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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
FLORIDA POWER AND LIGHT COMPANY)	Docket Nos. 50-250
(Turkey Point Nuclear Generating)	50-251
Unit Nos. 3 and 4))	(Proposed Amendments to Facility
)	Operating Licenses to Permit
)	Steam Generator Repair)

NRC STAFF SECOND MOTION FOR SUMMARY DISPOSITION

The NRC Staff hereby moves for summary disposition of Contentions 2 and 6. The Staff submits that the attached affidavits, together with the cited documentation, demonstrate that there are no factual issues requiring adjudication and that dismissal of these contentions is warranted as a matter of law. The operative legal principles underlying summary disposition are outlined in the Staff's earlier summary disposition motion of February 20, 1981. As noted therein, once a motion for summary disposition has been made and supported by affidavit, a party opposing the motion may not rely on mere allegations, but instead must demonstrate by affidavit or otherwise that a genuine issue exists as to a material fact. 10 CFR § 2.749(b); Virginia Electric and Power Company (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 453 (1980).

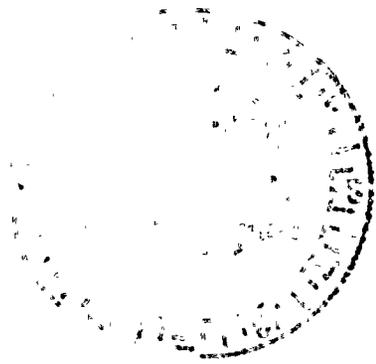
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I. Contention 2

A. The programs and procedures proposed to be followed by the Licensee in making the steam generator repairs demonstrate that it will not make every reasonable effort to maintain occupational radiation

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exposures as low as is reasonably achievable (ALARA) within the meaning of 10 CFR Part 20 or that it will not comply with 10 CFR §20.101, in that the Licensee intends to use transient workers with unknown radiation exposure histories.

B. A sufficient work force, both skilled and unskilled, cannot be obtained to perform the repairs without violating the limits on individual exposures contained in 10 CFR § 20.101.

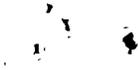
Material Facts As To Which There Are No Genuine Issues To Be Heard

1. Part 20 of the Commission's regulations provides, that in addition to complying with the radiation dose standards specified therein, a licensee must make every reasonable effort to maintain radiation exposures as low as is reasonably achievable (ALARA) 10 CFR §20.1(1). The regulations do not contain a prescribed occupational dose limitation deemed to conform with the ALARA criteria.

2. The NRC has traditionally followed a qualitative approach in the implementation of the occupational ALARA concept. Establishment of collective occupational dose limitations upon all power reactors is neither practical nor desirable. Staff affidavit of John V. Nehemias on Contention 2.

3. Regulatory Guide (Reg Guide) 8.8^{1/} is the principle NRC guidance for controlling occupational dose exposure in furtherance of the ALARA

^{1/} Information Relevant to Ensuring That Occupational Radiation Exposures at Nuclear Power Stations Will Be As Low As Is Reasonably Achievable.



criteria. Reg Guide 8.8 stresses management policy and organization; personnel qualification and training; design of facilities and equipment; radiation control program, plans, and procedures; and availability of supporting equipment, instrumentation, and facilities as desirable dose reduction measures. Nehemias affidavit at 3-4. All of these measures will be employed, in varying degrees, during the proposed repair operation. Staff Affidavit of John L. Minns on Contention 2 (Minns affidavit); Safety Evaluation Report (SER) (NUREG-0756), December, 1980, § 2.8.1.5.

4. The total occupational dose for a single unit repair is estimated at 2100 person-rem. This takes into account the dose reduction measures described in Reg. Guide 8.8. Id.

5. The licensee has committed to making every reasonable effort to keep radiation exposure ALARA in accordance with 10 CFR § 20.1(c) and Reg. Guide 8.8. Id.

6. Personnel with experience from the Surry Unit 2 steam generator removal and replacement will be utilized. These individuals will provide added expertise to the licensee for dealing with health physics problems associated with the repair. Id.

7. All craft personnel will be required to take training in radiological protection. Personnel will be required to pass a comprehensive examination to have unescorted access in the radiation-controlled area. Id.

8. Extensive training in other areas will be used throughout the repair, including the use of scale models to familiarize supervisory and key craft personnel with the repair effort and to develop the most efficient work procedures. Id.



