

February 19, 1962

MEMORANDUM

To : Dr. J. C. Geyer, Chairman
Environmental Subcommittee

From : James B. Graham ^{Original Signed By}
Executive Secretary, ~~ACRS~~ B. Graham

Subject: TECHNICAL INFORMATION DOCUMENT - DRAFT #5 REVISED
JANUARY 29, 1962

Reference: Memorandum from R. F. Fraley to ACRS Members, dated 2/12/62,
Subject: ACRS Action Regarding 10 CFR Part 100 -
Technical Information Document

By now you should have received comments from ACRS members pertaining to the subject document. As stated in our telephone conversation of this date, I am furnishing a listing of points which Ray Fraley and I believe should be covered. I understand that you expect to collate the comments and decide what subcommittee action is needed.

Some of the below comments may be almost trivial in nature. I shall try to identify those which I consider to be major.

1. Page 2, line 4 - Suggest "can be used to compare proposed sites for a nuclear power plant."
2. Page 5, line 3 - Last word should be "disapproving."
3. Page 9, line 25 - Suggest "major release" rather than "gross release." (This point raised by JCG during meeting of 1/8/62.)
4. Page 13, line 4 - Suggest that the parenthetical expression be deleted or that the following be substituted: "which are often more significant than the whole body doses." (During meeting of 1/8/62, a similar comment by DAR was passed to the staff.)

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5. Page 14, line 16 - During meeting of 1/8/62, FG suggested that some word other than "conservative" be used.
6. Page 15, line 10 - Suggest that the words ^{"light cooled and"} "water moderated one" be substituted for "pressurized water type." (This avoids the pressurized water versus boiling water controversy and I consider it a major point.)
7. Page 15, paragraph 2 - During meeting of 1/8/62, FG suggested that a reference be cited which would provide some basis for the assumed percent fission product release. This has not been done.
8. Page 15, paragraph 3, line 1 - Suggest the word "radioactive" be inserted before "iodines." (This may appear to be a minor point but experiment may show that the presence of stable iodine, of which there will be a fair amount in the reactor, seriously affects the absorption of the radioactive iodine on the internal surfaces. For this reason, I believe that since "radioactive iodines" is clearly intended, it should be so stated.)
9. Page 16, paragraph 4, line 3 - It should be made clear that the leakage rate of 0.1% per day is a maximum, not an average rate.
10. Page 16, paragraph 5 - In this spot and perhaps others throughout the document, it may be well to insert a caveat which takes into account recent data concerning lower rates of diffusion observed over water surfaces.
11. Page 19, line 24 - Perhaps it depends upon your definition of "centerline" but it appears that the word "on" should be substituted for "directly under."
12. Page 21, line 3 - Should the word "parameter" be capitalized or has an earlier portion of the sentence been omitted?
13. Page 23, line 7 - It should be clarified that the rate of leakage is calculated either in terms of S T P or at the pressure and temperature conditions during the accident. (See also page 24, bottom. This is a major point.)
14. Page 29 - Note that the ~~gamma~~ source strength is a factor of about 3.6 smaller than that used in draft #4 but this does not seem to have caused any significant change in the exclusion distance due to the direct ~~gamma~~ dose. (I don't really expect them to change the final result, I only wonder how they compensated for the decrease.)

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- ✓ 15. Page 31, line 18 - Suggest "iodine and whole body doses" be substituted for "controlling." (This is a point which has been made several times by DAR.)

A further general comment is that in six places throughout the document, they have pointed out that this calculational procedure just happens to reflect past and present siting practices. I think this is nice but, as Dr. Williams has pointed out, this does not justify or vouch for the correctness of the method.

cc: F. A. Gifford
K. R. Osborn
L. Silverman
C. R. Williams
D. A. Rogers
H. W. Newson

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