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 Rules & Directives Review Branch (Post 920323)

SUBJECT: Comment on licensee 981223 application & NRC 990113 FR re
 NRC proposed finding of NSHC.

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Received in Rules
And Directives Branch
64FR 2237
Jan. 13, 1999
2/16/99 11:00 AM
DL Meyer
February 11, 1999
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D-400

Re: Federal Register, January 13, 1999, pages 2237-2241

I am writing in response to the opportunity for public comment on Carolina Power and Light Co.'s application dated December 23, 1998, and the NRC staff's proposed finding of "No Significant Hazards Considerations."

I. SUMMARY OF COMMENTS

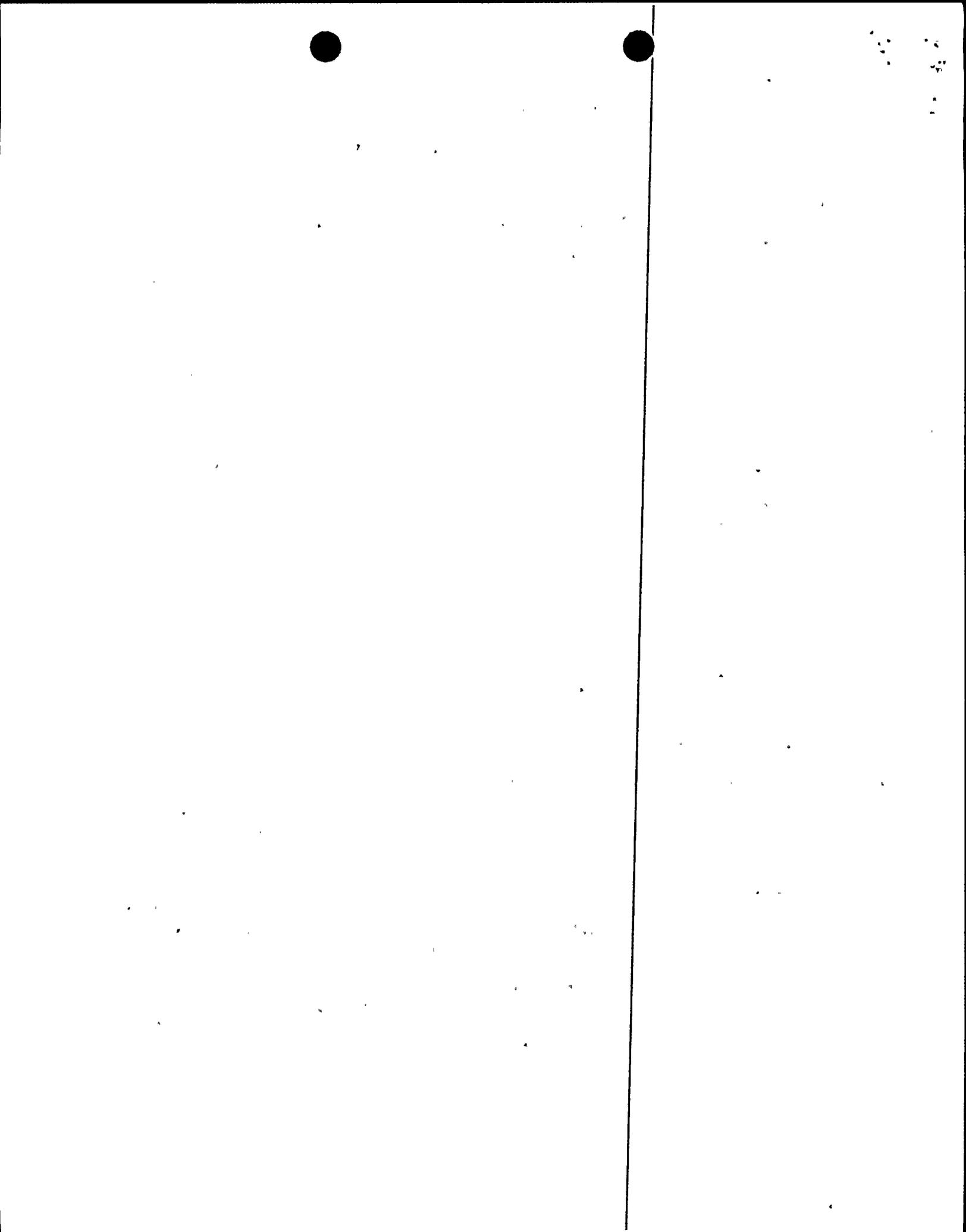
- a) The Commission needs to grant at least a 30-day extension for comment and intervention, because the application has been censored prior to public review on the grounds of a claim by Holtec International of "proprietary information;" some of which may be essential for independent expert review.
- Some critical deletions clearly concern non-proprietary information, components, issues, and aspects of the proposal.
- b) Any extension granted should allow a full 30-day review of a legible, complete and reproducible copy of the licensee's application.
- c) The Commission should also grant an extension because the schedule of meetings for Orange and Chatham Counties has impaired Chatham County's ability to obtain an expert consultant's report on the licensee's proposal and to vote on a timely joint intervention with Orange County on the basis of that report, prior to the current February 12th deadline.
- d) The Commission must not approve CP&L's request for the issuance of new Tech. Specs. for the Harris plant, and completion and activation of spent fuel pools (SFP) 'C' and 'D' until after a hearing is held (and a corrected analysis is available) because the NRC staff has erred in proposing a "No significant hazards considerations" (NSHC) finding on CP&L's application.
- (i) Inherent in the proposed course of actions to be approved is a significant increase in the probability and/or consequences of an accident previously evaluated.
- (ii) the proposed amendment would create the possibility of new/different types of accidents.
- (iii) The licensee's application clearly states that there is an "unreviewed safety question" raised by the use of the existing Component Cooling Water (CCW) system for SFP's 'C' and 'D', with the addition of a significant heat load, a reduction in the existing operating margin

