

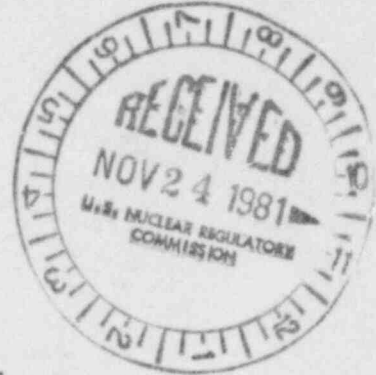
ILLINOIS POWER COMPANY



U-0338
L30-81(11-19)-6
500 SOUTH 27TH STREET, DECATUR, ILLINOIS 62525

November 19, 1981

Mr. James R. Miller, Chief
Standization & Special Projects Branch
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



Dear Mr. Miller:

Clinton Power Station Unit 1
Docket No. 50-461

Per recent discussions between Mr. John Stang and our
D. W. Wilson, the following information is provided:

1. Illinois Power commits to administrative controls for fire protection of systems and/or areas important to safety consisting of having: a fire protection organization, fire brigade training controls over combustibles and ignition sources, pre-fire plans and procedures for fighting fires, and quality assurance pertaining to fire protection.

In addition, Illinois Power will comply with Appendix A, Criteria I, Subcriteria 3, and Section 3H, I, and K of Appendix R to 10CFR50 and will implement the fire protection program delineated in the NRC supplemental guidance document "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls and Quality Assurance" transmitted to Illinois Power on August 29, 1977. Illinois Power also will comply with the NRC Standard Technical Specifications as applicable to the Clinton Power Station (CPS).

The administrative controls for non-supervised valves controlling water supply to sprinkler systems and hose stations for areas where equipment important to safety is located is as follows: break-away locks and a periodic surveillance of valves conducted at a frequency of no less than every 31 days.

B002
5/11
✓

2. The following fire zones will be upgraded to either two or three hour fire ratings:

2 hr. fire rating

A.2.3

A.2.4

D.2.9

3 hr. fire rating

A.3.1

A.3.3/A.4.4 (ceiling/floor slab)

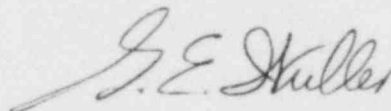
D.2.13

D.2.15

D.4.10/D.4.12
(interfacing wall)

3. For fire protection purposes, the control room will be designated to consist of fire zones D.5.1, D.5.2, D.5.8 and D.5.12. All fire zones shall comply with Appendix A to BTP 9.5-1, control room requirements.
4. The following fire zones have 1 hr. fire ratings:
- | | | | |
|-------|-------|-------|-------|
| A.1.1 | A.4.6 | C.5.1 | D.2.1 |
| A.4.1 | C.4.1 | D.4.1 | D.3.1 |
5. In regards to your concern that a single break may eliminate both primary and secondary water suppression systems in a single fire zone, the following statement will be added to FSAR Subsection 9.5.1.2.2.2: "A single break in the fire protection water supply piping will not eliminate both the primary and secondary water suppression systems in any fire zone."
6. Enclosed is a listing of the American Nuclear Insurers approved test reports for various configurations which may be used for penetration sealing. Any configuration which ANI approval has not been received will not be used at Clinton.

Sincerely,



G. E. Wuller
Supervisor-Licensing
Nuclear Station Engineering

DWW/lit

cc: J. H. Williams, NRC Clinton Project Manager
H. H. Livermore, NRC Resident Inspector
J. Stang, NRC

