SIDE 2

EAL TABLE 4
DOSE PROJECTION MONITORS

1. CNMT HI RANGE ACCIDENT MONITORS
2. PLANT VENT STACK #1 WRGM EFFLUENT CHANNEL
3. MAIN STEAM LINE MONITORS
4. STACK #5 MONITOR WRGM EFFLUENT CHANNEL
5. STACK #5A MONITOR WRGM EFFLUENT CHANNEL

EAL TABLE 5
EFFLUENT MONITORS

1. PLANT VENT STACK #1 WRGM EFFLUENT CHANNEL
2. TURBINE BUILDING STACK #3A WRGM EFFLUENT CHANNEL
3. STACK #5 WRGM EFFLUENT CHANNEL
4. STACK #5A WRGM EFFLUENT CHANNEL
5. TREATED LAUNDRY AND HOT SHOWER DISCHARGE MONITOR
6. SECONDARY WASTE SAMPLE TANK DISCHARGE MONITOR
7. WASTE MONITOR TANK DISCHARGE MONITOR
8. TURBINE BLDG. DRAIN MONITOR

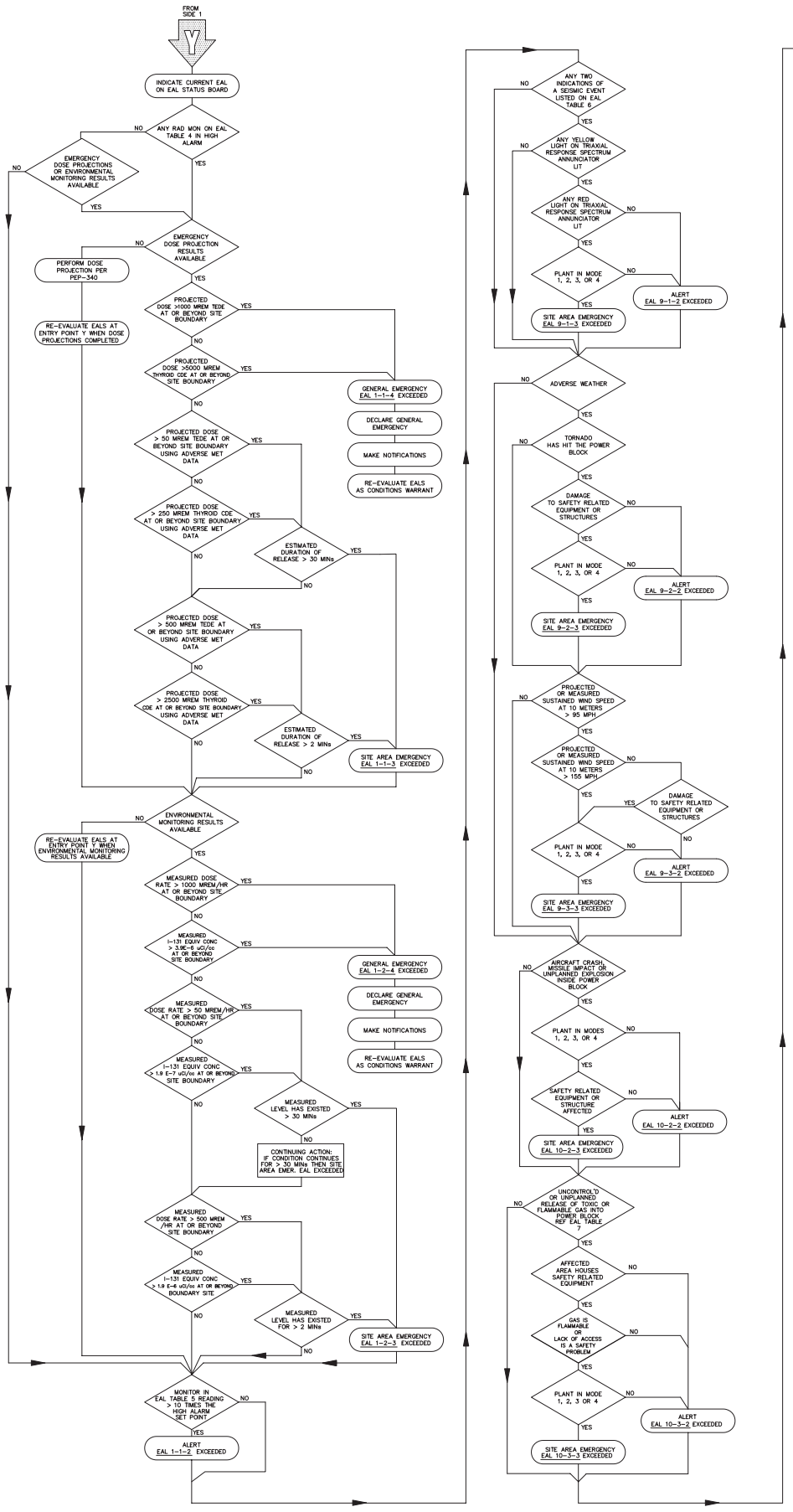
EAL TABLE 6
SEISMIC EVENT SYMPTOMS

1. "SEISMIC MON SYS OBE EXCEEDED" ALARM (ALB 10-4-4) AND/OR "ALARM" LIGHT ON THE SEISMIC SWITCH PANEL.
2. WHITE EVENT INDICATOR ON SMA CONTROL PANEL.
3. ALARM AT TRIAXIAL RESPONSE SPECTRUM ANNUNCIATOR.
4. NOTICEABLE TREMORS OR VIBRATION.

EAL STATUS BOARD

	EAL REF. NO(S).:
GENERAL EMERGENCY	
SITE AREA EMERGENCY	
ALERT	
UNUSUAL EVENT	

CONTINUING ACTION:	TIME
BEGAN:	
REQUIRED DURATION (MIN)	
EXPIRES:	
CURRENT CLASSIFICATION	
NEW OR 'POTENTIAL' CLASSIFICATION	



EAL DECLARATION _____ TIME

EAL TABLE 1
RADIATION MONITOR TAG NUMBERS

MONITOR DESCRIPTION	INSTRUMENT TAG NO.	RM-11 CHANNEL ID NO.	ERFIS POINT ID NO.
CNMT LEAK DETECTION MONITOR	REM-ILT-3502A-SA	2GS303	RLT3502B
CNMT HI RANGE ACCIDENT MONITORS	RM-1CR-3589-SA RM-1CR-3590-SB	2AX162 2AX163	RCR3589A RCR3590A
PLANT VENT STACK #1 WRGM EFFLUENT CHANNEL	RM-21AV-3509-1SA	1EX817	RAV3509H
