NRC 8HDA

0817 EST

640137 STUDS S

55 FR 1130

12

1981-04-01 1520 TLX NO 1309

ATTN M SILBERBERG

REGARDING NUREG-0772 DRAFT

1.
DURING THE LIMITED TIME PERIOD AVAILABLE NRC AND ITS CONTRACTORS HAVE COLLECTED A SUBSTANTIAL AMOUNT OF VALUABLE INFORMATION AND HAVE PERFORMED THE APPROPRIATE COMPUTER CALCULATIONS AS A GOOD BASIS FOR ESTIMATING THE BEHAVIOUR OF PRIMARILY IODINE AND CESIUM DURING REACTOR ACCIDENT CONDITIONS. THE RESULTS ARE PRESENTED IN A DRAFT REPORT NUREG-0772. IT IS NO DOUBT THAT THE DOCUMENT WILL BE VERY HELPFUL FOR THE UNDERSTANDING OF THE BEHAVIOUR OF IODINE AND CESIUM DURING ACCIDENTS.

2.
ALTHOUGH CESIUM IODIDE MAY BE AN IMPORTANT SPECIE DURING ACCIDENTS OTHER IODIDES AND ELEMENTAL IODINE MAY ALSO BE PRESENT. THE EVIDENCES FOR CESIUM IODIDE DOMINANCE OVER OTHER IODIDES ARE NOT CLEARLY DEMONSTRATED.

3.
BASED ON OUR PRESENT KNOWLEDGE, WHICH IMPLIES THAT THE RETENTION EFFECTS CAN BE CLEARLY DOCUMENTED, THE RELEASE FIGURES REFLECT A BETTER ESTIMATE THAN PREVIOUSLY POSSIBLE. THE KNOWLEDGE IS HOWEVER STILL LIMITED TO CERTAIN EXTENT. ADDITIONAL KNOWLEDGE TENDS TO DECREASE RELEASE FIGURES AND PROBABILITIES FOR THOSE SEQUENCES WHICH ARE RISK DOMINANT.

4.
THE REPORT DOES NOT TREAT THE PROBABILITIES OF ACCIDENT SEQUENCES. HOWEVER THERE IS A GENERAL CONSENSUS THAT THE PROBABILITIES FOR STEAM EXPLOSIONS DAMAGING THE CONTAINMENT IS AT LEAST MUCH LOWER THAN PREVIOUSLY ASSUMED. THE IMPLICATION IS REDUCED RISK AND SOMEWHERE IN THE SUMMARY THIS ASPECT OUGHT TO BE ADDRESSED.

5.
IN THE SUMMARY OF THE REPORT TOO MUCH EMPHASIS IS PUT ON THE ULTIMATE EQUILIBRIUM OF THE IODINE IODATE REACTION IN CONTACT WITH WATER. FROM OUR EXPERIMENTS WE KNOW THAT THIS REACTION IS RELATIVELY SLOW EVEN AT 400 DEGREES C.

SOME ADDITIONAL COMMENTS MAY ARRIVE LATER. THANK YOU FOR THE INTERESTING MEETING AND THE TRANSCRIPTS VIA RAGNAR NILSON.

BEST REGARDS
LENNART DEVELL
STUDSVIK++

CORRECTION POINT 5: FOURTH LINE SHALL BE READ
RELATIVELY SLOW EVEN AT 100 DEGREES C.

NRC 8HDA

001205

640137 STUDS S