AMERICAN
NUCLEAR INSURERS
ACCEPTANCES

SPECIFIC INFORMATION AND REPORTS

<u>File Number</u>	<u>Title</u>	<u>Description</u>
ANI/S-01 (March 1970)	March 1970 Revision of the NELPIA-MAERP "Basic Fire Protection For Nuclear Power Plants" guide.	Describes fire protection needs of nuclear power plants during construction.
ANI/S-02 (Feb.12,1973)	Acceptance Letter Author: J. J. Carney Engineering Manager	Accepts foamed-in-place cellular concrete fire stops for cable pans and conduit for pass-thru fire walls and floors as shown on BISCO Drawings FS-1, 2, 3 & 4 (dated 11/24/79).
ANI/S-03 (Nov.22,1974)	NELPIA Requirements for Fire Testing of Pipe and Cable Wall Penetrations.	Describes specific design criteria required by NEL-PIA prior to re- ceiving acceptance for any system.
ANI/S-04 (No Date) Tentative copy (July 1979) Final Copy	ANI/MAERP Standard Fire Endurance Test Method for the Protection of Cable Systems That Contain Class IE Circuits.	Describes testing requirements for determining acceptability of protective envelope fire protec- tion systems for safety related circuits.
ANI/S-05 (Nov.6,1976)	Cable and Pipe Penetration Fire Stop Approval Author: J. J. Carney Engineering Manager	NEL-PIA approval of cable pene- tration system. A. 2 hour rating B. Solid bottom or open ladder tra C. Hypalon Jacketed cables-40% fil D. 9" of SF20 foam E. Maximum cable tray penetration size = 5' X 5'6" (test dated 7/7 and 7/21/76)
ANI/S-06 (Feb.1976)	NEL-PIA Standard Test Method of Acceptable Fire Exposure Test for Mechanical and Electrical Penetration Fire Stops.	Details requirements necessary for NEL-PIA acceptance of fire protection systems.

Test NumberTitleDescription

ANI/S-07
(Feb.1976)

NEL-PIA Philosophy on Ducts, Dampers
and Smoke/Heat Removal

Title is self explanatory

ANI/S-08
(Mar.1976)

Acceptance Letters for BISCO Silicone
Foam, Cable and Pipe Penetration Seal
Systems.

Letters for specifically addressing
the following plants:

Oyster Creek
Trojan
Davis/Besse
Dresden

ANI/S-09
(Sept.7,1976)

Acceptance Letter for Lightweight
Concrete Fire Barrier

Author: R. G. Sawyer
Staff Engineer

Accepts lightweight concrete as
fire barrier material where no
penetrating items exist.

ANI/S-10
(March 10,1977)

Acceptance Letter

Author: R. G. Sawyer
Staff Engineer

1. Acceptance for "left-in-place"
damming materials (with a flame
spread of less than 25) where
the material is considered part
of the seal.

2. Acceptance for penetration size
reduction using a known fire re-
sistant material.

3. Acceptance for division of
safety related circuits within
a blackout by use of non-com-
bustible barriers with a listed
fire resistance of 3 hours
across its thickness.

4. Acceptance for use of precast
or cut-out blocks using listed
fire resistant materials.

ANI/S-11
(March 9,1977)

Acceptance Letter

Author: J. J. Carney
Engineering Manager

NEL-PIA approval of cable and pipe
penetration system

- A. 5 hour rating
- B. Solid bottom tray
- C. 6" maximum conduit

Test Number

Title

Description

ANI/S-12
(June 6, 1977)

Preliminary Acceptance Letter
Author: D. J. Slater
Administrative Engineer

- D. cable load 20%
- E. SF 20 material 14" @trays
(12" foam 2" dam
13" conduit
- F. Maximum cable tray
size 17" X 41 3/4"
(test date 8/5/75 and 7/21/76

Initial acceptance of substitutio
between SF20, SF20-1975 and
SF20-1977
(BISCO Test Ref. No. 13)

ANI/S-13
(Aug. 4, 1977)

Tentative Acceptance Letter for SF20,
density 20 lb. Ft.³ + 3 pcf.
Author: J. J. Carney
Engineering Manager

Tentative approval for SF20 with
density of 20 + 3 pcf.

