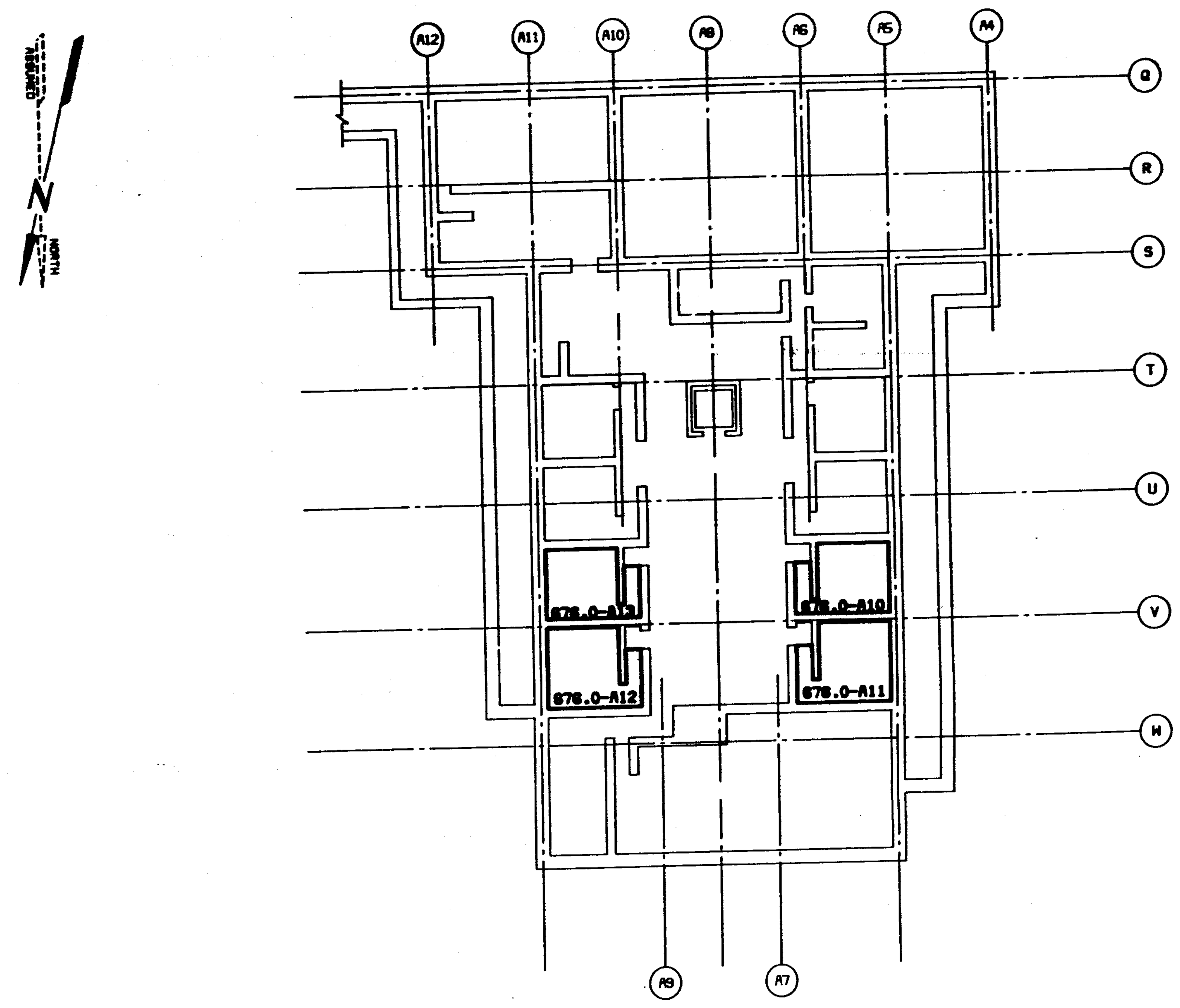


PLAN-EL 676.0

GENERAL NOTES: FIGURE AND NOTE NUMBERS CORRESPOND TO THOSE OF REFERENCE 1. ALL FIGURES AND NOTES REQUIRED FOR THE AREA(S) ARE GIVEN.

NOTES:

1. OPERATIONAL CONDITION DEFINITIONS:
   1. NORMAL
   2. ABNORMAL
   3. LOCA/HELB INSIDE PRIMARY CONTAINMENT (WORST CASE SMALL BREAK FOR TEMPERATURE - LARGE BREAK FOR PRESSURE)
   4. HELB OUTSIDE PRIMARY CONTAINMENT
   5. TORNADO (SUDDEN PRESSURE DROP OF 3 PSI)
   6. INADVERTENT CONTAINMENT SPRAY INITIATION - SEE NOTES 19, 22

2. ATM -INDICATES ATMOSPHERIC PRESSURE EXISTS. NORMAL ATMOSPHERIC PRESSURE AT WBN IS APPOXIMATELY 14.4 PSIA.

   ATM(+) -INDICATES A POSITIVE PRESSURE WITH RESPECT TO THE ATMOSPHERE.

