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 STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publ 05000529
 STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publ 05000530
 AUTH. NAME: AUTHOR AFFILIATION
 VAN BRUNT, E. E. Arizona Public Service Co.
 RECIP. NAME: RECIPIENT AFFILIATION
 KNIGHTON, G. Licensing Branch 3

SUBJECT: Forwards mod. to deviation request in FSAR Amend 13, Section 9B.2.1, 9B.2.2 & Figures 9B-8, 9, 10 & 11. Updated response to FSAR Question 9A-98 part (2) also encl. Changes will be incorporated in next FSAR amend.

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NOTES: Standardized plant. 05000528
 Standardized plant. 05000529
 Standardized plant. 05000530

RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
NRR/DL/ADL	1 0	NRR LB3 BC	1 0
NRR LB3 LA	1 0	LICITRA, E 01	1 1
INTERNAL: ADM-LFMB	1 0	ELD/HDS3	1 0
IE FILE	1 1	IE/DEPER/EPB 36	3 3
IE/DEPER/IRB 35	1 1	IE/DQASIP/QAB21	1 1
NRR/DE/AEAB	1 0	NRR/DE/CEB 11	1 1
NRR/DE/EHEB	1 1	NRR/DE/EQB 13	2 2
NRR/DE/GB 28	2 2	NRR/DE/MEB 18	1 1
NRR/DE/MTEB 17	1 1	NRR/DE/SAB 24	1 1
NRR/DE/SGEB 25	1 1	NRR/DHFS/HFEB40	1 1
NRR/DHFS/LQB 32	1 1	NRR/DHFS/PSRB	1 1
NRR/DL/SSPB	1 0	NRR/DSI/AEB 26	1 1
NRR/DSI/ASB	1 1	NRR/DSI/CPB 10	1 1
NRR/DSI/CSB 09	1 1	NRR/DSI/ICSB 16	1 1
NRR/DSI/METB 12	1 1	NRR/DSI/PSB 19	1 1
NRR/DSI/RAB 22	1 1	NRR/DSI/RSB 23	1 1
REG. FILE 04	1 1	RGN5	3 3
RM/DDAMI/MIB	1 0		
EXTERNAL: ACRS 41	6 6	BNL (AMDTs ONLY)	1 1
DMB/DSS (AMDTs)	1 1	FEMA-REP DIV 39	1 1
LPDR 03	1 1	NRC PDR 02	1 1
NSIC 05	1 1	NTIS	1 1

The following information was obtained from the records of the
 Department of the Interior, Bureau of Land Management, at
 Washington, D. C., on the 10th day of May, 1906.
 The land described in the foregoing is situated in the
 State of California, and is more particularly described
 in the accompanying map.

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 State of California, and is more particularly described
 in the accompanying map.

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 in the accompanying map.

Section	Tract	Area	Remarks
1	Tract 1	100.00	Acres
2	Tract 2	100.00	Acres
3	Tract 3	100.00	Acres
4	Tract 4	100.00	Acres
5	Tract 5	100.00	Acres
6	Tract 6	100.00	Acres
7	Tract 7	100.00	Acres
8	Tract 8	100.00	Acres
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10	Tract 10	100.00	Acres
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98	Tract 98	100.00	Acres
99	Tract 99	100.00	Acres
100	Tract 100	100.00	Acres

Arizona Public Service Company

ANPP-30291-EEVBJr/TFQ/DKN
August 21, 1984

Director of Nuclear Reactor Regulation
Attention: Mr. George Knighton, Chief
Licensing Branch No. 3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Changes to the PVNGS FSAR.
Docket Nos. STN 50-528/529/530
File: 84-056-026; G.1.01.10

Reference: Letter from E. E. Van Brunt, Jr., APS, to the Director
of Nuclear Reactor Regulation (ANPP-29978), dated
August 1, 1984.

