

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the matter of)	Docket Nos. 50-338 and
)	50-339
VIRGINIA ELECTRIC)	
AND POWER COMPANY)	
)	
North Anna Power Station)	
Units 1 and 2)	

EXEMPTION AMENDMENT

I.

The Virginia Electric and Power Company (VEPCO, the licensee) is the holder of Operating License No. NPF-4 which authorizes operation of North Anna Power Station Unit 1 and Operating License No. NPF-7 which authorizes operation of Unit 2. These operating licenses provide, among other things, that the North Anna Power Station is subject to all rules, regulations, and Orders of the Commission now or hereafter in effect.

The station comprises two pressurized water reactors at the Licensee's site located in Louisa County, Virginia.

II.

By letter to the licensee dated November 6, 1986, Exemption 1 (among others) was approved by the NRC. Exemption 1 was from the technical requirements of Section III.G.3 of Appendix R to 10 CFR Part 50 to the extent that fire detection and fixed suppression systems were not installed throughout the Auxiliary, Fuel, and Decontamination Building (Fire Area 11). The original Safety Evaluation supporting Exemption 1 stated the charging pump cubicles had 3-hour fire-rated walls, and that the penetrations in these walls were sealed to a rating of 3 hours. By letter dated December 11, 1992, the licensee requested an addendum (exemption amendment) which revises the

original Exemption 1 to account for non-fire-rated penetration seals and unprotected openings located in the south wall of the charging pump cubicles. The lack of penetration seals was identified in an NRC Inspection Report 50-338, 339/92-18 dated October 19, 1992.

The Commission's staff has evaluated the information provided by the licensee to support the addendum to Exemption 1. The Commission's Safety Evaluation relating to an Addendum to Exemption 1 From Certain Requirements of Appendix R to 10 CFR Part 50 is being issued concurrently with this exemption amendment. The Safety Evaluation concludes that the lack of fire-rated penetration seals in the south wall of the pump cubicles does not present an undue risk to the public health and safety and that special circumstances are present in that application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule.

III.

The underlying purpose of Section III.G.3 of Appendix R to 10 CFR Part 50 is to ensure that safe shutdown capability is maintained. Notwithstanding the lack of three hour rated penetration seals, the circumstances, as fully described in the Safety Evaluation, are such that the installation of fire detection and fixed suppression systems throughout Fire Area 11 is not necessary to provide reasonable assurance that safe shutdown capability is maintained.

Therefore, the staff concludes that "special circumstances" exist for the licensee's requested exemption amendment in that application of the regulation in these particular circumstances is not necessary to achieve the underlying purposes of Section III.G.3 of Appendix R to 10 CFR Part 50. The

Commission hereby grants an amendment to Exemption 1 granted November 6, 1986, and authorizes the subject addendum (attached) to revise Exemption 1 to account for non-fire-rated penetrations in the south wall of the charging pump cubicles.

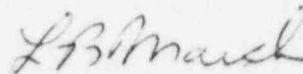
IV.

Accordingly, the Commission has determined that, pursuant to 10 CFR Part 50.12(a), (1) the exemption amendment as described in Section II is authorized by law and will not present an undue risk to the public health and safety and is consistent with common defense and security, and (2) special circumstances are present for the exemption amendment in that application of the regulation in this particular circumstance is not necessary to achieve the underlying purposes of Appendix R to 10 CFR Part 50.

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of the exemption amendment will have no significant impact on the environment (60 FR 45747).

This exemption amendment is effective upon its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Ledyard B. Marsh, Acting Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Addendum

Dated at Rockville, Maryland
this 12th day of September 1995

ADDENDUM TO EXEMPTION REQUEST # 1
APPENDIX R REPORT
NORTH ANNA POWER STATION

The following changes are being made to Exemption Request # 1, Auxiliary Building - Partial Area Fire Suppression and Detection.