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of the CCW, which "reduces the margin of safety," and a "reduction in the minimum CCW flow to the RHR heat exchanger...[which] is deemed to be a change in the acceptance limit."

- e) The amendments requested by the licensee cannot be approved on the basis of the current application dated December 23, 1999, because the analyses are incomplete, inadequate, and fatally flawed.
- f) Similarly, the NRC staff's review appears to have been conducted in a merely perfunctory fashion if these blatant deficiencies have not been detected and a corrected application required from the licensee prior to any proposed finding on "no significant hazards considerations." Thus the NRC staff's proposed finding is based on a review that cannot be considered adequate to determine whether or not the criteria have been met. Even the licensee appears to make no strong claim that the application and proposed TS amendments involve "no significant hazards considerations." Rather they clearly state that there is an unreviewed safety question and reduction in the margin of safety at the plant.
- g) A public hearing is essential prior to the issuing of any amendment for two additional reasons.
 - (i) The Licensee's analysis in Enclosure 7, involving both crucial safety issues (heat load, criticality, accidents etc.) and consideration of alternative options for fuel storage, has been prepared by Holtec International. Holtec is the manufacturer of the high-density racks that CP&L proposes to purchase and install in SFPs 'C' and 'D'. From a review of recently licensed dry storage systems it appears that Holtec has an exclusive, inherent bias towards the selection of a single option for the licensee, high-density rack installation. The omissions, distortions, discrepancies and bias in Enclosure 7 regarding the comparison of options and impacts of the rack installation option are obvious and egregious, and demand the hearing by the Commission of additional evidence.
 - (ii) The steps that would be taken if the amendments are approved would be irreversible in many respects, and a hearing after approval would render many current issues moot. More importantly, they would include the avoidable significant exposure to both public and workers and the probable repeat of these exposures once the spent fuel is later removed from pools 'C' and 'D' for subsequent dry storage.



II. DELETION OF NON-PROPRIETARY INFORMATION

Enclosure 7 contains a claim by Holtec International for NRC withholding of certain portions of Enclosure 7 as "proprietary information," identified as including for example that which discloses "a process, method or apparatus" that is proprietary or which could be used in the licensing of another competitive product.

Yet there are sections subject to wide-ranging deletions that completely fail to fall within (or even near) the product at issue (the high-density Dynarack) or the criteria for proprietary treatment described.