TURBINE BUILDING STACK 3A WRGM EFFLUENT CHANNEL	RM-1TV-3536-1	2EX827	RTV3536D
MAIN STEAM LINE MONITORS	RM-1MS-3591-SB RM-1MS-3592-SB RM-1MS-3593-SB	5AX164 5AX165 5AX166	RMS3591A RMS3592A RMS3593A
FUEL BREACH AREA RAD. MONITORS:			
VOLUME CONTROL TANK RM.	RM-1RR-3595	1AA056	RRR3595A
CHARGING PUMP 1A ROOM	RM-1RR-3599A	1AA060	RRR3599A
CHARGING PUMP 1B ROOM	RM-1RR-3599B	1AA061	RRR3599B
CHARGING PUMP 1C ROOM	RM-1RR-3599C	1AA062	RRR3599C
RECYCLE EVAP. VLV. GAL.	RM-1RR-3600	1AA063	RRR3600A
LETDOWN HX VALVE GAL.	RM-1RR-3601	1AA064	RRR3601A
MODERATING HX VLV. GAL.	RM-1RR-3602	1AA065	RRR3602A
STACK #5 MONITOR WRGM EFFLUENT CHANNEL	RM-1WV-3546-1	4EX837	RWV3546H
STACK #5A MONITOR WRGM EFFLUENT CHANNEL	RM-1WV-3547-1	4EX847	RWV3547H
LIQUID EFFLUENT MONITORS			
TREATED LAUNDRY & HOT SHOWER DISCHARGE	REM-1WL-3540	4LL666	RWL3540A
SECONDARY WASTE SAMPLE TANK DISCHARGE	REM-21WS-3542	4LL686	RWS3542A
WASTE MONITOR TANK DISCHARGE	REM-1WL-3541	4LL676	RWL3541A
TURBINE BLDG. DRAIN	REM-1MD-3528	2LL276	RMD3528A

EAL TABLE 7
TOXIC, FLAMMABLE, & ASPHYXIANT GASES

GAS	TOXIC	FLAMMABLE	ASPHYXIANT	CHEMICAL FACT SHEET NUMBER
ACETYLENE	X	X		AP-501-00610
HYDROGEN (1)		X		AP-501-00129
CARBON DIOXIDE	X			AP-501-00085
AMMONIA	X	X		AP-501-00637
P-10 (USED IN PORTAL MONITORS)		X		AP-501-00591
OXYGEN (2)		X		AP-501-00068
NITROGEN			X	AP-501-00130
ARGON			X	AP-501-00319
HELIUM			X	AP-501-00573
FREON			X	AP-501-00987

THIS LIST INCLUDES GASES STORED IN BULK AND IS NOT INTENDED TO BE ALL INCLUSIVE.

(1) VENTING OF H2 FROM THE H2 TANK VENT STACK OR H2 HEADER IN ACCORDANCE WITH DESIGN AND IS A PLANNED EVENT.

