



# Duquesne Light

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May 13, 1988

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Reference: Beaver Valley Power Station, Unit No. 1  
Docket No. 50-334, License No. DPR-66  
Inspection Report 88-02

Gentlemen:

In response to NRC correspondence dated April 14, 1988 and in accordance with 10 CFR 2, Appendix C, the attached reply addresses the Notice of Deviation which was included with the referenced report.

If there are any questions concerning this response, please contact my office.

Very truly yours,

*for J. D. Sieber*  
J. D. Sieber  
Vice President  
Nuclear Group

Attachment

cc: Mr. J. Beall, Sr. Resident Inspector  
Mr. W. T. Russell, NRC Region I Administrator  
Mr. Robert M. Gallo, Chief, NRC Region I Operations Branch  
Director, Safety Evaluation & Control (VEPCO)

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DUQUESNE LIGHT COMPANY  
Nuclear Group  
Beaver Valley Power Station, Unit No. 1

Reply to Notice of Deviation  
Inspection 88-02  
Letter dated April 14, 1988

DEVIATION (88-02-01)

Description of Deviation

NRC Generic Letter 82-33 (GL 82-33) identified basic requirements for upgrading their emergency response capabilities. Duquesne Light Company responded to one of the basic requirements of GL 82-33, upgrading of their Emergency Operating Procedures, in letters dated June 28, 1984 and April 8, 1987. In these letters Duquesne Light Company committed to using an NRC approved Procedures generation Package (PGP) for upgrading their EOPs. The NRC approved PGP contains detailed instructions for the preparation of the Emergency Operating Procedures and Background Information.

Contrary to the above, as of February 5, 1988, many of the Emergency Operating Procedures and the Background Information did not adhere to the guidelines in the PGP. Some examples of this deviation are as follows:

1. Contrary to PGP Appendix A Section V.E.4.e, Step 7 of EOP ECA-0.0 uses the logic term IF NOT without specifying a first condition by the use of an IF statement.
2. Contrary to PGP Appendix A Section V.H.2, Step 23 of EOP E-0 requires two transitions in the same step and uses "complete" to transition to other steps rather than the recommended term "GO TO".
3. Contrary to PGP Appendix A Section V.F.1 and 6, EOP E-0 page 23 contains a "CAUTION" which lacks identification for the hazard and includes an action statement.
4. Contrary to PGP Appendix A Section V.B.1, Step 5.C of EOP E-3.1 uses two complex sentences which deal with more than one task in an action statement rather than using concise steps which deal with only one task.
5. Contrary to PGP Appendix B Section IV.A.4.e, the Step Description Tables in the Background Information do not include the benchboard identification of the instruments to be used.

Further examples are detailed in Inspection Report 50-334/88-02.

Corrective Action Taken

Based on the deficiencies identified during the inspection, a review of the Beaver Valley Unit 1 PGP and EOPs was conducted to determine the actions necessary to resolve and eliminate these deficiencies. Following this evaluation, the items were organized into six deficiency categories and an action plan was developed for each.

Attached is the action plan with a completion schedule for the deficiency categories. Due to a recent change to the Beaver Valley PGP to make it a common document for both Unit 1 and Unit 2, the Unit 1 EOPs were previously scheduled for revision. The completion schedule provided in the action plan is consistent with our previous planned actions.

Action Taken to Prevent Recurrence

Completion of the tasks in the action plan should prevent recurrence of these issues.

Date of Full Compliance

As provided in the action plan schedule, all tasks should be completed by March 31, 1989.

BVPS UNIT 1 EOP ACTION PLAN

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CATEGORIES OF DEFICIENCIES

COMPLETION  
DATE

1. Administrative Program

Problem Area- The Procedures Section receives Operations and Training personnel EOP feedback via the Operating Manual Deficiency Report (OMDR) process. However there is no written administrative program for the disposition of OMDRs.

Action Plan- The Procedures Section will revise the Procedures Section Procedures (PSPs) to explain how approved OMDRs are resolved and processed.

12-31-88

2. EOP-ERG Deviation Sheets

Problem Area- Numerous deviation sheets that were reviewed contained inconsistencies and often lacked sufficient detail to explain technical reasons for deviations. Deviation sheets lacked administrative control. Several deviation sheets were missing.

Action Plan- a. The Procedures Section will revise deviation sheets to include sufficient justifications of deviation and include an independent reviewer sign-off.

12-31-88

b. These deviation sheets will be typewritten and administratively controlled by a PSP.

3-31-89

3. EOP Background Documents

Problem Area- Majority of step background documents lack specific control board instrumentation mark numbers. Many background documents did not contain technical references.

Action Plan- The Procedures Section will revise the background documents to ensure they all reference qualified specific instrumentation mark numbers where needed for each step. References have been added to numerous background documents revised since Rev 0. Not all documents will have a reference until the associated EOP steps are revised.

12-31-88

4. EOP ECA-0.0

Problem Area- Portions of several steps between Steps 10 through 30 contain actions that cannot be performed due to loss of power condition. Although each of these steps is usable, these steps need to be reevaluated and revised to only include all of the required actions that can be performed.

Action Plan- a. A Procedures Engineer and a Reactor Operator walked down ECA-0.0 on 3-16-88 to identify those actions not capable of being performed during loss of power. These discrepancies are all documented on OMDR 1-88-0416.