Dear Mr. Knighton:

Attached are two changes to the PVNGS FSAR. Attachment 1 is a modification to a deviation request in FSAR Amendment 13, Section 9B.2.1, 9B.2.2 and Figures 9B-8, 9, 10, and 11.

Attachment 2 is an updated response to FSAR question 9A-98 part (2).

These changes will be incorporated into the next FSAR Amendment.

Very truly yours,

EE Van Brunt / DSK

E. E. Van Brunt, Jr.
APS Vice President
Nuclear Production
ANPP Project Director

EEVBJr/TFQ/DKN/mb
Attachment

cc: E. A. Licitra (w/a)
A. C. Gehr (w/a)
D. Kubicki (w/a)

8408240289 840821
PDR ADOCK 05000528
A PDR

Boo1
11

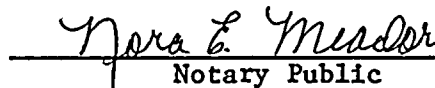
August 21, 1984

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, Donald Karner, represent that I am Assistant Vice President, Nuclear Production of Arizona Public Service Company, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true.


Donald Karner

Sworn to before me this 22nd day of August, 1984.


Notary Public

My Commission Expires:

My Commission Expires April 6, 1987



9B.2.1

FIRE HAZARDS ANALYSIS

4. A deviation is requested to Section III.G.2 to the extent that it requires installation of a one-hour fire rated barriers and an area-wide suppression system.

Discussion:

The west wall of Zone 86A is a fire area boundary between Fire Area I and Fire Area X at elevations 77'0", 100'0", 120'0" and 140'0". The boundary contains two 6-inch (nominal) seismic gaps which are covered with non-rated, solid 18-gauge sheet metal flashings on each side of a reinforced concrete stub wall or pillar. The metal flashings would retard the passage of heat and/or smoke. Fire Area X contains no safe shutdown equipment or cables. Therefore, a postulated fire within Zone 86A would have no effect upon safe shutdown capability, even if the fire did spread into Fire Area X.

Within the Fire Area X side of this boundary, there are negligible combustibles; the compartment adjacent to the seismic gap is a large HVAC and pipe chase with floor dimensions approximately 13 feet by 50 feet. Within Fire Area I, Zone 86A is separated from the remainder of the fire area by 2- and 3-hour rated walls. Zone 86A is separated from Zone 86B (Fire Area II) by a 3-hour ^{non-}rated barrier. Zonal detection and automatic deluge water spray covers the predominant in-situ combustible (cable trays at elevations 100'0" and 120'0"). The equivalent fire severity for Zone 86A is approximately 107 minutes. Fire brigade response (within 30 minutes) is expected before significant degradation of the existing fire barriers would occur. Access to Zone 86A for fire brigade response is available at elevation 100'0" (through Zone 5A).

(See Fire Area I, deviation No. 5, for the Zone 86A/Zone 86B separation considerations).

FIRE HAZARDS ANALYSIS

Conclusion:

The existing design provides equivalent protection to that required by Section III.G.2, and upgrading the existing design to a 1-hour rating plus suppression would not significantly enhance protection currently provided.

See section 9B.2.2 for a deviation common to Fire Area II and the section 9B.2 introduction for generic deviations.

Insert (A)

Insert A to page 9.B.2.1-11:

5. A deviation is requested to Section III.G.2 to the extent that it requires three-hour rated barriers to separate circuits of redundant trains.