- A. 3 hour rating
- B. Solid bottom or open ladder t
- C. cable load 40%
- D. SF20-9" or SF150L-12"
- E. Maximum cable tray penetratio
size = 2' X 3'6"

ANI/S-14
(Oct. 12, 1977)

Acceptance Letter
Author: R. G. Sawyer
Senior Administrative Engineer

States acceptance (and need for)
M board strips to be extended
outside foam material to prevent
spread of flame along surface in
reduction systems.

ANI/S-16
(Nov. 7, 1978)

Acceptance Letter
Author: D. J. Slater
Administrative Engineer

Accepts Brand Insulation as a
licensed installer of BISCO fire
penetration systems.

ANI/S-17
(Jan. 15, 1979)

Acceptance Letter
Author: D. J. Slater
Administrative Engineer

1. Acceptance for BISCO test
"Fire and Hose Stream"
File Reference #20
2. Acceptance of drawing 1064-11-1
"Extension of Penetration to
Create Proper Depth for Seal
Rating"

Test NumberTitleDescription

ANI/S-18
(May 3, 1979)

Acceptance Letter
Author: D. J. Slater
Administrative Engineer

3. Acceptance for a "Future Hole" in a 3" Q deck floor to be sealed with 2" of ceramic board covered with a diamond plate to receive a 3 hr. rating

Acceptance to use fire retardent fiberglass sheets as a bracing for fire rated pressure seals.

ANI/S-19
(May 7, 1979)

Acceptance Letter
Author: R. J. MacMillan
Project Engineer

Acceptance of test 1025-07
(File Reference No. 24)

ANI/S-20
(June 4, 1979)

Tentative Acceptance Telex
Author: D. J. Slater
Administrative Engineer

Tentative acceptance of 9 3/4" seal of SF20 as a gypsum board wall up to 40" X 70" in area.

ANI/S-21
(Aug. 2, 1979)

Acceptance Letter
Author: R. F. MacMillan
Project Engineer

Acceptance for BISCOSEAL pressure sealing material.

ANI/S-22
(Sept. 13, 1979)

Acceptance Letter
Author: R. F. MacMillan
Project Engineer

Acceptance of BISCO seal system for 3 hr. rating in a metal clad, gypsum board wall. Test Ref. No. 31 simulated condition at T.M.I. Nuclear Plant.

ANI/S-23
(Sept. 13, 1979)

Acceptance Letter
Author: R. F. MacMillan
Project Engineer

Acceptance of BISCO seal system for 3 hr. rating in a gypsum board wall less than 9" in thickness. Test Ref. No. 33 simulated conditions at V. C. Summer Nuclear Plant.

File NumberTitleDescription

ANI/S-24
(July 27, 1977)

Acceptance Letter
Author: J. J. Carney
Vice President

Cable and pipe penetration acceptance for 3 hr. rating using Carborundum products with silicone foam .

- A. Cable = 1" damm and 9" foam
- B. Conduit = 1" damm and 7" foam
- C. Pipe = 1" damm and 7" foam

ANI/S-25
(March 10, 1977)

General Letter
Author: R. G. Sawyer
Senior Engineer

- ✓ 1. Accepts left-in-place damming as part of fire seal.
- 2. Accepts subdividing of large blockouts.
- 3. Accepts division of safety related circuits within a blockout by use of non-combustible barriers with a listed fire resistance of 3 hours across its thickness.
- 4. Accepts use of precast or cut-out blocks for blockouts, using materials of a listed fire resistance sealing these "plugs" in place with SF 60 and SF 20 is also acceptable.

ANI/S-26
(July 7 & 21, 1979)

Acceptance Letter
Author: J. J. Carney
Engr. Mgr.

- ✓ NEL-PIA approval of penetration sealing system.