3-16-88

b. This OMDR will be incorporated into the Unit 1 EOPs.

12-31-88

5. Human Factors Concerns:

PROBLEM AREAS:

a. Logic Terms - Some steps failed to properly use logic terms "IF, THEN" ; "IF NOT, THEN"; "AND" ; and "OR". In addition the auditors disagreed with the Writers Guide requirement to emphasize "or" and "and" where joining actions, alternatives or conditions.

b. Referencing & Branching - The EOPs contained a number of transition terms which were undefined in the Writer's Guide and inconsistent with the guidance provided.

- c. Notes & Cautions - Some cautions and notes were found to contain actions. Some cautions lacked statements of the hazard at hand and possible consequences.
- d. Sentence Structure- Some steps contained more than one action or task. Identified some deviations from the Writers Guide for the use of substep lettering or numbering, and the use of substep bullets. Some steps used vague terms such as "as necessary", "Stable" (no range included), and "maintain" (without requirements).
- e. Equipment nomenclature - Steps that use control board switches and indication did not use exact placard nomenclature. This is in violation of the Writers Guide.
- f. Abbreviations & Acronyms - Some abbreviations and acronyms used in the EOPs are not approved for use by the EOP Writers Guide.
- g. Use of RNO column - Several steps in the EOPs had a contingency action in the left column. Some other steps needed to include additional contingency actions in the RNO column.
- h. Benchboard Nomenclature - The verification program failed to correctly translate control room plant switch and indicator nomenclature into the EOPs.
- i. Mental Calculations- Several steps in E-0 required to have the operator perform simple mental addition or subtraction. This is in violation of the EOP Writers Guide.
- j. Instrumentation - Numerous EOP steps and step background documents failed to list all required instrumentation used to perform EOP steps.



ACTION PLAN TO HUMAN FACTORS CONCERNS:

The EOPs will be revised to address the following concerns:

12-31-88

1) To properly utilize logic terms, notes, cautions and action steps in accordance to the EOP Writers Guide. Also the EOP Writers Guide will be revised to strengthen the instructions on use of logic terms, conjunctions and the system of step numbering and identification (e.g. lettering of substeps versus use of bulleted substeps).

2) Transitions terms presently used in the EOPs (e.g. perform, do, continue with) will be reviewed and changed for consistency with the Writers Guide.

3) The use of vague terms and double negative terms in the EOP will be eliminated (where possible).

4) The steps throughout the EOPs will be revised to include the new control board switches nomenclature resulting from the Control Room Design Review changes. The NRC inspectors were aware of the control board design changes in progress during the audit. Since the NRC audit, the EOP CIA, SI and CIB checklists were revised to include new control board switches nomenclature. Annunciator A5-9 has already been incorporated into procedure E-0.

5) The EOPs and EOPs Writers Guide will be revised to utilize only the abbreviations and acronyms approved by chapter OM 1/2.48.

6) All steps in the EOPs will be evaluated and verified to contain adequate contingency actions (where necessary) in the RNO column.

7) The need to perform mental calculations in EOP steps will be evaluated and eliminated where possible.

8) Review EOP steps and step background documents. Ensure all required instrumentation is listed for each step.

6. Procedures Generation Package:

- A. Problem Area- Several technical errors were discovered in the ERG Reference Plant/BVPS Unit 1 Difference document of the PGP. The technical errors included difference between the plants CCW (CCR) systems, CIA systems, and Containment Depressurization systems.
- Action Plan- The PGP will be revised to correct the discrepancies identified during the audit, and to evaluate and ensure the other differences are technically correct. 12-31-88
- B. Problem Area- The ERG-EOP Deviation Sheet (form) needs to be revised to include an independent reviewer's signature to ensure the justifications of the deviations from the ERGs are accurate, complete and legible.
- Action Plan- The PGP will be revised to include a new deviation form that addresses the above concern. All deviation sheets will be reviewed by an independent EOP procedure engineer to ensure the objective above is met. 12-31-88
- C. Problem Area- The NRC inspectors reviewed the documentation of five plant specific setpoint documents and determined that the engineering analysis to support those setpoints was not referenced in all cases.
- Action Plan- The BV-1 preliminary setpoints documents will be formalized into a controlled setpoints document that will, as a minimum, reference all supporting engineering analysis and list plant instrumentation qualified for use of monitoring the setpoints in the EOPs. 3-31-89



D. Problem Area- There has been no human factors or quality assurance (QA) involvement in the validation of the latest revision of the EOPs.

Action Plan- Only a table top validation and a simulator validation were required for the latest EOP revision.

\*PGP Appendix C (Table Top Validation) Section II.A.1.b does not require human factors review.

\*PGP Appendix D (Walk-Through Validation) Section II.A.1.b states that a human factors review should be performed during this phase of validation.

\*PGP Appendix E (Simulator Validation) Section II.A.2. states that a human factors review is optional during this phase of validation.

a. Because a walk-through validation was not required, no human factors review was necessary during this validation process of the latest EOPs revision. Therefore the EOPs are in compliance with the above listed sections of the PGP.

NC DATE  
REQUIRED

b. The PGP does not require QA involvement during the EOP validation process. However QA will perform audits of the EOP revision process to verify conformance to PGP requirements.

12-31-88