ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: RECORD OF CHANGES AND REVISIONS | FORM NO. 1000.06A

OFFSITE DOSE PROJECTIONS - POCKET COMPUTER METHOD | REV. #12 | PC #

Safety Related YES ☒ NO ☐

OFFSITE DOSE PROJECTIONS - POCKET COMPUTER METHOD
1904.02 REV. 1

UN- Controlled Copy # 107

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APPROVED BY:

(General Manager)

APPROVAL DATE
1-6-83

REQUIRED EFFECTIVE DATE:

5.2 The Duty Emergency Coordinator, or his designee, is responsible for performing the magnitude of release calculations.

5.3 The Shift Operations Supervisor/Duty Emergency Coordinator is responsible for notifying appropriate groups per 1903.10, "Emergency Action Level Response".

5.4 The Offsite Radiological Monitoring Section of the Emergency Radiation Team is responsible for measuring offsite radiological hazards per 1903.43, "Duties of the Emergency Radiation Team".

6.0 LIMITS AND PRECAUTIONS

6.1 This procedure provides an initial projection of the radiological conditions; field monitoring is necessary to determine the actual conditions.

6.2 Actual terrain and weather conditions will generally limit the accuracy of the projected doses at a specific location.

6.3 The diffusion overlays used in this procedure represent long-term average conditions for a ground level release.

6.4 When performing manual or programmed calculations, the computer should be in the RUN Mode.

7.0 DETERMINATION OF EXISTING METEOROLOGICAL CONDITIONS

7.1 Site meteorological data may be obtained at the TSC, ECC, or other locations by utilizing the "R MONIT" command from GERMS (chromatics) terminal. Station No. 1 (40' elevation sensor) should be used, if possible, for readings other than $\sigma\theta$ (indicated as wind direction variability), which may be obtained from station No. 2. [The recorders indicated on form 1904.02A may also be used from control room locations.]

7.2 If the on-site meteorological system is out of service, limited meteorological data may be obtained from the following sources.

A. National Weather Service (Meteorologist-in-Charge) [834-0308 or •, ,•]

B. KARV Radio (968-1184)

C. MSS Dispatcher •. • - Request data for Arkansas Zone five.

D. The stability category may be calculated from causative factors (see procedure 1904.05, "Atmospheric Stability Class Determination").

7.3 Complete Form 1904.02A to record the current meteorological conditions.

8.0 DETERMINATION OF THE AIRBORNE RELEASE PATHS

NOTE: If the GERMS detectors are out of service for a normal release path which is discharging substantial amounts of radioactive material, refer to procedure 1904.04 "Estimating Airborne Release Rates".

8.1 Normal Release Paths:

8.1.1 At the Eberline Control Terminal (CT), insert the key into the "keyboard" switch and activate the control terminal.

8.1.2 Set the History Format select knob to "Release Rate."

8.1.3 Depress the [PRINT] then the [1] and then the [ENTER] pushbuttons. A printout with the "10-minute" averaged release rates for each SPING will appear followed by the Site Total Release Rates.

8.1.4 Record the radioactive release data as indicated on the Eberline CT-2 printout for each of the SPING monitors that are in service on Form 1904.02C. (For purposes of this procedure, disregard the particulate channel). Any negative values should be entered as zero. Record the noble gas data from the lowest numbered channel which gives valid, onscale data. Data is valid if either "NORMAL" or any of the following alarms are displayed beside each parameter:

"TND ALM" (Trend Alarm)
"ALT ALM" (Alert Alarm)
"HI ALM" (High Radiation Alarm)

NOTE: Use method 1 or 2 to obtain site totals from GERMS for noble gases.

1. Calculate the sum of the noble gas readings recorded for each SPING on Form 1904.02C.

OR

2. Record the site total value for noble gases (using the lowest numbered channel with valid data) that appears at the bottom of the CT-2 printout.

CAUTION: USE METHOD 2 ONLY WHEN THE NOBLE GAS DATA FOR EACH SPING MONITOR FALLS WITHIN THE RANGE OF THE SAME CHANNEL, i.e. ALL SPING NOBLE GAS DATA RECORDED ON FORM 1904.02C MUST COME FROM THE SAME NOBLE GAS CHANNEL (05, 07, or 09).

10.0 PLUME DEFINITION

NOTE: The attachments contained in this procedure are provided for ILLUSTRATION ONLY. The correctly scaled overlays and maps are located in the emergency kits.

10.1 Select the overlay (Attachments 1-7) which corresponds to the existing atmospheric stability category (Form 1904.02A, Line 5.0).

10.2 Place the selected overlay on the ANO area map (Attachment 8) with the origin directly over the ANO site center and align the plume centerline with the downwind direction (from Form 1904.02D Line 5.1.2).

10.3 Locate the plume boundary line (from Form 1904.02D Line 5.1.3) on the overlay. Any sub-sectors which are contained (or partially contained) with the plume boundary line should be designated as affected. Record this information on line 7.0 of Form 1904.02D.

10.3.1 Account for the uncertainty in the local wind near Mt. Nebo/ Spring Mountain:

A. If the plume centerline lies in sector 10 and the plume boundary extends beyond 6 miles, the affected area should also include sectors 9, 10 and 11 (from subsector G to the projected extent of the plume).

B. If the plume centerline lies in sector 11 and the plume boundary extends beyond 6 miles, the affected area should also include sectors 10, 11 and 12 (from subsector G to the projected extent of the plume).

11.0 NOTIFICATIONS AND PROTECTIVE ACTION RECOMMENDATIONS

11.1 If an Unusual Event, Alert, or Site Emergency has been declared, proceed directly to Section 11.2. If a General Emergency has been declared due to high airborne radioactive release rates, perform the appropriate action as indicated below:

11.1.1 If the projected whole body dose rate on Form 1904.02D, Section 5.1.5.A exceeds 250 mR/hr at 0.65 miles, or if the child thyroid dose rate exceeds 1250 mR/hr at 0.65 miles, recommend immediate protective action in the affected sectors to 2.0 miles.

11.1.2 If the projected whole body dose rate on Form 1904.02D, Section 5.1.5.C exceeds 250 mR/hr at 2.0 miles, or if the child thyroid dose rate exceeds 1250 mR/hr at 2.0 miles, recommend immediate protective action in the affected sectors to 5.0 miles.

11.1.3 If the projected whole body dose rate on Form 1904.02D, Section 5.1.5.D exceeds 250 mR/hr at 5.0 miles, or if the child thyroid dose rate exceeds 1250 mR/hr at 5.0 miles, recommend immediate protective action in the affected sectors to 10.0 miles.

11.1.4 In order to select the appropriate protective action, State officials should be given an estimate of the expected release duration. This is especially important if the release duration is expected to be less than 2 hours (puff releases).

11.1.5 Upon activation of the TSC/ECC, additional protective action recommendations should be evaluated using procedure 1904.07, "Protective Action Recommendations". These evaluations should be made under the supervision of the Technical Analysis Superintendent and/or the Dose Assessment Supervisor.

11.2 Provide radiological release information to appropriate groups per 1903.10, "Emergency Action Level Response".

11.3 The Emergency Radiation Team shall be dispatched to obtain field radiological data whenever an Emergency Action Level has been declared based on offsite radiological releases. If the Emergency Radiation Team is dispatched, refer to Section 12.0.

11.4 Return to Section 7.0 of this procedure. New data should be taken as specified by the Duty Emergency Coordinator/Dose Assessment Supervisor.

12.0 VERIFICATION OF PROJECTED DOSE RATES BY FIELD MEASUREMENT

12.1 Whenever an Emergency Action Level has been declared due to offsite radiological releases, the Duty Emergency Coordinator/Offsite Monitoring Supervisor shall, based on wind direction, dispatch offsite radiological monitoring teams to sample the plume to determine the magnitude and extent of the radiation fields.

12.1.1 Radiation surveys at specific locations should include a direct exposure rate measurement (mR/hr) and an air sample to determine iodine concentration (μCi/cc).

12.1.2 As the survey teams approach assigned survey locations, continuous measurements should be taken to identify the location of the highest radiation level for a particular downwind distance.

12.2 Scale Factor Determination

12.2.1 Accurate scale factors may be calculated only by comparing measured plume centerline conditions with projected plume centerline conditions for corresponding time periods and downwind distances.

12.2.2 When field monitoring data becomes available for a plume centerline location, select one set of data and complete Form 1904.02E to calculate whole body and child thyroid dose rate scale factors. The calculation on 1904.02E should be performed no more than once per run of the dose calculation program.