(2) OXYGEN ITSELF IS NOT FLAMMABLE, HOWEVER, ITS PRESENCE INCREASES THE FLAMMABILITY OF MATERIALS.

ASPHYXIANT GASES IN LARGE ENOUGH QUANTITIES CAN DISPLACE OXYGEN AND POSE A DANGER TO PERSONNEL AND SHOULD BE CONSIDERED A TOXIC.

THE TYPE AND QUANTITY OF GAS RELEASED, VOLUME OF AREA, AND VENTILATION SYSTEMS IN SERVICE SHOULD BE EVALUATED TO DETERMINE WHETHER PERSONNEL OR EQUIPMENT COULD BE IN AN ADVERSE ENVIRONMENT, OR WHETHER ACCESS TO EQUIPMENT REQUIRED TO OPERATE THE PLANT IS IMPEDED.

UNUSUAL EVENT MATRIX

1) GASEOUS OR LIQUID EFFLUENT(S) EXCEEDING TECHNICAL SPECIFICATIONS	2) FUEL DAMAGE INDICATION	3) LOSS OF SECONDARY COOLANT OR COOLING	4) LOSS OF REACTOR COOLANT	5) LOSS OF POWER	6) LOSS OF MCB ANNUNCIATORS OR COMMUNICATIONS CAPABILITY	7) SECURITY THREAT	8) OTHER PLANT OR EQUIPMENT PROBLEMS	9) NATURAL PHENOMENA	10) OTHER HAZARDS	11) SITE EMERGENCY COORDINATOR JUDGMENT
EAL 1-1-1 VALID HIGH ALARM ON ANY OF THE MONITORS IN EAL TABLE 5 AND THE RELEASE HAS NOT BEEN TERMINATED (UNUSUAL EVENT EXISTS UNTIL EFFLUENT DISCHARGE IS TERMINATED AND WHEN ALL REQUIRED NOTIFICATIONS ARE MADE)	EAL 2-1-1 GROSS FAILED FUEL DETECTOR INDICATES AN INCREASE > 2E4 CPM WITHIN 30 MINUTES EAL 2-2-1 RCS SPECIFIC ACTIVITY EXCEEDS TECHNICAL SPECIFICATION 3.4.8 LIMITS FOR DOSE EQUIVALENT I-131 OR GROSS RADIOACTIVTY (FOR DOSE EQUIVALENT I-131 THE EAL IS NOT EXCEEDED UNLESS THE 48 HOUR TIME INTERVAL LIMIT IS EXCEEDED.)	EAL 3-1-1 RAPID DEPRESSURIZATION OF STEAM GENERATOR SECONDARY SIDE EAL 3-2-1 FAILURE OF A SG SAFETY OR PORV TO FULLY RESET AFTER OPERATION EAL 3-3-1 MAIN STEAM LINE OR FEEDWATER LINE BREAK (A BREAK IS A LEAK WHICH EXCEEDS THE OPERATORS ABILITY TO SHUTDOWN THE PLANT IN A CONTROLLED MANNER OR TO NOT EXCEED TECH. SPEC COOLDOWN LIMITS) EAL 3-4-1 STEAM GENERATOR BLOWDOWN LINE BREAK (MODES 1,2 AND 3)	EAL 4-1-1 FAILURE OF A PRESSURIZER SAFETY OR PORV TO CLOSE FOLLOWING REDUCTION OF APPLICABLE PRESSURE EAL 4-2-1 ANY RCS PRESSURE BOUNDARY LEAKAGE EAL 4-3-1 ANY OTHER RCS LEAKAGE IN EXCESS OF TECHNICAL SPECIFICATION 3.4.6.2 WITH THE 4 HOUR CORRECTIVE ACTIONS NOT SATISFIED	EAL 5-1-1 LOSS OF ALL OFFSITE POWER EAL 5-2-1 LOSS OF BOTH EMERGENCY DIESEL GENERATORS	EAL 6-1-1 UNPLANNED LOSS OF >75% OF MCB ANNUNCIATORS (ALBS) FOR >15 MINUTES AS DEFINED BY: * MODES 1-4 TOTAL # ALBS = 30 * MODES 5-6 TOTAL # ALBS = 20 (ALB 1,2, 4-13, 15, 22, 23, EITHER 24 OR 25 BASED ON EDG OPERABILITY, 26-28, & 30) EAL 6-2-1 FAILURE OF BOTH SITE TELEPHONE AND EMERGENCY (HEMEC) TELEPHONE SWITCHES	EAL 7-1-1 CONFIRMED SECURITY EVENT WHICH INDICATES A POTENTIAL DEGRADATION IN THE LEVEL OF SAFETY OF THE PLANT AS INDICATED BY ANY OF THE FOLLOWING: *UNAUTHORIZED ALTERATION OR TAMPERING HAS OR IS OCCURRING AFFECTING PLANT EQUIPMENT *ATTEMPTED UNAUTHORIZED ENTRY INTO THE PROTECTED AREA *HOSTAGE/EXTORTION SITUATION THAT THREATENS TO INTERRUPT NORMAL PLANT OPERATIONS *A CREDIBLE THREAT AGAINST THE HARRIS PLANT *A VALIDATED NOTIFICATION FROM NRC PROVIDING INFORMATION OF AN AIRCRAFT THREAT	EAL 8-1-1 INABILITY TO REACH REQUIRED SHUTDOWN (MODE 3) CONDITION WITHIN TECH. SPEC. TIME LIMITS EAL 8-2-1 INADVERTENT CRITICALITY – EXTENDED AND UNPLANNED SUSTAINED POSITIVE STARTUP RATE. (THIS DOES NOT INCLUDE CRITICALITY EARLIER THAN ESTIMATED DURING PLANNED REACTOR STARTUPS) EAL 8-3-1 TURBINE ROTATING COMPONENT FAILURE RESULTING IN A REACTOR TRIP, CASING PENETRATION OR SIGNIFICANT DAMAGE TO THE MAIN GENERATOR SEALS	EAL 9-1-1 INDICATION OF ANY TWO VALID SEISMIC SYMPTOMS LISTED ON EAL TABLE 6 EAL 9-2-1 TORNADO REPORTED WITHIN THE EAB EAL 9-3-1 SUSTAINED WIND SPEED AT 10 METERS OF 74 MPH OR GREATER	EAL 10-1-1 FIRE WITHIN THE PROTECTED AREA NOT EXTINGUISHED WITHIN 15 MINUTES OF CONTROL ROOM NOTIFICATION OR VERIFICATION OF A CONTROL ROOM ALARM (THIS DOES NOT INCLUDE FIRES WITHIN OFFICE AREAS, TRASH BIN FIRES, H2 TANK VENT STACK FIRES EXTINGUISHED PER OP-152.02 OR OTHER SMALL FIRES OF NO PLANT SAFETY CONSEQUENCE) EAL 10-2-1 AIRCRAFT, TRAIN OR OTHER VEHICLE CRASH THAT MAY DAMAGE PLANT STRUCTURES CONTAINING FUNCTIONS OR SYSTEMS REQUIRED FOR SAFE SHUTDOWN OF THE PLANT EAL 10-3-1 UNPLANNED EXPLOSION WITHIN THE PROTECTED AREA RESULTING IN VISIBLE DAMAGE TO PERMANENT STRUCTURES OR EQUIPMENT EAL 10-4-1 UNPLANNED TOXIC OR FLAMMABLE GAS RELEASE WITH THE EAB (REFERENCE EAL TABLE 7) EAL 10-5-1 CIVIL DISTURBANCE ONGOING BETWEEN THE SITE BOUNDARY AND THE PROTECTED AREA	EAL 11-1-1 OTHER PLANT CONDITIONS EXIST THAT WARRANT INCREASED AWARENESS ON THE PART OF THE PLANT OPERATION STAFF, CHATHAM COUNTY, HARNETT COUNTY, LEE COUNTY, WAKE COUNTY, OR THE STATE OF NORTH CAROLINA

