



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 12 1988

MEMORANDUM FOR: Docket File 99900323

FROM: Richard C. Wilson
Special Project Inspection Section
Vendor Inspection Branch
Division of Reactor Inspection and Safeguards

SUBJECT: INSPECTION 88-01, VISIT TO CONAX BUFFALO ON
FEBRUARY 10-11, 1988.

PURPOSE:

On February 10-11, 1988, I visited the Conax Buffalo works to obtain information for a forthcoming Information Notice (TAC 66651) concerning problems with Kapton insulated wire. A formal inspection was not conducted. No attempt was made to close previous inspection findings, although they were addressed as relevant to the purpose.

ANNOUNCEMENT:

See attached letter to Conax dated February 5, 1988.

PERSONS CONTACTED:

See attached list. Telephone discussions were also held before the visit with William C. Federick, Vice President and Ronald E. Farchmin, QA Manager, both of whom were on travel. (Mr. Federick was expected back on the second day, but was delayed).

SCOPE:

The following topics were covered. In most cases partial or complete copies of relevant documents were obtained.

A. Concerns

1. Kapton damage mechanisms
2. 1987 San Onofre 1 failures and test lab report
3. 1984 River Bend failures and Conax evaluation
4. "Laboratory tests" and Naval aircraft problems

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JUL 12 1988

B. Conax Products

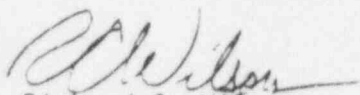
1. Wire construction and specification
2. Construction of penetration, replacement adapters, and device entry seals
3. Installation instructions concerning wire protection
4. Wire protection in early shipments (this was the only action item; it was satisfied by Conax letter dated February 23, 1986)
5. Part 21 notifications; procedures and listing
6. List of nuclear utility customers

C. Conax Type Testing

1. Protection of wire
2. Submergence
3. Kulka terminal block tests (a digression)

D. Tour

1. Manufacturing and assembly areas
2. Test facilities including ongoing thermal aging test, LOCA test penetration specimen, and terminal block and box test facility



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8/3/88, 12 pm
from Bill Buxton, DuPont 302/999-5936

Nuclear vs
Aerospace

- 1. Solid vs stranded + lead radius + flexing
- 2. Outer coat TFE vs Kapton
- 3. Stress
- 4. Flexing

NRC and Navy Experience:

- 1. Experience in nuclear is good
- 2. Aerospace - continue to be used after 20 yrs - spacecraft, airplanes, etc. (incl Boeing MC-D-D)
- 3. DuPont has no evidence that Kapton has no worse record than any other high perf ins. systems.

Damage Factors:

Physical damage

Power service

Repetitive service (eg, re-energize breaker)

He will have others address the 1985 Campbell ^{report} ~~paper~~.
NACE effects.

~~Edmunds~~
Overall aircraft performance record is good

Repeat call to Buxton 8/10 at 10:15 am:

Asked for the "Care of Kapton" list per 7/24 Ft Worth paper -
he agreed to include in info package he's assembling. Promised
I will have it by end of next week. He's also including two papers
on hydrolysis to address Campbell's papers.

B/10