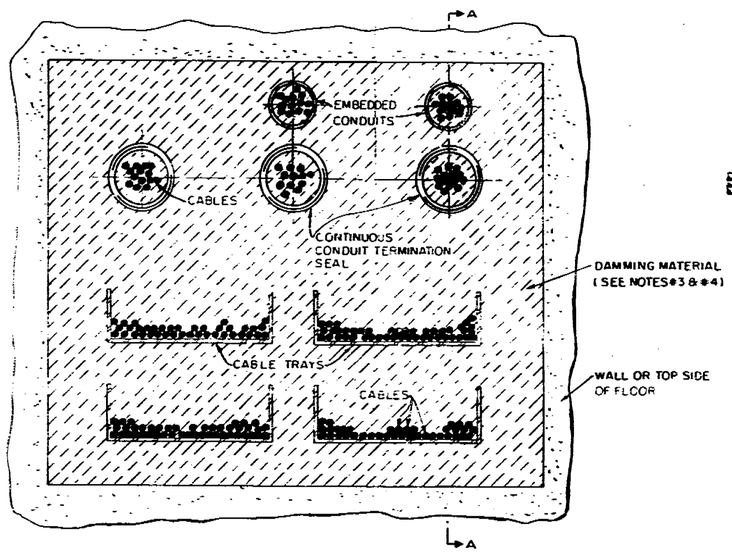
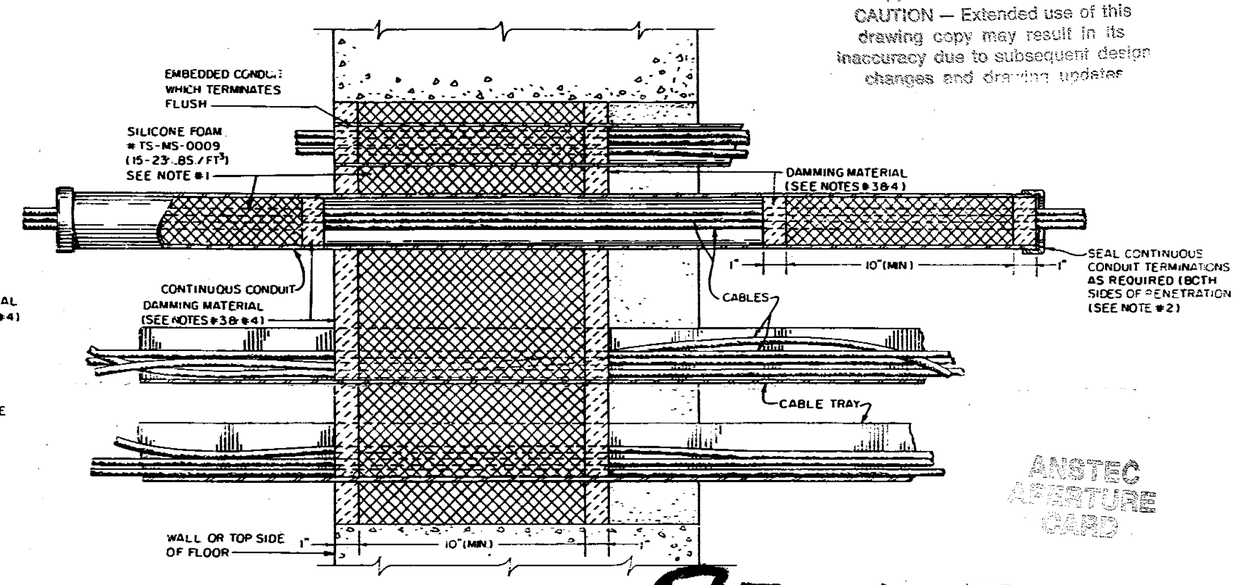
UNCONTROLLED DRAWING
Copy Date NOV 06 1996
CAUTION — Extended use of this drawing copy may result in its inaccuracy due to subsequent design changes and drawing updates



ELEVATION OR TOP SIDE OF FLOOR



SECTION A-A

ANSTEC APERTURE CARD

9701070168

SILICONE FOAM FOR ELECTRICAL PENETRATIONS

DETAIL "E-4"

Internal Conduit Fire Seal and Smoke and Hot Gas Seal Criteria

ROW	COL.	1	2	3				
	SIZE OF CONDUIT	CONT. RUN THRU AREA W/ NO JB	TERM. IN JB OR NON-COND. PNCL.	CONDUIT RUN FROM BARRIER TERM. OPEN				
				<1'	≥1'-<3'	≥3'-<5'	≥5'-<25'	≥25'
1	<1"	NSR	S[3]	F	NSR	NSR	NSR	NSR
2	1"	NSR	S[3]	F	S	S	NSR	NSR
3	>1"-<2"	NSR	S[3]	F	S	S	NSR	NSR
4	2"	NSR	S[3]	F	F	S	NSR	NSR
5	>2"-<4"	NSR[4]	S[3]	F	F	F	S	NSR[4]
6	>4"	NSR[4]	S[3]	F	F	F	S	NSR[4]

NOTES:

1. NSR - NO SEAL REQUIRED. HOWEVER, IF A SLIGHT TO MODERATE AIR FLOW IS DETECTED AT THE CONDUIT TERMINATION, A NON-COMBUSTIBLE SEAL OF APPROXIMATELY 2" OF CERAMIC FIBER SHOULD BE INSTALLED WHERE PRACTICAL.
2. S - SMOKE & HOT GAS SEAL REQUIRED. A NON-COMBUSTIBLE SEAL OF APPROXIMATELY 2' OF CERAMIC FIBER OR AN EXISTING SILICONE FOAM OR ELASTOMER SEAL IS ACCEPTABLE. WHERE A SMOKE & HOT GAS SEAL IS REQ'D IN A LATERAL BEND OR PULL BOX, THE SEAL SHOULD RESIDE IN THE LB OR PB WITH THE COVER INSTALLED.
3. F - FIRE SEAL REQUIRED. THE SEAL IS TO BE INSTALLED AT THE FIRST ACCESS POINT.
4. INTERNAL CONDUIT SEALS ARE TO BE PRESENT ON BOTH SIDES OF THE BARRIER. IF REQ'D BY THE ABOVE CRITERIA OR INSTALLED WITHIN THE PLANE OF THE BARRIER.
5. TERMINATION OF A CONDUIT RUN FROM BARRIER IS DEFINED AS EITHER TERMINATION OPEN ENDED OR TERMINATION IN A JUNCTION BOX (JB).
6. IF LB OR PULL BOX IS PRESENT WITHIN THE FIRST 25' OF CONDUIT RUN FROM BARRIER, A SMOKE AND HOT GAS SEAL IS TO BE PRESENT AT THAT POINT.
7. NO SEAL REQUIRED, IF THE CONDUIT RUN TO THE JB IS >= 1'.
8. NO SEAL REQUIRED, IF THE CONDUIT RUN TO THE JB IS >= 5'.
9. NO SEAL REQUIRED, IF THE CONDUIT RUN TO THE JB IS >= 25'.

DESIGN LIMITATIONS

MAX. RAD _____ 1.25×10^8 RADS
MAX. CONTINUOUS TEMP. _____ 392°F
FIRE RESISTANCE _____ 3 HOURS
MAX. PRESSURE DIFFERENTIAL ___ NOT RATED

DESIGN VERIFICATIONS

TS-TP-0004 _____ FIRE

SCALE: N.T.S.

NOTES:

1. REFER TO PROMATEC INSTALLATION PROCEDURE IP-0044.
2. FOR INTERNAL CONDUIT SEALING REQUIREMENTS REFER TO CONDUIT SEAL TABLE ON THIS DRAWING.
3. PERMANENT DAMMING IS A REQUIRED PART OF THE DESIGN. TWO SIDES OF WALLS AND BOTTOM ONLY OF FLOORS.
4. USE 1" OF JOHNS-MANVILLE 8LBS. DENSITY "CERABLANKET" (#TS-MS-0013A), "CERABOARD" TYPE 103 14LBS DENSITY (#TS-MS-0014), AND/OR "CERAFIBER" (#TS-MS-0016)
5. SEAL MAY BE LOCATED AT ANY POINT WITHIN THE WALL OR FLOOR. FLUSH WITH TOP OF FLOOR IS RECOMMENDED.
6. FOR WALLS OR FLOORS LESS THAN THE REQUIRED 12" THICKNESS, BOX THE SEAL OUTSIDE OF THE WALL OR FLOOR. FOR EVERY ONE INCH OF SEAL DEPTH OUTSIDE OF WALL OR FLOOR BOX AWAY FROM THE PERIMETER TWO INCHES.
7. WHEN INSTALLING OR REWORKING A FIRE SEAL, 1/4" TO 1/2" OF SILICONE ELASTOMER MAY BE SUBSTITUTED FOR AN EQUIVALENT DEPTH OF SILICONE FOAM (COMPOSITE MATERIAL DEPTH TO REMAIN THE SAME), TO PROVIDE AN ELASTOMER CAP. WHEN PROVIDING AN ELASTOMER CAP TO AN ELECTRICAL FIRE SEAL, A MINIMUM DEPTH OF ELASTOMER SHOULD BE USED TO ALLOW EASE OF REWORK IN THE FUTURE.

REFERENCES:

1. ENG-527, FIRE BARRIER INSPECTIONS, EVALUATIONS NO. 3 & 4.

DRAWING RELEASE RECORD							
REV.	DATE	RELEASED TO:	BY	CK	CK	CK	APP
0	8/14/82	P.A.S.N.Y.	RAN	[illegible]	[illegible]	[illegible]	[illegible]

P.A.S.N.Y.
INDIAN POINT UNIT 3

DETAIL "E-4"
SILICONE FOAM
TYPICAL ELECTRICAL PEN. SEALS
(WALLS & FLOORS)

BY	M.K.	8/14/82
CKD	TH	9-3-82
CKD	MK	9-3-82
CKD	[illegible]	9/9/82
APP.	[illegible]	9/9/82

Tech-Sil, inc.

DRAWING NO.
NP57-02

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