12.3 Return to section 7.0 of this procedure. New data should be taken as specified by the Duty Emergency Coordinator/Dose Assessment Supervisor.

13.0 ATTACHMENTS AND FORMS

13.1 Form 1904.02A - Current Meteorology Summary

13.2 Form 1904.02B - Contaminated Steam Release Rates

13.3 Form 1904.02C - Airborne Release Rate Work Sheet

13.4 Form 1904.02D - EAL/Offsite Dose Projection Work Sheet

13.5 Form 1904.02E - Scale Factor Work Sheet

13.6 Attachment 1 - Diffusion Overlay (Atmospheric Stability Category A)

13.7 Attachment 2 - Diffusion Overlay (Atmospheric Stability Category B)

13.8 Attachment 3 - Diffusion Overlay (Atmospheric Stability Category C)

13.9 Attachment 4 - Diffusion Overlay (Atmospheric Stability Category D)

13.10 Attachment 5 - Diffusion Overlay (Atmospheric Stability Category E)

13.11 Attachment 6 - Diffusion Overlay (Atmospheric Stability Category F)

13.12 Attachment 7 - Diffusion Overlay (Atmospheric Stability Category G)

13.13 Attachment 8 - Area Map

13.14 Attachment 9 - Keyboard Layout

13.15 Attachment 10 - Battery Replacement

13.16 Attachment 11 - Program Loading/Verification

13.17 Attachment 12 - Program Listing

13.18 Attachment 13 - Memory Contents

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: CONTAMINATED STEAM RELEASE RATES | FORM NO. 1904.02B | REV. # ; PC #

NOTE: Complete only the sections of the table below which correspond to headers currently discharging contaminated steam.

1.0 If the number of open safeties is used as the criteria for steam flow, complete the first table below.

Col 1	Col 2	Col 3	Col 4[a]	Col 5	Col 6[b]	Col 7	Col 8[c]	Col 9	Col 10[d]
Unit/Hdr	Rad. Monitor Number	MR/hr Reading	No. Open Safeties	Lb/Hr Per Safety	Steam Flow (Lb/Hr)	Monitor Calib. Factors	Q-GAS Ci/Sec	Q-I/Q-G Ratio	Q-Iodine (Ci/Sec)
ANO-1/A	RI-2682			8.0E 5		2.23E-8		7.2E-3	
ANO-1/B	RI-2681			8.0E 5		2.23E-8		7.2E-3	
ANO-2/A	2RI-1007			1.5E 6		2.46E-8		1.1E-5	
ANO-2/B	2RI-1057			1.5E 6		2.46E-8		1.1E-5	
TOTALS	XXXXXXXX	XXXXXXX	XXXXXXXX	XXXXXXX	XXXXXXC	XXXXXXX		XXXXXXX	

2.0 If the feedwater flow rate is used as the criteria for steam flow, complete the following table:

Col 1	Col 2	Col 3	Col 4	Col 5	Col 6[b]	Col 7	Col 8[c]	Col 9	Col 10[d]
Unit/Hdr	Rad. Monitor Number	MR/hr Reading	GPM Feedwater Flow	Lb/H Per GPM	Steam Flow (Lb/Hr)	Monitor Calib. Factors	Q-GAS Ci/Sec	Q-I/Q-G Ratio	Q-Iodine (Ci/Sec)
ANO-1/A	RI-2682			500		2.23E-8		7.2E-3	
ANO-1/B	RI-2681			500		2.23E-8		7.2E-3	
ANO-2/A	2RI-1007			500		2.46E-8		1.1E-5	
ANO-2/B	2RI-1057			500		2.46E-8		1.1E-5	
TOTALS	XXXXXXXX	XXXXXXX	XXXXXXXXX	XXXXXX	XXXXXXX	XXXXXXX		XXXXXXX	

a Initially, assume: 7 per steam header for ANO-1
5 per steam header for ANO-2
Thereafter, assume: 1 per steam header for ANO-1
1 per steam header for ANO-2
(Unless verified to be otherwise.)

b Column 6 = Column 4 x Column 5

c Column 8 = Column 3 x Column 6 x Column 7

d Column 10 = Column 8 x Column 9

Performed By _____ / _____
Initials Time

Reviewed By _____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: AIRBORNE RELEASE RATE WORKSHEET | FORM NO. 1904.02C

REV. # 1 PC #

Monitor Number	Unit/ Designation	Release Rates (Ci/sec.) Iodine (Chan. 03)	Noble Gases (Circle Chan.)	
001	1/Cont. Purge		05 07 09	
002	1/Radwaste		05 07 09	
003	1/Fuel Hd.		05 07 09	
004	1/Pen. & H_2 PRG		05 07 09	
005	2/Cont. Purge		05 07 09	
006	2/Radwaste		05 07 09	
007	2/Fuel Hd.		05 07 09	
008	2/Pen. & H_2 PRG		05 07 09	
009	PASS Bldg.		05 07 09	
010	2/Aux. Bldg. Ext.		05 07 09	
Site Totals From GERMS (Ci/sec.)			XXXXXXXXXXXXXXXX	

Releases from Unmonitored Locations	Release Rates (Ci/sec.) Iodine		Noble Gases
Steam Releases (Ci/sec.) Totals from 1904.02B Columns 8 & 10 respectively		XXXXXXXXXXXXXXXX	
Other Releases (Ci/sec.)		XXXXXXXXXXXXXXXX	
Other Releases (Ci/sec.)		XXXXXXXXXXXXXXXX	
Other Releases (Ci/sec.)		XXXXXXXXXXXXXXXX	
Other Releases (Ci/sec.)		XXXXXXXXXXXXXXXX	
Site Totals (Monitored & Unmonitored)		XXXXXXXXXXXXXXXX	

Performed By _____ / _____
Initials Time

Reviewed By _____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EAL/OFFSITE DOSE PROJECTION WORKSHEET | FORM NO. 1904.02D

REV. # 1 | PC #

INSTRUCTIONS

1.0 Press the [ON] button.

1.1 If a dot is not visible in the upper right hand corner of the display, replace the batteries per Attachment 10 - Battery Replacement.

2.0 Press the [MODE] button repeatedly, as necessary, until the word "RUN" is indicated in the upper portion of the display.

NOTE: At least one test case contained in Attachment 11 - Program Loading/Verification should be performed prior to initial use.

_____
Initials

3.0 Type RUN (followed by [ENTER])

4.0 Type the appropriate responses, as indicated (followed by [ENTER]) to each question as it is displayed.

4.1 Wind Direction (From) - 1904.02A, Line 3.0

4.2 Windspeed (MPH) - 1904.02A, Line 2.0

4.3 Stability Class A-G - 1904.02A, Line 5.0

4.4 Q-GAS (Noble Gas in Ci/sec.) - 1904.02C "Totals"

4.5 Q-Iodine (Ci/sec.) - 1904.02C "Totals"

4.6 Whole Body Scale Factor - 1904.02E, Step 4.0, Column 4a (or 1.0, in the absence of usable field data.)

4.7 Child Thyroid Scale Factor - 1904.02E, Step 4.0, Column 4b (or 1.0, in the absence of usable field data.)

5.0 When the computer prints an answer, the following actions should be taken:

5.1 Record the answer in the appropriate column below; then press [ENTER] to display the next answer (through Line 5.1.5E).

5.1.1	EAL (Circle One)	OK U.E. Alert S.E. G.E.
5.1.2	Downwind Direction	Degrees
5.1.3	Plume Outer Boundary X/Q	Sec/m^3

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EAL/OFFSITE DOSE PROJECTION WORKSHEET | FORM NO. 1904.02D

REV. # 0 PC # 1

NOTE: Data may be reviewed by the following:

OTHER RESERVE KEY FUNCTIONS

Key Sequence	Function	Purpose
[SHIFT] V [ENTER]	Run 390	Review Output Variables
[SHIFT] A [ENTER]	Run 560	Review Input Variables

7.0 AFFECTED SUB-SECTORS (From step 10.0 of this procedure):

_____

Performed By _____ / _____
Initials Time

Reviewed By _____

3.7 Set Tone to maximum treble (if this option is available).

3.8 Type NEW [ENTER].

3.9 Press the [MODE] button repeatedly until the word "RESERVE" is indicated in the upper portion of the display.

3.10 Type NEW [ENTER].

3.11 Press the [MODE] button repeatedly until the word "RUN" is indicated in the upper portion of the display.

NOTE: When the program has been transferred, the Computer will automatically stop the tape motion and display the PROMPT (>) symbol.

