



## Duquesne Light

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March 16, 1987

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

ATTENTION: Mr. Steward D. Ebnetter, Director  
Division of Reactor Safety

SUBJECT: Beaver Valley Power Station - Unit No. 2  
Docket No. 50-412  
Inspection Report 50-412/86-47

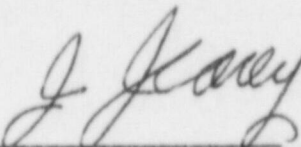
REFERENCE: Letter dated February, 13, 1987 (S. D. Ebnetter to J. J. Carey)

Gentlemen:

The above referenced letter transmitted a Notice of Violation as Appendix A. Attachments 1 and 2 of this letter provide Duquesne Light Company's (DLC) response pursuant to the requirements of 10CFR2.201 and the NRC's Notice of Violation.

DUQUESNE LIGHT COMPANY

By

  
J. J. Carey  
Sr. Vice President

LMR/ijr  
NR/IR/50412  
Attachment

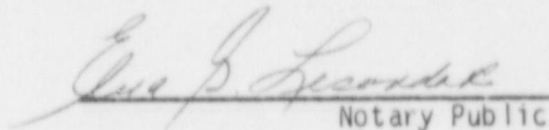
cc: Mr. P. Tam, Project Manager (w/a)  
Ms. A. A. Asars, NRC Resident Inspector (w/a)  
Mr. J. Beall, NRC Senior Resident Inspector (w/a)  
NRC Document Control Desk (w/a)

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COMMONWEALTH OF PENNSYLVANIA )  
 ) SS:  
COUNTY OF BEAVER )

On this 16<sup>th</sup> day of March, 1987, before me, a  
Notary Public in and for said Commonwealth and County, personally appeared  
J. J. Carey, who being duly sworn, deposed and said that (1) he is Senior  
Vice President of Duquesne Light, (2) he is duly authorized to execute and  
file the foregoing Submittal on behalf of said Company, and (3) the  
statements set forth in the Submittal are true and correct to the best of his  
knowledge.

  
Notary Public

ELVA G. LESONDAK, NOTARY PUBLIC  
SHIPPINGPORT, BEAVER COUNTY  
MY COMMISSION EXPIRES OCTOBER 20, 1990

## ATTACHMENT 1

### NOTICE OF VIOLATION 86-47-01

10 CFR 50, Appendix B, Criterion XIII states in part that "measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration."

Duquesne Light Company Electrical Installation Specification, 2BVS-931, Sections 1.16.16 states in part that "All covers, caps, plugs or other closures shall be intact--covers or closures removed---shall be promptly replaced---preservatives and coatings shall be in place and intact. If reapplication is required only previously approved preservative material shall be used."

Duquesne Light Company Field Construction Procedure for Permanent Plant Cable Receiving, Storage, and Handling, FCP-430, Section 5.4.1 states in part that "All ends of insulated cable in storage---shall be sealed to exclude moisture and cut ends shall be immediately resealed. Cable sealing shall be by taping with water-proof tapes and painting taped seal with insulating varnish, General Electric Company 'Glyptal', 'Scotch IVI Spray Sealer'. Heat shrinkable caps or tubing of proper size may also be used for sealing."

Contrary to the above, a sample inspection of 50 cable reels in outside Storage Location "P" disclosed that 18 of the reels either had exposed cut cable ends with no protective cap or the tape was frayed or gaping open to expose the cable end to moisture. Painting of the taped seals with "glyptal" or any other protective varnish had been discontinued.

This is a Severity Level IV violation (Supplement II).