1. On page 1-7, the first and second paragraph are replaced with the following three paragraphs:

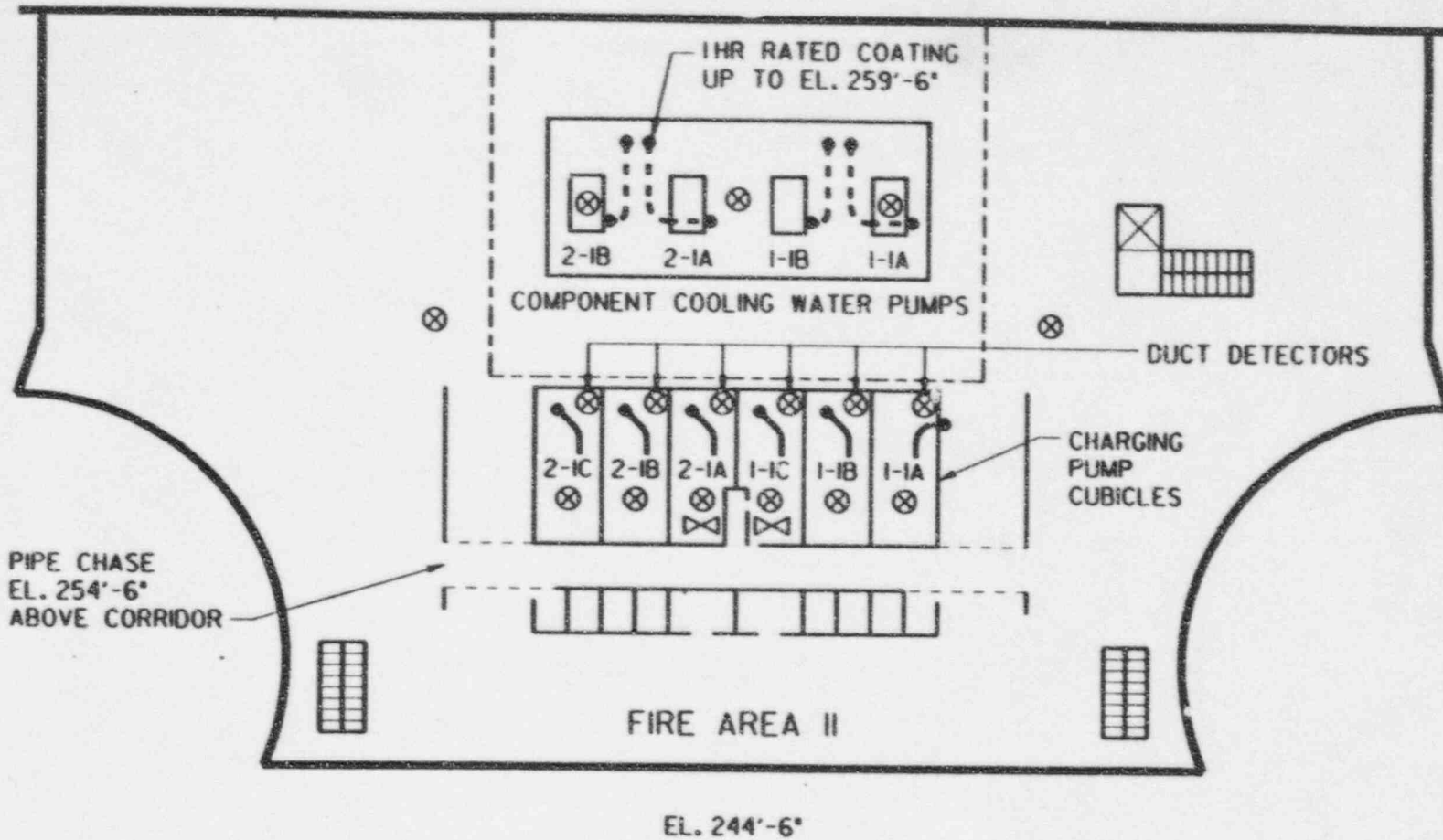
"three on the east end are for Unit 1, and the remaining three are for Unit 2. The cubicles are constructed of heavy concrete walls on three sides, and the fourth side is a removable wall made of concrete beams. These walls have an inherent fire rating in excess of 3 hours (see Exemption Request 7 concerning the removable wall). The charging pump cubicle walls extend from floor to ceiling on Elevation 244 ft-6 in. Openings at the floor of the 259 ft-6 in. elevation for each cubicle are diked and include a hatch for personnel entry, ventilation ducts, cable trays, and conduit. The walls extend from floor to ceiling on elevation 244 ft.-6 in., and penetrations through the walls are sealed to a rating of 3 hours. In the south wall of the charging pump cubicles there are some openings that are not sealed to a 3 hour fire rating. These openings lead to the corridor and the horizontal pipe chase adjacent to the south wall of the cubicles. The openings into the corridor consist of valve stems (with valve handles located in the corridor) covered with metal plates. The pipe penetrations into the pipe chase are covered with metal plates and 1 inch thick panels of Thermo-Lag. Cubicle 1-1C also has, on the south wall and at the southwest corner of the ceiling, unsealed blockouts with pipes leading into the horizontal and vertical pipe chases. Except for the unsealed openings in cubicle 1-1C, the metal plates cover the openings and provide a non-fire rated seal against the passage of smoke and hot gasses."