3.12 Type CLOAD "PRO/ING" [ENTER]

3.12.1 If an error occurs (error code "5" is displayed), start over from the beginning. If the error continues, adjust volume up or down slightly and repeat steps 3.1 to 3.12.

3.12.2 If the error code is not displayed but tape motion continues, transferring is improper. Press [ON] key to stop the tape. Repeat steps 3.1 to 3.12.

3.12.3 If the error remains or the tape continues to run after several attempts to correct the problem, try cleaning or demagnetizing the Recorder's tape head.

3.13 Type INPUT # "MEM/ING" [ENTER].

3.14 Press the [MODE] button until the word "RESERVE" appears in the upper portion of the display.

3.15 Type CLOAD "RES/ING" [ENTER].

3.16 Stop the recorder.

3.17 Press the [MODE] button repeatedly, as necessary, until the word "RUN" appears in the upper portion of the display.

NOTE: The following methods may be used to indicate that the program has been loaded correctly. The first method causes the Computer to automatically search for the specified file name and compare the contents on tape with the contents in memory. The second method checks the general program operation by inputing given initial data and manually comparing the output data to the calculated results.

ATTACHMENT 11

TEST CASE #	1	2	3	4	5
INPUT:					
Wind Direction	17	215	100	360	180
Wind Speed	4.5	3	18	6	1.5
Stability Class	A	C	D	E	G
Q-Gas	5E-3	0.15	1.9	6.8	20
Q-Iodine	6E-6	5E-4	4E-3	5E-3	6E-3
WB Scale Factor	0.9	1.1	0.6	0.99	1.9
CT Scale Factor	0.7	1.5	0.3	0.88	1.7
RESULTS:					
EAL	O.K.	Unusual Event	Alert	Site Emergency	General Emergency
Downwind Dir.	197	35	280	180	0
X/Q: Plume Bdy.	3.68E-4	8.70E-6	9.65E-6	6.09E-7	4.93E-8
.65 mi Avg. MPC	5.98E-2	2.19E 0	1.51E 1	8.95E 1	5.05E 2
.65 mi WB	1.00E-3	6.02E-1	1.48E 0	3.96E 1	2.08E 3
.65 mi CT	3.86E-3	1.47E 1	1.07E 1	1.98E 2	7.84E 3
1 mi WB	2.53E-4	2.66E-1	7.14E-1	2.14E 1	9.74E 2
1 mi CT	9.77E-4	6.49E 0	5.15E 0	1.07E 2	3.65E 3
2 mi WB	1.05E-4	8.09E-2	3.43E-1	8.36E 0	4.84E 2
2 mi CT	4.07E-4	1.97E 0	2.47E 0	4.18E 1	1.82E 3
5 mi WB	4.61E-5	1.51E-2	6.78E-2	2.39E 0	1.74E 2
5 mi CT	1.77E-4	3.68E-1	4.89E-1	1.19E 1	6.54E 2
10 mi WB	2.57E-5	4.44E-3	2.50E-2	9.34E-1	7.56E 1
10 mi CT	9.93E-5	1.08E-1	1.80E-1	4.68E 0	2.84E 2
INPUT:					
Local X/Q	1E-7	1.9E-7	3.9E-7	1.2E-6	8.08E-9
RESULTS:					
Local WB	~1.22E-5	~0.0012	~1.21E-3	~9.74E-2	~1.56E-2
Local CT	~3.66E-5	~0.0399	~4.37E-3	~4.34E-1	~0.0523

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: TRANSMITTAL | FORM NO. 1013.02H

REV. # 12 PC #

Arkansas Nuclear One
Russellville, Arkansas
Date January 27, 1983

MEMORANDUM

TO: 107-NRC Washington

FROM: ANO DOCUMENT CONTROL

SUBJECT: ANO MASTER PLANT MANUAL UPDATE

PROCEDURE NUMBER 1903.31 REV. # 4 PC # _____ TC # _____

PROCEDURE TITLE EXCLUSION AREA EVACUATION

PROCEDURE NUMBER 1903.60 REV. # 4 PC # _____ TC # _____

PROCEDURE TITLE EMERGENCY SUPPLIES & EQUIPMENT

PROCEDURE NUMBER _____ REV. # _____ PC # _____ TC # _____

PROCEDURE TITLE _____

The following pages of the indicated procedure (s) contains items which involve personal privacy or proprietary material. PLEASE REMOVE THE INDICATED MATERIAL PRIOR TO DISTRIBUTION TO PUBLIC DOCUMENT ROOMS, ETC.

PROCEDURE (S)	PAGE (S)
1903.31	3, 4

[ ] PROCEDURE (S) HAS BEEN PLACED IN YOUR SET OF THE PLANT MANUAL.

[✓] PROCEDURE (S) SHOULD BE PLACED IN YOUR SET OF THE PLANT MANUAL.

NOTE: PLEASE RETURN SIGNED TRANSMITTAL TO DOCUMENT CONTROL - 4TH FLOOR:

SIGNATURE _____ DATE _____

UPDATED

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: RECORD OF CHANGES AND REVISIONS

FORM NO. 1000.06A

REV. # 12 PC #

EMERGENCY PLAN

Safety Related YES ☒ NO ☐

EXCLUSION AREA EVACUATION
1903.31 REV. 4

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APPROVED BY:

James M. Levine
(General Manager)

APPROVAL DATE
1/28/83

REQUIRED EFFECTIVE DATE:

7.3 The Shift Operations Supervisor shall declare an Exclusion Area Evacuation over the public address system (and sound the plant evacuation alarm, as necessary).

7.4 Shift Operations personnel on duty should report to the Control Room.

7.5 If a plant evacuation is required in conjunction with an exclusion area evacuation, the evacuation and accountability shall be accomplished per 1903.30, "Plant Evacuation".

8.0 FOLLOW-UP ACTIONS

8.1 Determine if any Emergency Action Level criteria have been exceeded (Refer to 1903.10, "Emergency Action Level Response").

8.2 Shift Operations Personnel which are onsite but not on duty should report to the Control Room from the appropriate response center.

8.3 If additional emergency response personnel are required, they should be contacted, as needed, by the most expedient means available and provided with a description of the situation and required response.

8.4 Emergency response personnel shall report to their pre-assigned assembly areas unless directed otherwise. A list of reporting individuals shall be supplied to the Technical Support Center •

• as soon as practical following announcement of the evacuation (refer to 1903.10 Attachments 1-8) for the applicable rosters. The Emergency Team Leaders and Shift Operations Supervisors are responsible for providing the accountability information for their personnel.

8.5 In the case of an Exclusion Area evacuation, Security shall dispatch Security Officers and/or emergency evacuation team members to assure that personnel within .65 miles of the plant are notified to leave.

8.6 Personnel, other than emergency response personnel shall proceed to their respective guard house, turn in their personnel I.D. badge, exit the plant and proceed to the designated assembly area (i.e. the Emergency Control Center unless directed otherwise).

8.7 Security Officers shall log badges out and place them in the badge holders as expeditiously as practical.

8.8 As soon as badges are logged out, Security will obtain a computer printout of personnel remaining on-site. If the Security computer is not operable, Security personnel should account for exiting personnel as stated in Paragraph 8.12.

8.9 Security shall contact the Technical Support Center • , • and obtain the names of the accounted for Emergency Team and Operations personnel.

8.10 Security shall then check the list of accounted for personnel on-site against the computer printout of persons on-site. Results shall be reported to the Duty Emergency Coordinator/Recovery Manager by Security personnel.

8.11 If there are person(s) unaccounted for, the Duty Emergency Coordinator/Recovery Manager shall direct personnel to search for the unaccounted for individual(s).

8.12 If the Security computer is not working, the list of accounted for on-site personnel obtained from the Technical Suport Center •
• should be checked against badges in the badge racks. Persons not accounted for in this manner will be reported to the Duty Emergency Coordinator/Recovery Manager.

8.13 Should there not be time for Security to complete the accountability on-site, the badges and badge racks and a master list computer printout of badged personnel and if readily available, a printout of remaining onsite personnel should be taken to the west end of the Emergency Control Center, ground floor. Accountability should then be established as stated in Paragraph 8.7 through 8.12.