DEFINITIONS OF AREAS REFERRED TO IN THESE EAL's:

POWER BLOCK INCLUDES THE CONTAINMENT, REACTOR AUXILIARY BLDG., TURBINE BLDG., FUEL HANDLING BLDG. (INCLUDING THE "K" AREA), WASTE PROCESSING BLDG., DIESEL GENERATOR BLDG., DIESEL FUEL OIL STORAGE, FIRE HOUSE, TANK AREA, INTAKE STUCTURES, AND DUCT BANKS SERVING THESE AREAS.

PROTECTED AREA INCLUDES THE PLANT AREA INSIDE THE SECURITY FENCE INCLUDING THE INTAKE STRUCTURES.

SITE BOUNDARY (SB) IS APPROXIMATELY A CIRCLE OF 2500 FT. RADIUS (0.47 MILES)

EXCLUSION AREA BOUNDARY (EAB) IS APPROXIMATELY A CIRCLE OF 7000 FT. RADIUS (1.3 MILES)

EAL REFERENCE NUMBERS (X-Y-Z):

X = CATEGORY (1-11)
Y = IDENTIFIER WITHIN CATEGORY
Z = CLASSIFICATION (1-4)
1 = UNUSUAL EVENT
2 = ALERT
3 = SITE AREA EMERGENCY
4 = GENERAL EMERGENCY

Progress Energy Carolinas

Shearon Harris Nuclear Power Plant
Units 1, 2, and 3
Part 5, Emergency Plan

New Hill, North Carolina

Emergency Action Level Flowpath
(Side 2)

FIGURE ANNEX 1-2

Rev 0