Discussion:

The central wall of the dead space compartment between the Auxiliary and Control Buildings is a fire area boundary common to Fire Area I (Zone 86A) and Fire Area II (Zone 86B) at elevations 74'0", 100'0", 120'0", and 140'0". The wall is reinforced concrete with a nominal 6-inch seismic gap. The seismic gap is covered by solid 1/4-inch steel plates bolted to each side of the concrete wall. The fit is snug and there is no path for heat or smoke to travel through the plate steel. The dead air space between the steel plates will have an insulating quality thus minimizing radiant heat transfer to the other side as well as eliminating convected heat through the barrier. Zonal detection and automatic deluge water spray covers the predominant in-situ combustible (cable trays at elevations 100'0" and 120'0"). The train A safe shutdown cable trays of Zone 86A and the Train B safe shutdown cable trays of Zone 86B are located approximately 10 feet from the central wall with no intervening combustibles. The equivalent fire severity for each of Zones 86A and 86B is approximately 107 minutes. Fire brigade response (within 30 minutes) is expected before significant degradation of the existing fire barriers would occur.

Access to Zone 86A for fire brigade response is available at elevation 100'0" (through Zone 5A). Access to Zone 86B for fire brigade response is available at elevation 100'0" (through Zone 5B).

Conclusion:

The existing design provides equivalent protection to that required by Section III.G.2, and upgrading the existing design to a 3-hour rating would not significantly enhance the protection currently provided.

FIRE HAZARDS ANALYSIS

East: ^{g Non-} 3-hour rated area boundary wall common of heavy concrete construction to Fire Area II, Zone 86B, at column line JC.

West: Non-rated area boundary wall common to Fire Area X at column line JA.

Floor: Non-rated area boundary basemat of light concrete paving at elevation 74'0".

Ceiling: Non-rated area boundary roof at elevation 156'4".

2. Zone Access

One Class B door in the 2-hour rated south wall, elevation 100'0", to Zone 5A.

3. Sealed Penetrations

Seals equal or exceed fire barrier ratings.

4. Fire Dampers

None

5. Protected Raceways

None

6. Protected Structural Members

None

C. Safety Related Equipment and Components

- Train A cable trays and conduit^(a)

D. Non-Safety Related Equipment and Components

- Cable trays and conduit

E. Radioactive Material

None

a. Safe Shutdown Related

9B.2.2

FIRE HAZARDS ANALYSIS

equipment or cables. Therefore, a postulated fire within Zone 86A or the Corridor Building would have no effect upon safe shutdown capability.

Within Fire Area II, Zone 86B is separated from the remainder of the fire area by 2- and 3-hour rated walls. Zone 86B is separated from Zone 86A (Fire Area I) by a 3-hour ^{non}rated barrier. Zonal detection and automatic deluge water spray covers the predominant in-situ combustible (cable trays at elevation 100'0" and 120'0"). The equivalent fire severity for Zone 86B is less than 10 minutes. Fire brigade response (within 30 minutes) is expected before significant degradation of the existing fire barriers would occur. Access to Zone 86A for fire brigade response is available at elevation 100'0" (through Zone 5A).

(See Fire Area I, deviation No. 5, for the Zone 86A/Zone 86B separation considerations).

Conclusion:

The existing design provides equivalent protection to that required by Section III.G.2, and upgrading the existing design to a 1-hour rating plus suppression would not significantly enhance protection currently provided.

3. See section 9B.2.1 for deviations common to Fire Area I and the section 9B.2 introduction for generic deviations.

13

FIRE HAZARDS ANALYSIS

West: -3-hour ^{Non-}rated area boundary wall common
to Fire Area I, Zone 86A, at column
line JC.

Floor: Non-rated area boundary basemat of
light concrete paving at elevation
74'0".

Ceiling: Non-rated area boundary roof of heavy
concrete construction at elevation
156'4".

2. Zone Access

One Class B door in the 2-hour rated south wall,
elevation 100'0", to Zone 5B

3. Sealed Penetrations

Seals equal or exceed fire barrier ratings

4. Fire Dampers

None

5. Protected Raceways

None

6. Protected Structural Members

None

C. Safety Related Equipment and Components

Train B cable trays and conduit^(a).

