

ATTACHMENT 2A TO AEP:NRC: 09000

TECHNICAL SPECIFICATIONS PAGES
MARKED TO SHOW PROPOSED CHANGES

REVISED PAGES
UNIT 1

3/4 6-27

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SURVEILLANCE REQUIREMENTS (Continued)

shall be constituted of one basket each from Radial Rows 1, 2, 4, 6, 8 and 9 (or from the same row of an adjacent bay if a basket from a designated row cannot be obtained for weighing) within each bay. If any basket is found to contain less than 1333 pounds of ice, a representative sample of 20 additional baskets from the same bay shall be weighed. The minimum average weight of ice from the 20 additional baskets and the discrepant basket shall not be less than 1333 pounds/basket at a 95% level of confidence.

The ice condenser shall also be subdivided into 3 groups of baskets, as follows: Group 1 - bays 1 through 8, Group 2 - bays 9 through 16, and Group 3 - bays 17 through 24. The minimum average ice weight of the sample baskets from Radial Rows 1, 2, 4, 6, 8 and 9 in each group shall not be less than 1333 pounds/basket at a 95% level of confidence.

The minimum total ice condenser ice weight at a 95% level of confidence shall be calculated using all ice basket weights determined during this weighing program and shall not be less than 2,590,000 pounds.

3. Verifying, by a visual inspection of at least ^{four} ~~two~~ flow passages per ice condenser bay, that the accumulation of ^{frost} ~~frost or ice on the top deck floor grating, on the intermediate deck and on~~ flow passages between ice baskets and past lattice frames is restricted to a nominal thickness of 3/8 inches. ~~If one flow passage per bay is found to have an accumulation of frost or ice greater than this thickness, a representative sample of 20 additional flow passages from the same bay shall be visually inspected. If these additional flow passages are found acceptable, the surveillance program may proceed considering the single deficiency as unique and acceptable. More than one restricted flow passage per bay is evidence of abnormal degradation of the ice condenser.~~ ^{**} ~~flow passages~~ ^{**} ~~from the same bay~~ ^{**} ~~shall be visually inspected.~~ ^{**} ~~If these additional flow passages are found acceptable,~~ ^{**} ~~the surveillance program may proceed considering the single deficiency as unique and acceptable. More than one restricted flow passage per bay is evidence of abnormal degradation of the ice condenser.~~ ^{**}

- c. At least once per 18 months by verifying, by a visual inspection, of each ice condenser bay, that the accumulation of frost or ice on the lower plenum support structures and turning vanes is restricted to a nominal thickness of 3/8 inches. An accumulation of frost or ice greater than this thickness is evidence of abnormal degradation of the ice condenser.
- d. At least once per 40 months by lifting and visually inspecting the accessible portions of at least two ice baskets from each 1/3 of the ice condenser and verifying that the ice baskets are free of detrimental structural wear, cracks, corrosion or other damage. The ice baskets shall be raised at least 12 feet for this inspection.

and will require a 100% inspection of that bay to determine, by calculation, that the total flow passage blockage is less than the 15% assumed in the analysis of lower subcompartment pressurization following a LOCA or MSLB.

* channel

** channels

3/4 BASES
3/4.6 CONTAINMENT SYSTEMS

3/4.6.5 ICE CONDENSER

The requirements associated with each of the components of the ice condenser ensure that the overall system will be available to provide sufficient pressure suppression capability to limit the containment peak pressure transient to less than 12 psig during LOCA conditions.

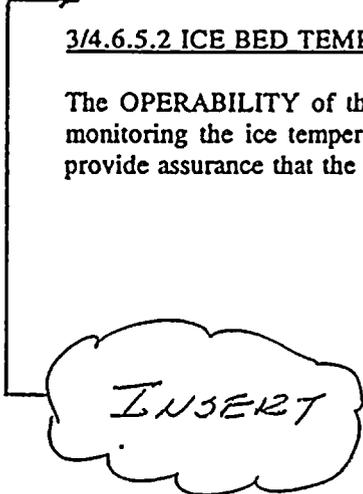
3/4.6.5.1 ICE BED

The OPERABILITY of the ice bed ensures that the required ice inventory will 1) be distributed evenly through the containment bays, 2) contain sufficient boron to preclude dilution of the containment sump following the LOCA and 3) contain sufficient heat removal capability to condense the reactor system volume released during a LOCA. These conditions are consistent with the assumptions used in the accident analyses.

