



November 17, 1982
KI-GEN-82-050

Region IV, USNRC
Office of Inspection and Enforcement
611 Ryan Plaza Dr., Suite 1000
Arlington, TX 76012

Gentlemen:

In conformance with applicable provisions and requirements of 10CFR21, Kaman Instrumentation Corporation (KI) hereby provides notification of a possible defect in a basic component supplied to our clients which may relate to a substantial safety hazard.

At approximately 2:00 p.m. MST, 11/15/82, Mr. Cliff Hale of the Region IV office, Vendor Inspection Branch, was contacted regarding questions about KI obligations to 10CFR21 concerning a failure of a cable undergoing Class 1E qualification testing for a client whose plant was licensed for construction but not for operation. We were advised that notification was necessary.

The cable in question supports the in-containment high range area radiation measurement required by Regulatory Guide 1.97 Rev. 2 for both BWR and PWR installations. The failure modes are still under investigation, but preliminary indications are that excessive handling and subsequent seismic testing of the stainless-steel jacketed, mineral insulated cable had propagated cracks in the jacket that apparently exhibited inclusions due to die stress during manufacture. Subsequent exposure to loss of coolant (LOCA) environments caused moisture to enter the cable which lead to the failure. Such cable failure would preclude the radiation measurement during a postulated design basis event (DBE).

The following information applicable to this substantial safety hazard is provided as required by 10CFR21.21(3), i through viii.

(i) Name and Address of Individual Informing the Commission

Daniel Piraino, Vice President and General Manager
Engineered Systems Division
Kaman Instrumentation Corporation
1500 Garden of the Gods Road
Colorado Springs, CO 80907

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(ii) Identification of the Basic Component Supplied

Cable, Mineral Insulated P/N 451140 for Model KDI-1000
Ion Chamber Detector

(iii) Identification of the Firm Supplying the Basic Component

Kaman Instrumentation Corporation
Address in (i) above

(iv) Nature of Failure to Comply

(See discussion above.)

(v) The Date on which the Information of such Failure to Comply
Was Obtained

Receipt of test articles from the qualification laboratory
was on 11/9/82. Initial failure analysis on 11/16/82
indicated possible safety hazard.

(vi) The Number and Location of all such Basic Components in Use,
Supplied, or Being Supplied

Delivered:	o Long Island Lighting Company Shoreham NPS	(4 cables)
	o Central Nuclear de Almaraz Spain	(8 cables)
Ordered:	o Arizona Public Service Company Palo Verde NGS	(24 cables)

The disposition or use of the delivered cables is not known
by Kaman.

(vii) Corrective Action, Organization Responsible, and Time to
Complete Action

Kaman Instrumentation is currently continuing the failure
analysis and examining traceability records to determine if
the delivered cables and the tested cables are of the same or
different lot numbers, modifying the cable specification to
achieve a higher quality product, and arranging for
requalification testing facilities. Design, Procurement,
Manufacturing, and Testing activities are expected to be
complete to support delivery of qualified cables by May, 1983.

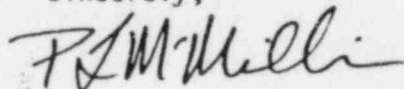
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(viii) Advice Related to the Failure to Comply Being Given to the Purchasers

Place subject material in suspicion. If not installed, recommend hold or return to factory. If installed, readings obtained during DBE conditions may be invalid. KI will recommend a course of action for installed cables upon completion of current failure analysis.

We trust this information is complete as required under 10CFR21. Please contact Mr. Patrick McMillin, Engineering Manager, of my staff, if you need additional information.