- A. 3 hour rating
- B. Solid bottom or open ladder tray
- C. 6" maximum conduit sleeve
- D. 40% cable loading
- E. Maximum tray size: 2' x 3'-6"
- F. 9" of SF 20 - 12" of SF 150L

SPECIFIC INFORMATION AND REPORTS

<u>File Number</u>	<u>Title</u>	<u>Description</u>
ANI/S-27 (Sept. 26, 1979)	Acceptance Letter Author: R. F. MacMillan Project Engineer	✓ Accepts BISCO installation Procedure DMI-1, Rev. 6 Dated May 16, 1979 (Separate cable from sides of tray during damming operation)
ANI/S-28 (Oct. 17, 1979)	Acceptance Letter Author D. J. Slater Administrative Eng.	✓ Accepts 4" minimum silicone foam poured over existing floor pene- tration to upgrade seal in difficult access areas.
ANI/S-29 (Oct. 24, 1979)	Acceptance Letter Author: R. F. MacMillan Project Engineer	✓ Accepts BISCO Fire Test 748-31 "Fire Endurance Test on BISCO Flexible Boot and Flexible Radiation Seal System" (File Ref. No. 36)
ANI/S-30 (Nov. 13, 1979)	Acceptance Letter Author: R. F. MacMillan Project Engineer	✓ Accepts BISCO Standard Details for Fire and Radiation Seals (Specific Use - Job 4036)
ANI/S31 (March 19, 1980)	Acceptance Letter Author: R. F. MacMillan Project Engineer	✓ Accepts seal design on BISCO typical installation drawing #13 (3-11-80) for firewalls less than 9" thick.
ANI/S-32 (March 19, 1980)	Acceptance Letter Author: R. F. MacMillan Project Engineer	✓ Accepts G.E. 850 Silicone Foam as alternative for D.C.3-6548

GENERAL INFORMATION, REPORTS AND LETTERS

<u>File Number</u>	<u>Title</u>	<u>Description</u>
ANI/G-01 (no date)	NEL-PIA adaption of ASTM E-119-73 "Standard Method of Fire Tests of Building Construction and Materials to Cable and Pipe Penetration Fire Stop Tests"	Describes general requirments necessary for NEL-PIA acceptance of fire protection systems. (also see file #ANI/S-06)
ANI/G-02 (Oct.27,1975)	Atomic Energy Commission Vol. 21 - No. 43 pgs. 5 thru 9	NR Contains NEL-PIA and NRC comments and <u>requirements</u> for fire protection based on the outcome of the Browns Ferry Accident.
ANI/G-03 (April,1976)	NEL-PIA Information Bulletin	NR Contains recommendation for preferred cable fire test methods.
ANI/G-04 (Sept.1976)	NEL-PIA document on development of standard fire test for cable and pipe penetration fire stops.	NR Discusses rationale regarding fire stop tests.
ANI/G-05 (June 1977)	Bulletin subject: "Waste Handling and Processing" Author: J. J. Carney, Engineering Manager	NR Identifies new section printed in June 15, 1977 edition of "NEL-PIA/MAERP Basic Fire Protection for Nuclear Plants"
ANI/G-06 (Jan. 78)	Bulletin - "Fire Protection for Nuclear Power Plants from the Insurance Industry's Viewpoint"	NR Copy of report presented to American Nuclear Society 1977 Winter Meeting.
ANI/G-07	Memo Letter - Author: J. J. Carney V.P.Property Engineering	NR Introduces new ANI acceptance form and details submittal requirements necessary prior to any consideration for acceptance.
ANI/G-08	Information Letter Author: J. J. Carney V.P. Property Engineering	NR Announces that pressure retaining components must be in compliance with the provisions of the ASME Boiler and Pressure Vessel Code in order to receive ANI acceptance.

Test NumberTitleDescription

ANI/G-09

General Letter

Author: Donald Slater

Administrative Engr.

Notifies of Flamastic unaccept-
ability as 3 hr. seal.

