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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
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 UHRIG, R. E. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 NOVAK, T. M. Assistant Director for Operating Reactors

SUBJECT: Forwards addl info in response to NRC 800728 ltr re
 containment ventilation isolation. Three oversize electrical
 drawings encl. SEE DRAWINGS

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NOV 5 1980



October 27, 1980
L-80-355

Office of Nuclear Reactor Regulation
Attention: Mr. Thomas M. Novak, Assistant Director
for Operating Reactors
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Novak:

Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 and 50-251
Containment ventilation isolation

A reply to a NRC letter dated July 28, 1980 requesting additional information on the above subject is attached.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/PLP/md

Attachment

cc: J.P. O'Reilly, Region II
Harold F. Reis, Esquire

A001

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1/2

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801104031

P

Re: Turkey Point Units 1 & 4
Docket Nos. 50-250, 50-251
Containment ventilation isolation

ATTACHMENT

Item 1:

What is the memory element in the CVI control circuit shown on FPL drawing 5610-T-LI? Is it an MG-6 relay? Shown on what drawing? Please send drawing. Also, please send drawings 5610-E-25, sheet 59, E-389, and lesson 45. What is the form of switch QR50? Momentary? Key lock?

Response 1:

"T" Drawings are simplified logic used to familiarize operators in training with the various plant systems. They are not appropriate for design review purposes.

The memory element in the CVI control circuit shown on FPL drawing 5610-T-L1, sheet 11, is device 3-86/CIV1 shown on FPL drawing 5610-E-28, sheet 31F. This is a General Electric type HEA61 relay which is a "lock-out" relay. This device locks in the energized position, requiring manual operation by turning it clockwise to reset it to the de-energized position. The designation of "QR50 and QR51" on FPL drawing 5610-T-L1, sheet 11, refers to the location of these relays. QR50 and QR51 are the containment isolation relay racks. The "switch" shown in the manual operating handle of the relay. (See attached General Electric drawing). This handle turns to reset, however, the relay will not maintain the de-energized (reset) position if the originating signal is still present.

Item 2:

What is the function of the 86 "lock out relays"? Do they have memory function? Shown on what drawing? Send drawing if not 5610-E-28, sheet 31G. If they have memory function, how are they reset?

Response 2:

See response to Item 1.

Item 3:

Are the CVI radiation monitors R3-11 and R3-12 qualified as safety grade? If not, justify their use in a function required to protect public health and safety.

Response 3:

Radiation monitors R-3-11 and R-3-12 are supplied by vital AC power and are environmentally qualified. They were purchased as safety related in accordance with the criteria in existence at time of procurement. The PRMS includes R-11 and R-12 and is on the FPL Q-List. In addition, their operability is a Technical Specifications item to insure that adequate protection exists for the public health and safety. They are a redundant leak detection system. Refer to FSAR Section 6.5.

ATTACHMENT (cont'd)

Item 4:

Are the MG-6 relays qualified as safety grade (class 1E)? (Used in other engineered safety features circuits?)

Response 4:

The MG-6 relays are safety grade relays provided by the NSSS vendor for the protection and safeguards systems.

Item 5:

Is there a system level (containment ventilation isolation) annunciation and indication of the overridden status of an initiating signal (radiation monitor or safety injection)?

Response 5:

Radiation monitor signals cannot be overridden, therefore, no annunciation at the containment ventilation isolation channel is required. Safety injection can be blocked to prevent actuation during shutdown from low pressurizer pressure, high steam line differential pressure, or high steam line flow coincident with low steam generator pressure or low Tavg. This is targeted as "SI blocked". This does not remove "SI" initiation or containment isolation from diverse signals such as "Hi" and "Hi-Hi" containment pressure, therefore, "containment ventilation isolation" override annunciation would be inappropriate.

Item 6:

Are the safeguard actuation systems shown on FPL drawing 5610-T-LI, sheet 11 redundant? Are all channels redundant, including containment radiation monitors?

Response 6:

The safety actuation signals are redundant with diverse signals and separate logic trains. There is one R-11 and R-12 monitor per unit. These sensors feed both logic trains for isolation signals. Although diverse from each other, they are functionally redundant. In addition, the SI initiation signals, e.g., high containment pressure, will actuate containment ventilation isolation, giving functional redundancy. See FSAR Section 6.5.

LESSON 45
SAFEGUARDS SYSTEMS
HIGH AND LOW HEAD SAFETY INJECTION
AND CONTAINMENT ISOLATION

REFERENCES AND READING ASSIGNMENT

FSAR Paragraph 6.1, 6.2 and Figures 6.2-1, 6.2-2, 6.2-4
W FPL-200/D, Safety Injection System.
W Logic Diagrams 2, 6, 8, 9, 12, 13, and FPL Sheet 7
OP 1508.2, 3206.1, 4104.1, 4504.1, 4004.2

LECTURE OUTLINE

- 1.0 FSAR Section 6
- 2.0 Detailed Drawings, SIS and RHR, OC, IC.
 - 2.1 Control Room Indicators VPB
 - 2.2 Control Room Controls, Hi Head SI-VPB
 - 2.3 Control Room Controls, Lo Head SI-VPB
 - 2.4 Control Room Controls, Recirc. Phase - VPB
 - 2.5 Local Controls
 - 2.6 Annunciator Targets
- 3.0 Logic Diagrams Related to SIS
- 4.0 SI Status Windows, - VPA
- 5.0 Reactor Protection Status Windows, VPB
- 6.0 White Lamps - Status of SI System VPB
- 7.0 Containment Isolation Phase A, B
- 8.0 Discussion Redundancy, Power Supplies
- 9.0 Study, Article on SI
- 10. OP Relating to SI

LESSON 45
SAFEGUARDS SYSTEMS
HIGH AND LOW HEAD SAFETY INJECTION
AND CONTAINMENT ISOLATION

1.0 FSAR Section 6

1.1 Study, discussion of selected portions of Sections 6.1, 6.2, and Figures 6.2-1, 6.2-2, and 6.2-4.

2.0 Detailed Drawings, SIS and RHR Systems, OC, IC

Study, discussion of details relating to High Head and Low Head Safety Injection.

NOTE: Be capable of making a sketch of system, showing important valving and instrumentation.