D. Non-Safety Related Equipment and Components

Cable trays and conduit

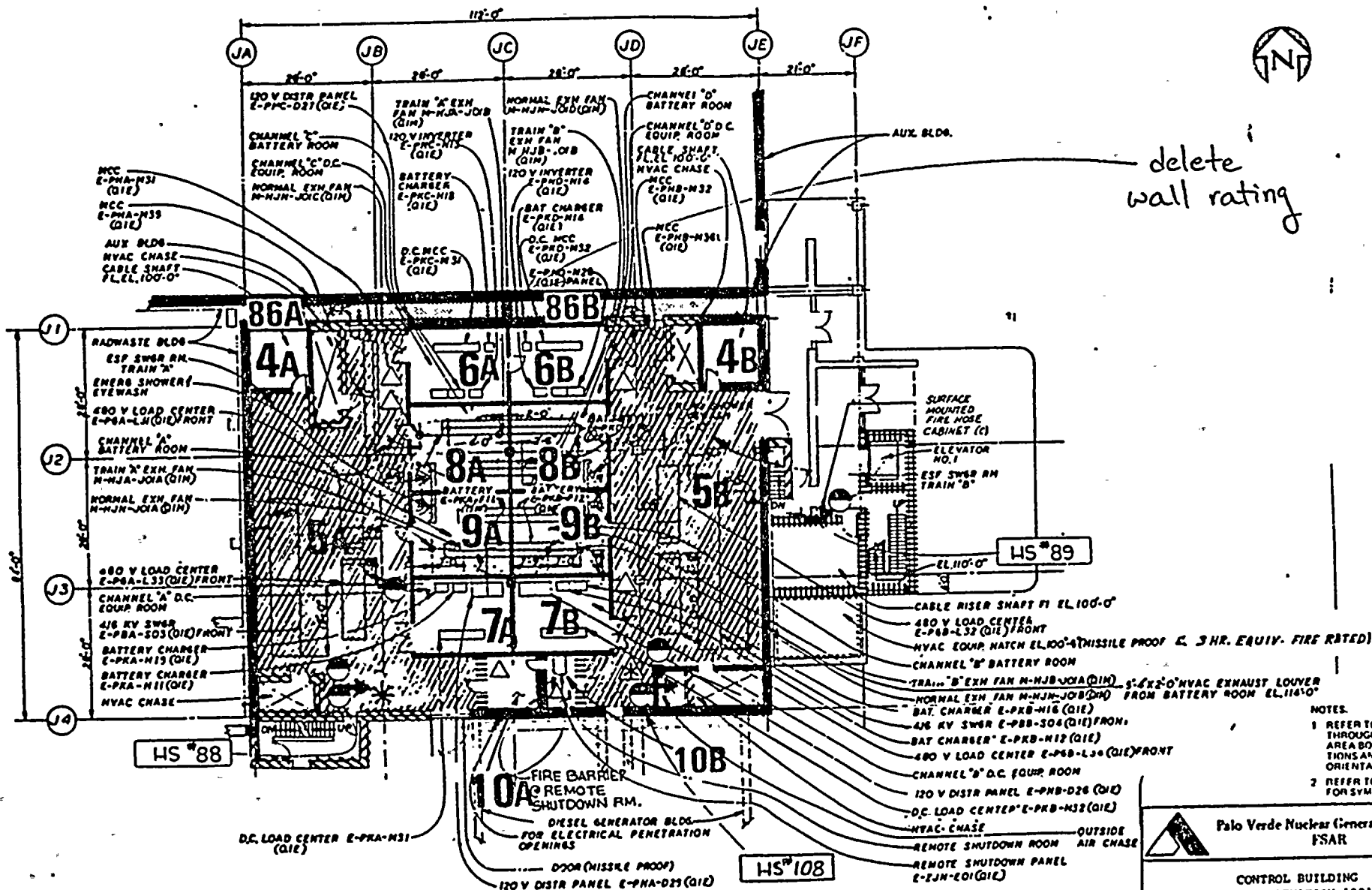
E. Radioactive Material

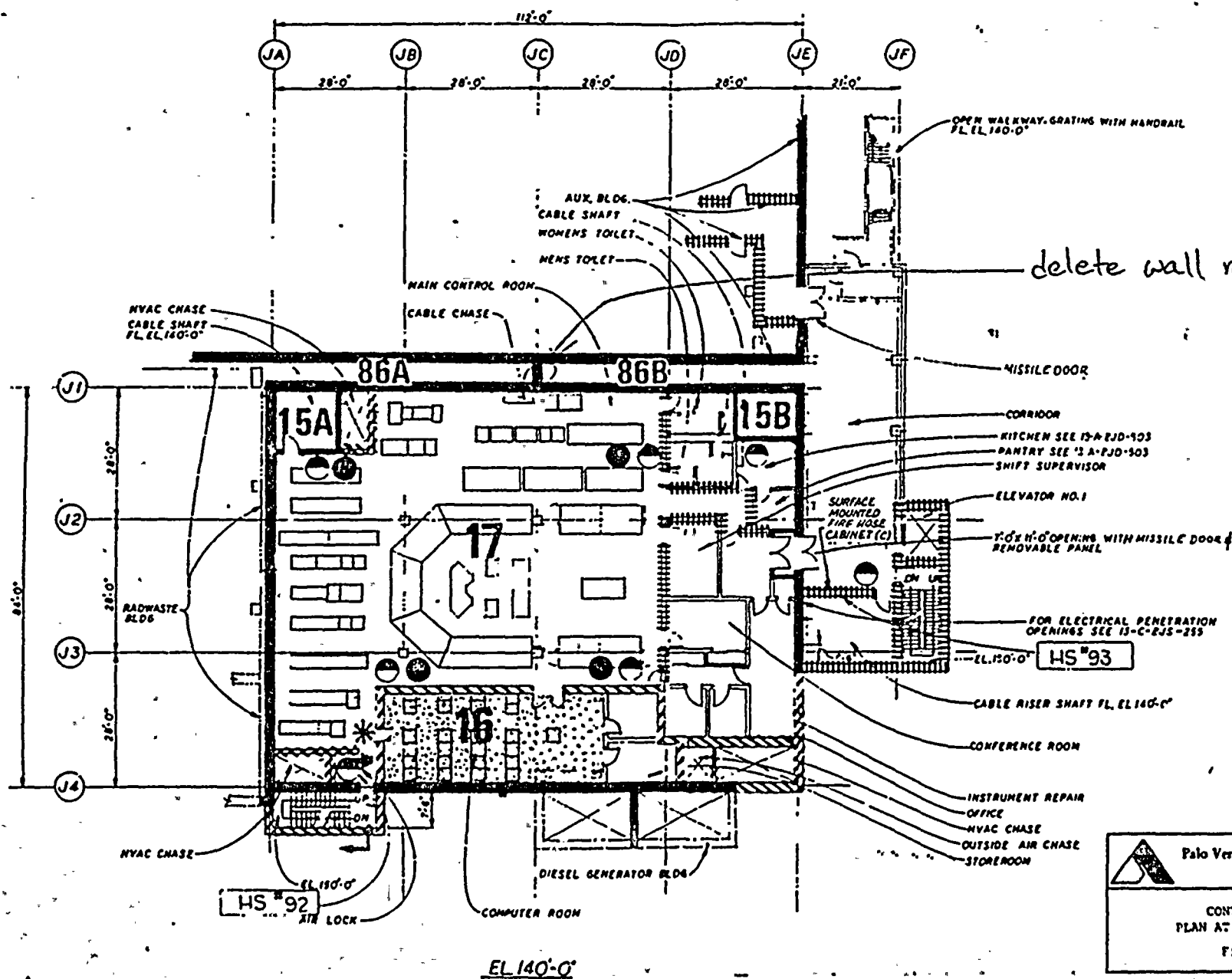
None

a. Safe Shutdown Related



Amendment 11





NOTES:

1. REFER TO FIGURES 98-1 THROUGH 98-7 FOR FIRE SPEC. BOUNDARY LOCATIONS AND PLANT ORIENTATION
2. REFER TO FIGURE 98-30 FOR SYMBOL LEGEND.
3. "CUR RATED WALLS, INTERNAL TO FIRE ZONE 12 ARE RATED FOR LIFE SAFETY REASONS ONLY.

