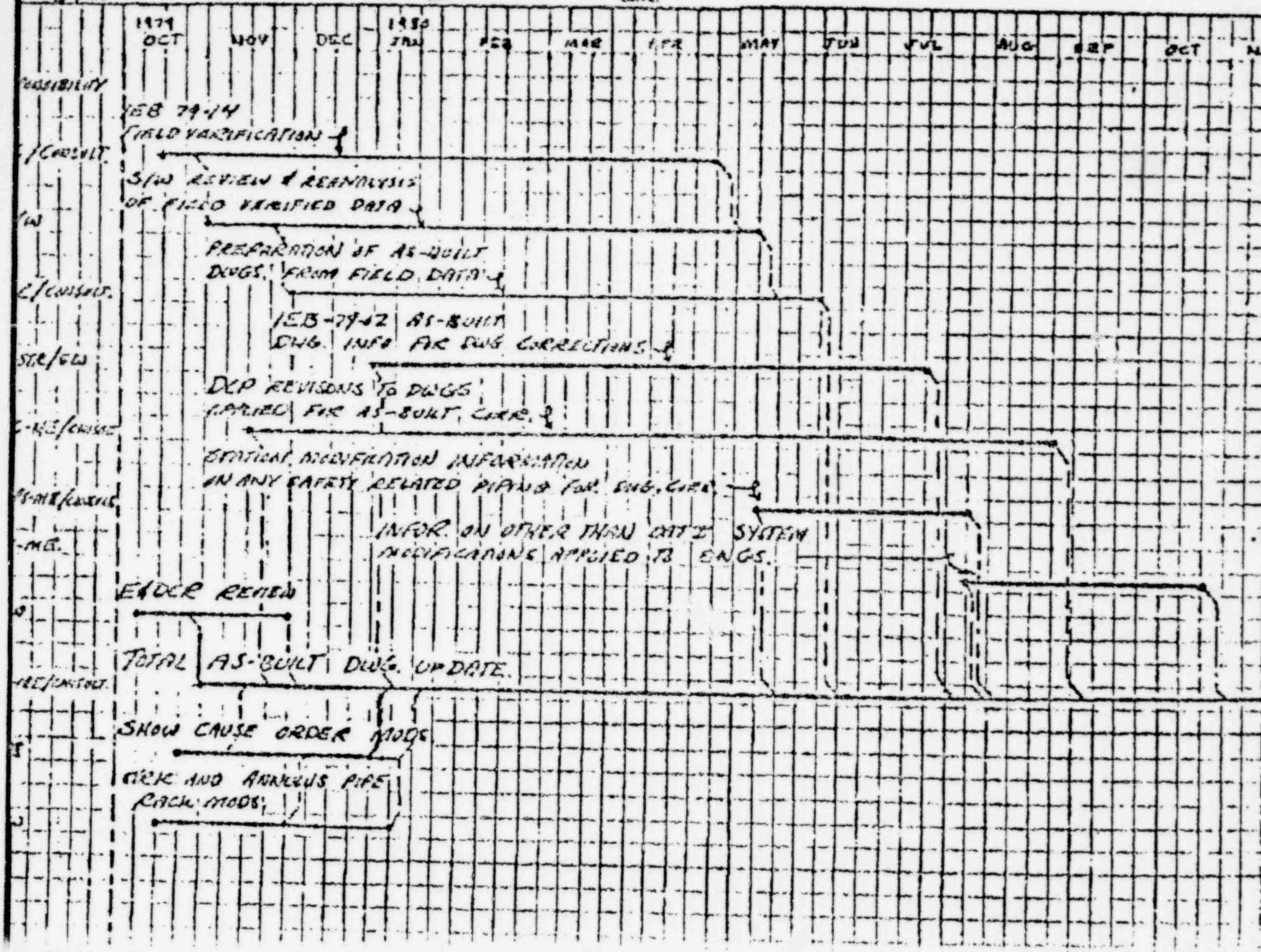

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1980 JAN
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IEB 79-14
FIELD VARIFICATION
S/W REVIEW & REANALYSIS OF FIELD VERIFIED DATA
PREPARATION OF AS-BUILT DWGS. FROM FIELD DATA
IEB-79-12 AS-BUILT DWG. INFO FOR DWG CORRECTIONS
DCP REVISONS TO DWGS APPLIED FOR AS-BUILT CORR.
STATION MODIFICATION INFORMATION ON ANY SAFETY RELATED PIPING FOR DWG. CORR.
INFOR. ON OTHER THAN CAT I SYSTEM MODIFICATIONS APPLIED TO DWGS.
EADCR REVIEW
TOTAL AS-BUILT DWG. UPDATE
SHOW CAUSE ORDER MODS
RCK AND ANNULUS PIPE RACK MODS