2.1 Control Room Indicators - VPB

- a. FI-*940 HI Head SI Hot Leg Header [not used].
- b. FI-*943 HI Head SI, Cold Legs A, B, C, through Boron Inj. Tank.
- c. FI-*932 HI Head SI, Hot Leg Loop A [not used].
- d. FI-*933 HI Head SI, Hot Leg Loop B [not used].
- e. FI-*940 HI Head SI, Hot Legs A & B [not used].
- f. FI-*943 HI Head SI, Cold Legs A, B, C, through Boron Inj. Tank.
- g. FI-*934 HI Head SI, Lvg Boron Inj. Tank, Alarm Function.
- h. LI-*1545, RWST, Alarm Functions.
- i. FI-*921, 923, 925, 927, 929, 931, Accumulators A, B, C Pressure, Alarm Function.
- j. LI-*920, 922, 924, 926, 928, 930, Accumulators A, B, C Level, Alarm Function.
- k. FI-*605 RHR Hx out to A, B, C Cold Legs Alarm Function [Control Function for RCS Cooldown].
- l. TR-*604 RHR Hx in and out Temperature.
- m. NPSH Lamps, Recirc. Sumps A, B. Indicate Sufficient Level to Start Recirc. Phase.

2.2 Control Room Controls, HI Head SI - VPB

- a. Control switches and ammeters, 4 SI pumps. Receive S signal if not in stop.

NOTE: SI pump switches for all pumps located on both Units 3 and 4 (VPB). Any pump switch in stop will prevent that pump start and give alarm (SI pump trip).

Lesson 45 - Continued

- b. 2 P.B. train A, B SI Initiation. Manual start of SI. Refer to W Logic Diagram 6.
- c. 2 P.B. train A, B SI Reset. Must push both to Reset. Refer to W Logic Diagram 6 and handout on SI.
- d. Switch, SI block, normal, unblock. Refer to Paragraph 3.4, this lesson and handout on SI.
- e. *-843 A, B Hi Head SI leaving boron injection tank to cold legs A B C. N.C., S signal opens.
- f. *-878A, B, Hi Head discharge header isolation between 3A and B and 4A and B SI pumps. N.O.
- g. *-864 A, B. RWST out to Hi, Lo Head SI and contain spray pumps. N.O. closed during recirc. phase.
- h. *-867A, B, Hi Head SI to inlet of boron injection tank. N.C., S signal opens.
- i. *-856A, B. Hi Head SI pumps, contain. spray pumps recirc. return to RWST. N.O. Discuss consequences of a closed valve.
- j. *-850B, D, E. Hi Head SI test lines, loops A, B, C.
- k. *-841A, B. Boron injection tank return to BA tanks N.C., S signal closed valves.
- l. *-869 and *-866A, B Hi Head SI to hot legs, loops A, B, N.C., breakers L.O. lines not normally used.

Accumulators, Controls

- a. *-865A, B, C, Accum. discharge to loops A, B, C. N.O. breaker locked open. Receive S signal to open.
NOTE: When bringing system down to cold standby BKRS are unlocked, closed and valves are run to closed position when system pressure is reduced to 1000 psig. BKRS are then locked open to prevent inadvertant opening of valves.
- b. *-851A, B, C, makeup for accum. N.C.
- c. *-852A, B, C, Accum. drain to RCDT. N.C.
- d. *-850A, C, E, Accum. flow test line. N.C.
- e. *-853A, B, C, Accum. A, B, C Vent and N₂ supply N.C.
- f. HIC-*-936 positioning valve to vent N₂ from accum. Also relief valve - lifts at 900 psig.
- g. *-855 N₂ supply to accum. receives T signal.

Lesson 45 - Continued

2.3 Control Room Controls, Lo Head SI, VPB

- a. *-862A, B. RHR Pumps A, B, suction from RWST. N.O. Closed during recirc. phase. (Manual operation).
- b. *-863 A, B, Lo Head SI leaving RHR Hx. N.C. Opened during recirc. phase to furnish suction to Hi Head SI pumps, contain. spray pumps or for alternate Lo Head SI.
- c. *-744 A, B, Lo Head SI to Loops A, B, C. N.C. receives S signal to open.
- d. *-872 alternate Lo Head SI to Loops B & C N.C.
- e. Control switches RHR pumps A, B. S signal starts pump unless switch is in Stop.
- f. HCV-*-758. For normal line-up [aligned for SI] Manual loader shall position valve wide open.
- g. FCV-*-605. For normal line-up [aligned for SI]. Auto-manual set point station shall be on Manual with valve fully closed.

2.4 Control Room Controls, Recirc. Phase, VPB

- a. *-861A, B. Recirc. sump A, B to RHR pump A, B suction. Opened only during recirc. phase.
- b. *-860 A, B. Recirc. sump A, B to RHR pump A, B suction. Opened only during recirc. phase.

2.5 Local Controls

P.B. Start/Stop at SI and RHR pumps.

2.6 Annunciator Targets

C-2/4, Manual SI has been initiated.

C-3/6, PRZ Lo Pressure and Lo Level has initiated SI.

C-8/4, 8/5, 8/6, Hi ΔP, Steam Generators A, B, C has initiated SI.

C-9/3, Hi ΔP. At least one ΔP channel on steam line from Steam Generators A, B, C has tripped.

C-9/4 Hi Steam Line Flow with Lo Steam line pressure or Lo Tavg has initiated SI.

C-9/5 Hi Containment Pressure has initiated SI.

COMMON - 1/3, 1/4, 9/3, 9/4 SAFEGUARDS SEQUENCING TIMER 3A,B;
4A,B FUSE FAILURE.

Lesson 45 - Continued

G-8/1 RWST, Hi Level or below tech spec. level.

G-9/1, 9/2, 9/3, 9/4 SI pump 3A, B, 4A, B Lo suction pressure.

H-2/1, 2/3, 2/5 Accumulator A, B, C Hi/Lo pressure.

H-2/2, 2/4, 2/6 Accumulator A, B, C Hi/Lo level.

H-3/1, 3/2, 3/3, 3/4, SI pump 3A, B; 4A, B trip (overcurrent).

H-3/5, 3/6 Boron injection tank, Hi, Lo temp.

H-4/1, 4/2, 4/3, 4/4 SI pump 3A, B; 4A, B Motor overload.

H-4/5 Boron inject. tank header Hi pressure.

H-4/6 Boron inject. tank Lo level.

H-5/1 Containment Hi or Hi Hi pressure.

H-5/5 Safeguard Logic Test.

H-5/6 Safeguard Power Supply Failure (Train A or B)

H-6/2 RHR Hx out Lo Flow.

H-6/3 RHR pumps, overload.

H-6/4 RHR pumps trip, (overcurrent).

H-6/5 RWST Lo Level, 27%

H-6/6 RWST Lo Lo Level, 9%

H-7/3, 7/4 RHR pumps A, B cooling water Lo flow.

COMMON - 7/6 HI HEAD SI PUMPS COOLING WATER LO FLOW.

I-7/6 RHR pump A sump Hi Level.

I-8/6 RHR pump B sump Hi Level.