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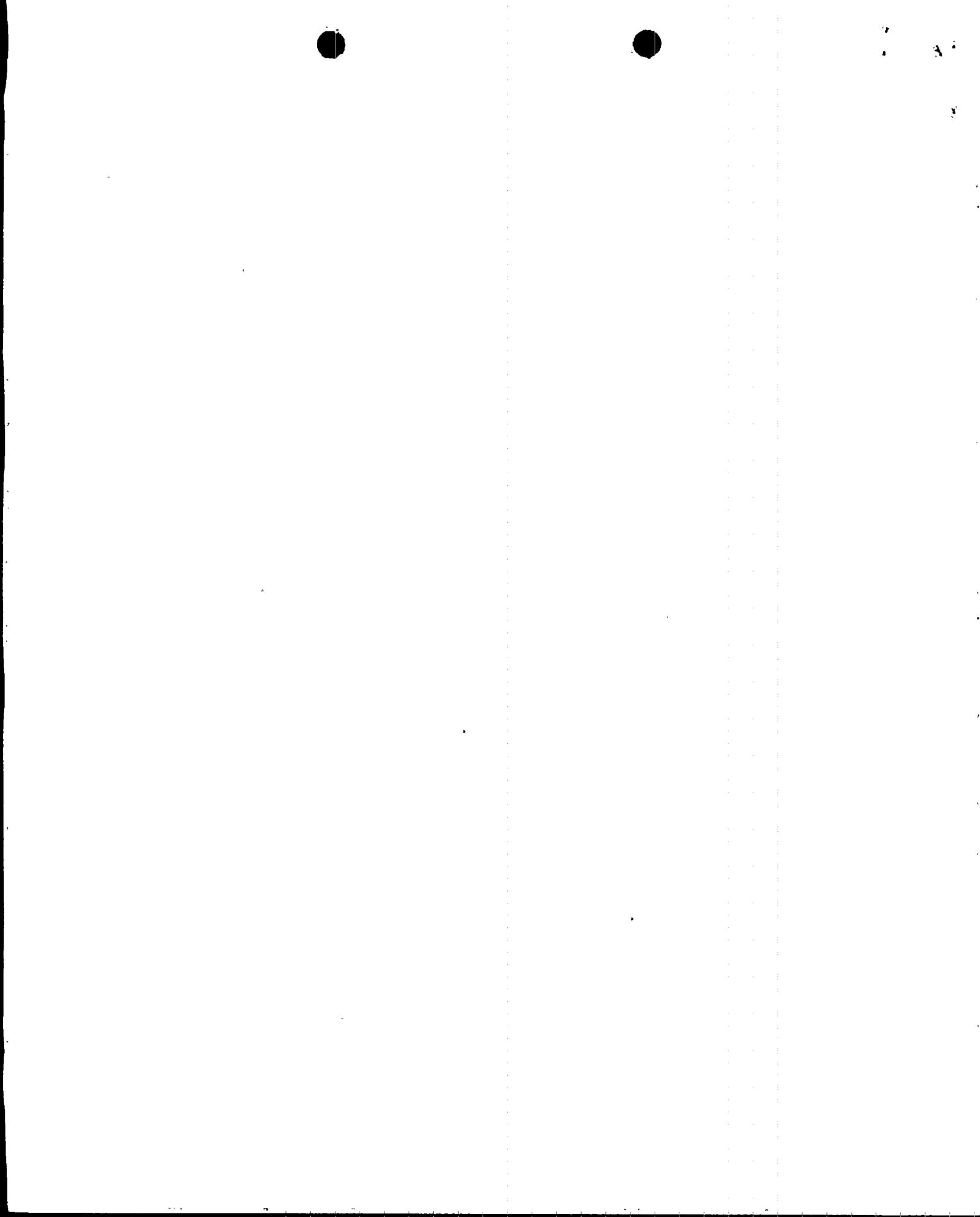
9. Additional facilities for the repair effort, including a radiological protection training facility, additional health physics area (including separate offices for health physics personnel) counting room, access control station, laboratory facilities, change room, and decontamination facilities will be provided. Id.

10. The programs and procedures proposed by the licensee in making the steam generator repairs demonstrate that it will meet (1) 10 CFR Part 20 limits and requirements, including efforts to maintain radiation exposure ALARA; (2) Regulatory Guide 8.8 with respect to management policy and organization, personnel qualifications and training, design of facilities and equipment, radiation protection program, plans, and procedures, and the availability of supporting equipment, instrumentation, and facilities; and (3) Regulatory Position C.1.f of Regulatory Guide 8.10^{2/} on modifications to reduce radiation exposures. Id.