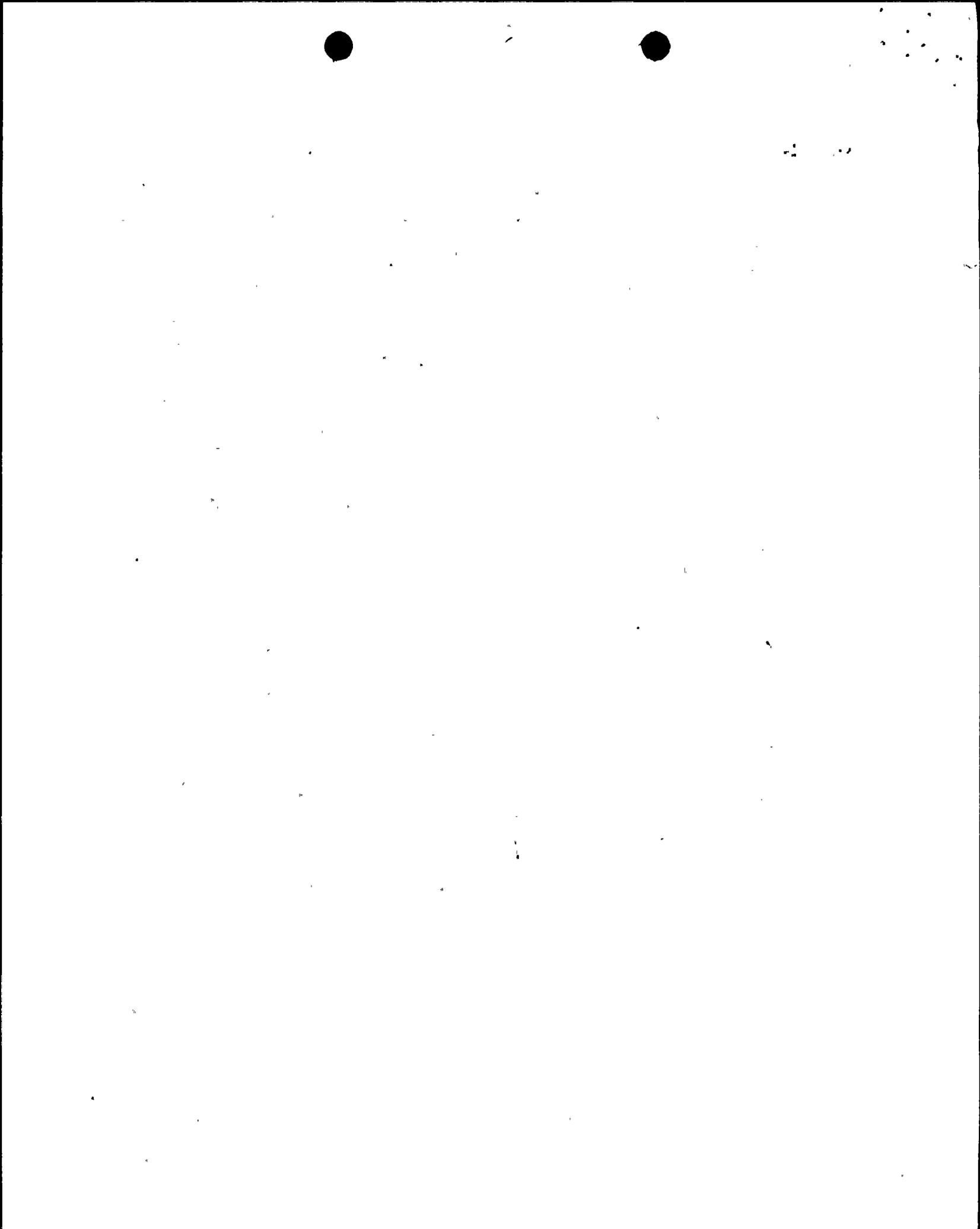
The minimum weight figure of 1333 pounds of ice per basket contains a 5% conservative allowance for ice loss through sublimation. In the event that observed sublimation rates are equal to or lower than design predictions after three years of operation, the minimum ice baskets weight may be adjusted downward. In addition, the number of ice baskets required to be weighed each 18 months may be reduced after 3 years of operation if such a reduction is supported by observed sublimation data.