3.0 Logic Diagrams Related to SI System

- 3.1 W Logic Diagram Sheet 6, Safeguards Actuation Logic.
Note: Manual SI does not initiate containment isolation
Phase A. Physical location of safeguards logic
cabinets, Train A, Train B - rear of VPA.
- 3.2 W Logic Diagrams Related to SI Initiation
Sheet 13, Steam Generator
Sheet 12, PRZ

Lesson 45 - Continued

3.3 Logic Diagrams and Lists, Devices Actuated by S Signal

W Logic Sheet 2, Reactor Trip

W Logic Sheet 8, Feedwater Isolation

W Logic Sheet 9, Auxiliary Feedwater

FP&L Sheet 7, Sequencer Actions

List, this Lesson, Devices actuated from safeguards logic cabinet, Train A, B. (Receive S Signal).

List, this Lesson, Containment Isolation Phase A, B. (Receive T Signal) Also refer to Paragraph 7.

3.4 Logic Diagrams Auto/Manual Unblock, Manual Block, of SI.

W Sheet 12, PRZ Press, Level

W Sheet 13, Steam Line Δ P.

NOTE: Know all signals and the logic that initiate SI.

4.0 SI Status Windows, VPA

4.1 Window "Lo Tavg Block SI" [Tavg is below 543F] permissive. Will allow Manual Block of SI from Hi Steam Line Flow, Lo Steam Line Pressure or Low Tavg W Logic Diagram 13.

4.2 Window "Steam Line Saf Inj. Blocked". SI signal from 4.1 above is blocked.

4.3 Window "Saf Inject. Block Tripped" - means that RCS pressure is below 2000 psig. Permissive. Will allow Manual Block of SI from Lo PRZ Level coincident with Lo PRZ Press, W Logic Sheet 12. Also from Steam Gen Hi Δ P, W Logic Sheet 13.

4.4 Window "Safety Inj. Blocked". SI signal from 4.3 above is blocked.

5.0 Reactor Protection Status Windows, Status Panel C, VPB

Refer to drawing of Status Windows, Panel C Windows give a visual display of the status of channels which initiate SI. Class discussion.

6.0 White Lamps - Status of the SI System, VPB

Refer to drawing of VPB. Upon receiving a SI signal certain valves must open and others must close for proper operation of the system. Bright lamp indicates that valve is in proper position after a SI signal. If not, manual action is required. Normally some may be bright, some dim.

7.0 Containment Isolation Phase A

7.1 Initiated by the SI signal. Path is from Train A, Train B safeguard logic racks to containment isolation racks QR 50 and QR 51 (rear of VPB) to all devices as listed on attached list, except those under heading of Phase B.

Lesson 45 - Continued

- 7.2 Phase A may be reset by turning the three Phase A reset handles on QR 50 and QR 51 after resetting SI (pushbutton VPB). This will then permit operation of valves and normal containment coolers as required.

NOTE: Racks QR50 and QR51 develop the logic that:

- a. Initiates SI due to HI containment pressure.
- b. Containment ventilation isolation and control building isolation due to HI activity in containment.
- c. Phase B containment isolation due to HI and HI HI containment pressure.
- d. Spray actuation, HI and HI HI containment pressure. Refer to W Logic Diagram 6.

- 7.3 Status Lamps, Phase A, VPB glow brightly when valve is closed.

- 7.4 Annunciator targets related to Phase A.

H-5/1, Containment HI or HI HI Pressure.

H-5/2, Phase A Containment Isolation operated.

H-5/3, Containment Isolation Cabinet A or B Fuse Failure.

H-5/4, Containment Isolation Racks in Test.

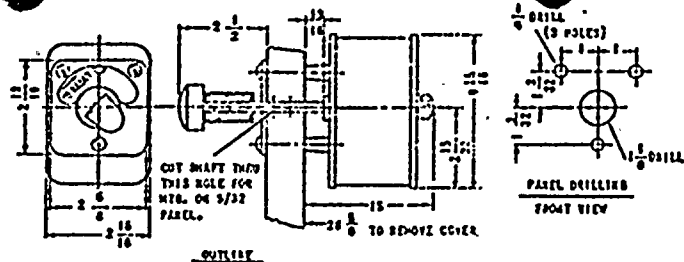
- 8.0 Discussion. Redundancy, Train A, Train B.

Parallel Flow Paths and Valves. Power Supplies to Valves, Pump Motors.

- 9.0 Study, Article on SI System by L. F. Pabst.

- 10.0 OP Relating to SI

OP 1508.2, 3206.1, 4004.2, 4104.1, 4504.1



		BELLY ROOM RUNERAL								CONTACT ARRANGEMENT		
CYCLES	PC	DC	DC	DC	SC	SO/RO	SC			BELLY POSITION	POSITION	
	200	125	48	25	220	115	540	110	275	1	OPEN	CLOSED
	210	210	280	270	250	110	510	110	270	1	ROSE	1 TO 18
	211	211	251	271	231	311	531	131	271	1	1	2 TO 18
	212	212	252	272	232	312	532	132	272	1	1 & 2	3 TO 18
	213	213	253	273	233	313	533	133	273	1	1 TO 2	4 TO 18
	214	214	254	274	234	314	534	134	274	1	1 TO 4	5 TO 18
	215	215	255	275	235	315	535	135	275	1	1 TO 5	6 TO 18
	216	216	256	276	236	316	536	136	276	1	1 TO 6	7 TO 18
	217	217	257	277	237	317	537	137	277	1	1 TO 7	8 TO 18
	218	218	258	278	238	318	538	138	278	1	1 TO 8	9 TO 18
	219	219	259	279	239	319	539	139	279	1	1 TO 9	10 TO 18
	220	220	260	280	300	320	540	140	280	1	1 TO 10	11 TO 18
	221	221	261	281	301	321	541	141	281	1	1 TO 11	12 TO 18
	222	222	262	282	302	322	542	142	282	1	1 TO 12	13 TO 18
	223	223	263	283	303	323	543	143	283	1	1 TO 13	14 TO 18
	224	224	264	284	304	324	544	144	284	1	1 TO 14	15 TO 18
	225	225	265	285	305	325	545	145	285	1	1 TO 15	16 TO 18
	226	226	266	286	306	326	546	146	286	1	1 TO 16	NOPE

WHEEL INTERNAL

WHEEL 140 OF 150

BOTTOM COILS

TOP COILS

INTERNAL CONNECTIONS

NOTE-CONTACTS 17 & 18
SAVED IN RESET
POSITION.