8.14 • Security personnel shall upon ANO personnel exiting each applicable area, lock up their posts, as necessary, and assemble at the Main Guard Station. •

8.15 • Security shall patrol the exclusion area every two hours to notify anyone found within the area to leave. •

8.16 After initial accountability is established, security personne issuing/receiving badges are responsible for notifying the Technical Support Center of changes when personnel ingress/egress the protected area.

8.17 When the plant is determined to have returned to a condition where the exclusion area evacuation is no longer required, the Duty Emergency Coordinator/Recovery Manager may terminate the exclusion area evacuation.

9.0 ROAD BLOCKS

9.1 Road blocks restricting access to ANO shall be manned by at least one ANO Security Officer. The ANO Security Officer shall be capable of making radio contact with the Security Duty Sergeant. The Security Duty Sergeant shall obtain verbal approval from the Duty Emergency Coordinator/Recovery Manager or the Incident Response Director before allowing passage of individuals who are not part of the response organization.

10.0 ATTACHMENTS AND FORMS

None

The material contained within the symbols (•) is proprietary or private information.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: RECORD OF CHANGES AND REVISIONS | FORM NO. 1000.06A

EMERGENCY PLAN PROCEDURE | REV. # 12 PC #

Safety Related YES ☒ NO ☐

EMERGENCY SUPPLIES & EQUIPMENT
1903.60 REV. 4

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26	1		62	2										
27	1		63	2										
28	2		64	1										
29	1		65	3										
30	2		66	4										
31	2		67	1										
32	2		68	3										
33	1		69	4										
34	3		70	1										
35	2		71	3										
36	1		72	4										

APPROVED BY:

J. J. Fisicaro
(General Manager)

APPROVAL DATE
1/26/83

REQUIRED EFFECTIVE DATE:

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: FIRE LOCKER A
FORM NO. 1903.601
REV. # 4 PC #

INVENTORY LIST

Page 3 of 3

Equipment	Required Quantity	Actual Quantity	Init.	Corrective Actions*	Init. Date*
PROTECTIVE CLOTHING	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
Turn-Out Gear	5 sets				
White Fire Fighter's Helmet	1				
Red Fire Fighter's Helmet	1				
RESPIRATORY PROTECTION EQUIPMENT	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
SCBA	5				
FIRE FIGHTING EQUIPMENT	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
Smoke Ejector	2				
Fire Ax	2				
Fire Extinguisher	5				
Handlite w/Batteries	5				
MISCELLANEOUS	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
First Aid Kit (Ensure Minimum Inventory)	1				
Stretcher	1				
Blanket	1				

*Where applicable

Inventory By ____________________ Date ______________

Reviewed By ____________________

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: FIRE LOCKER B

FORM NO. 1903.60H
REV. # 4 PC #

INVENTORY LIST

Equipment	Required Quantity	Actual Quantity	Init.	Corrective Actions*	Init. Date*
PROTECTIVE CLOTHING	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
Turn-Out Gear	5 sets				
White Fire Fighter's Helmet	1				
Red Fire Fighter's Helmet	1				
RESPIRATORY PROTECTION EQUIPMENT	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
SCBA	5				
FIRE FIGHTING EQUIPMENT	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
Smoke Ejector	2				
Fire Ax	2				
Fire Extinguisher	5				
Handlite w/Batteries	5				
MISCELLANEOUS	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
First Aid Kit (Ensure Minimum Inventory)	1				
Stretcher	1				
Blanket	1				

*Where applicable

Inventory By _____ Date _____

Reviewed By _____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: FIRE LOCKER C — FORM NO. 1903.60N

REV. # 4 PC #

INVENTORY LIST — Page 3 of 3

Equipment	Required Quantity	Actual Quantity	Init.	Corrective Actions*	Init./ Date*
PROTECTIVE CLOTHING	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
Turn-Out Gear	5 sets				
White Fire Fighter's Helmet	1				
Red Fire Fighter's Helmet	1				
RESPIRATORY PROTECTION EQUIPMENT	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
SCBA	5				
FIRE FIGHTING EQUIPMENT	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
Smoke Ejector	2				
Fire Ax	2				
Fire Extinguisher	5				
Handlite w/Batteries	5				
MISCELLANEOUS	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
First Aid Kit (Ensure Minimum Inventory)	1				
Stretcher	1				
Blanket	1				

*Where applicable

Inventory By _____ Date _____

Reviewed By _____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: MISCELLANEOUS EQUIPMENT — FORM NO. 1903.600

REV. # 4 PC #

Instrument	Location	S/N	Cal. Due Date	(1)Operational (2)Response (3)Inventory	Instr. Off
Single Channel Analyzer with Detector	U-1 CR			(2)	
Single Channel Analyzer with Detector	TSC			(2)	
NMC	TSC			(1)	
First Aid Kit	First Aid Rm.			(3)	
ND-60 MCA	ECC (156)			(2)	

Corrective Actions*	INITIAL/DATE*

*Where applicable

Checked By _____ Date _____

Reviewed By _____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: TRANSMITTAL | FORM NO. 1013.02H

REV. # 12 PC #

Arkansas Nuclear One
Russellville, Arkansas
Date January 28, 1983

MEMORANDUM

TO: 107-NRC Washington

FROM: ANO DOCUMENT CONTROL

SUBJECT: ANO MASTER PLANT MANUAL UPDATE

PROCEDURE NUMBER 1904.06 REV. # 0 PC # _____ TC # _____

PROCEDURE TITLE RADIOLOGICAL PLUME TRACKING & DOSE INTEGRATION

PROCEDURE NUMBER 1904.07 REV. # 0 PC # _____ TC # _____

PROCEDURE TITLE PROTECTIVE ACTION RECOMMENDATIONS

PROCEDURE NUMBER _____ REV. # _____ PC # _____ TC # _____

PROCEDURE TITLE _____

The following pages of the indicated procedure (s) contains items which involve personal privacy or proprietary material. PLEASE REMOVE THE INDICATED MATERIAL PRIOR TO DISTRIBUTION TO PUBLIC DOCUMENT ROOMS, ETC.

PROCEDURE (S)	PAGE (S)
1904.07	3

[ ] PROCEDURE (S) HAS BEEN PLACED IN YOUR SET OF THE PLANT MANUAL.

[✓] PROCEDURE (S) SHOULD BE PLACED IN YOUR SET OF THE PLANT MANUAL.

* NOTE: PLEASE RETURN SIGNED TRANSMITTAL TO DOCUMENT CONTROL - 4TH FLOOR:

SIGNATURE _____ DATE _____
UPDATED

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: RECORD OF CHANGES AND REVISIONS

FORM NO. 1000.06A

OFFSITE DOSE PROJECTIONS

REV. # 12 PC #

Safety Related YES ☒ NO ☐

RADIOLOGICAL PLUME TRACKING AND DOSE INTEGRATION
1904.06 REV. 0

UN-Controlled Copy # 107

PAGE	REV	PC#	PAGE	REV	PC#	PAGE	REV	PC#	PAGE	REV	PC#	PAGE	REV	PC#
1	0													
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11	0													
12	0													

APPROVED BY:

James M. Levine
(General Manager)

APPROVAL DATE
1/27/83

REQUIRED EFFECTIVE DATE:

1.0 PURPOSE

This procedure provides a manual method for estimating the location of airborne radioactive materials offsite under changing release and meteorological conditions, and for estimating the maximum integrated dose commitments at 0.65, 1.0, 2.0, 5.0, and 10.0 mile radii.

2.0 SCOPE

2.1 This procedure is applicable to airborne radioactive releases from either ANO-1 or ANO-2.

2.2 This procedure does not calculate the fine structure (actual distribution) of integrated doses offsite.

2.3 This procedure does not take into account effects caused by precipitation and terrain channelling.

3.0 REFERENCES

3.1 References Used in Procedure Preparation

3.1.1 Emergency Dose Calculation Package Methodology Manual, Applied Physical Technology, July 1981

3.2 References Used in Conjunction with this Procedure

3.2.1 1904.02, "Offsite Dose Projections - Pocket Computer Method"

3.2.2 1904.07. "Protective Action Recommendations"

3.3 Related ANO References

None

4.0 RESPONSIBILITIES

4.1 The Dose Assessment Supervisor in the Emergency Response Organization, or his designee, is responsible for long-term radiological plume tracking and dose integration.

4.2 The Duty Emergency Coordinator, or his designee, should initiate radiological plume tracking and dose integration as soon as possible after the TSC is activated and continue until relieved by the Dose Assessment Supervisor.