3/4.6.5.2 ICE BED TEMPERATURE MONITORING SYSTEM

The OPERABILITY of the ice bed temperature monitoring system ensures that the capability is available for monitoring the ice temperature. In the event the monitoring system is inoperable, the ACTION requirements provide assurance that the ice bed heat removal capacity will be retained within the specified time limits.



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The containment sub-compartment analyses assumes a 15% blockage throughout the ice condenser flow paths. The minimum ice condenser flow area through each bay occurs at the lattice frame support elevations, and includes the net open area at these support elevations. This includes the flow area left between the crane wall and the containment wall inside surfaces, after subtracting out the areas for the ice condenser equipment at that elevation, that includes ice baskets full of ice, lattice frame, lattice frame columns, wall panel air ducts and wall panel cradles and other appurtenances. In summary, a flow channel consists of the annular area outside of each basket and one-half of the triangular areas formed by the lattice supports between baskets, such that the sum of these areas around each basket equals the total flow area in the bay. Flow channels in radial rows one and nine include the area between the basket and the containment and crane wall respectively. There are a total of 81 flow channels in each bay - one per ice basket.

The selection of one flow channel each from radial rows 1 and 9 assures that the inspection should include those areas where, based on experience, it is expected to see frost build-up first.

The 3/8" frost or ice accumulation in a flow channel criterion provides only an indicator of ice condenser condition. The lattice frame thickness is 3/8", and therefore, this dimension provides a convenient visual reference during flow channel inspections. Frost or ice buildup in excess of 3/8" shall be evaluated by selecting a further representative sample of 20 flow channels that spiral outward from the affected flow channel. This sample population assures that the areas around and adjacent to the blocked channel are also inspected. More than one restricted flow channel per bay requires a 100% inspection of the bay and calculation to ensure that the 15% blockage limit is met.

Because the minimum ice condenser flow area in each ice condenser bay occurs at the lattice frame support elevations, the inspection of the lower inlet plenum support structures and turning vanes, top deck floor grating and intermediate deck also provides only an indicator of the overall ice condenser condition. The 3/8" thickness criterion provides a threshold to provide reasonable assurance that any frost or ice buildup is corrected well before the 15% blockage assumption is approached in these areas.