Fig. 10 (165A7677-1) Outline, Panel Drilling and Internal Connection Diagram for HEA61C Relay

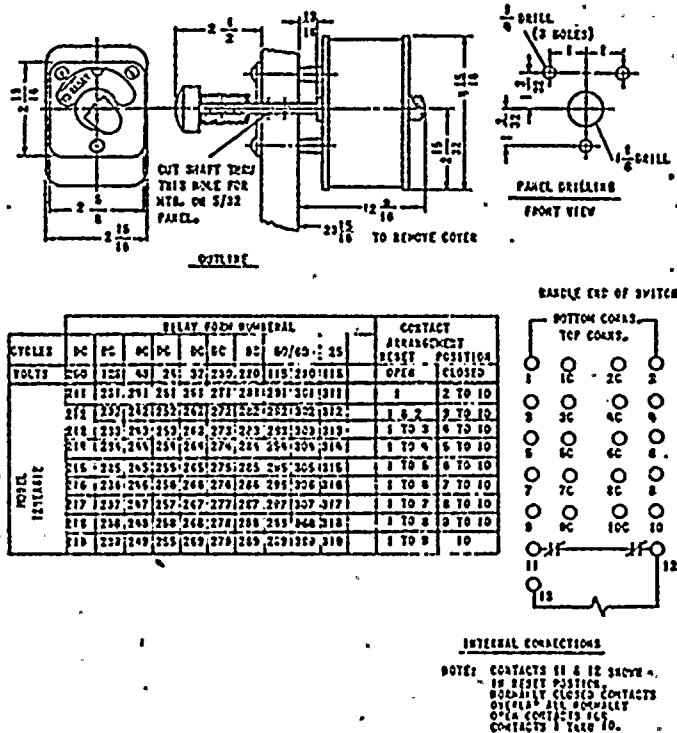


Fig. J1 (165A7678-1) Outline, Panel Drilling and Internal Connection Diagram for HEA61E Relay

3/4.3 INSTRUMENTATION

BASES

3/4.3.1 and 3/4.3.2 PROTECTIVE AND ENGINEERED SAFETY FEATURES (ESF) INSTRUMENTATION

The OPERABILITY of the protective and ESF instrumentation systems and bypasses ensure that 1) the associated ESF action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, 2) the specific coincidence logic is maintained, 3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and 4) sufficient system functional capability is available for protective and ESF purposes from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the accident analyses.

The surveillance requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability.

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the accident analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

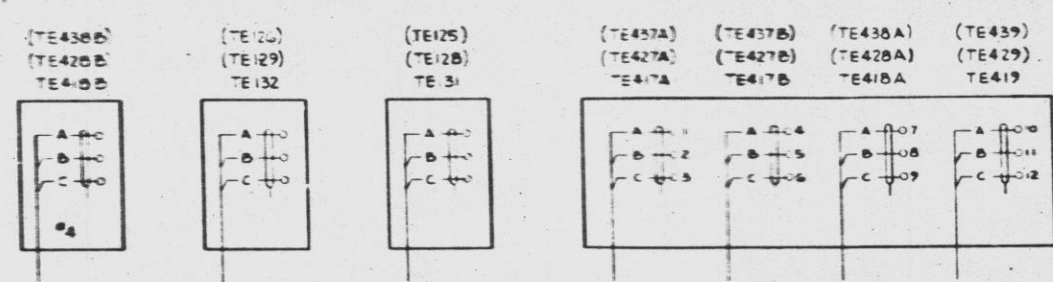
Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either 1) in place, onsite or offsite test measurements or 2) utilizing replacement sensors with certified response times.

The Safety Injection Actuation Signal (SIAS) provides direct actuation of the Containment Isolation Signal (CIS) to ensure containment isolation in the event of a small break LOCA.

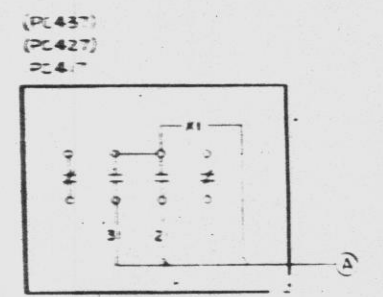
3/4.3.3 MONITORING INSTRUMENTATION

3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION

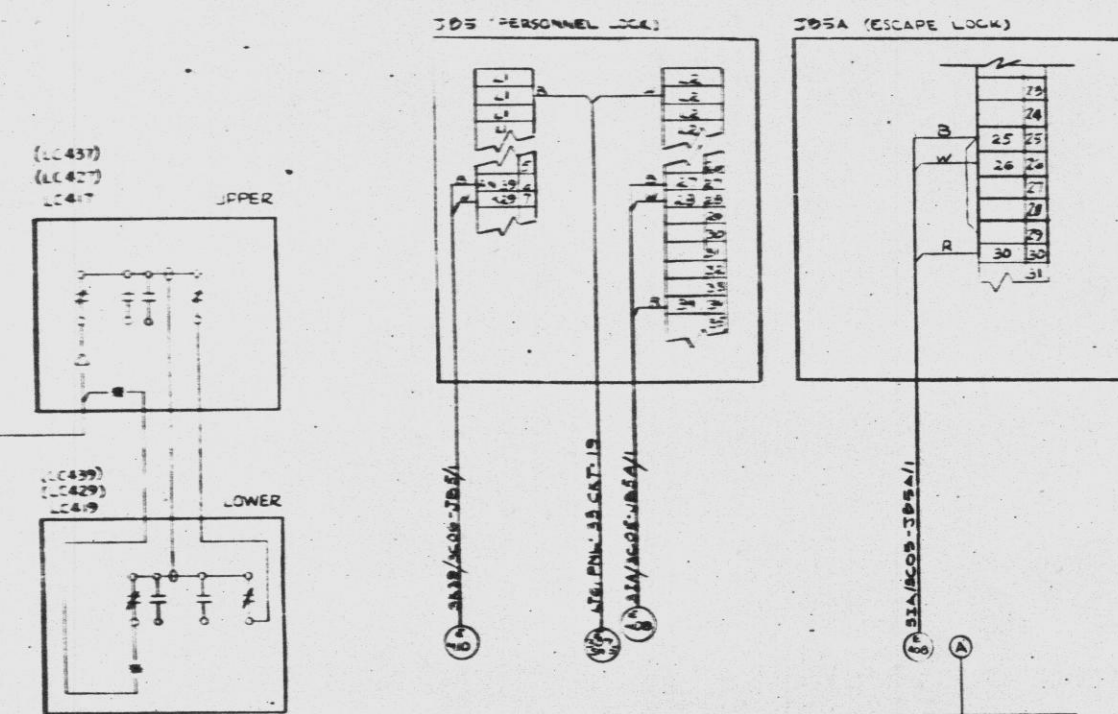
The OPERABILITY of the radiation monitoring channels ensures that 1) the radiation levels are continually measured in the areas served



