DCR 016

April 30, 1987

Docket Nos. 50-334
and 50-412

Mr. J. J. Carey, Senior Vice President
Duquesne Light Company
Nuclear Group
Post Office Box 4
Shippingport, PA 15077

Dear Mr. Carey:

Subject: BEAVER VALLEY UNIT 2-REQUEST FOR ADDITIONAL INFORMATION ON SEVERAL ISSUES (TACS 62933, 62935, 63184)

Enclosed please find two documents which delineate our information needed to complete review of several issues:

(1) Confirmatory issue 48, fire protection deviations

(2) Confirmatory issue 46, control room isolations on high radiation signal - this issue is also tied into the Unit 1 amendment request on control room wall removal.

These two documents are transmitted to provide background information for conference calls with your staff. No written response is needed from you. This letter also serves to make the subject documents available to the public.

Sincerely,

/S/

Peter S. Tam, Project Manager
Project Directorate I-4
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Enclosures:
As stated

cc w/enclosures:
See next page

Docket File
NRC & Local PDRs
PD #I-4 Files

SVarga	BBoger
SNorris	PTam
OGC-Bethesda	E. Jordan
J. Partlow	ACRS (10)

LAPDI-4	PDI-4	PDI-4
SNorris	PTam:eh	JStolz
4/30/87	4/30/87	4/30/87

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POSITION PAPER

Unresolved Issue Beaver Valley Unit 2

During a site visit on December 5, 1984, the staff expressed concern that portions of the fire alarm system may not be in compliance with NFPA 72D regarding the listing of equipment and that circuits may not be electrically supervised in accordance with BTP CMEB 9.5-1 Section C.6.a which specifies that "Fire detection systems should comply with the requirements of Class A systems as defined in NFPA 72D.....". In addition, Sections 6.c, d and e which provide guidelines for the installation of Sprinkler, Halon and Carbon Dioxide Systems respectively, refer to the guidelines as provided in NFPA 13, 12A and 12. Each of these guidelines refers back to NFPA 72D for alarm installation.

In Generic Letter 86-10, in response to an industry question concerning conformance with NFPA codes, the staff affirmed that fire protection systems should comply with applicable codes. Where deviations from these codes exist, the utility is obligated to identify and justify nonconformances. The applicant has not formally identified any deviation from NFPA 72D.

The Applicant responded to the December 5, 1984 concerns by letter dated May 24, 1985. In this letter the Applicant stated that the early warning smoke detection system was completely Class A per NFPA 72D and that portions of the

Halon and Carbon Dioxide System alarm circuitry were Class A and supervision was provided for the remaining portion. No mention was made of NFPA 72D compliance for the sprinkler system alarms.

It was interpreted by the staff and stated in SER Supplement 3 that "the Applicant verified that all circuits of the fire-detection system are Class A."

During the site audit of January 27-30, 1987, additional concerns were raised about the adequacy of the fire alarm system and its compliance with NFPA 72D per Section C.6 of BTP CMEB 9.5-1. Specifically, the control room annunciator circuits appeared not to be properly supervised. If a single break or ground fault condition occurred, a fire alarm would not be able to be transmitted to the control room, with resulting delays in fire alarm notification and fire brigade response. In addition, the trouble condition on these circuits would not be annunciated as is required by NFPA 72D.

The applicant should be required to modify the existing alarm system to assure that all circuits are supervised per the referenced NFPA standard.

BEAVER VALLEY 1 & 2 - CONTROL ROOM ISOLATION

INSTRUMENTATION & CONTROL ISSUES

1. Numerous interposing/isolating relays are used in the BV-1/BV-2 design. Testability/single failure design requirements may not be met. This issue is related to the inadequacy of the technical specifications proposed for control room isolation instrumentation.

   Applicant must provide:

   - Identification of technical specifications for operability and surveillance of chlorine and radiation instrumentation channels, actuation logic, master relays and slave relays associated with automatic control room isolation on high chlorine and radiation signals.

   - Complete, final design electrical schematics encompassing control room isolation on CIB/chlorine/radiation signals from sensors to final actuated devices (solenoid valves, motor-operated dampers, etc.)

   - Complete control room ventilation system functional diagrams showing control signals and component identification for each fan, damper, etc. receiving automatic isolation signals and fail-open/fail-closed information for each damper.

   - Discussion of procedures related to pulling fuses to effect disabling of equipment (such as ESF actuation relays) and of compliance with R.G. 1.47 when fuses are pulled. Relate this to at power testing of the relays used for control room isolation.

2. BV-2 SER Section 7.3.3.8 was closed based on a commitment that control room isolation dampers would be shut when an associated unit enters Mode 5 or 6 to ensure the dampers would be in their safety position in the event that electrical power is not available. Proposed BV-1/BV-2 technical specifications do not contain this commitment which may re-open our issue related to GDC-5.

   Applicant must provide a discussion of how the proposed BV-1/BV-2 technical specifications for control room habitability systems comply with the commitment contained in the September 9, 1984, letter responding to Draft SER Section 7.3.3.8 and ensure that the design for control room habitability systems continues to meet GDC-5.

3. For multi-unit stations, bypassing of a protective function of a shared system (such as the BV-1/BV-2 control room habitability system) should be indicated in each control room per R.G. 1.47, "Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems."

Applicant must provide:

- Discussion of bypassed/inoperable status indications provided in the BV-1 control room and BV-2 control room for components (instrument channels, automatic actuation logic trains, power sources, etc.) which are required for the control room habitability systems to be operable, may be deliberately bypassed or rendered inoperable more frequently than once per year, and are shared by both units.