"The horizontal pipe chase is located south of the charging pump cubicles and extends along the south wall of each pump cubicle (See Figure 1.3). The pipe chase is open ended at the pipe penetration areas adjacent to the

Unit 1 and 2 Containments, and has openings into the adjacent cubicles (seal water filters, heat exchangers, ...etc.) located on the south side of the pipe chase. The vertical pipe chase is located between cubicles 2-1A and 1-1C and extends vertically to the Volume Control Tank (VCT). This vertical chase has an unsealed opening into cubicle 1-1C and is open ended at the VCT with no intermediate openings. The vertical and horizontal pipe chases are not expected to create a fire exposure to the cubicles due to the lack of combustible material in the chases. A fire in cubicle 1-1C would not be expected to enter the pipe chases due to the negligible amount of combustibles in the chases. If the fire did enter the chases, it would travel out and away from the adjacent cubicles which have penetrations sealed with metal plates."

"It is not considered credible, based on the configuration described above, for a fire in an individual charging pump cubicle to expose an adjacent cubicle or to propagate out of the cubicle. A fire in cubicle 1-1C would not be expected to enter the pipe chases due to the negligible amount of combustibles in the chases. If the fire did enter the chases, it would travel out and away from the adjacent cubicles which have penetration seals. The metal plates will provide an adequate seal against the passage of smoke and hot gasses based on the configuration and lack of combustibles in the corridor and pipe chase. It is not considered credible for a fire in the open areas of the 259 ft.-6 in. elevations to expose a charging pump (although it may affect the power feeds) or valves within a cubicle since the floor openings have dikes. It is not credible for a fire to spread from the general areas of the 244 ft.-6 in. elevation into the pipe chase due to the negligible combustible loading in the area and long travel distance from the open ends of the chase to the cubicles."

2. Figure 1-3 is replaced with the revised Figure 1-3 (attached).



KEY

- AUTOMATIC FIRE SUPPRESSION SYSTEM BOUNDARY
- CHARGING PUMP POWER FEED
- CCW PUMP POWER FEEDS
- ⊗ SMOKE DETECTORS
- ⊗ MANUAL VALVES FOR CHARGING PUMP DISCHARGE CROSSCONNECT

VIRGINIA ELECTRIC & POWER COMPANY
NORTH ANNA POWER STATION
UNITS 1&2

AUXILIARY BUILDING
ELEVATION 244'-6"

FIGURE NO.
1.3

CAD NO. NAIFG72.APR