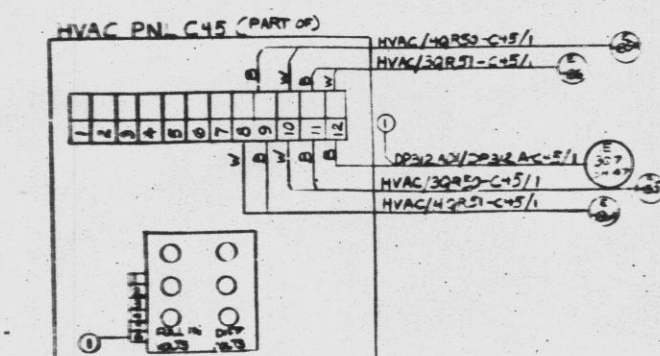
DEVICE	CABLE NUMBER	WIRE NOS	TER	DEVICE	CABLE NUMBER	WIRE NOS	TER
TE 32	31725/3111-TE132/1	1A 1B 1C	E-426	TE 437B	31725/3111-TE132/1	2A 2B 2C	E-426
TE 129	31725/3111-TE132/1	3A 3B 3C	E-426	TE 437C	31725/3111-TE132/1	3A 3B 3C	E-426
TE 129	31725/3111-TE132/1	4A 4B 4C	E-426	TE 437D	31725/3111-TE132/1	4A 4B 4C	E-426
TE 129	31725/3111-TE132/1	5A 5B 5C	E-426	TE 438A	31725/3111-TE132/1	5A 5B 5C	E-426
TE 129	31725/3111-TE132/1	6A 6B 6C	E-426	TE 438B	31725/3111-TE132/1	6A 6B 6C	E-426
TE 129	31725/3111-TE132/1	7A 7B 7C	E-426	TE 438C	31725/3111-TE132/1	7A 7B 7C	E-426
TE 129	31725/3111-TE132/1	8A 8B 8C	E-426	TE 438D	31725/3111-TE132/1	8A 8B 8C	E-426
TE 129	31725/3111-TE132/1	9A 9B 9C	E-426	TE 439A	31725/3111-TE132/1	9A 9B 9C	E-426
TE 129	31725/3111-TE132/1	10A 10B 10C	E-426	TE 439B	31725/3111-TE132/1	10A 10B 10C	E-426
TE 129	31725/3111-TE132/1	11A 11B 11C	E-426	TE 439C	31725/3111-TE132/1	11A 11B 11C	E-426
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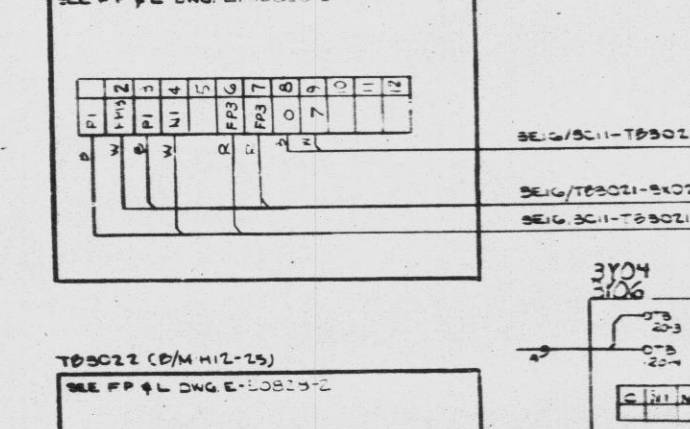
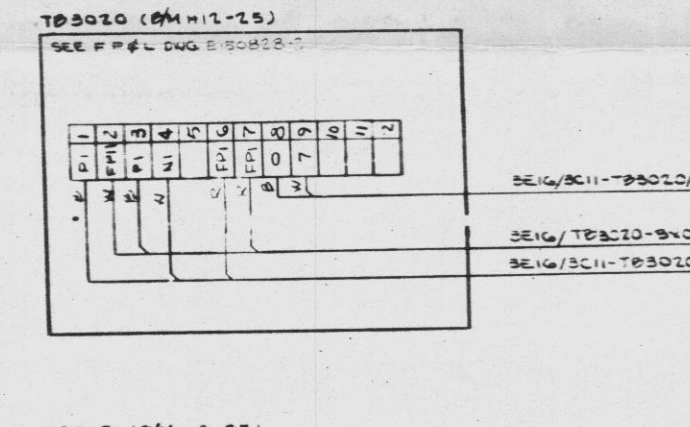
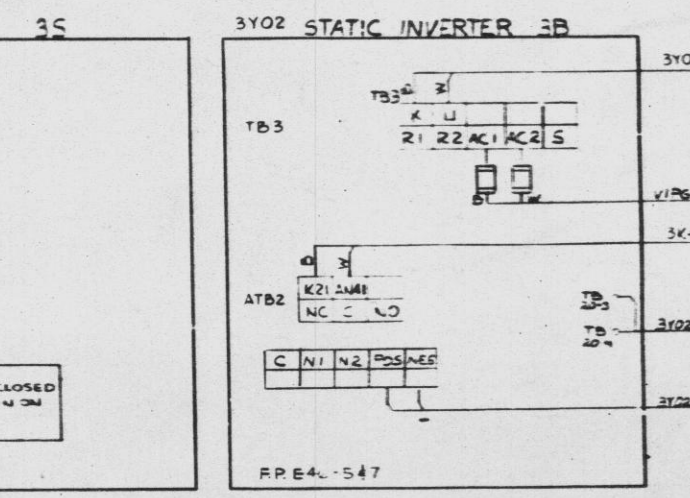
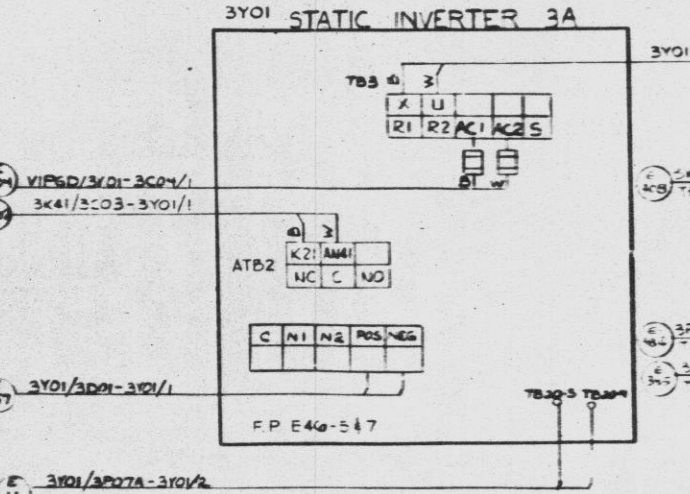
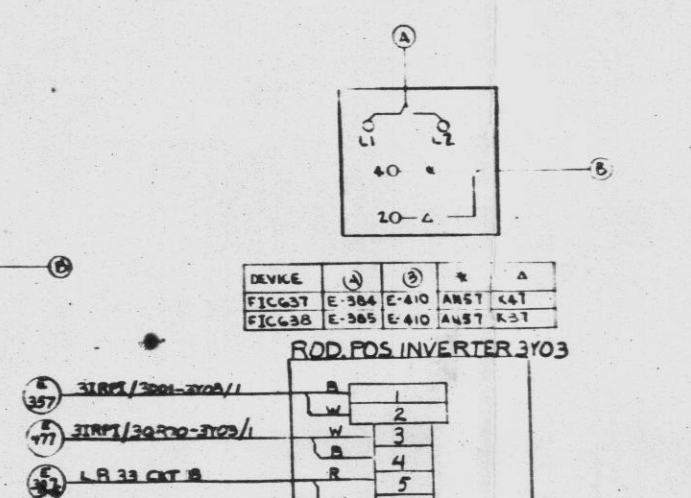
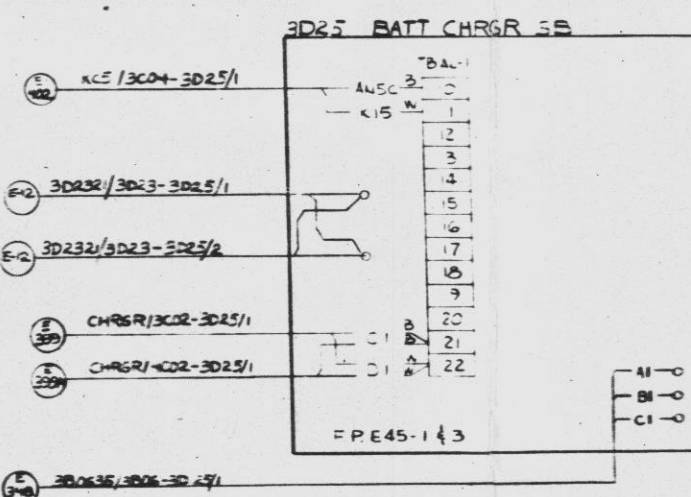
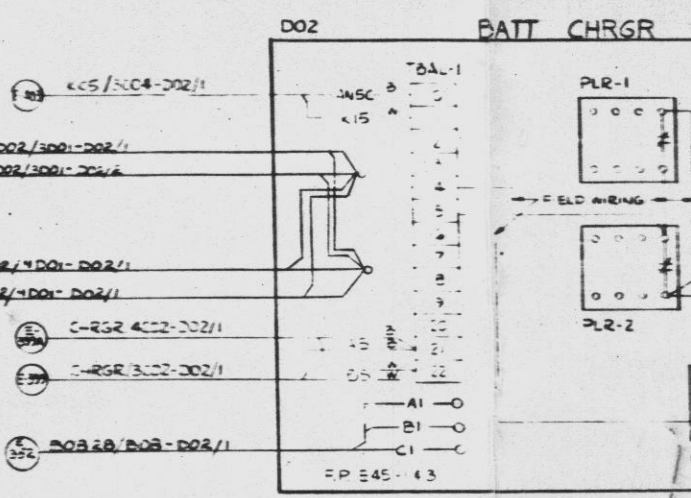
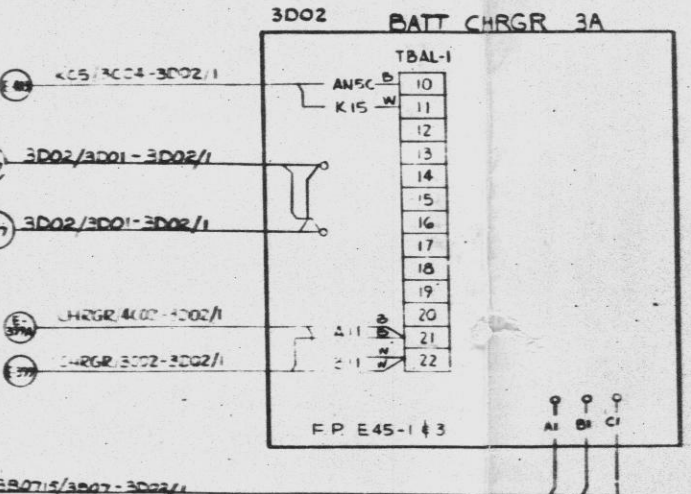
DEVICE	CABLE NUMBER	WIRE NOS	TER
TE 437	31725/3111-TE132/1	1A 1B 1C	E-426
TE 438	31725/3111-TE132/1	2A 2B 2C	E-426
TE 439	31725/3111-TE132/1	3A 3B 3C	E-426
TE 440	31725/3111-TE132/1	4A 4B 4C	E-426
TE 441	31725/3111-TE132/1	5A 5B 5C	E-426
TE 442	31725/3111-TE132/1	6A 6B 6C	E-426
TE 443	31725/3111-TE132/1	7A 7B 7C	E-426
TE 444	31725/3111-TE132/1	8A 8B 8C	E-426
TE 445	31725/3111-TE132/1	9A 9B 9C	E-426
TE 446	31725/3111-TE132/1	10A 10B 10C	E-426
TE 447	31725/3111-TE132/1	11A 11B 11C	E-426
TE 448	31725/3111-TE132/1	12A 12B 12C	E-426



