SNH

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

POOR ORIGINAL

Task Action Plan A-9

AUG 13 1979

NOTE TO: Files

FROM: Ashok Thadani

This note records telephone conversation that Fuat Odar and I had with General Electric on 8/7/79. The subject matter was specific questions on radiological assessment and ATWS analysis code. The total list of questions was sent to GE on 8/6/79 and to the ATWS task group on 8/9/79.

Radiological

Q.63 See Question list for question description

Item 3g. GE: Alt. #4 not yet evaluated

Alt. #3 - No degradation of seals expected and therefore none assumed.

NRC: Difficulties at TMI-2 suggest that leakage can and does occur and that GE should review lessons learned report on this item and comment to us.

Item 3i, j, k: Alt. #4

Item 3l: Leakage pathways considered are containment and condenser and the leakage assumptions are conservative.

Item 3m: Part a: Release thru condenser considered
Part b: Alt. #4

Q.64: GE did essentially what was asked in 2/15/77 Mattson letter.
i.e. Tech Spec activity (TSA) x 250 = 1/2 TSA x 500

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Q.65: GE analysis results in

$1.2 \times 10^{3}_{4}$ Curies airborne in 1 minute
9.6×10^{4} Curies airborne in 8 hours

Staff assumptions yield 3.7×10^{3} Curies airborne in 30 minutes
GE feels their method is more appropriate.

Q.66: 8 x 8 assembly on all BWR 5/6
All operating BWRs are expected to have 8 x 8 assemblies by Mid'81- i.e. prior to ATWS fix is implemented.

Q.67: GE recommends that the staff review Section 5.2.1.

Q.30: GE was told that the staff had recommended use of 90% efficiency of SGTS filter and not 95%. GE stated that in the worst case this assumption would result in a factor of five increase in radiological dose values. However, GE believes the final radiological dose would still be far below 10 CFR 100 guideline value.

Computer Code

We described our concerns with the use of REDY code for ATWS analyses, (These concerns are documented in my note to M. Aycock dated 8/8/79).

GE stated the following concerns with using ODYN code for ATWS calculations.

a) No film boiling heat transfer model - minor problem

b) ATWS long term core flow less than 20% - ODYN hydraulic model may be inadequate and the code may be susceptible to numerical uncertainties. This raises the concern of accuracy after about 30 seconds in the transient.

c) The reactivity model in the ODYN code does not have provision for Boron injection.

Staff asked GE to compare ODYN/REDY calculations for all overpressure transients for all classes of plants for ~ 60 seconds and if the results are not significantly different, REDY could be used for long term calculations. The staff also gathered from GE comments that the short term limitations of REDY (~ 60 sec. calculation) were not major and could be corrected in a reasonably short time period.

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