NR

ANI/G-10

General Letter

Author: J. J. Carney

Vice President

States ANI position on test stand-
ards of:

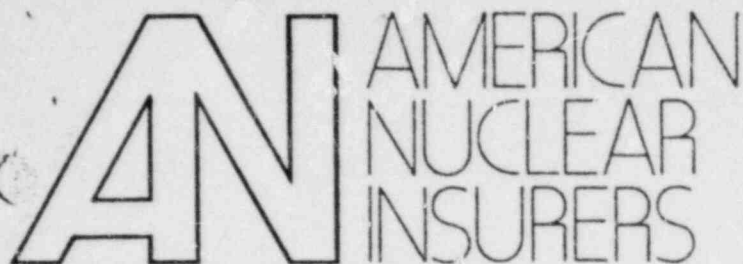
- A. IEEE
- B. NEPA 803
- C. ASTM
- D. NRC

NR

All of which have, or are in
the process of publishing their
own test standards.

SPECIFIC INFORMATION AND REPORTS

<u>File Number</u>	<u>Title</u>	<u>Description</u>
NML/S-01	Acceptance Letter Author: Michael F. Gerdtz Fire Protection Consultant	Accepts BISCO fire test #3001-02 (file reference 44) as a two hour barrier utilizing 6" of DC3-6548 Silicone foam.



BURT C. PROOM, CPCU
President

PROPERTY ENGINEERING DEPARTMENT
John J. Carney, Vice President

NOTIFICATION OF ANI/MAERP CABLE AND PIPE PENETRATION FIRE STOP SYSTEM ACCEPTANCE

The following fire stop supplier has successfully completed the "ANI/MAERP Standard Method of Fire Tests of Cable and Pipe Penetration Fire Stops". This form is provided for information only.

FIRE STOP INSTALLER: BISCO
PARK RIDGE, ILLINOIS

TEST DATE: Various (1976) ACCEPTANCE DATE: 10/12/77 HOUR RATING: 3

GENERAL DATA

	CABLE PENETRATIONS	PIPE PENETRATIONS
	2' x 3'6"	6"
Max. Penetration Size	Yes	Yes
Accepted for Floor	Yes	Yes
Accepted for Wall		
Material	BISCO SF-20 (1977) Silicone Foam or Dow Corning 3-6548 RTV Silicone Foam Density: 17-23 lbs/cu.ft.	Same as Cable Penetrations plus BISCO SF-20, SF150L Silicone Lead Material
Fire Stop Thickness	9 Inches Minimum	9 Inches Minimum - SF-20 12 Inches Minimum - SF-150L
Form Material	CFR 2300 Loose Alumina Silica Fiber - Left in Place. (Non-Combustible Forming Used and Removed).	

LIMITATIONS

Tray Types: Open Ladder or Solid Bottom Cable Construction: No Limitations
% Cable Loading: 40% Tray, 40% Conduit Max. Conduit Sleeve Size: 6"
(Note: % Loading = Total Cross-sectional area of cable/Cross-sectional area of tray/conduit)

Complete details of fire stop installations are to be submitted to American Nuclear Insurers prior to actual installation. ANI acceptance is for insurance coverage related to fire protection of the property and is based on information provided and any information contained hereon is considered confidential and cannot be released to any other person or organization without the written consent of the Supplier and ANI.

J.J. Carney 035

J.J. CARNEY - VICE PRESIDENT, PROPERTY ENGINEERING

The Exchange Suite 245 / 270 Farmington Avenue / Farmington, Connecticut 06032 / (203) 677-7305 ■ Engineering Dept (203) 677-7715