For example, significant deletions of non-proprietary information include:

- a) Enclosure 7, Section 4, Criticality Analysis: this section has been substantially gutted in the copy available for public and expert review, including deletion of the "conservative assumptions" used. This has been done even though the criticality would be caused by and occur in the spent fuel rods manufactured by companies other than Holtec, used in reactors not designed or manufactured by Holtec, and cooled in pools and by existing systems and components not designed or manufactured by or proprietary to Holtec.
- b) Enclosure 7, Section 8: this section contains deletions of information relating to components other than the racks, even when these components are being considered independently of the racks. For instance, information is deleted on page 8-5 relating to the seismic integrity of the existing pool structures of 'C' and 'D' pools. On page 8-13 information is deleted regarding seismic considerations of the entire Fuel Handling Building (FHB) itself! Holtec neither designed nor built these structures, and the information cannot be considered proprietary to them.
- c) In Enclosure 7, Section 9, crucial deletions have been made related to (and including actual estimates of) anticipated (worker) dose from the proposed option (high-density rack/pool storage). This cannot possibly be proprietary since the dose is coming from the fuel rods, not the racks, and is dependent on the number of assemblies loaded, inspected, etc., their age, burnup rates, failure etc, which are totally unrelated to rack design. There has been no attempt to suppress disclosure of the number of assemblies to be shipped and loaded into the two new pools. CP&L/Holtec's estimate is thus also identified as being probably wildly inaccurate, possibly zero (given CP&L's stated basis for this estimate, that "the Harris racking project represents lower radiological risks due to the fact that the pools currently contain no spent fuel[!]")



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The page numbers of pages with deletions in Enclosure 7 in the copy available for public review are listed below.

Pages in CP&L's application with deletions, Chatham copy

Enclosure 7, Holtec

Section 2: pages, 2-1, 2-2, 2-13, 2-14, 2-15, 2-16
table 2.5.1, Figs. 2.6.1 through 7

Section 4: pages 4-2, 4-5 through 4-9, 4-12, 4-14, 4-15,
4-18, 4-20 through 4-26.

Section 5: pages 5-3, 5-5 through 5-7, pages 5-22 through 5-26

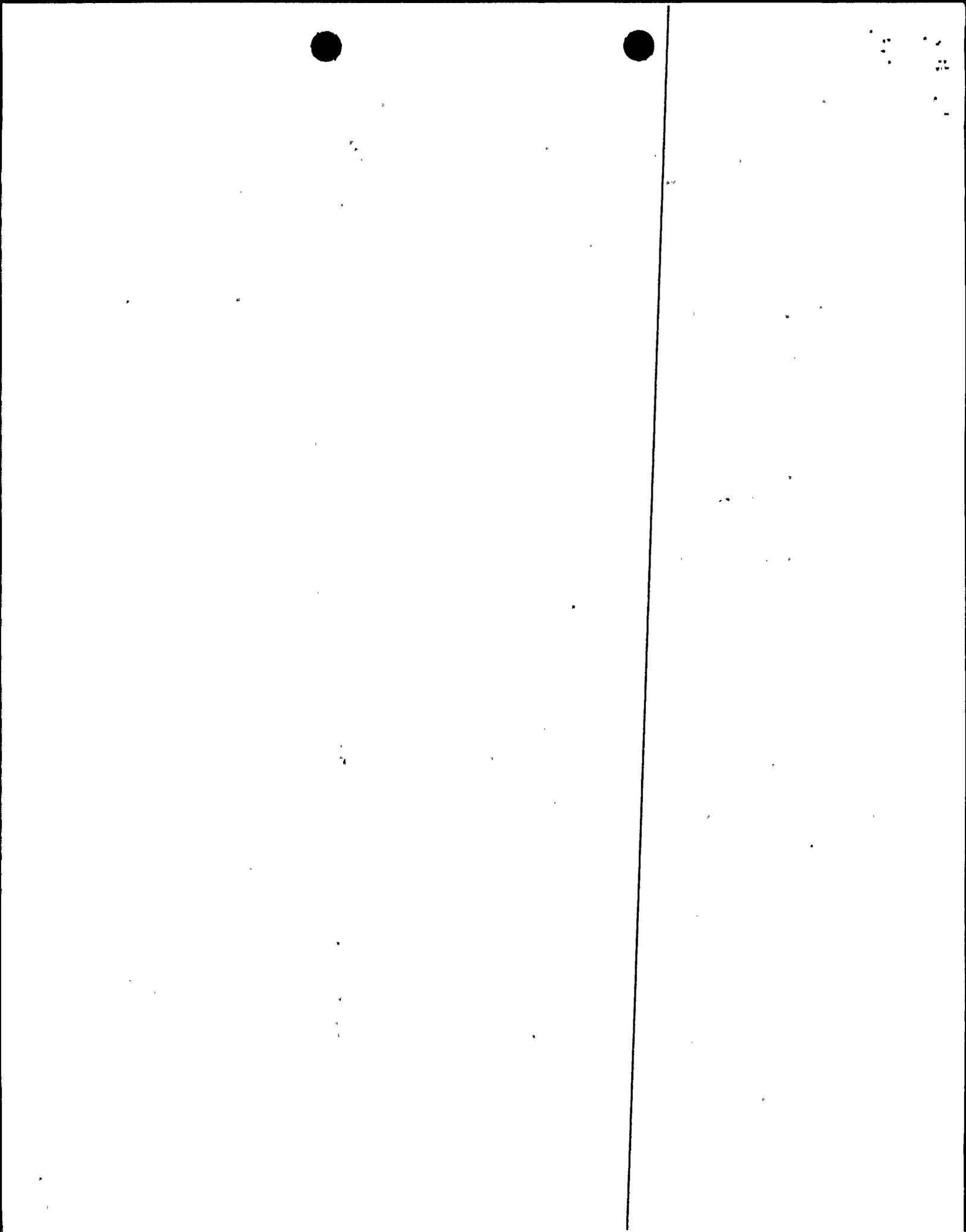
Section 6: pages 6-7, 6-8, 6-9, 6-12, 6-14, 6-49, 6-50, 6-51
6-61 through 6-75