	Palo Verde Nuclear Generating Station FSAR
	CONTROL BUILDING PLAN AT ELEVATION 140'-0"
	Figure 75-11

August 1984

Amendment 13

(ART 1
P 10 OF 10)

APPENDIX 9A

RESPONSE:

1. A system is provided to collect and contain lubricating oil from non-welded joints for each reactor coolant pump and motor. The system is designed to remain functional after an SSE.

INSERT

(A)

2. ~~The response will be provided in a future amendment.~~

QUESTION 9A.99 (FPER Question 20d)

(9B.2)

Containment BuildingPage II-282^(a), Item 5.1.c^(a):

1. The auxiliary feed pump rooms have an outside wall of three-hour rating while the rest of the walls are heavy concrete construction. Appendix A, Section D.1(j), states that three-hour separation including protection of all communicating openings around each auxiliary feed-water pump room be provided. Verify that you comply with this position in that the other walls and communicating openings have three-hour rating.
2. It is our position that an outside entrance be provided for fire fighting access to the motor-driven pump room rather than through the turbine-drive pump room.

- a. Page/paragraph references are no longer applicable due to FPER reformatting for FSAR Amendment 13.

07/05/84

PVNGS FSAR EDIT SECTION

INCREMENTAL

JUL 6 1984

APPENDIX 9A

INSERT (A) TO PAGE 9A-81

IN _____ OUT _____

RESPONSE:

1. A system is provided to collect and contain lubricating oil from non-welded joints for each reactor coolant pump and motor. The system is designed to remain functional after an SSE.

2. In Zones 63A and 63B, which contain the reactor coolant pumps (RCP's), there are twelve instrument nozzle taps with 3/8-inch diameter stainless steel sensing lines for redundant steam generator (S/G) level and pressure transmitters. The transmitters themselves are located outside the secondary shield, and therefore beyond the area involved in a postulated fire in the vicinity of the RCP's. The sensing lines are routed 20 to 40 feet above a concrete floor. The most remote nozzle taps are separated from each other by approximately 15 feet horizontally along the circumference of the S/G. There is ^{about at least 15} ~~about 20~~ feet of horizontal separation between the RCP and the ^{closest} ~~nearest~~ S/G nozzle. Operability of any one of the ^{eight} ~~eight~~ S/G level instruments is sufficient for the operator to fulfill his required safety function. There are no in-situ combustibles directly under the sensing lines. An RCP oil collection system (refer to the response to Question 9A.126) has been provided, ^{to mitigate the effects of the} ~~such that the~~ major in-situ combustible load ~~can be eliminated from further consideration.~~ A transient load of 2½ gallons of flammable liquid (approximately 400,000 Btu) would only yield a fire severity of about one minute in the vicinity of the S/G. ^{Therefore,} ~~in this location,~~ fire of this magnitude and duration would not cause the failure of all safe shutdown instrument sensing lines.

which meets the requirements of 10CFR50, Appendix R Section III.O,

INSERT (B)

INSERT (B) TO INSERT (A)

The instrument sensing lines for the differential pressure measurement across the primary side of the S/G are also located in the vicinity of the RCP's.

The instrumentation is not required for safe shutdown.

In event of failure of these sensing lines, the ~~RCP~~ reactor coolant pressure boundary is breached. However, equipment required to mitigate this failure ^{is} are located outside the S/G compartment, and both trains are unaffected by the fire. (Details of the analysis are available in chapter 15.)