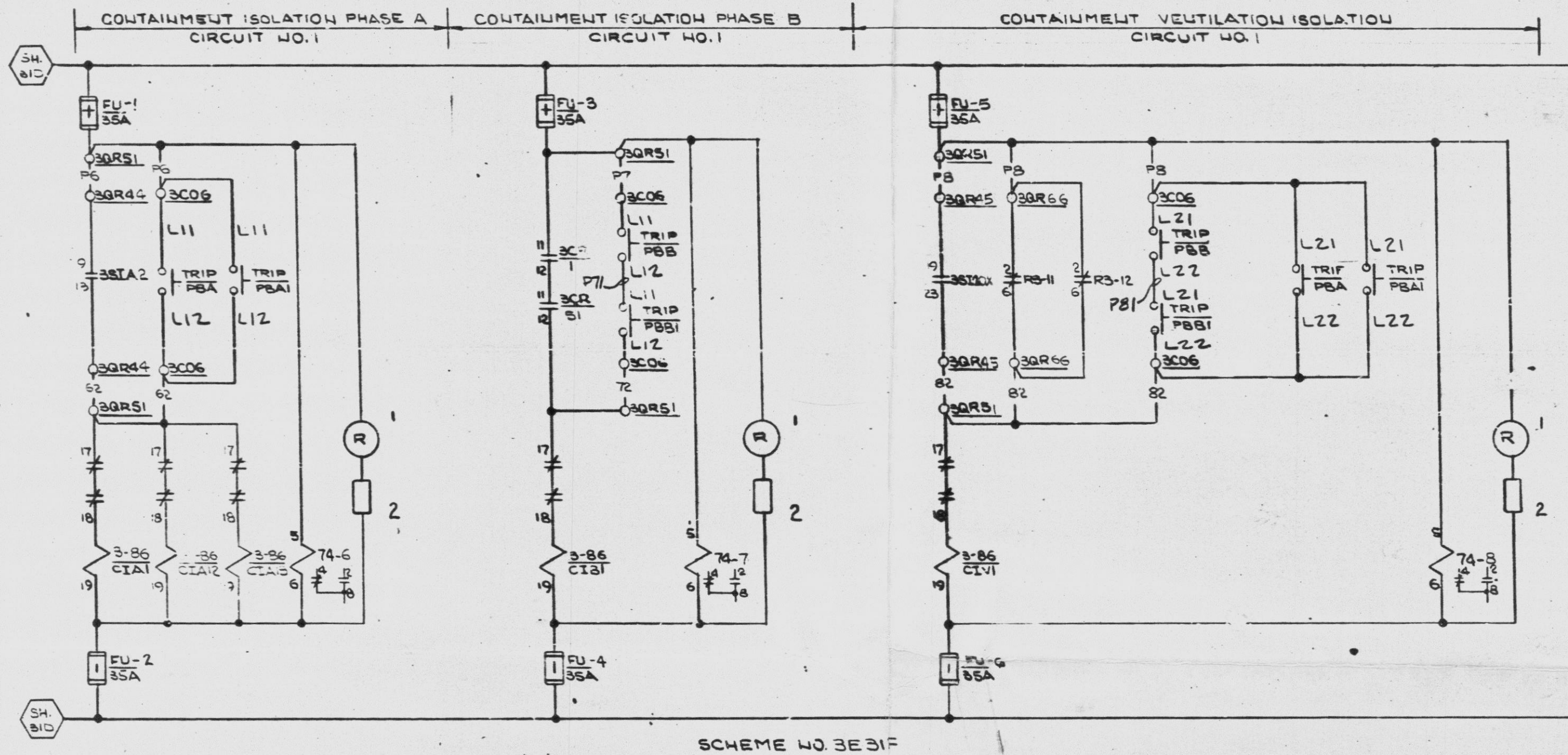
DEVICE	CABLE NUMBER	WIRE NOS	TER
TE 437	31725/3111-TE132/1	1A 1B 1C	E-426
TE 438	31725/3111-TE132/1	2A 2B 2C	E-426
TE 439	31725/3111-TE132/1	3A 3B 3C	E-426
TE 440	31725/3111-TE132/1	4A 4B 4C	E-426
TE 441	31725/3111-TE132/1	5A 5B 5C	E-426
TE 442	31725/3111-TE132/1	6A 6B 6C	E-426
TE 443	31725/3111-TE132/1	7A 7B 7C	E-426
TE 444	31725/3111-TE132/1	8A 8B 8C	E-426
TE 445	31725/3111-TE132/1	9A 9B 9C	E-426
TE 446	31725/3111-TE132/1	10A 10B 10C	E-426
TE 447	31725/3111-TE132/1	11A 11B 11C	E-426
TE 448	31725/3111-TE132/1	12A 12B 12C	E-426