5.0 LIMITS AND PRECAUTIONS

5.1 Actual integrated doses will generally be lower than predicted by this procedure due to typical wind direction meander.

5.2 In order to be meaningful, the dose integration must cover the entire release period (i.e. all plume segments).

6.0 DEFINITIONS

6.1 Plume Segment - An air parcel containing radioactive material emitted at a relatively uniform relase rate and under relatively uniform meteorological conditions.

7.0 DOSE RATE PROJECTION SUMMARY

7.1 Transfer the dose projection input and output data from Form 1904.02D to Form 1904.06A for each dose projection as it is performed. Include all dose projections previously calculated by Control Room personnel since the beginning of the release. The time on Form 1904.06A refers to the time recorded on 1904.02A.

7.2 For each projection, compute the "segment length (miles)" by multiplying the then-current windspeed (mph) by the total time during which that projection was valid (hours). Record the "segment length" on Form 1904.06A for each dose projection (plume segment).

7.3 Combine sequential dose projections which have similar meteorological and release rate characteristics into a single plume segment. This reduces subsequent plotting and integration tasks.

8.0 PLUME CENTERLINE PLOTTING

8.1 Obtain a 360° protractor, ruler, stability class overlays, map, calculator, and pad of tracing paper (11" x 17", ruled 10 x 10 to the inch) from the appropriate emergency kit:

8.1.1 Technical Support Center

8.1.2 Emergency Control Center

8.2 Select an origin and north-south axis on the tracing paper, taking into consideration the general direction of plume development.

8.3 Refer to Form 1904.06A to determine the downwind direction and segment length of the most recently emitted plume segment.

8.4 Center the protractor on the origin of the tracing paper.

8.5 Turn the protractor until the downwind direction angle (indicated on the outer ring) is aligned with either the north or the south direction on the tracing paper.

8.6 Draw the segment centerline along the indicated side of the protractor's central straightedge, depending on whether the downwind angle was aligned with north or south on the paper.

8.7 Use a ruler to draw the plume segment length to scale (1" = 1 mile).

8.8 Mark the segment endpoint. This is the starting point for the next (older) plume segment.

8.9 Label the segment centerline with its initial release time. Mark the segment endpoint with the total broken-path plume length at that point.

8.10 Center the protractor over the starting point for the next older segment.

8.11 Refer to Form 1904.06A to determine the downwind directions and lengths of successively older plume segments, repeating Steps 8.5 through 8.10 until all plume segments have been plotted which fall within a 10-mile radius of ANO.

9.0 PLUME OUTLINE DRAWING

NOTE: This section must be completed only if a graphic plume drawing is required; normally once every 30 minutes.

9.1 For each plume segment, beginning with the one emitted most recently:

9.1.1 Select the overlay corresponding to the atmospheric stability when that segment was released.

9.1.2 Using the total broken-path distance to the segment starting point (as recorded on the centerline plot), mark the segment starting point on the centerline of the stability overlay.

9.1.3 Place the overlay under the tracing paper bearing the centerline plot, aligning the segment starting points and centerlines.

9.1.4 Trace the bounding X/Q lines for the segment, connecting smoothly with the adjacent segment. (It is usually helpful to extend the boundary lines an inch or so beyond the segment endpoint).

9.2 Darken the plume outline.

9.3 Affix the tracing sheet to a 10-mile radius emergency planning map, aligning the north-south directions, and centering the starting point of the youngest plume segment over the plant site.

10.0 DOSE COMMITMENT INTEGRATION

10.1 At the top, leftmost open column on Form 1904.06B, list the starting and ending times for the most recently emitted plume segment. Subtract the starting time from the ending time to determine the duration of this integration period in hours. A separate set of forms must be maintained for whole body and for child thyroid doses.

10.2 Where the plume centerline intersects each of the following map radii (0.65, 1.0, 2.0, 5.0 and 10.0 miles):

10.2.1 Obtain the current child thyroid and whole body dose rates associated with the plume segment currently crossing the radii of interest.

A. For the most recently emitted plume segment, the most recent centerline dose rates tabulated on Form 1904.06A may be used.

B. For substantially curved portions of the plume:

1. Note which plume segment is currently crossing the radius of interest.

2. Reposition the X/Q overlay for that segment over the plume outline, aligning the centerline axes.

3. The total broken-path distance to the segment starting point must coincide with the straight line source-to-segment start distance on the overlay.

4. Interpolate the X/Q value at the plume centerline where it crosses the radius of interest.

5. Divide the local X/Q by the bounding X/Q for that plume as shown on Form 1904.06A, then multiply by 0.050 mR/hr to obtain the whole body dose rate at the radius of interest.

6. Obtain the child thyroid dose rate at the radius of interest by dividing the result from Step 5 by the whole body dose rate for the corresponding radius for that plume segment from Form 1904.06A, then multiplying by the child thyroid dose rate.

10.2.2 Multiply the dose rates obtained in Step 10.2.1.A or Step 10.2.1.B times the duration to determine the incremental whole body and child thyroid integrated doses. Record these in the 'Δ' column on the whole body and child thyroid worksheets (Form 1904.06B), on the appropriate sector/radius line.

NOTE: When the plume centerline falls between two sectors, add the incremental doses to both sectors.

10.3 For all sector/radii lines on Form 1904.06B, sum the 'Δ' column to the previous 'Σ' column and record the new total integrated doses in the current 'Σ' column.

10.4 Circle the highest integrated exposure value for each major radius (0.65, 1.0, 2.0, 5.0, and 10.0 miles) and for both dose types (whole body and child thyroid).

11.0 PROTECTIVE ACTION RECOMMENDATIONS

11.1 Recommend protective action in affected offsite subsectors when trends indicate that:

11.1.1 Whole body integrated dose may approach 1 Rem (1000 mR), or

11.1.2 Child thyroid integrated dose may approach 5 Rem (5000 mR).

11.2 Recommend protective action in affected onsite (exclusion area) subsectors when trends indicate that:

11.2.1 Whole body integrated dose may approach 0.5 Rem (500 mRem), or

11.2.2 Child thyroid integrated dose may approach 1.0 Rem (1000 mRem).

12.0 ATTACHMENTS AND FORMS

12.1 Form 1904.06A - Dose Projection Summary

12.2 Form 1904.06B - Integrated Exposure Worksheet

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: DOSE PROJECTION SUMMARY

FORM NO. 1904.06B

REV. # 0 PC #

	DOSE PROJECTION SUMMARY (ACTUAL METEOROLOGY)			RADIUS (MILES)	WHOLE BODY (MR/HR)	CHILD THYROID (MR/HR)
1.0	TIME:	WINDSPEED:	(MPH)	0.65		
	DOWNWIND DIRECTION:		(DEG)	1.0		
	STABILITY CLASS:			2.0		
	BOUNDING X/Q:		(SEC/M^3)	5.0		
	SEGMENT LENGTH:		(MILES)	10.0		
2.0	TIME:	WINDSPEED:	(MPH)	0.65		
	DOWNWIND DIRECTION:		(DEG)	1.0		
	STABILITY CLASS:			2.0		
	BOUNDING X/Q:		(SEC/M^3)	5.0		
	SEGMENT LENGTH:		(MILES)	10.0		
3.0	TIME:	WINDSPEED:	(MPH)	0.65		
	DOWNWIND DIRECTION:		(DEG)	1.0		
	STABILITY CLASS:			2.0		
	BOUNDING X/Q:		(SEC/M^3)	5.0		
	SEGMENT LENGTH:		(MILES)	10.0		
4.0	TIME:	WINDSPEED:	(MPH)	0.65		
	DOWNWIND DIRECTION:		(DEG)	1.0		
	STABILITY CLASS:			2.0		
	BOUNDING X/Q:		(SEC/M^3)	5.0		
	SEGMENT LENGTH:		(MILES)	10.0		
5.0	TIME:	WINDSPEED:	(MPH)	0.65		
	DOWNWIND DIRECTION:		(DEG)	1.0		
	STABILITY CLASS:			2.0		
	BOUNDING X/Q:		(SEC/M^3)	5.0		
	SEGMENT LENGTH:		(MILES)	10.0		
6.0	TIME:	WINDSPEED:	(MPH)	0.65		
	DOWNWIND DIRECTION:		(DEG)	1.0		
	STABILITY CLASS:			2.0		
	BOUNDING X/Q:		(SEC/M^3)	5.0		
	SEGMENT LENGTH:		(MILES)	10.0		

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: INTEGRATED EXPOSURE WORKSHEET