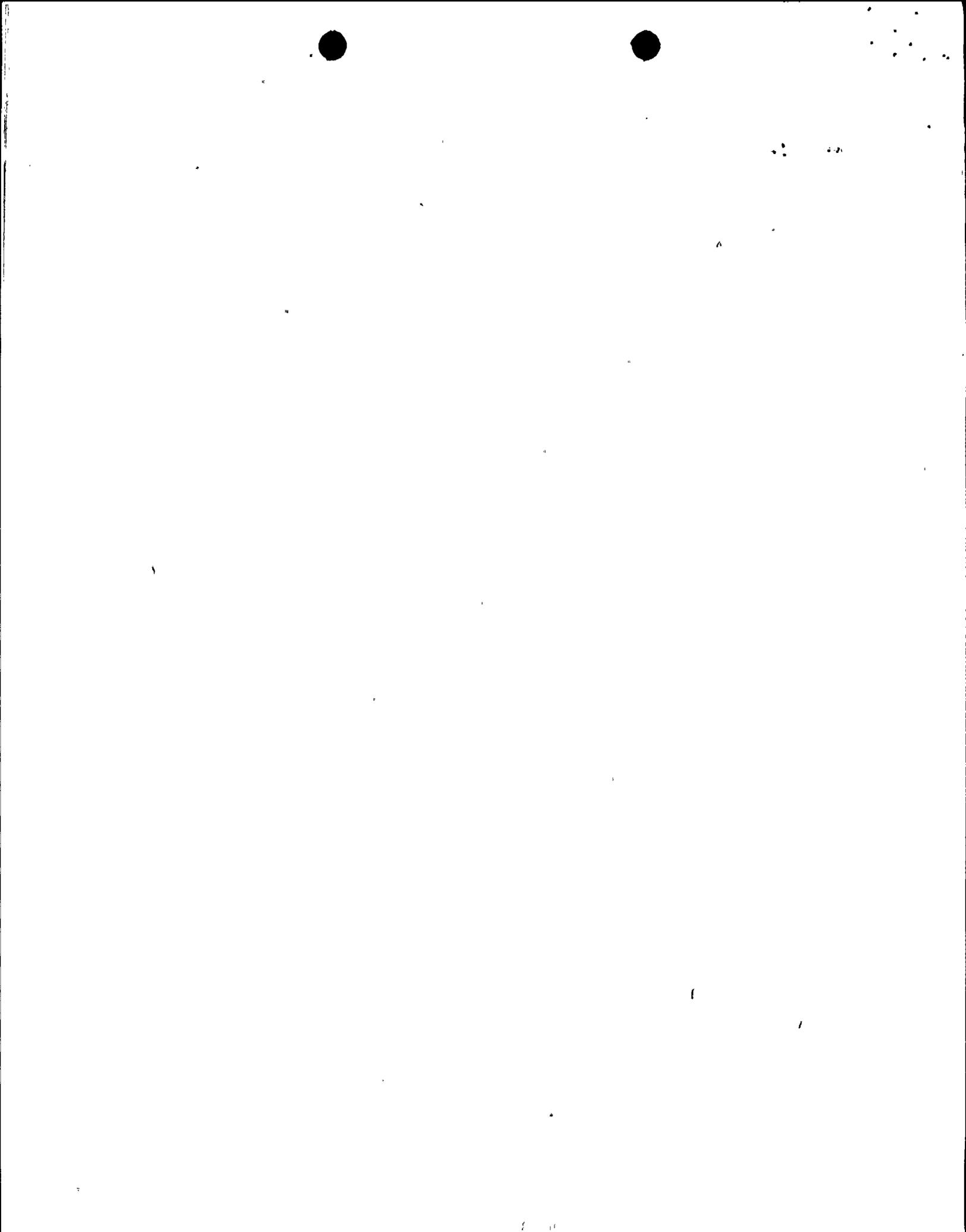
ATTACHMENT 2B TO AEP:NRC:09000

TECHNICAL SPECIFICATIONS PAGES
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REVISED PAGES
UNIT 2

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SURVEILLANCE REQUIREMENTS (Continued)

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Flow channels will be selected as follows: two at random from radial rows 2 through 8 and one each from radial rows 1 and 9.

on the top deck floor grating and on the intermediate deck,

3. Verifying, by a visual inspection of at least ^{four} ~~two~~ flow passages per ice condenser bay, that the accumulation of ~~frost or ice on the top deck floor grating, on the intermediate deck and on flow passages between ice baskets and past lattice frames~~ is restricted to a nominal thickness of 3/8 inches. ^{four} If one flow passage per bay is found to have an accumulation of frost or ice greater than this thickness, a representative sample of 20 additional flow passages from the same bay shall be visually inspected. If these additional flow passages are found acceptable, the surveillance program may proceed considering the single deficiency as unique and acceptable. More than one restricted flow passage per bay is evidence of abnormal degradation of the ice condenser.

c. At least once per 18 months by verifying, by a visual inspection, of each ice condenser bay, that the accumulation of frost or ice on the lower plenum support structures and turning vanes is restricted to a nominal thickness of 3/8 inches. An accumulation of frost or ice greater than this thickness is evidence of abnormal degradation of the ice condenser.

d. At least once per 40 months by lifting and visually inspecting the accessible portions of at least two ice baskets from each 1/3 of the ice condenser and verifying that the ice baskets are free of detrimental structural wear, cracks, corrosion or other damage. The ice baskets shall be raised at least 12 feet for this inspection.