   ATM(-) -INDICATES A NEGATIVE PRESSURE WITH RESPECT TO THE ATMOSPHERE. THE ANNULUS IS MAINTAINED AT A NOMINAL PRESSURE OF -5.0 INCHES OF WATER DURING ALL NORMAL AND ABNORMAL CONDITIONS. DURING AN ACCIDENT CONDITION (OPERATIONAL CONDITION 3) AND DURING PERIODS OF TESTING THE EGTS, ANNULUS PRESSURE WILL BE MAINTAINED AT -0.5 INCHES OF WATER.

4. PRIMARY CONTAINMENT IS NOT AFFECTED BY DEPRESSURIZATION DURING A TORNADO CONDITION. THE PROBABILITY OF A TORNADO IS 3.38X10^{-5} OR APPROXIMATELY ONCE EVERY 30,000 YEARS.

8. THESE MAXIMUM AND MINIMUM ABNORMAL TEMPERATURES COULD OCCUR AS A RESULT OF OUTSIDE TEMPERATURE EXCURSIONS, TEMPORARY GREATER THAN DESIGN HEAT LOADS, OR DEGRADED ENVIRONMENTAL CONTROL SYSTEM OPERATION. THIS CONDITION COULD EXIST FOR UP TO EIGHT HOURS PER EXCURSION AND WILL OCCUR LESS THAN 1% OF THE PLANT LIFE.

10. THESE MAXIMUM AND MINIMUM ABNORMAL HUMIDITIES COULD EXIST FOR UP TO 8 HRS PER EXCURSION AND WILL OCCUR LESS THAN 1% OF THE PLANT LIFE.

11. ALL 40 YR INTEGRATED DOSES SHOWN ARE UPPER LIMITS FOR THE SUMMATION OF THE GAMMA AND BETA CONTRIBUTIONS UNLESS OTHERWISE INDICATED. RADIATION DOSE INFORMATION WAS TAKEN FROM THE FSAR SECTION 3.11.2, FIGURES 12.3-1 THRU 12.3-7. THE INTEGRATED ACCIDENT DOSE GIVEN IS FOR A LOCA. TOTAL RADIATION DOSE IS OBTAINED BY ADDING THE 40 YR INTEGRATED AND INTEGRATED ACCIDENT DOSES FOR SPACES WHICH HAVE 40 YR INTEGRATED DOSES >1.75X10^{3}. USE 1X10^{4} RADS FOR AREAS WHICH HAVE 40 YR INTEGRATED DOSES ≤1.75X10^{3} RADS AND INTEGRATED ACCIDENT DOSES <1X10^{4} RADS.

12. AREAS LISTED ARE DIVIDED INTO THREE CATEGORIES DEFINED AS FOLLOWS:
    A. SPACES THAT ARE SERVED BY SAFETY-RELATED REDUNDANT ENVIRONMENTAL CONTROL SYSTEMS BACKED BY ONSITE EMERGENCY ELECTRICAL POWER.
    B. SPACES NOT MAINTAINED BY REDUNDANT ENVIRONMENTAL CONTROL SYSTEMS BACKED BY ONSITE EMERGENCY ELECTRICAL POWER.
    C. SPACES SERVED BY NON SAFETY-RELATED ENVIRONMENTAL CONTROL SYSTEMS DURING NORMAL CONDITIONS AND REDUNDANT SAFETY-RELATED SYSTEMS DURING ACCIDENT CONDITIONS.

13. THESE SPACES ARE AFFECTED BY BREAKS IN THE FOLLOWING HIGH ENERGY SYSTEMS: AUXILIARY FEEDWATER (AFW) STEAM SUPPLY, AUXILIARY BOILER SYSTEM, RESIDUAL HEAT REMOVAL (RHR) SYSTEM AND CHEMICAL AND VOLUME CONTROL SYSTEM (CVCS) LETDOWN LINE. THE COMPANION DRAWINGS REFERENCED CONTAIN TEMPERATURE AND PRESSURE VS TIME PROFILES FOR ALL THE WORST CASE BREAK SCENERIOS INVOLVING THESE SYSTEMS. PROFILE TITLES EXPLAIN WHICH HIGH ENERGY SYSTEM EFFECT IS BEING DEPICTED. THE VOLUME NUMBER CORRESPONDS TO AREAS OR PORTIONS OF THE AREAS HIGHLIGHTED ON THE KEY PLAN. EACH TEMPERATURE AND PRESSURE CURVE SHOULD BE ASSUMED TO DECREASE LINEARLY TO THE NORMAL MAXIMUM VALUE GIVEN IN THE ENVIRONMENTAL TABLE AT THE END OF 24 HOURS IF IT HAS NOT REACHED THAT VALUE WITHIN THE TIME SCALE OF THE FIGURE. THE SAME HUMIDITY VS TIME FIGURE APPLIES IN EACH CASE. FOR QUALIFICATION PURPOSES, THE WORST CASE HELB PROFILES REPRESENTING THE EVENTS FOR WHICH THE EQUIPMENT IN QUESTION IS REQUIRED TO FUNCTION SHOULD BE USED.