Section 7: 7-10, 7-16, 7-17(?), 7-18, 7-20 through 7-25

Section 8: pages 8-4, 8-5, 8-13

Section 9: pages 9-2, 9-4.

Note: these are pages with deletions, not pages that are omitted or totally blank. Some full-page figures obviously mean that the figure is identified but not shown.



III. ERRONEOUS FINDING OF "NO SIGNIFICANT HAZARDS CONSIDERATION"

In its January 13, 1999 Federal Register notice the Commission states that a proposed determination of "no significant hazards considerations" cannot be made if the proposed amendment would "(3) involve a significant reduction in a margin of safety."

In addition to the objections raised in I.(d) and I.(d) 3 above, I must draw the Commission's attention to the non-discretionary aspects of all the criteria listed for a NSHC finding, and proposed finding, especially that regarding "margin of safety."

Clearly the Commission should never ultimately approve any amendment which increases accident risks or consequences (or decreases any margin of safety) beyond current benchmarks of acceptability to the Commission.

However ultimate acceptability and approval of any such increases or decreases is not the issue in a NSHC finding, only that such increases or decreases are involved. It does not matter one iota how "adequate" the margin of safety is stated to be by the licensee, nor whether the Commission determines that the margin is adequate, or even excessive, it only matters that it would be appreciably reduced, as the licensee has clearly stated in Enclosure 9.

In addition, there appears to be faulty math at work in the assessment that the amendment fails to pose an increased risk of accidents "previously evaluated" or the consequences of such accidents.

As cogently stated in a letter to the Commission dated January 22, 1999, regarding increased risk of fuel handling accidents, by David A. Lochbaum of the Union of Concerned Scientists, "the probability of a fuel handling accident at Harris will nearly double if the license amendment request is granted."

Even if the Commission disagrees with Mr. Lochbaum's analysis, both the licensee (and apparently NRC staff) appear to base their assumption of no increased risk on the rather Twilight Zone concept that shipment of fuel from other CP&L plants and loading of that fuel into racks, would continue unabated for decades on end, presumably in some quite other dimension, even if there are no additional pools (and racks) to load them into.

In other words, if the amendment is not approved, there will, at some point, be no additional fuel handling of this type, and at the current rate, and this particular activity would have to stop. This ending of the activity is inherent to any previous analysis of the use of pool 'B' for fuel from other plants.