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* channel

** channels

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with: 1) zirconium-water reactions; 2) radiolytic decomposition of water; and 3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," March 1971.

The acceptance criterion of 10,000 ohms is based on the test being performed with the heater element at an ambient temperature, but can be conservatively applied when the heater element is at a temperature above ambient.

3/4.6.5 ICE CONDENSER

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3/4.6.5.1 ICE BED

The OPERABILITY of the ice bed ensures that the required ice inventory will 1) be distributed evenly through the containment bays, 2) contain sufficient boron to preclude dilution of the containment sump following the LOCA and 3) contain sufficient heat removal capability to condense the reactor system volume released during a LOCA. These conditions are consistent with the assumptions used in the accident analyses.

The minimum weight figure of 1333 pounds of ice per basket contains a 5% conservative allowance for ice loss through sublimation. In the event that observed sublimation rates are equal to or lower than design predictions after three years of operation, the minimum ice baskets weight may be adjusted downward. In addition, the number of ice baskets required to be weighed each 18 months may be reduced after 3 years of operation if such a reduction is supported by observed sublimation data.

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PROPOSED TECHNICAL SPECIFICATIONS PAGES

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3/4 6-27

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Surveillance Requirements (Continued)

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PROPOSED TECHNICAL SPECIFICATIONS PAGES

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UNIT 2

3/4 6-36

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SURVEILLANCE REQUIREMENTS (Continued)

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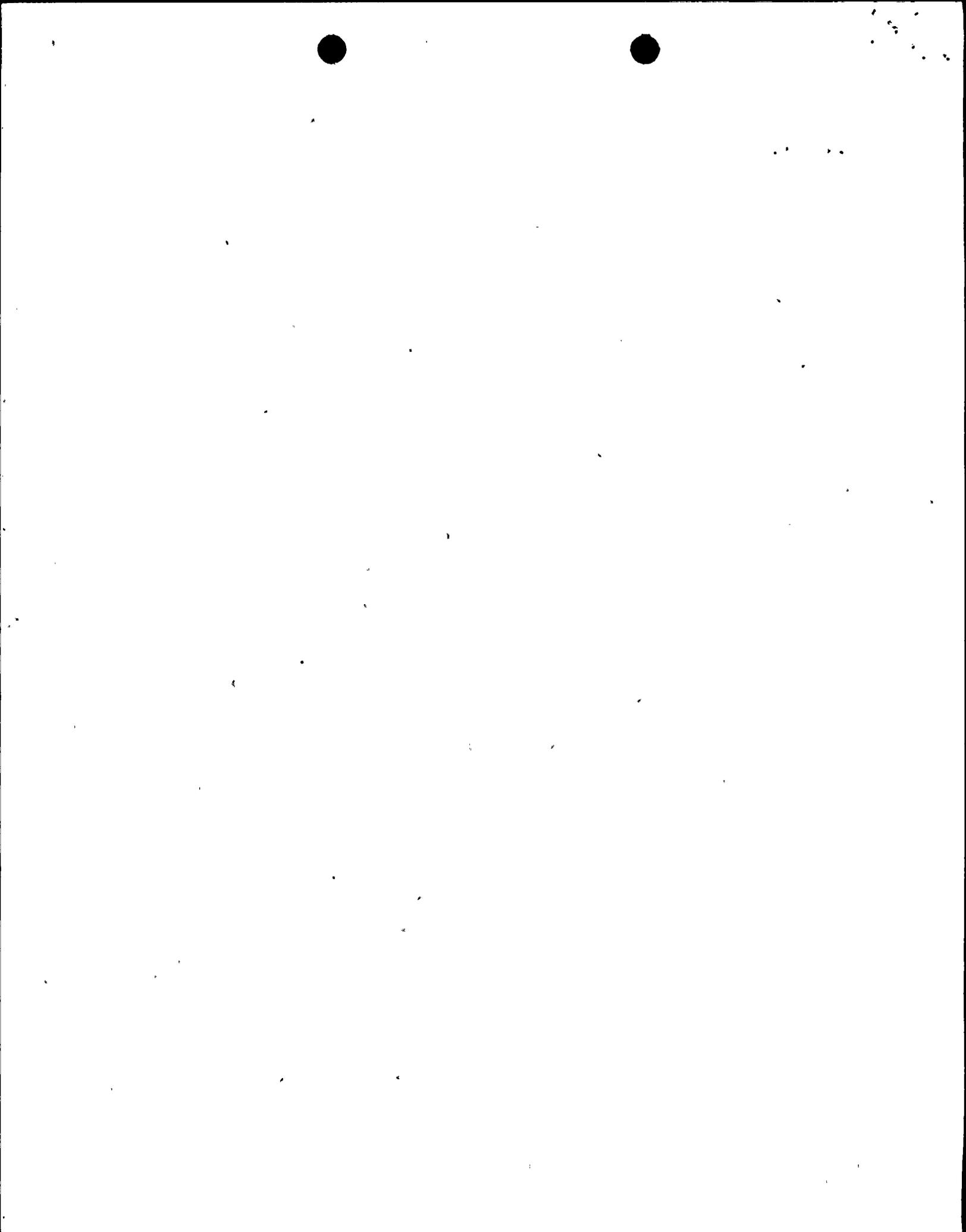
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3/4 BASES
3/4.6 CONTAINMENT SYSTEMS