15. THE MAXIMUM 40-YEAR DOSE IN INDIVIDUALLY COOLED ROOMS IS 10^{8} RADS; HOWEVER, FOR SPECIFIC ROOMS THE RADIATION DOSE INFORMATION CAN BE DETERMINE FROM THE FSAR (SECTION 3.11.2 AND FIGURES 12.3-1 THRU 7).

16. THE COMPUTED MAXIMUM FLOOD LEVEL OF 740.3 FT WILL CAUSE FLOODING TO ELEVATION 738.8 FT IN THE AUXILIARY BUILDING. ALL EQUIPMENT REQUIRED TO MAINTAIN PLANT SAFETY DURING THIS CONDITION AND FOR 100 DAYS AFTER THE BEGINNING OF THE FLOOD SHOULD BE EITHER DESIGNED TO OPERATE SUBMERGED, LOCATED ABOVE THE MAXIMUM FLOOD LEVEL, OR OTHERWISE PROTECTED.

25. THE DURATION OF THIS CONDITION SHOULD BE CONSIDERED TO EXIST FOR UP TO 30 DAYS.

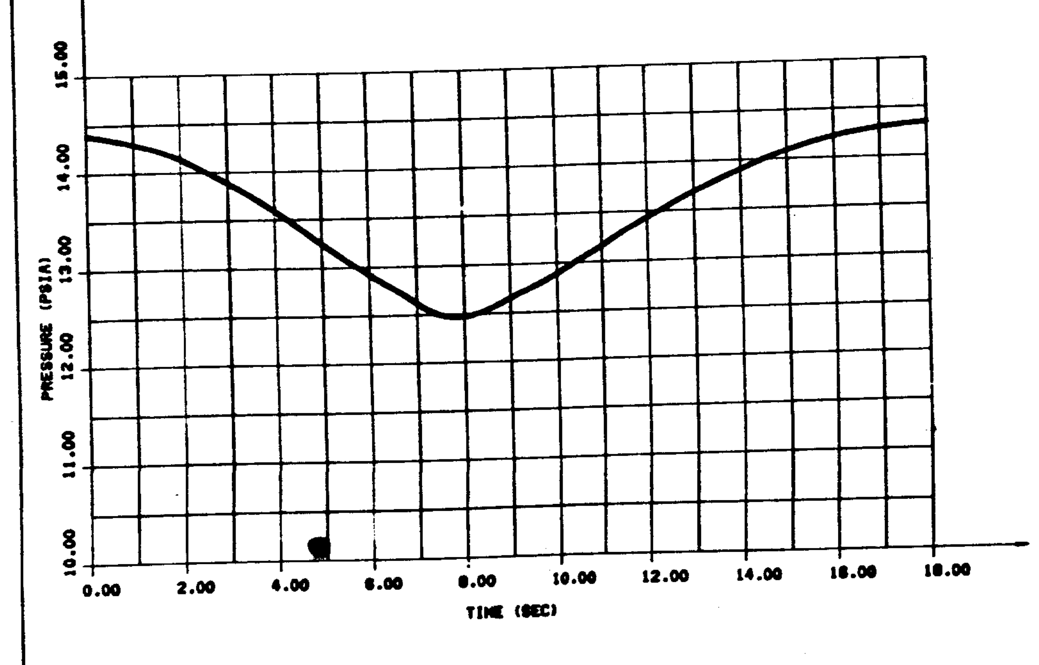
28. THE FIRST SET OF VALUES ARE MAXIMUMS FOR A BREAK OF THE HIGH ENERGY LINE SERVING THE PUMP INSIDE THE SPACE. IF THE EQUIPMENT ASSOCIATED WITH THE PUMP IS NOT REQUIRED TO OPERATE DURING THIS CONDITION, THE SECOND SET OF PARAMETERS SHOULD BE USED.