11. Regarding control of doses to transient workers, the licensee will be required to operate in accordance with the provisions of 10 CFR §20.102, adopted to control transient workers' quarterly doses. Id.

12. Pursuant to 10 CFR §20.102, a licensee shall require any individual, prior to first entry into a restricted area under circumstances in which that individual could receive in any period of one calendar quarter an occupational dose in excess of 25 percent of the applicable standards specified in 10 CFR §20.101(a) and §20.104, to disclose in a written, signed statement, either that the individual had

^{2/} Operating Philosophy for Maintaining Occupational Radiation Exposure As Low As Is Reasonably Achievable.



no prior occupational dose during the current calendar quarter or the nature and amount of such exposure.

13. That regulation also provides that, before permitting any individual in a restricted area to receive an occupational dose in excess of the standards specified in 10 CFR §20.101(a), each licensee obtain a certificate on Form NRC-4 or signed statement from the individual containing all the information required in that form relative to such individual's accumulated occupational dose. 10 CFR §20.102(b).

14. Observance of these requirements will assure that transient workers will not receive impermissible radiation doses during their participation in the proposed steam generator repair. Minns affidavit.

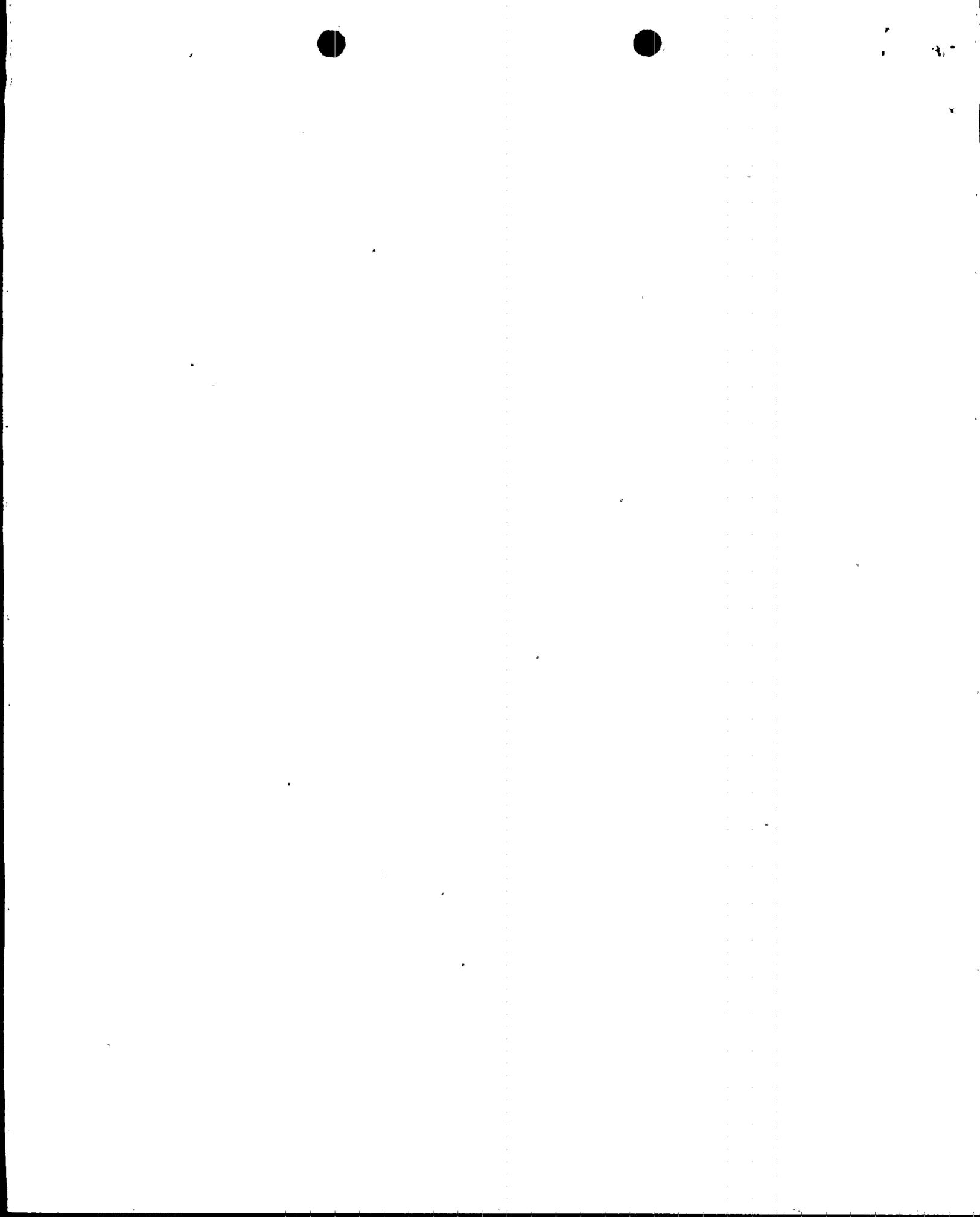
15. With regard to worker staffing, the licensee will be required to operate in accordance with the permissible dose levels in 10 CFR §20.101. Id.