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ATTACHMENT 4 TO AEP:NRC:09000

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Evaluation of Significant Hazards Consideration

The Licensee has evaluated this proposed amendment and determined that it involves no significant hazards consideration. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment should not:

1. involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated;
2. create the possibility of a new or different kind of accident from any previously analyzed; or
3. involve a significant reduction in a margin of safety.

The Licensee proposes to revise T/S 4.6.5.1b.3 and 4.6.5.1c, "Ice Condenser, Ice Bed," and its associated bases for units 1 and 2. The proposed changes would revise the surveillance for ice condenser flow channels to provide reasonable assurance that blockage of flow channels is detected and evaluated to the maximum analyzed blockage of 15%. The bases are revised to reflect the changes to the T/S and to clarify the intent of additional representative sampling when blocked channels are detected.

The determination that the criteria set forth in 10 CFR 50.92 are met for this amendment request is indicated below.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The ice condenser system is used to mitigate the consequences of an accident and has no impact on the initiation of any evaluated accidents. Therefore, changing the flow channel surveillance does not increase the probability of an evaluated accident.

The proposed changes to the flow channel surveillance provide additional assurance beyond current requirements to provide reasonable assurance that the maximum analyzed blockage of 15% is not exceeded. Therefore, the change does not represent an increase in the consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated. The ice condenser has no function during normal operation. It is a passive system that functions after an

accident has already occurred. The proposed change to the ice condenser flow channel surveillance does not alter physical characteristics of the ice condenser, nor does it change the function of the ice condenser. No new failure mechanisms are introduced by this change.