FORM NO. 1904.06B

REV. # 0 PC #

☐ WHOLE BODY ☐ CHILD THYROID

FROM (TIME)												
UNTIL (TIME)												
DURATION (HR)												
SECTOR/RADIUS	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ
1 0.65 mi												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: INTEGRATED EXPOSURE WORKSHEET
FORM NO. 1904.06B
REV. # 0 PC #

☐ WHOLE BODY ☐ CHILD THYROID

FROM (TIME)												
UNTIL (TIME)												
DURATION (HR)												
SECTOR/RADIUS	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ
1 1.0 mi												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: INTEGRATED EXPOSURE WORKSHEET
FORM NO. 1904.06B
REV. # 0 PC #

Page 3 of 5

☐ WHOLE BODY ☐ CHILD THYROID

FROM (TIME)												
UNTIL (TIME)												
DURATION (HR)												
SECTOR/RADIUS	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ
1 2.0 mi												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: INTEGRATED EXPOSURE WORKSHEET

FORM NO. 1904.06B

REV. # 0 PC #

Page 4 of 5

☐ WHOLE BODY ☐ CHILD THYROID

FROM (TIME)												
UNTIL (TIME)												
DURATION (HR)												
SECTOR/RADIUS	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ
1 5.0 mi												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: INTEGRATED EXPOSURE WORKSHEET — FORM NO. 1904.06B

REV. # 0 PC #

Page 5 of 5

☐ WHOLE BODY ☐ CHILD THYROID

FROM (TIME)												
UNTIL (TIME)												
DURATION (HR)												
SECTOR/RADIUS	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ	Δ	Σ
1 10.0 mi												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: RECORD OF CHANGES AND REVISIONS | FORM NO. 1000.06A

OFFSITE DOSE PROJECTIONS PROCEDURE | REV. # 12 PC #

Safety Related YES X NO ☐

PROTECTIVE ACTION RECOMMENDATIONS
1904.07 REV. 0

N- Controlled Copy # 107

PAGE	REV	PC#	PAGE	REV	PC#	PAGE	REV	PC#	PAGE	REV	PC#	PAGE	REV	PC#
1	0													
2	0													
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4	0													
5	0													
6	0													
7	0													
8	0													
9	0													
10	0													
11	0													

APPROVED BY:

James M Levine
(General Manager)

APPROVAL DATE
1/22/83
REQUIRED EFFECTIVE DATE:

1.0 PURPOSE

This procedure provides a rapid and reproducible method for generating offsite protective action recommendations due to airborne radiological releases based upon current best estimates of plant and meteorological trends.

2.0 SCOPE

2.1 This procedure is primarily a screening procedure which can be used to determine if immediate action is needed, or if additional time is available to wait for improved conditions which are reasonably certain to occur, but whose timing is unknown.

2.2 Some subjective factors are included, the importance of which must be evaluated at the time of the incident.

3.0 REFERENCES

3.1 References used in procedure preparation:

3.1.1 "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents", Environmental Protection Agency; Revised February 1980

3.1.2 "Workbook of Atmospheric Dispersion Estimates," U.S. Department of Health, Education, and Welfare, D. Bruce Turner, 1970

3.1.3 "Meteorology and Atomic Energy", U.S. Atomic Energy Commission, D. H. Slade, July 1968

3.1.4 "Arkansas Nuclear One Evacuation Time Study", ANO Emergency Plan Appendix I, March 1981

3.1.5 1904.05, "Atmospheric Stability Class Determination"

3.2 References used in conjunction with this procedure:

3.2.1 1904.02, "Offsite Dose Projections - Pocket Computer Method"

3.2.2 1904.06, "Radiological Plume Tracking and Dose Integration"

3.2.3 1903.10, "Emergency Action Level Response"

3.3 Related ANO references:

None

4.0 RESPONSIBILITIES

4.1 The Shift Administrative Assistant is responsible for formulating protective action recommendations and communicating them to the Duty Emergency Coordinator for the initial notifications per procedure 1904.02, "Offsite Dose Projections - Pocket Computer Method".

4.2 The TSC staff as designated by the Duty Emergency Coordinator, or the ECC staff as directed, is responsible for formulating protective action recommendations for followup notifications as outlined by this procedure.

4.3 The ERO Technical Support Manager, or his designee, is responsible for preparing protective action recommendations for the remainder of a radiological incident.

5.0 LIMITS AND PRECAUTIONS

5.1 The "latest evacuation start time" calculated in this procedure allows one hour for preliminary governmental actions, sufficient time for evacuation, plus two hours for verification of evacuation.

5.2 If the current Emergency Action Level is "Unusual Event" or "None", this procedure need not be completed.

5.3 Calculations in this procedure are conservative; however, actual offsite doses and decision times may be higher or lower, and new recommendations should be considered whenever updated information becomes available.

6.0 EVACUATION RECOMMENDATIONS

6.1 Attach form 1904.07A to the most recent offsite dose projection forms (1904.02A-E).

6.2 Complete form 1904.07A to determine the appropriate evacuation recommendation.

6.3 If box d) is checked in section 17 of form 1904.07A, consider a recommendation of delaying evacuation due to the factors listed after the evacuation recommendation statements.

6.4 If evacuation is recommended for any radius, rerun this procedure to determine protective action recommendations for the next larger evacuation test radius (i.e., 0.65, 2.0, or 5.0 miles).

7.0 ATTACHMENTS AND FORMS

7.1 Form 1904.07A - Protective Action Selection

7.2 Attachment 1 - X/Q Ratios

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: PROTECTIVE ACTION SELECTION | FORM NO.

REV. # 0 PC #

1.0 Check current Emergency Action level:

1	2	3	4	5
☐	☐	☐	☐	☐
O.K.	U.E.	ALERT	S.E.	G.E.

If box 1 or 2 was checked, check box a) in section 17.0 and terminate the procedure.

2.0 Request the forecast average airborne radioactive release rate for the duration of the incident, based upon considerations of system temperature, pressure, planned remedial actions, probable failures, etc. (factor above current) from the Shift Operations Supervisor:

_____ (factor)

3.0 Request the forecast release continuation time in hours from the Shift Operations Supervisor and/or the Recovery Manager:

_____ (hours)

4.0 Refer to the table in Attachment 1 which applies to the current date and most closely approximates the current sky conditions. Select the predicted X/Q ratio which corresponds to the release continuation time from line 3.0.

NOTE: For overcast (i.e., 100% cloud cover) sky conditions, the predicted X/Q ratio is always 1.0. Predicted X/Q ratio: _____

5.0 Obtain a weather forecast from the National Weather Service [redacted]. (Note: A limited forecast may be obtained by calling the Middle South System Dispatcher at extension 4882; request forecast for Arkansas Zone 5) and record the windspeeds (averages, not gusts) and directions forecast for the duration of the release period:

	Wind Direction (from)	Wind Speed (MPH)	Time Period
a.	_____	_____	Current
b.	_____	_____	_____
c.	_____	_____	_____
d.	_____	_____	_____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: PROTECTIVE ACTION SELECTION
FORM NO. 1906.07A
REV. # 0 PC #

NOTE: The National Weather Service uses the following forecasting periods:

TODAY - 6 a.m. to 6 p.m. Standard (7-7 daylight)

TONIGHT - 6 p.m. to 6 a.m. Standard (7-7 daylight)

TOMORROW - 6 a.m. to 6 p.m. Standard (7-7 daylight)

TOMORROW NIGHT - 6 p.m. to 6 a.m. Standard (7-7 daylight)

6.0 Average the current windspeed with all forecast windspeeds (use the midpoint of forecast ranges of windspeed):

_____ MPH

7.0 Divide the current windspeed in line 5a) by the average windspeed from line 6.0 to obtain the windspeed ratio:

_____ (ratio)

8.0 Based upon the current and forecast wind directions, check the boxes for potentially affected sectors. Include any sectors covered by the transition between forecast wind directions.