16. Limitations, if any, on the size of the available work force, could necessitate extending the work into a new quarter. Id.

17. This could be accomplished without exceeding the exposure limits in 10 CFR §20.101. Id.

18. There are expected to be 840 workers involved in the steam generator repair. Id.

19. This is a sufficient workforce to satisfactorily and safely perform the necessary repair activities based on the repair experience at Surry. Id.



II. Contention 6

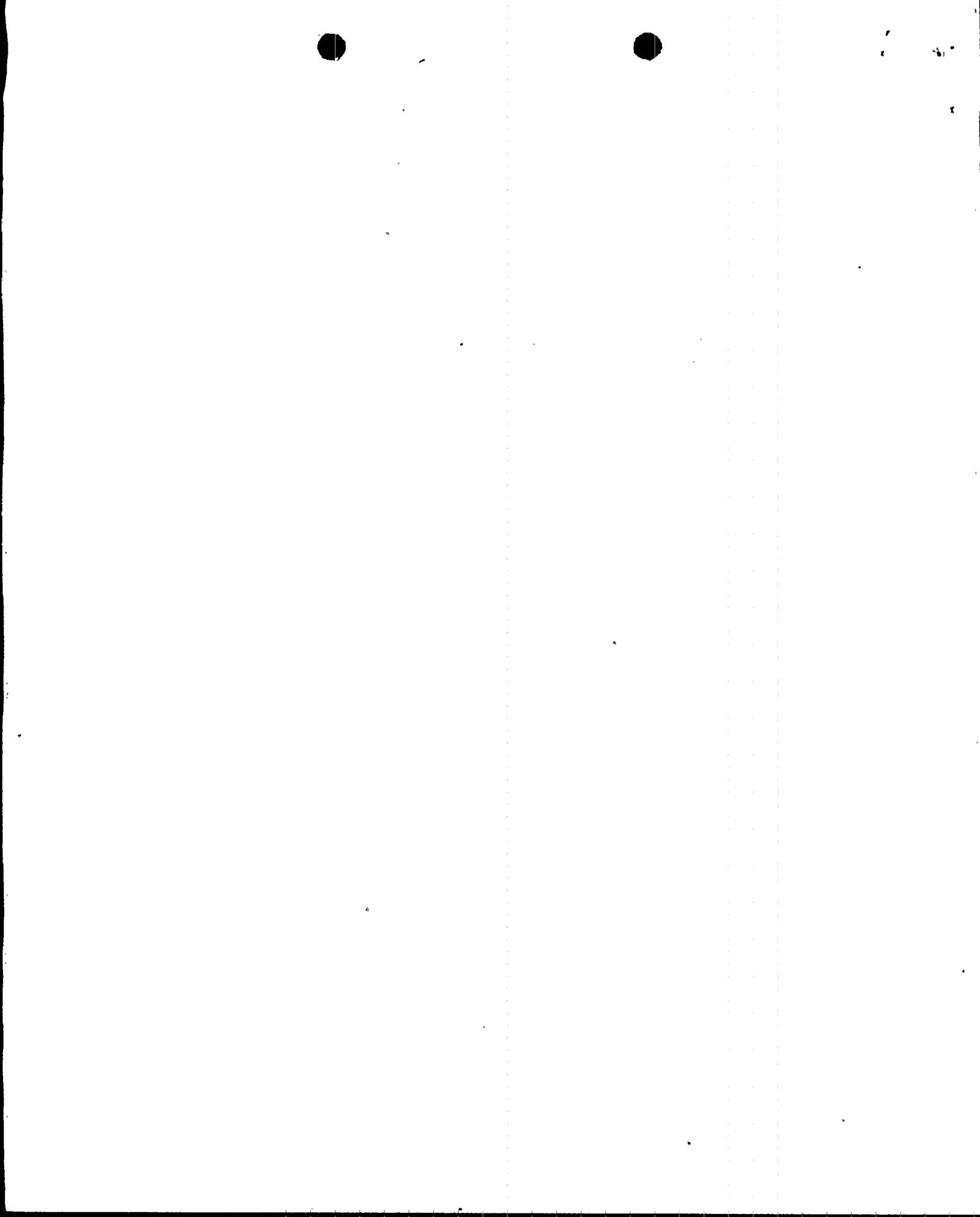
There are likely to occur radioactive releases from one or more stored assemblies to unrestricted areas which violate 10 CFR Part 20 or are not as low as is reasonably achievable within the meaning of 10 CFR Part 50, as a result of:

- a. substantial immersion of the steam generators in sea water during a hurricane;
- b. movement of steam generators while so immersed;
- c. impact of such moving steam generators upon the walls of the structure in which they are stored or upon another object or objects;
- d. corrosion resulting from moisture, sea water, or salt spring; and
- e. leakage through the floor beneath the stored steam generators.

Material Facts As To Which There Are No Genuine Issues To Be Heard

1. The storage structure will be located at an elevation of 17.5 feet Mean Low Water (MLW) with an additional elevation of one-half foot for the floor height. Staff Affidavit of Richard B. Codell on Contention 6 (Codell affidavit).

2. The design basis flood event for the Turkey Point plant, the Probable Maximum Flood (PMF), is identified as a hurricane surge which would reach a stillwater level of 18.3 feet MLW. The Probable Maximum Flood is defined as the flood due to the most adverse natural phenomena which could reasonably occur at that particular site. Id.



3. In addition to the still water level of 18.3 MLW, it was determined that wind generated waves could run up on the vertical walls of the intake structure to 22.5 ft MLW. Id.

4. The storage building would be exposed to the still water level of 18.3 feet, but not to the high runup associated with the plant intake structure. Id.

5. The storage building is located on a filled plain about 65 feet from a graded 3 on 1 slope which runs down to a level of 5 feet MLW. The still water level on the 17.5 feet MLW plain would be only 0.8 feet. Id.