#### Response

Upon notification of this violation, the following actions were taken:

1. Construction immediately performed a walkdown of the cable reel storage and staging areas to check cable end seal integrity. Those cables requiring new end seals or repairs were reworked during the walkdown. A list of cable reels not used since 1982 was given to the Engineers for review. Cable ends were taken, on a random basis by cable type, from reels in the storage areas and given to Engineering to be tested. Verbal instructions were given to construction electrical supervision to caution their craftsmen about the required procedure. To emphasize and reinforce the program requirements, changes to FCP-430 and FCP-431 were issued on January 15, 1987. Formal training classes were then given to the electrical craftsmen and supervisors. A Cable End Surveillance Program was established under which the Storage Maintenance Coordinator, QC inspector, and an electrician regularly check cable end seal integrity and maintain a record log of those checks.

Since issuance of N&D-38863A, Construction has been reverifying compliance to the N&D directions. This will be completed for all cable reels required for the remaining plant cable pulling activities by March 13, 1987.

ATTACHMENT 1 (continued)

NOTICE OF VIOLATION 86-47-01

2. SQC performed an independent verification of the cable end caps on cable reels in the storage yards. Unsatisfactory findings were identified on N&D-38863A.
3. Engineering evaluated the cable reel conditions, had the sample cable ends tested, and provided the Engineering position and technical analysis in the disposition to N&D-38863A.

## ATTACHMENT 2

### NOTICE OF VIOLATION 86-47-02

10 CFR 50, Appendix B, Criterion X, states in part, that "A program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures and drawings for accomplishing the activity. Such inspections shall be performed by individuals other than those who performed the activity being inspected."

Duquesne Light Company Site Quality Control Procedure No. SQC-5.2 "Storage Inspection Program - Designated Storage Areas" paragraph 1.1 states in part that "This procedure shall establish methods by which SQC shall verify compliance with Project Engineering requirements for designated storage facilities and for items stored in these areas."

Contrary to the above, Duquesne Light Company SQC Inspection Procedure, IP-5.2 currently in use for audit inspections of the outside cable storage area "P" does not provide sufficient visibility of the overall storage area to detect gross breakdowns in protection of the stored cable since it requires inspection of only one type of cable per inspection period.

This was confirmed by a review of recent Duquesne Light Company inspection of storage location "P" using SQC-IP-5.2 as the reference inspection procedure. Inspection reports reviewed include MC-5394 dated September 17, 1986 and MC-5462 dated October 30, 1986.

This is a Severity Level IV violation (Supplement II).

#### Response

The QC program of storage inspection is one of surveillance. The program provides for three types of inspections: a) Area inspections; b) Item inspections; and c) Storage system inspections. Two QC procedures are involved in implementing this surveillance program, SQC-5.2, "Storage Inspection Program - Designated Storage Areas," and Inspection Plan IP-5.2.1, "Storage Inspection - Designated Storage Areas." As the NRC Inspector only references procedure SQC-5.2 in his comments, some question remains as to whether his inspection included a review of the instructions given in IP-5.2.1.

Procedure SQC-5.2 provides generic instructions pertaining to the approach to performing the surveillance of storage; i.e., Area, Item and System inspections.

#### Area Inspection

There are 22 designated storage areas which are randomly assigned to be surveyed each day of the month. As storage inspection is presently conducted approximately 30 days each month, some areas are inspected more than once a month. IP-5.2.1 would provide the attributes to be applied during an area inspection. At the time of the NRC inspection, the attributes for area inspection dealt exclusively with verifying relative ANSI storage requirements as well as other established housekeeping, material identification and safety requirements.

## ATTACHMENT 2 (continued)

### NOTICE OF VIOLATION 86-47-02

#### Item Inspection

There are 24 generic item categories which are randomly assigned to be surveyed in a similar manner to the area inspections noted previously. Examples of item categories are Welding Materials, Motors and Generators, Pumps, Valves and Cable Raceway Components. IP-5.2.1 would provide the attributes to be applied during an item inspection. Included in these attributes is MC-40, Verify - Tapes properly applied. Additionally, the Inspector is required to review specific storage/maintenance requirements for the item and apply them to his inspection.