Affected Sector	Wind Direction (from)	Downwind Direction (degrees)	Evacuation Zone
☐ 1	S	348.8 - 11.3	London
☐ 2	SSW	11.3 - 33.8	Russellville
☐ 3	SW	33.8 - 56.3	Russellville
☐ 4	WSW	56.3 - 78.8	Russellville
☐ 5	W	78.8 - 101.3	Russellville
☐ 6	WNW	101.3 - 123.8	Russellville
☐ 7	NW	123.8 - 146.3	Russellville
☐ 8	NNW	146.3 - 168.8	Dardanelle

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: PROTECTIVE ACTION SELECTION | FORM NO. 1004.07A
REV. # 0 PC #

Affected Sector	Wind Direction (from)	Downwind Direction (degrees)	Evacuation Zone
☐ 9	N	168.8 - 191.3	Dardanelle
☐ 10	NNE	191.3 - 213.8	Dardanelle
☐ 11	NE	213.8 - 236.3	Delaware
☐ 12	ENE	236.3 - 258.8	Delaware
☐ 13	E	258.8 - 281-3	Delaware
☐ 14	ESE	281.3 - 303.8	London
☐ 15	SE	303.8 - 326.3	London
☐ 16	SSE	326.3 - 348.8	London

9.0 Check the smallest standard radius presently unevacuated in any downwind direction:

☐ 0.65 mi ☐ 2.0 mi ☐ 5.0 mi

10.0 Complete the following table using data for the radius from 9.0 above:

	Column 1 Current Doserate (mR/hr)	Column 2 Forecast Average Doserate (mR/hr)	Column 3 Current Max. Integrated Dose Downwind (mR)	Column 4 Forecast Max. Integrated Dose (mR)	Yes No
a) Whole Body					Exceeds 1000 mR? ☐ ☐
b) Child Thyroid					Exceeds 5000 mR? ☐ ☐

NOTE: Column 1 = Form 1904.02D, Section 5.15

Column 2a = Column 1a) x Line 2.0 x Line 4.0 x Line 7.0

ARKANSAS POWER & LIGHT COMPANY
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(Note Continued)

Column 2b = (Column 1b) x Line 2.0 x Line 4.0 x Line 7.0

Column 3 = Zero for initial recommendation; or use 1904.06 max. dose in an affected sector at the appropriate radius

Column 4a = (Column 2a x Line 3.0) + Column 3a

Column 4b = (Column 2b x Line 3.0) + Column 3b

11.0 If both "no" boxes were checked in the table above, check box number b) in section 17.0 and terminate the procedure.

12.0 Calculate the PAG dose accumulation time:

12.1 [1000 (mR) - _____ (mR)] ÷ _____ (mR/hr) = _____ (hr)
Column 3a Column 2a) Whole Body

12.2 [5000 (mR) - _____ (mR)] ÷ _____ (mR/hr) = _____ (hr)
Column 3b Column 2b) Child Thyroid

12.3 Enter the lesser of line 12.1 or line 12.2:

_____ (hr)

13.0 Estimate the evacuation time of potentially affected sectors. Based upon the road conditions forecast for the PAG dose accumulation time in 12.3 above, circle the evacuation time in the following table for each potentially evacuation zone (from line 8.0).

Evacuation Zone	Weekday	Night	Weekend	rse itions day)
London	2.7	2.6	2.7	3.3
Russellville	3.8	3.0	5.4	5.1
Dardanelle	2.1	2.1	2.6	2.1
Delaware	2.1	2.1	2.1	2.1

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14.0 Record the largest evacuation time circled in 13.0 above:

_____ (hrs)

15.0 Calculate the latest evacuation start time:

_____ (hr) - _____ (hr) - 3.0 (hr) = _____ (hours)
Line 12.3 Line 14.0

16.0 If the time calculated on line 15.0 is negative, check box c) in section 17.0, otherwise check box d).

17.0 Use the data from this sheet to fill in the blanks in the recommendation statement checked below:

☐ a) At the current release rates, no need for offsite evacuation is anticipated.

☐ b) Based upon forecast meteorology and radiological release rates, offsite evacuation is not recommended at this time.

☐ c) Based upon forecast meteorology, radiological release rates, and clearance time estimates, immediate evacuation of sectors _____ (See Line 8.0) from (0.65 to 2.0)(2.0 to 5.0)(5.0 to 10.0) (Circle one range: See Line 9.0) miles is recommended. No additional time is available.

☐ d) Based upon forecast meteorology, radiological release rates, and clearance time estimates, evacuation of sectors _____ (See Line 8.0) from (0.65 to 2.0)(2.0 to 5.0)(5.0 to 10.0) (Circle one range: See Line 9.0) miles may be required to start before _____ (Current time plus line 15.0).*

*Optional: Evacuation should be delayed due to:

☐ Dose distribution due to uniform forecast wind changes.

☐ Possibility of more rapid plant repairs.

☐ Improved forecast driving conditions.

☐ Emergency response personnel/equipment currently unready.

Performed By: _____ / _____
Initials Date

Reviewed By: _____ / _____
Initials Date

ATTACHMENT 1

X/Q RATIOS

TABLE 1A: CLEAR SKIES (Feb. 16 - Apr. 22)

Current Time	Release Continuation Time (Hr) 4	6	8	10	12	14	16	18	20	22	≧24
11 PM- 1 AM	1.0	1.0	0.83	0.69	0.58	0.50	0.45	0.41	0.40	0.46	0.50
1 AM- 3 AM	1.0	0.78	0.61	0.50	0.42	0.37	0.34	0.34	0.40	0.46	0.50
3 AM- 5 AM	0.67	0.48	0.37	0.31	0.26	0.24	0.26	0.34	0.40	0.46	0.50
5 AM- 7 AM	0.68	0.50	0.41	0.35	0.36	0.45	0.75	0.99	1.19	1.34	1.47
7 AM- 9 AM	0.69	0.59	0.54	0.63	0.98	1.98	2.73	3.31	3.77	4.16	4.04
9 AM- 11 AM	1.0	1.0	1.39	2.51	5.49	7.62	9.22	10.46	11.46	11.05	10.34
11 AM- 1 PM	1.0	1.52	2.89	6.39	8.73	10.40	11.65	12.62	12.06	11.19	10.34
1 PM- 3 PM	1.78	3.52	7.74	10.27	11.96	13.17	14.07	13.29	12.21	11.19	10.34
3 PM- 5 PM	1.86	3.90	4.91	5.52	5.93	6.22	5.79	5.25	4.77	4.37	4.04
5 PM- 7 PM	1.95	2.27	2.43	2.53	2.59	2.36	2.11	1.89	1.72	1.57	1.47
7 PM- 9 PM	1.0	1.0	1.0	1.0	0.89	0.78	0.68	0.61	0.56	0.52	0.50
9 PM- 11 PM	1.0	1.0	1.0	0.86	0.74	0.64	0.57	0.51	0.47	0.46	0.50

TABLE 1B: 60% CLOUD COVER (Feb. 16 - Apr. 22)

Current Time	Release Continuation Time (Hr) 4	6	8	10	12	14	16	18	20	22	24
11 PM- 1 AM	1.0	1.0	0.89	0.83	0.73	0.65	0.60	0.60	0.60	0.63	0.66
1 AM- 3 AM	1.0	0.86	0.79	0.68	0.60	0.54	0.55	0.55	0.60	0.63	0.66
3 AM- 5 AM	0.79	0.72	0.60	0.52	0.47	0.48	0.50	0.55	0.60	0.63	0.66
5 AM- 7 AM	1.0	0.78	0.68	0.61	0.68	0.72	0.84	0.94	1.01	1.07	1.12
7 AM- 9 AM	0.68	0.57	0.52	0.61	0.68	0.82	0.93	1.01	1.08	1.13	1.12
9 AM- 11 AM	1.0	1.0	1.43	1.69	2.17	2.52	2.78	2.98	3.15	3.11	3.08
11 AM- 1 PM	1.0	1.57	1.86	2.41	2.78	3.04	3.23	3.39	3.32	3.27	3.08
1 PM- 3 PM	1.86	2.15	2.76	3.13	3.38	3.55	3.68	3.58	3.49	3.27	3.08
3 PM- 5 PM	1.0	1.22	1.34	1.41	1.45	1.49	1.42	1.38	1.27	1.19	1.12
5 PM- 7 PM	1.34	1.45	1.51	1.54	1.57	1.49	1.42	1.31	1.21	1.13	1.12
7 PM- 9 PM	1.0	1.0	1.0	1.0	0.93	0.88	0.80	0.73	0.68	0.67	0.66
9 PM- 11 PM	1.0	1.0	1.0	0.91	0.86	0.77	0.70	0.64	0.64	0.63	0.66

ATTACHMENT 1

X/Q RATIOS

TABLE 2A: CLEAR SKIES (Apr. 23 - Aug. 22)