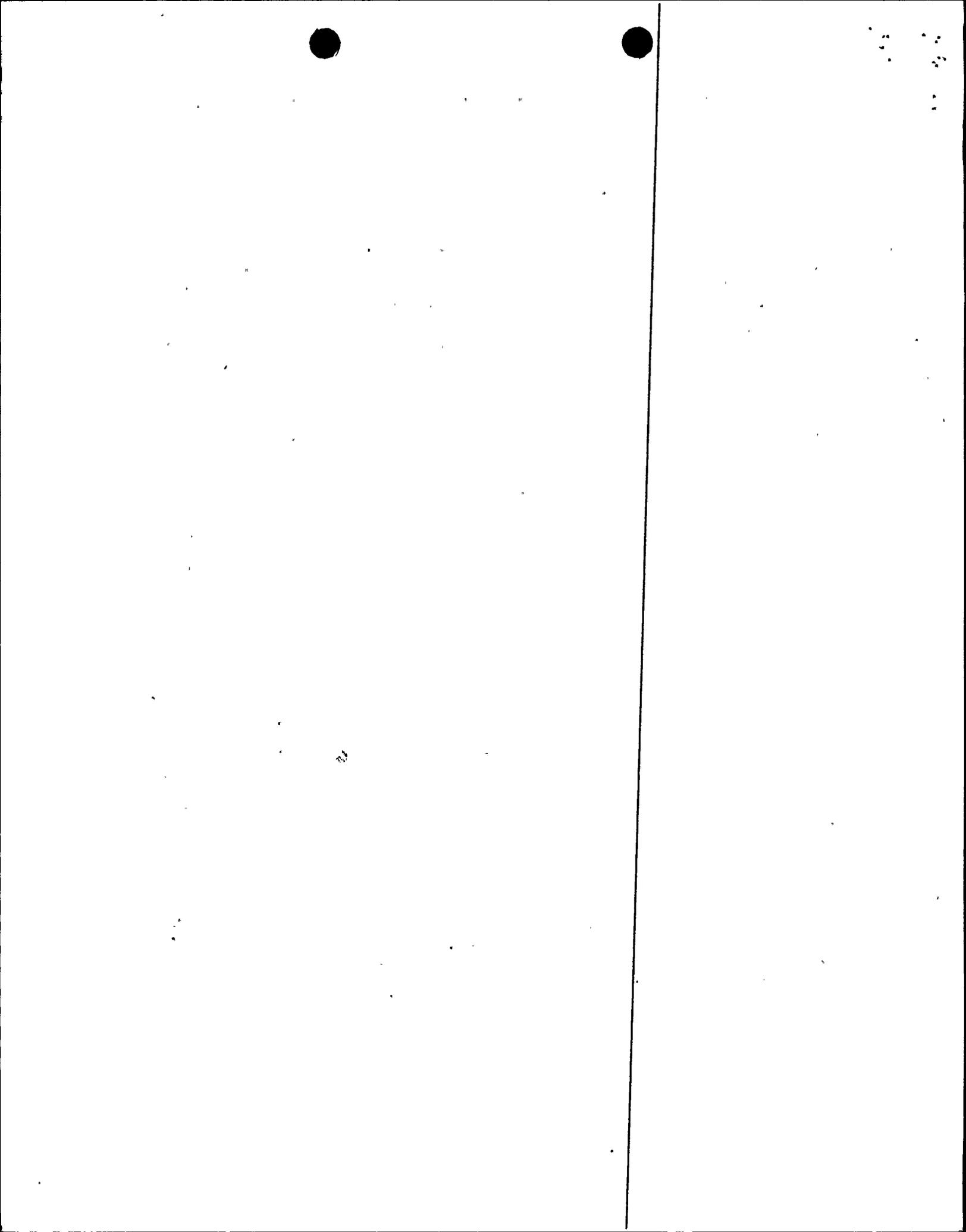
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The licensee's analysis, and NRC staff finding, also fail to use simple math in calculating accident consequences. Accidents "previously evaluated" involving loss of cooling, fuel failure and offsite dose were, inevitably, accidents involving fuel pool 'A' (freshly offloaded fuel) and pool 'B' older fuel shipped in from the CP&L Brunswick and Robinson reactors.

Accidents that could occur at the Harris plant if this amendment is approved are for components and conditions not previously evaluated, and involving an inventory of fuel not previously evaluated.

Even if the Commission refuses to consider the risk of an accident involving all four pools (instead of two) that utilize the same CCW as was previously involved only in cooling two pools, the Commission must determine that any accident involving loss of cooling, and subsequent increase in off-site dose, is an accident with increased consequences that have not been previously evaluated.

Pools A and B are stated to currently contain "conventional" racks, and pools C and D are to be equipped with high-density racks. The radioactive inventory (as well as the criticality risks) of this new configuration are only being now evaluated for the first time. Regardless of how low the Commission thinks that the risks of a loss of cooling accident are, it cannot make a NSHC finding when increased accident consequences are inherent to the new proposal compared to current conditions and previous calculations.