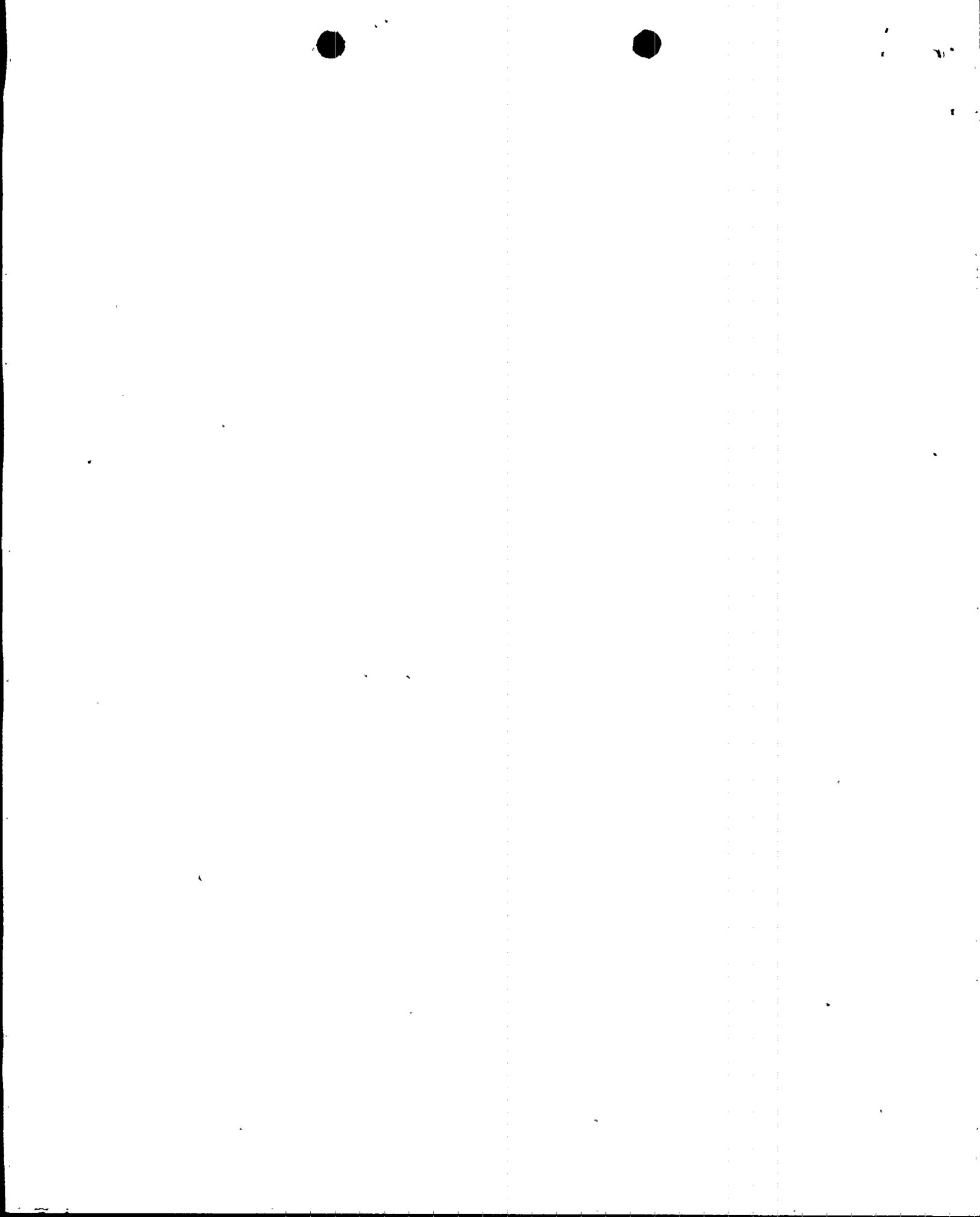
6. Incoming large waves would break on the 3 on 1 slope, well short of the storage building. Id.

7. The maximum wind generated waves which can be sustained on the plain without breaking is about 80 percent of the water depth, or in this case about 0.6 ft. crest to trough. Id.

8. This wave would be expected to cause only minor runup on the storage building, probably less than 1 foot, to an elevation of less than 19.3 feet MLW. Since the floor of the storage building will be at 18.0 feet MLW, there will not be a significant immersion of the steam generators caused by a hurricane. Id.

9. The approximate specific gravity for the steam generator is greater than 1.7. Therefore, the steam generators would not float even if immersed. Id.

10. No credible mechanism for the leakage of radioactivity to the environment through a liquid pathway is likely. The outside of the assemblies will be periodically decontaminated and the internal radioactive material securely sealed within the assemblies. Id.; See



also Staff affidavit of Marshall Grotenhuis on Contention 6(e); SER, § 2.8.2, 3.2.5.

11. Even if released from the steam generator, liquid radioactive contamination would be inhibited from being released to the environment by the integrity of the storage building, including a 6-inch thick reinforced concrete floor. Codell and Grotenhuis affidavits.

12. Even if the spilled radioactivity could enter the ground, no potable ground water could be affected. Codell affidavit.