29. NA INDICATES NOT APPLICABLE FOR THIS OPERATIONAL CONDITION.

BUILDING LOCATION AND ROOM NUMBER	OPERATIONAL CONDITION (NOTE 1)	TEMPERATURE (°F)	RELATIVE HUMIDITY (%)	PRESSURE (PSIA) (NOTE 2)	TOTAL 40 YEAR INTEGRATED DOSE (RADS) (NOTE 11)	INTEGRATED ACCIDENT DOSE (RADS) (NOTE 11)	AREA TYPE (NOTE 12)	FLOODING
AUXILIARY BUILDING RHR PMP ROOMS 1A-A, 1B-B, 2A-A, 2B-B ROOM NOS. A10, A11, A12, A13 EL 676.0	1	AVG 80 MAX 104 MIN 60	55 80 30	ATM (-) ATM (-) ATM (-)	NA 1X10^{8} (NOTE 15) NA	NA NA NA	C	NOTE 16
	2	MAX 110, MIN 50 } NOTE 8	90, 10 } NOTE 10	ATM (-) ATM (-)	NA NA	NA NA		
	3	110 NOTE 25	NA	NA	NA	1X10^{7}		
	4	NOTE 13	100 { NOTE 13, FIGURE 6	NOTE 13	NA	NA		
	5	NA	NA	NOTE 4 NODE 120	NA	NA		

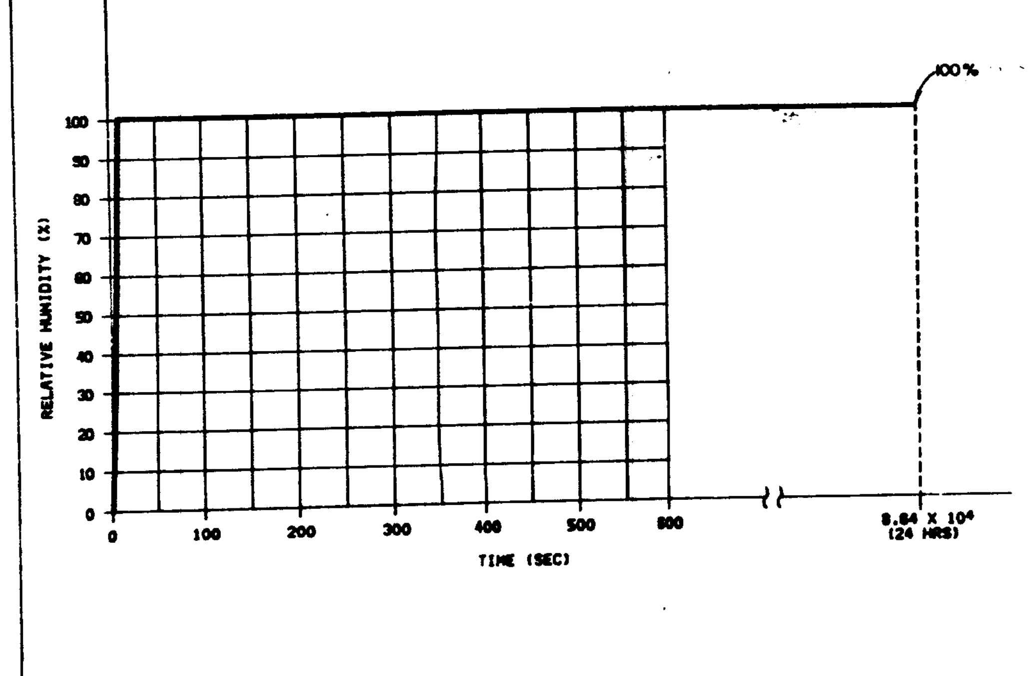
TORNADO PRESSURE VS TIME NODE 120

(ROOMS A10, A11, A12, A13)



HELB HUMIDITY VS TIME

(FIGURE 6)



REFERENCE:

1. SUMMARY OF HARSH ENVIRONMENTAL CONDITIONS FOR SEQUOYAH AND WATTS BAR NUCLEAR PLANTS (NEB-82-0726-235)
2. SEQUOYAH AND WATTS BAR NUCLEAR PLANTS NUREG-0588 ENVIRONMENTAL PROFILES (NEB-83-0201-263).

COMPANION DRAWING: 47E235-75

SCALE: NTS EXCEPT AS NOTED

AUXILIARY BUILDING
UNITS 1 & 2

ENVIRONMENTAL DATA
ENVIRONMENT - HARSH
EL 676.0

WATTS BAR NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

SUBMITTED | RECOMMENDED | APPROVED

FURTHER REVIEWED
EEB NA

ECN-3606

INSPECTED AND APPROVED FOR ISSUE

KNOXVILLE 8-26-83 85 N 47E235-74 R0