IV. INCOMPLETE APPLICATION, ERROR, OMISSION, DISCREPANCY ETC.

Errors and omissions etc. are rife in the application. Two areas of the analysis presented provide good examples.

a) Radiological evaluation:

On page 9-1 CP&L states that "no significant increase in the volume of solid radioactive wastes is expected from operating with the expanded storage capacity." Even if one considers volume only, not the increased radioactivity of filter resins, this statement is contradicted elsewhere. On page 11-7 CP&L describes the 250 tons of additional stainless steel (for racks) and 20 tons of boron, all of which would eventually become operating or decommissioning LLRW. On page 10-7 CP&L states that rack installation would generate LLRW.

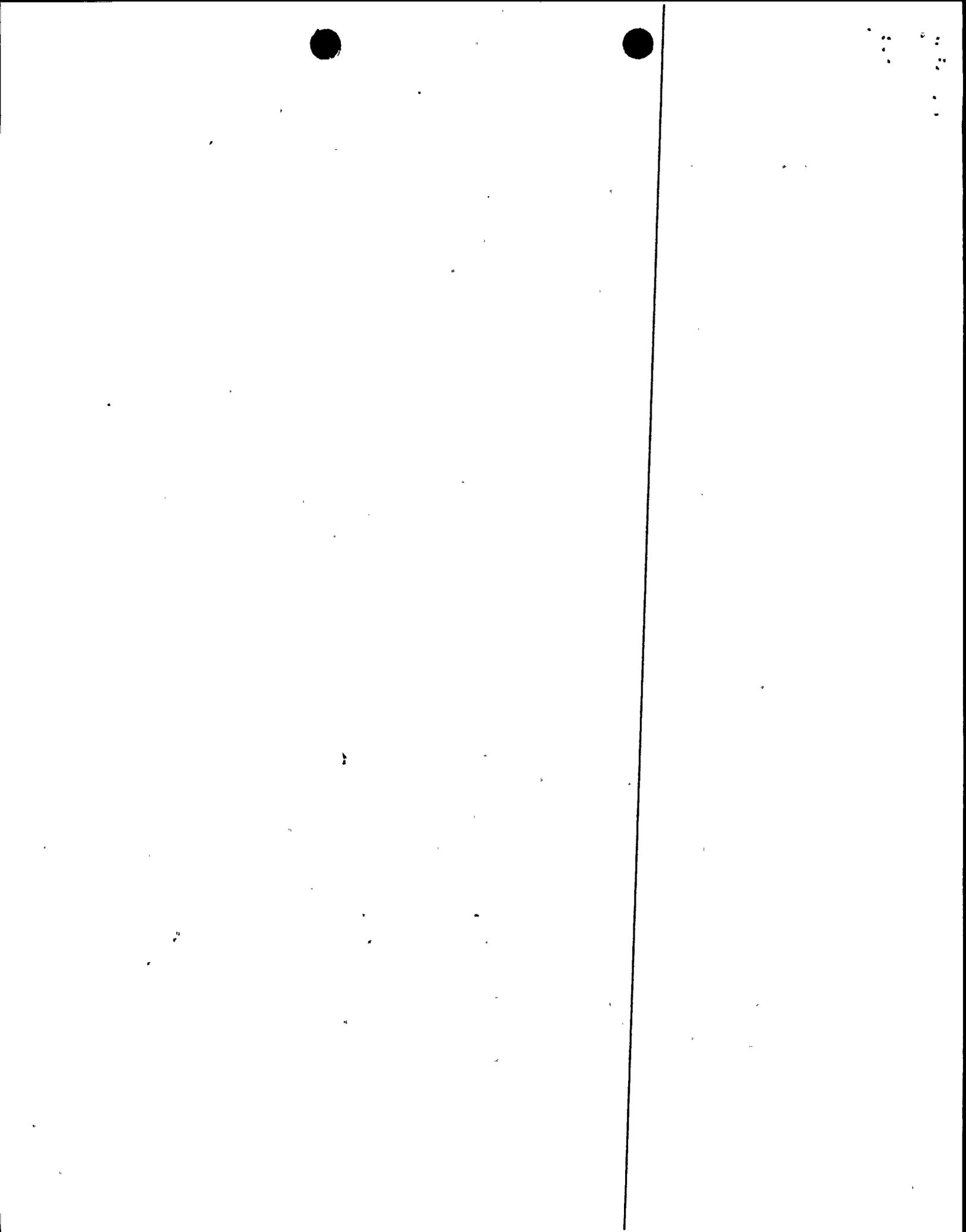
In its analysis of possible options in section 11 of Enclosure 7, CP&L fails to provide an objective comparison of LLRW generation for each option (included the proposed one), just as they fail to objectively present the lifecycle worker doses (or accident risks) for each option.