DEVICE	CABLE NUMBER	WIRE NOS	TER
TE 437	31725/3111-TE132/1	1A 1B 1C	E-426
TE 438	31725/3111-TE132/1	2A 2B 2C	E-426
TE 439	31725/3111-TE132/1	3A 3B 3C	E-426
TE 440	31725/3111-TE132/1	4A 4B 4C	E-426
TE 441	31725/3111-TE132/1	5A 5B 5C	E-426
TE 442	31725/3111-TE132/1	6A 6B 6C	E-426
TE 443	31725/3111-TE132/1	7A 7B 7C	E-426
TE 444	31725/3111-TE132/1	8A 8B 8C	E-426
TE 445	31725/3111-TE132/1	9A 9B 9C	E-426
TE 446	31725/3111-TE132/1	10A 10B 10C	E-426
TE 447	31725/3111-TE132/1	11A 11B 11C	E-426
TE 448	31725/3111-TE132/1	12A 12B 12C	E-426



REV.	DESCRIPTION	ENG	DR	CHK	SUPV	MATL	APPROVALS	DATE
2	REVISED AS NOTED	CDMT	BW	CDMT				4/15/76
3	REVISED AS NOTED		BW	CDMT				8/27/76
4	CONFIGURATION VERIFIED BY FIELD CHECK							12-8-78



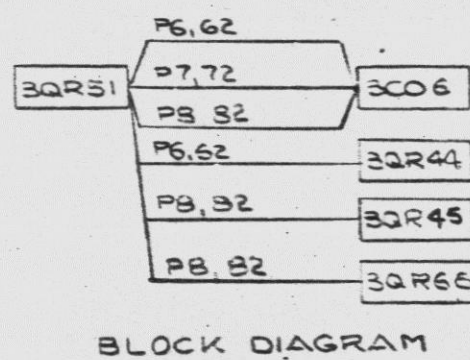
TURKEY POINT PLANT
UNITS 3 & 4
F. P. & L. TRACING

NOTES:

1. SEE E-300 SH.51 FOR DESIGNATION OF EQUIPMENT NO'S.
2. DEVICE & LOCATION NO'S FOR UNIT WQ.4 SHALL HAVE PREFIX 4 IN LIEU OF 3.

$\frac{3}{7} \nmid 74-6$ $\frac{3}{7} \nmid 74-7$ $\frac{3}{7} \nmid 74-8$

ANNUNCIATOR, SH. 31H



TERA
APERTURE
CARD
Docket # 50-250
Control # 8011040391
Date 10/27/80 of Document:
REGULATORY DOCKET FILE

(PL,R,-)

CONTAINMENT ISOL. SAFEGUARDS¹

ELEMENTARY DIAGRAM ELECTRICAL AUXILIARIES

FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR UNITS
UNIT NO. 3 1970-760 MW INSTALLATION
UNIT NO. 4 1971-760 MW INSTALLATION