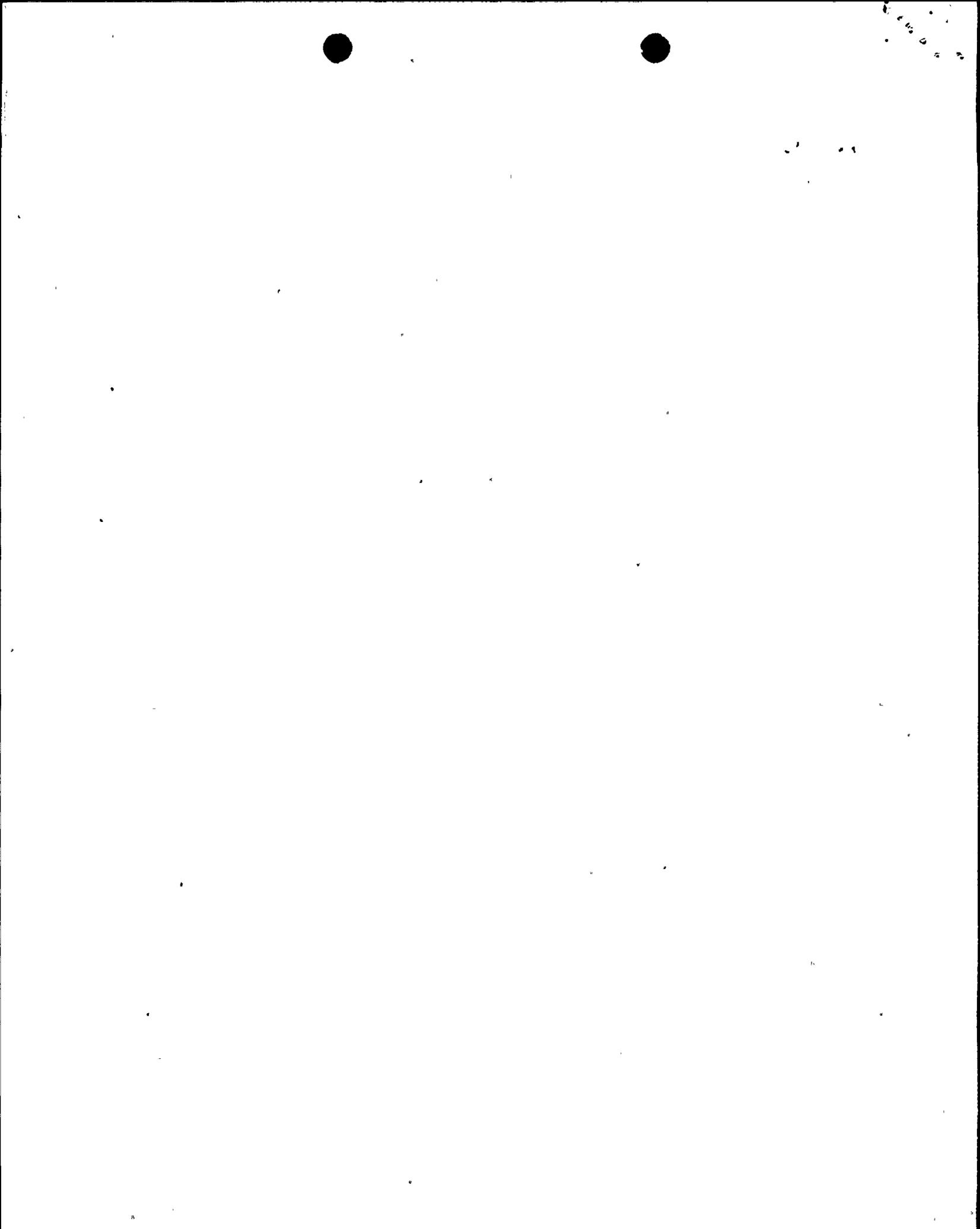
Therefore, it was concluded that the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

The proposed change to the ice condenser flow channel surveillance provides additional assurance that the ice condenser should contain the minimum analyzed flow area. By ensuring the minimum analyzed area is always available, inherent margins due to conservative assumptions in the calculation are maintained. These conservative assumptions include, for example, taking no credit for ice or frost blockage being blown clear during the accident and assuming only one dimensional flow through the ice bed with no credit taken for cross flow.

Therefore, these changes do not involve a significant reduction in a margin of safety.

In summary, based upon the above evaluation, the Licensee has concluded that these changes do not involve a significant hazards consideration.



ATTACHMENT 5 TO AEP:NRC: 09000

ENVIRONMENTAL ASSESSMENT

Environmental Assessment

The Licensee has evaluated this license amendment request against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. The Licensee has determined that this license amendment request meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50 that changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or that changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria.

- (i) The amendment involves no significant hazards consideration.

As demonstrated in attachment 4, this proposed amendment does not involve any significant hazards consideration.

- (ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

As documented in attachment 1, there will be no change in the types or significant increase in the amounts of any effluents released offsite.

- (iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes will not result in significant changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no increase in individual or cumulative occupational radiation exposure resulting from this change.