In Enclosure 7, Section 11.6, CP&L summarily dismisses "Environmental Considerations" (radiological and other) in two paragraphs. However, the only issue addressed is the possible impact of increased humidity in the FHB and the 'negligible' vapor emission to the environment.

CP&L states in its application that since the SER was prepared for a two-unit, four-pool configuration, no additional evaluations are required, for the UHS or for any other aspect. Yet the SER evaluations cannot have considered the use of high-density racks and their higher fuel inventory.

Did the SER anticipate that spent fuel would be shipped off to a DOE repository after a relatively short period of cooling (a reasonable assumption at the time the SER was prepared)? Four pools containing fuel from two reactors for a short period of time could contain more short-lived radionuclides, but less longer lived ones than four pools containing older fuel from four reactors. CP&L has

CP&L has omitted a needed analysis of many impacts of the proposed amendment on the basis of the SER, even though the environmental impacts don't come from the pools, they come from the spent fuel, and the calculations in the SER are completely inapplicable and irrelevant to the proposed amendment to install high-density racks for imported fuel in the C and D pools.



b) Environmental Cost/Benefit, Evaluation of Options

CP&L's application raises the issue of the potential shut down of the Harris plant even though it is the imported fuel, not Harris fuel, that is using up space in pool B.

Other distortions are evident in Enclosure 7, Section 11.

- (i) CP&L ignores the complete lifecycle costs of its preferred option, and fails to compare this cost estimate to the cost of the described dry storage options. Even if it were appropriate for the NRC to approve a less safe option on the grounds of licensee cost, CP&L is presenting rack installation as the cheapest of all alternatives considered, without comparing all their own actual costs for each alternative, such as operating costs, costs of shipment to Harris vs. dry storage at each plant of origin, costs of decommissioning the two new pools, etc. etc.
- (ii) CP&L does not prevent a fair analysis and comparison of the total number of fuel handling steps and estimated worker exposures involved in all possible alternative options for storage of spent fuel from Brunswick and Robinson.
- (iii) CP&L seems to think there is a problem with casks, "as presently licensed" and that they are limited to a 20-year storage service life. Their analysis fails to address the Horizontal Storage Module option selected by SMUD at Rancho Seco for spent fuel storage for the next 25 years, and other vaults considered good for 50.
- (iv) Another concern raised by CP&L with "modular vault storage is that of "inherent eventual repackaging": for shipment to a DOE repository. Should we assume that spent fuel shipped to the Harris North pools will be either (a) sold to terrorist nations or groups, or (b) simply left for eternity?
Similarly CP&L complains that modular vaults would have to be decommissioned (but so would the north pools).
- (v) CP&L's evaluation of alternatives in Enclosure 7, Section 11 actually omits a section on its proposed option, high-density rack installation and activation of C & D pools. This allows them to invent all sort of silly obstacles to other options and never even discuss the one proposed!

These are just a few examples among many of why the licensee's application should be considered inadequate and incomplete, and why the NRC staff's review should be considered insufficiently thoroughly for a NSHC finding.

Liz Cullington

Liz
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Handwritten notes or signatures in the bottom right corner, including the word "S. L." and other illegible characters.

Chief, Rules and Directives Branch
Division of Administrative Services
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US Nuclear Regulatory Commission
Washington DC 20555-0001

February 12 1999

Re: Federal Register: January 12, 1999, pp 2237-2241

I would like to make the following corrections to
my comments submitted 2/11/99.

Page 1, I. (d) (ii) ~~consequences~~ should be consequences

Page 2, I. (f) line 5 should read proposed finding of "no

Page 2, I. (g) (ii) may current issues should be many

Page 7, IV. (a) line 9, LLRW should be LLRW

Page 8, IV. (b) (i) line 10 decomissioning should be decommissioning

Page 8, IV. (b) (ii) line 1, prevent should be present

2/16/99 11:00
AM

Note: Per telephone call
from Liz Cullington on
2/16/99, this FAX is to
be added to the submission
sent via Fed Express as
page 9

Liz Cullington

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