Sincerely,

for PLM

Daniel Piraino
Vice President - General Manager
Engineered Systems Division

PLM:mm

1500 Garden of the Gods Road
Mailing Address: P.O. Box 7463
Colorado Springs, CO 80933-7463
Telephone (303) 599-1500

April 2, 1985
MKT-GEN-85-009

Long Island Lighting Company
175 East Old Country Road
Hicksville, New York 11801

Attention: Mr. John Kaczor, Electrical Engineer

Subject: Qualification of Mineral-Insulated Cable Assemblies
Shoreham Nuclear Station

Reference: Long Island Lighting Company
Purchase Order Numbers 310985 (5/1/81) and 381939 (1/22/85)

Kaman Instrumentation Letter
KI-GEN-82-050, dated November 17, 1982

Gentlemen:

The reference letter provided notification under 10CFR21 of a possible defect in mineral-insulated cable assemblies for the Shoreham Nuclear Station. The purpose of this letter is to report the closure of the 10CFR21 notification and to transmit supporting documentation.

Kaman Instrumentation Corporation has completed the design, manufacture and qualification testing of a High-Range Containment Area Monitoring System to the requirements of NUREG 0737 and REGULATORY GUIDE 1.97 for post accident monitoring. A copy of the design qualification report (Kaman document 460036-002, Rev. A) is enclosed for your review. The review cycle allows one comprehensive response of plant-specific comments from your organization for incorporation into our official records.

We have reported to the US Nuclear Regulatory Commission our closure of the 10CFR21 notification. Please refer to the attached copy of our recent letter. This is coded as April 2, 1985, MKT-GEN-85-008.

April 2, 1985

We are proceeding with production of qualified mineral-insulated cable assemblies for the Shoreham Nuclear Station in accordance with the provisions of your purchase orders.

If you have any questions regarding this subject, please contact Mr. Patrick McMillin (Engineering) at (303) 599-1669 or Mr. Warren Johnston (Marketing) at (303) 599-1223.

Sincerely,



Allan M. Colton
President

AMC:tt

Attachments: KI-GEN-82-050
Qualification Report 460036-002, Rev. A
Letter - NRC, dated April 2, 1985
(MKT-GEN-85-008)

1500 Garden of the Gods Road
Mailing Address: P.O. Box 7463
Colorado Springs, CO 80933-7463
Telephone (303) 599-1500

April 2, 1985
MKT-GEN-85-007

Bechtel Power Corporation
Western Power Division
P. O. Box 60860, Terminal Annex
Los Angeles, California 90060

Subject: Qualification of Mineral-Insulated Cable Assemblies
Palo Verde Nuclear Stations
Arizona Public Service Company

Reference: P.O. No. 10407-13-NM-997
Bechtel Job 10407

Kaman Instrumentation Letter
KI-GEN-82-050, dated November 17, 1982

Gentlemen:

The reference letter provided notification under 10CFR21 of a possible defect in mineral-insulated cable assemblies for the Palo Verde Nuclear Stations. The purpose of this letter is to report the closure of the 10CFR21 notification and to transmit supporting documentation.

Kaman Instrumentation Corporation has completed the design, manufacture and qualification testing of a High-Range Containment Area Monitoring System to the requirements of NUREG 0737 and REGULATORY GUIDE 1.97 for post accident monitoring. A copy of the design qualification report (Kaman document 460036-002, Rev. A) is enclosed for your review. The review cycle allows one comprehensive response of plant-specific comments from your organization for incorporation into our official records.

We have reported to the US Nuclear Regulatory Commission our closure of the 10CFR21 notification. Please refer to the attached copy of our recent letter. This is coded as April 2, 1985, MKT-GEN-85-008.

April 2, 1985

We are proceeding with production of qualified mineral-insulated cable assemblies for each of the Palo Verde Nuclear Stations in accordance with the provisions of your purchase order.

If you have any questions regarding this subject, please contact Mr. Patrick McMillin (Engineering) at (303) 599-1669 or Mr. Warren Johnston (Marketing) at (303) 599-1223.

Sincerely,



Allan M. Colton
President

AMC:tt

Attachments: KI-GEN-82-050
Qualification Report 460036-002, Rev. A
Letter - NRC, dated April 2, 1985
(MKT-GEN-85-008)