BURT C. PROOM, CPCU
President

PROPERTY ENGINEERING DEPARTMENT
John J. Corney, Vice President

NOTIFICATION OF ANI/MAERP CABLE AND PIPE PENETRATION FIRE STOP SYSTEM ACCEPTANCE

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FIRE STOP INSTALLER: BISCO
PARK RIDGE, ILLINOIS

TEST DATE: Various (1976) ACCEPTANCE DATE: 10/12/77 HOUR RATING: 2

GENERAL DATA

Max. Penetration Size Accepted for Floor Accepted for Wall Material	CABLE PENETRATIONS	PIPE PENETRATIONS
	5' x 5'6"	N/A
	Yes	N/A
	Yes	N/A
Fire Stop Thickness	BISCO SF-20 (1977) Silicone Foam or Dow Corning 3-6548 RTV Silicone Foam Density: 17-23 lbs/cu.ft.	N/A
	9 Inches Minimum	N/A
Form Material	CFR 2300 Loose Alumina Silica Fiber - Left in Place. (Non-Combustible Forming Used and Removed).	N/A

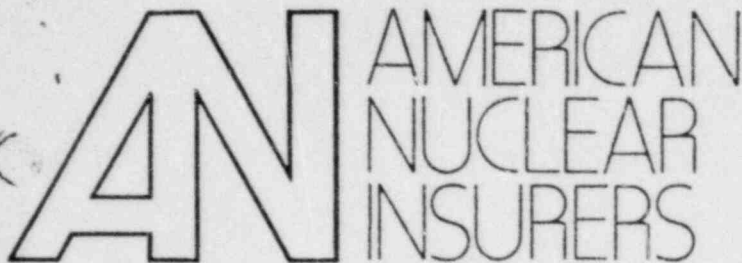
LIMITATIONS

Tray Types: Open Ladder or Solid Bottom Cable Construction: Hypalon Jacketed Cable Only
% Cable Loading: 40% Tray, 40% Conduit Max. Conduit Sleeve Size: N/A
(Note: % Loading = Total Cross-sectional area of cable/Cross-sectional area of tray/conduit)

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J.J. Corney DSS
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BURT C. PROOM, CPCU
President

PROPERTY ENGINEERING DEPARTMENT
John J. Carney, Vice President

NOTIFICATION OF ANI/MAERP CABLE AND PIPE PENETRATION FIRE STOP SYSTEM ACCEPTANCE

The following fire stop supplier has successfully completed the "ANI/MAERP Standard Method of Fire Tests of Cable and Pipe Penetration Fire Stops". This form is provided for information only.

FIRE STOP INSTALLER: BISCO
PARK RIDGE, ILLINOIS

TEST DATE: 8/5/75 & 7/21/76 ACCEPTANCE DATE: 3/9/77 HOUR RATING: 5 (Except as noted)

GENERAL DATA

Max. Penetration Size Accepted for Floor Accepted for Wall Material	CABLE PENETRATIONS	PIPE PENETRATIONS
	17" x 41 3/4"	12" pipe in 16" opening
	NO	NO
	YES	YES
Fire Stop Thickness	BISCO SF-20 Silicone Foam 18-22 lbs/cu. ft.	BISCO SF-20 (12" Foam 1" damming either side) 4 Hr.-SF 150L or SF 250L 8" pipe sleeve (12" foam, 1" damming either side)
	Trays: 14 "Arrangement (12" foam 1" damming both sides) Conduit: 13" arrangement (12" foam 1" damming either side)	4 Hr.-SF 300L - 12" pipe sleeve (12" foam, 1" damming either side)
Form Material	BISCO MFB-1600 BOARD	

LIMITATIONS

Tray Types: Solid Bottom Only Cable Construction: No Limitations*
% Cable Loading: 20% Tray, 20% Conduit Max. Conduit Sleeve Size: 6"-SF20, 12"-SF250L
(Note: % Loading = Total Cross-sectional area of cable/Cross-sectional area of tray/conduit)

Complete details of fire stop installations are to be submitted to American Nuclear Insurers prior to actual installation. ANI acceptance is for insurance coverage related to fire protection of the property and is based on information provided and any information contained hereon is considered confidential and cannot be released to any other person or organization without the written consent of the Supplier and ANI.

J.J. Carney DSS

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