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OCT 17 1963

Don Williams, Director
Reactors Division

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John R. Horan, Director
Health and Safety Division

COMMENTS: SAFETY ANALYSIS REPORT - SNAPTRAN 2/10A-3 WATER IMMERSION TESTS

SYMBOL: HSHP:RPB

The subject report has been reviewed by the Health and Safety Division. We agree that the destructive test program presents an acceptable hazard to site personnel and to the general public.

General Comments

The hazard calculations agree within a factor of two or three with our independent calculations except for the ingestion dose. Our calculations indicate a potential off-site child thyroid dose of about 100 mrem for the destructive test instead of the 25 mrem stated in the report. This larger value is still within the limits for off-site exposures and is not therefore considered a significant hazard, especially in the light of the pessimistic release model assumed.

Since the ingestion dose is the greatest calculated hazard, we have a few comments on the ingestion dose calculation. Reduction of calculated values was made in the report on the basis of empirical observations made locally. The reference report cited for this emperical reduction indicates the limitations of the observations. Information obtained from the preliminary CERT test indicates a reduction in calculated ingestion doses is warranted, but no specific reduction factor can be assigned at this time. Instead, consideration might be given to a reduction of the cow's consumption of pasture grasses during winter months. For instance, for the months of November and December, 20% of a cow's diet is estimated to be pasture grasses.

For most of the hazards calculations, reference is made to the CURIE program instead of presenting values for source terms. We are of the opinion that the use of explicit source values is desirable.

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Specific Comments

Tables VII - A and -B, pages 94 and 95, list a "total integrated dose" for different locations. This dose is a combination of whole body doses and a thyroid dose. Addition of a whole body dose and a thyroid dose is misleading; they should be listed separately.

Point (9) of Chapter IX, Conclusions, page 107, mentions for the first time the concept of "maximum credible" and states that it corresponds to the planned destructive test. The thorough safety considerations and planning indicated by the report justifies this belated conclusion. However, the possibility of a wind shift shortly after the power excursion is the maximum credible accident in our opinion. The on-site exposures in such a situation could be 25 mrem to the whole body and 7 mrem to the thyroid. These potential exposures are recognized in the report and should have been given in point (9) rather than the total integrated dose of less than 1 mrem.

Since test conditions call for a 3-hour period of temperature lapse conditions this means that the test will probably have to be initiated no later than 2o'clock in the afternoon in the winter months, since the inversion usually set in by 5:00 PM in the afternoon during that season.

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