#### System Inspection

A system inspection involves a detailed review of all documentation associated with an item to verify that pertinent handling, storage and maintenance requirements have been identified and accomplished. These inspections are assigned periodically by supervision.

The specific NRC comments for this violation are as follows:

1. The inspection procedure did not have any criteria which would provide an overview of the entire storage area to detect such deficiencies as unprotected cable ends on a substantial number of cable reels.
2. The QA inspection checklist implementing the Engineering specification omitted the cable end seal requirement.
3. Other deficiencies of identical cable storage deficiencies of other locations on site were identified by QA Inspectors without root cause follow-up. The Licensee's trending program did not capture the repeated identified deficiencies.
4. QA audits did not confirm the technical adequacy of the QC checklists.

#### Response to NRC Comments 1 and 2

The QC inspection checklist (referenced as QA inspection checklist by the NRC Inspector) did not provide a specific attribute for the cable end seal requirement as it is impractical to develop a checklist which includes every specified attribute for each specific item contained in BV-2 storage areas. Storage Specification 2BVS-981 contains nearly 1000 pages of storage requirements applicable to specific items. IP-5.2.1, as it pertains to surveillance of storage items, does provide Attribute MC-40, Verify - Tapes properly applied, as well as providing for the inclusion of storage and maintenance requirements specific to the item under inspection.

## ATTACHMENT 2 (continued)

### NOTICE OF VIOLATION 86-47-02

Owing to the varied types of items and attributes to be found in project storage, the QC program for surveillance should provide attention to certain generic attributes for storage while at the same time providing the Inspector with the means to review and apply specific attributes unique to individual items, where applicable. It is our contention that the QC program for storage inspection meets this description. However, we do agree that certain unique items, such as cable end protection, deserve increased attention, as compared to the degree of surveillance which might be applied to other items. This is due to the fact that the condition which must be maintained is subject to factors such as frequent disturbance during storage or deterioration with time. In response to this recognition, we added Attribute MC-52, Verify - Cable end seals, to the area inspection portion of our program during the course of the NRC inspection. This attribute provides for the inspection of a minimum of 5 cable reels for end protection and is to be applied during all area inspections of storage areas where cable reels are maintained. Cable reels will continue to be covered under item inspections.

Additionally, a review was performed by QC in order to identify other unique items which should be emphasized during area inspection similar to cable end protection. As a result of this review, IP-5.2.1 will be revised to add Attribute MC-53, Verify - Motors, to the area inspection of the program. This revision will be issued by 3/13/87. As with cable reels, motors will continue to be covered under item inspections.

#### Response to NRC Comment #3

The "other deficiencies of cable end protection identified by QC in other locations" refers to deficiencies identified by the QC Surveillance Group (referenced as QA Inspectors by the NRC Inspector) during inspection of on-site storage areas located in and around the permanent plant buildings. Cable reels have historically been stored in a number of these locations. This surveillance which involves daily walk-through inspections of all areas of the plant for items such as storage, general construction activities, clean zone maintenance and rework presently involves two Inspectors, but until early 1986, routinely involved five or more Inspectors. Storage of cable and cable end protection are frequently surveyed by this group.

For the 24-month construction period, 1985 through 1986, 4,040 unsats were identified by this group with only 6 unsats being issued for deficient cable end protection (0.1%). In comparison to the number of reels surveyed and found to be satisfactory during this period, the percentage of unsats for cable end protection is additionally very low. In the opinion of the Inspectors and supervision responsible for this surveillance, the 6 unsats for cable end protection did not require evaluation for root cause or reporting to the Trend Committee.

ATTACHMENT 2 (continued)

NOTICE OF VIOLATION 86-47-02

Response to NRC Comment #4

As stated previously, it is our contention that the QC inspection program for storage is technically adequate. We have recognized the need to expand the program in certain areas and have described the actions taken in this respect. We do not feel that previously conducted QA Audits should have identified the QC storage inspection program as being technically inadequate.