BECHTEL CORPORATION



POWER AND INDUSTRIAL DIVISION

5610-E-28 Sh. 31F	REV. 4
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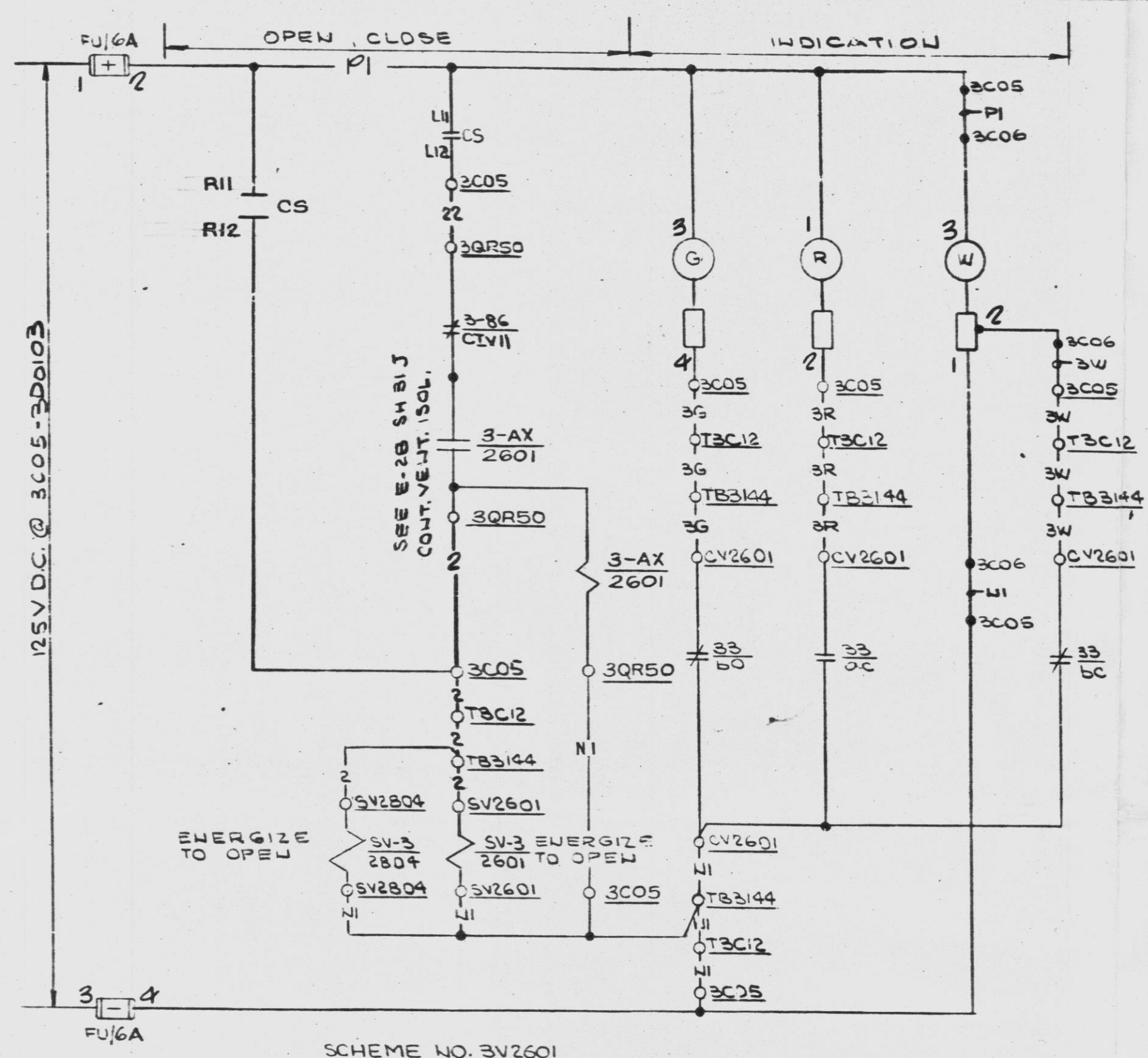
REGULATORY DOCKET FILE COPY

C-501748 SH. 69

8011040391-2 D

9 INCORP. PC/M 79-75876
 8 CONFIGURATION VERIFIED BY FIELD CHECK
 6 FIELD CHANGE INCORPORATED
 07 ADDED D.C. CIRCUIT NUMBERS

BE/SH MHA/LL
 BE/AT LCC MS
 CMT CMT
 9/15/90
 10-14-78
 11/11/72
 11/26/73

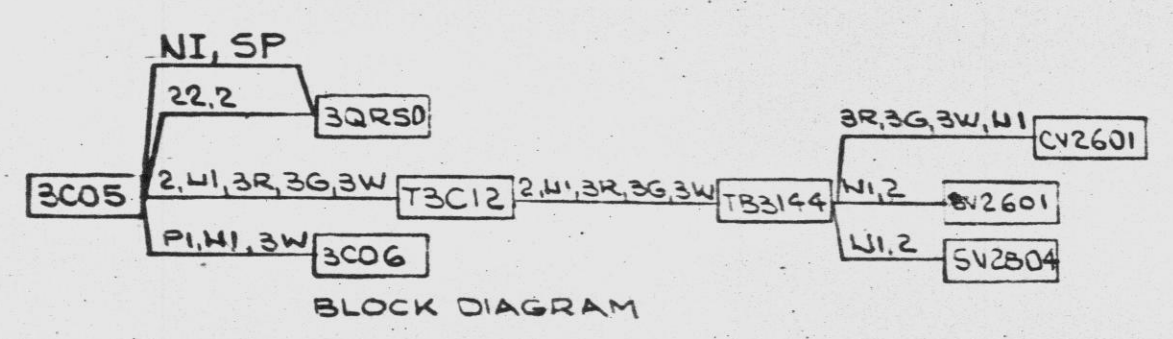


NOTES:
 1. SEE E-300, SH 51 FOR DESIGNATION OF EQUIPMENT NOS.
 2. SEE SH.C FOR SW. DEV.: FIG 7, FOR ADDITIONAL CONTACTS. SEE SH.59A.
 SEE SH.B FOR DESIGNATION OF POS. SW.33

TURKEY POINT PLANT
 UNITS 3 & 4
 F. P. & L. TRACING

EQUIPMENT	SCHEME NO	SV	LOCATION				CKT#	LOCATION	SV	FUSE NO	CS	3(4)-AX				
CONT. PURGE AIR SUPPLY S.VLV.	3V2601	3-2601	3C06	3C05	CV2601	SV2601	T3C12	T33144	3D0103	3QR50	SV2804	3-2804	XLAG	LII-LI2	RII-R12	2601
↓	4V2601	4-2601	4C06	4C05	CV2601	SV2601	T4C11	T43144	4D2307	4QR50	SV2804	4-2804	XLAG	LII-LI2	RII-R12	2601
CONT. PURGE AIR RETURN S.VLV.	3V2603	3-2603	3C06	3C05	CV2603	SV2603	T3C12	T33144	3D0103	3QR50	SV2806	3-2806	XLAH	LII-LI2	RII-R12	2603
↓	4V2603	4-2603	4C06	4C05	CV2603	SV2603	T4C12	T43145	4D2307	4QR50	SV2806	4-2806	XLAH	LII-LI2	RII-R12	2603

CONT. PURGE AIR SUP. & RETR. S.V.
 ELEMENTARY DIAGRAM
 REACTOR



Docket # 50-260
 Control # 8011040391
 Date 10/27/80 of Document:
 REGULATORY DOCKET FILE

TERA
 APERTURE
 CARD

(PL, R, -)
 C-501744 SH.83

FLORIDA POWER & LIGHT COMPANY
 TURKEY POINT NUCLEAR UNITS
 UNIT NO. 3 1970-750 MW INSTALLATION
 UNIT NO. 4 1971-750 MW INSTALLATION

BECHTEL CORPORATION

REV. 9

5610-E-25 SH.59

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