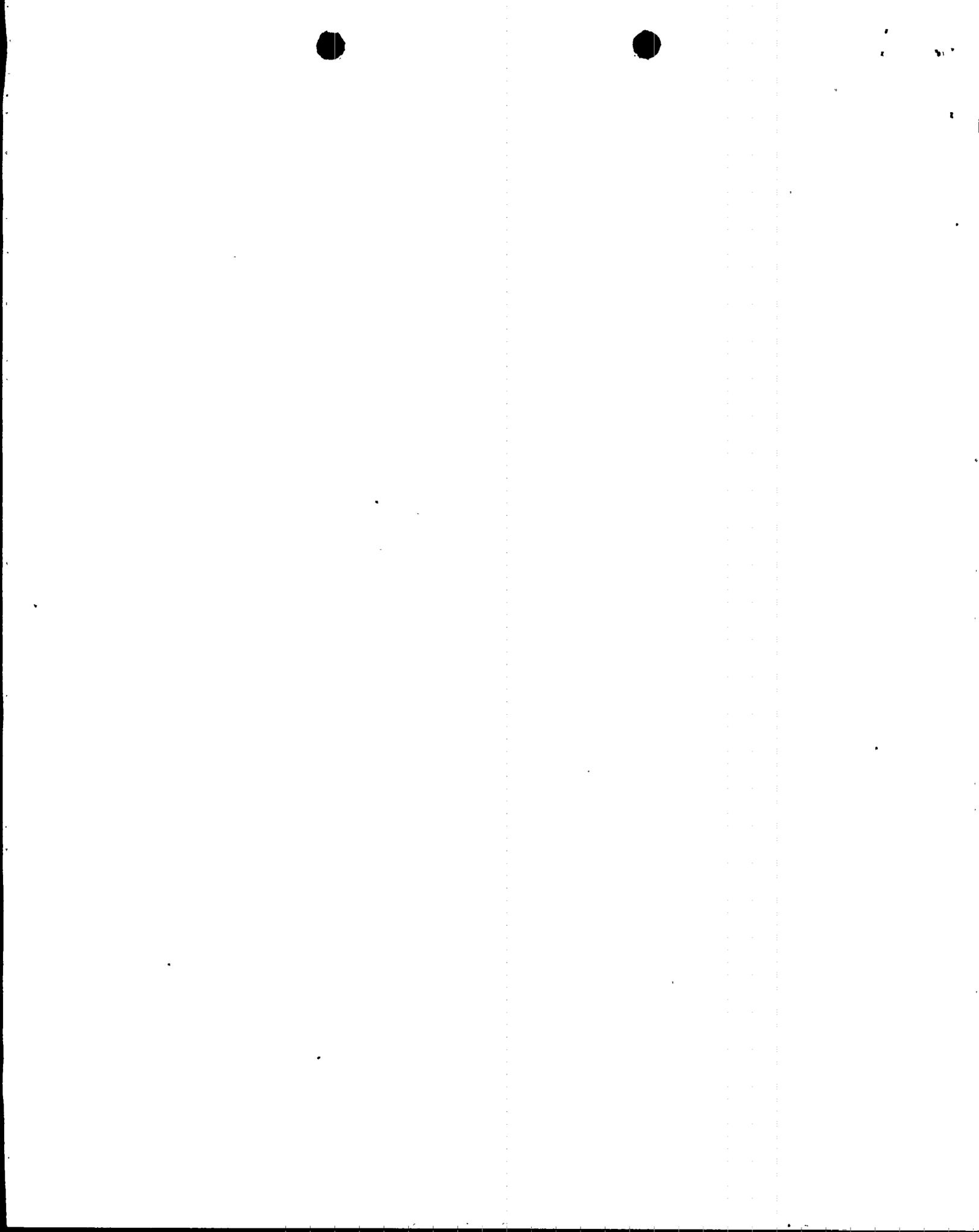
13. The two major groundwater units underlying the site, the Biscayne aquifer and the Floridian aquifer, are both highly saline and, in addition, flow in the direction of the ground water gradient away from land. Id.

14. Any contamination entering the ground would have to percolate through approximately 18 feet of engineered fill and soil before reaching the water table. Id.

15. The minimum ground water travel time from the storage building to the canal system would be several years. Id.

16. Since the steam generators will be inspected quarterly, any radioactive leakage would be discovered well before radioactive ground water could escape to the environment. Id.

17. With regard to the probability of through-wall corrosion from within the stored steam generator assemblies, there is insufficient oxygen within these sealed assemblies to result in through-wall corrosion. Staff affidavit of Bernard Turovlin on Contention 6(d) (Turovlin affidavit).



18. Therefore, the probability of a through-wall corrosion crack is so small as to be insignificant. Id.

19. To further assure that there would be no ingress of oxygen through the seal weld, all seal welds are coated with a heavy-bodied varnish such as Glyptol. Id.

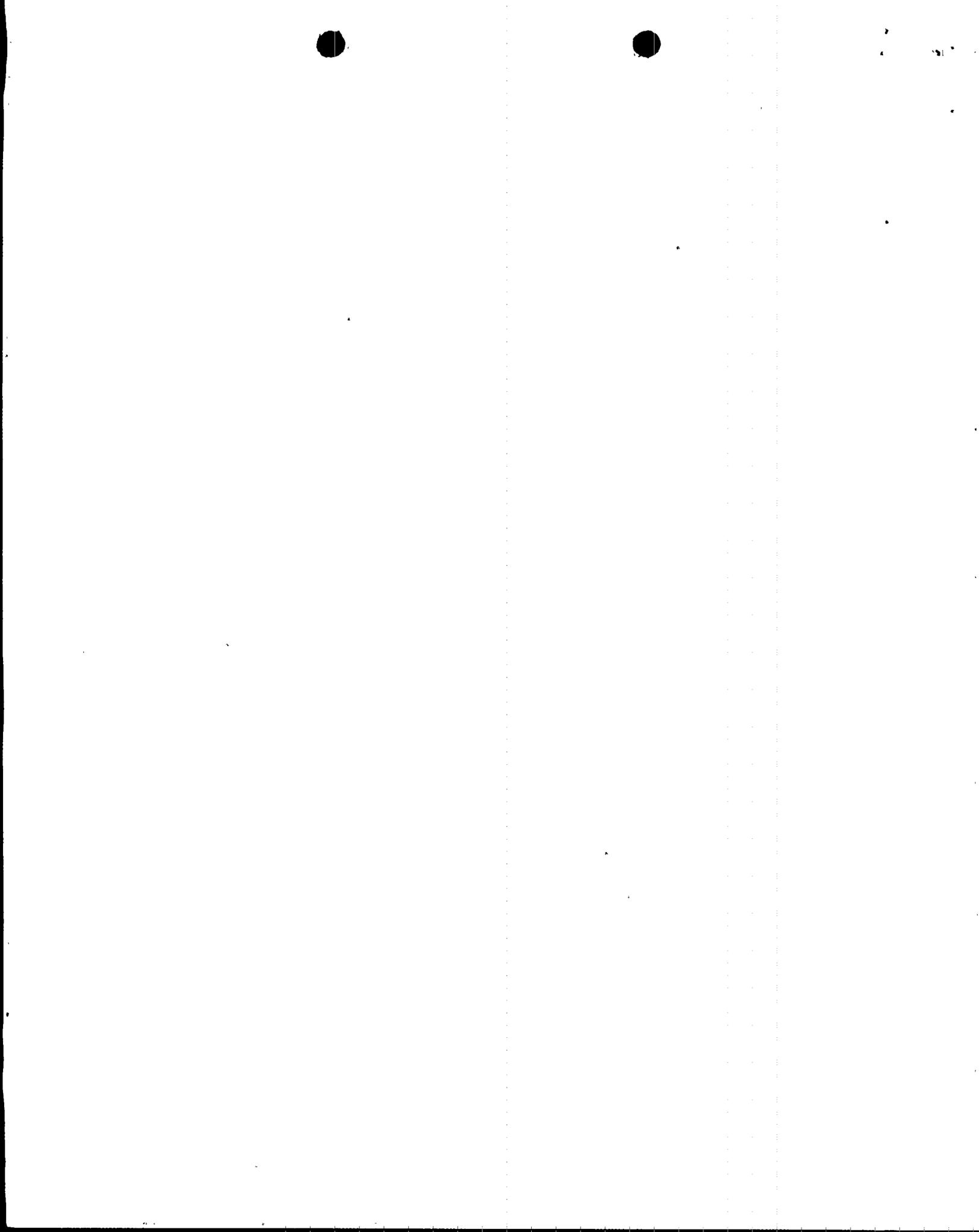
20. With regard to the probability of through-wall corrosion from the outside of the sealed steam generator, the heavy-bodied varnish coating the seal weld will also retard the corrosion from the outside. Id.

21. Published reports of corrosion testing of low alloy steel, such as that utilized in the Turkey Point steam generator assemblies, in a seacoast marine atmosphere, such as the Turkey Point site, demonstrated that the low alloy steel had lost only 0.003 inches of thickness after seven and a half years. Id.

22. Comparable experience is expected from the Turkey Point steam generator storage. Id.

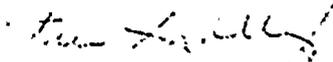
CONCLUSION

Under the present record, including discovery, no documents or evidence exist which establish a genuine dispute as to the material facts set forth in the present motion and, upon the basis of these facts, the Staff is entitled to summary disposition as a matter of



law. Accordingly, the Board should grant summary disposition and dismiss Contentions 2 and 6 from the proceeding.

Respectfully submitted,


Steven C. Goldberg
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 23rd day of March, 1981.