	Release Continuation Time (Hr)										
Current Time	4	6	8	10	12	14	16	18	20	22	24
11 PM- 1 AM	1.0	1.0	0.83	0.67	0.57	0.49	0.44	0.39	0.39	0.44	0.49
1 AM- 3 AM	1.0	0.78	0.59	0.48	0.41	0.36	0.32	0.32	0.39	0.44	0.49
3 AM- 5 AM	0.67	0.46	0.36	0.29	0.25	0.22	0.24	0.32	0.39	0.44	0.49
5 AM- 7 AM	0.57	0.42	0.35	0.31	0.28	0.38	0.70	0.94	1.14	1.30	1.44
7 AM- 9 AM	1.0	1.0	1.0	1.0	2.00	4.63	6.60	8.13	9.36	10.37	10.08
9 AM- 11 AM	1.0	1.0	1.0	2.20	5.23	7.40	9.03	10.29	11.30	10.91	10.08
11 AM- 1 PM	1.0	1.0	2.50	6.08	8.47	10.17	11.45	12.45	11.90	10.91	10.08
1 PM- 3 PM	1.0	3.0	7.35	9.96	11.70	12.95	13.88	13.11	11.90	10.91	10.08
3 PM- 5 PM	4.0	9.47	12.20	13.84	14.94	15.72	14.63	13.11	11.90	10.91	10.08
5 PM- 7 PM	1.95	2.27	2.43	2.53	2.59	2.36	2.09	1.8[illegible]	1.70	1.55	1.44
7 PM- 9 PM	1.0	1.0	1.0	1.0	0.89	0.77	0.68	0.60	0.55	0.50	0.49
9 PM- 11 PM	1.0	1.0	1.0	0.86	0.73	0.63	0.56	0.50	0.45	0.44	0.49

TABLE 2B: 60% CLOUD COVER (Apr. 23 - Aug. 22)

	Release Continuation Time (Hr)										
Current Time	4	6	8	10	12	14	16	18	20	22	24
11 PM- 1 AM	1.0	1.0	0.89	0.76	0.67	0.58	0.54	0.50	0.51	0.55	0.59
1 AM- 3 AM	1.0	0.86	0.70	0.60	0.51	0.47	0.44	0.45	0.51	0.55	0.59
3 AM- 5 AM	0.79	0.60	0.50	0.42	0.38	0.36	0.39	0.45	0.51	0.55	0.59
5 AM- 7 AM	0.68	0.57	0.46	0.44	0.43	0.51	0.66	0.77	0.86	0.94	1.0
7 AM- 9 AM	1.0	0.79	0.84	0.87	1.18	1.67	2.04	2.32	2.55	2.74	2.74
9 AM- 11 AM	0.69	0.79	0.84	1.22	1.78	2.19	2.49	2.72	2.91	2.90	2.74
11 AM- 1 PM	1.78	2.04	3.28	4.98	6.12	6.93	7.54	8.01	7.91	7.42	7.02
1 PM- 3 PM	1.0	1.57	2.33	2.79	3.09	3.31	3.47	3.39	3.15	2.95	2.74
3 PM- 5 PM	1.86	2.78	3.23	3.51	3.69	3.82	3.68	3.39	3.15	2.90	2.74
5 PM- 7 PM	1.34	1.45	1.51	1.54	1.57	1.49	1.34	1.24	1.13	1.06	1.0
7 PM- 9 PM	1.0	1.0	1.0	1.0	0.93	0.82	0.75	0.67	0.63	0.59	0.59
9 PM- 11 PM	1.0	1.0	1.0	0.91	0.80	0.71	0.63	0.59	0.55	0.55	0.59

ATTACHMENT 1

X/Q RATIOS

TABLE 3A: CLEAR SKIES (Aug. 23 - Oct. 25)

Current Time	Release Continuation Time (Hr)										
	4	6	8	10	12	14	16	18	20	22	≥24
11 PM- 1 AM	1.0	1.0	0.83	0.69	0.58	0.50	0.45	0.41	0.40	0.46	0.50
1 AM- 3 AM	1.0	0.78	0.61	0.[illegible]	0.42	0.37	0.34	0.34	0.40	0.46	0.50
3 AM- 5 AM	0.67	0.48	0.37	0.31	0.26	0.24	0.26	0.34	0.40	0.46	0.50
5 AM- 7 AM	0.68	0.50	0.41	0.35	0.36	0.45	0.75	0.99	1.19	1.34	1.47
7 AM- 9 AM	0.69	0.59	0.54	0.63	0.98	1.98	2.73	3.31	3.77	4.16	4.04
9 AM- 11 AM	1.0	1.0	1.39	2.51	5.49	7.62	9.22	10.46	11.46	11.05	10.34
11 AM- 1 PM	1.0	1.52	2.89	6.39	8.73	10.40	11.65	12.62	12.06	11.19	10.34
1 PM- 3 PM	1.78	3.52	7.74	10.27	11.96	13.17	14.07	13.29	12.21	11.19	10.34
3 PM- 5 PM	1.86	3.90	4.91	5.52	5.93	6.22	5.79	5.25	4.77	4.37	4.04
5 PM- 7 PM	1.95	2.27	2.43	2.53	2.59	2.36	2.11	1.89	1.72	1.57	1.47
7 PM- 9 PM	1.0	1.0	1.0	1.0	0.89	0.78	0.68	0.61	0.56	0.52	0.50
9 PM- 11 PM	1.0	1.0	1.0	0.86	0.74	0.64	0.57	0.51	0.47	0.46	0.50

TABLE 3B: 60% CLOUD COVER (Aug. 23 - Oct. 25)

Current Time	Release Continuation Time (Hr)										
	4	6	8	10	12	14	16	18	20	22	24
11 PM- 1 AM	1.0	1.0	0.89	0.83	0.73	0.65	0.60	0.60	0.60	0.63	0.66
1 AM- 3 AM	1.0	0.86	0.73	0.68	0.60	0.54	0.55	0.55	0.60	0.63	0.66
3 AM- 5 AM	0.79	0.72	0.60	0.52	0.47	0.48	0.50	0.55	0.60	0.63	0.66
5 AM- 7 AM	1.0	0.78	0.68	0.61	0.68	0.72	0.84	0.94	1.01	1.07	1.12
7 AM- 9 AM	0.68	0.57	0.52	0.61	0.68	0.82	0.93	1.01	1.08	1.13	1.12
9 AM- 11 AM	1.0	1.0	1.43	1.69	2.17	2.52	2.78	2.98	3.15	3.11	3.08
11 AM- 1 PM	1.0	1.57	1.86	2.41	2.78	3.04	3.23	3.39	3.32	3.27	3.08
1 PM- 3 PM	1.86	2.15	2.76	3.13	3.38	3.55	3.68	3.58	3.49	3.27	3.08
3 PM- 5 PM	1.0	1.22	1.34	1.41	1.45	1.49	1.42	1.38	1.27	1.19	1.12
5 PM- 7 PM	1.34	1.45	1.51	1.54	1.57	1.49	1.42	1.31	1.21	1.13	1.12
7 PM- 9 PM	1.0	1.0	1.0	1.0	0.93	0.88	0.80	0.73	0.68	0.67	0.66
9 PM- 11 PM	1.0	1.0	1.0	0.91	0.86	0.77	0.70	0.64	0.64	0.63	0.66

ATTACHMENT 1

X/Q RATIOS

TABLE 4A: CLEAR SKIES (Oct. 26 - Feb. 15)

	Release Continuation Time (Hr)										
Current Time	4	6	8	10	12	14	16	18	20	22	24
11 PM- 1 AM	1.0	1.0	1.0	0.86	0.74	0.64	0.58	0.55	0.59	0.63	0.66
1 AM- 3 AM	1.0	1.0	0.83	0.69	0.58	0.52	0.49	0.55	0.59	0.63	0.66
3 AM- 5 AM	1.0	0.78	0.61	0.50	0.44	0.42	0.49	0.55	0.59	0.63	0.66
5 AM- 7 AM	0.67	0.48	0.37	0.32	0.33	0.42	0.49	0.55	0.59	0.63	0.66
7 AM- 9 AM	0.68	0.50	0.46	0.57	0.96	1.24	1.45	1.61	1.74	1.85	1.94
9 AM- 11 AM	0.69	0.79	1.28	2.61	3.51	4.14	4.62	4.99	5.29	5.53	5.30
11 AM- 1 PM	1.78	3.52	7.74	10.27	11.96	13.17	14.07	14.78	15.34	14.58	13.58
1 PM- 3 PM	1.86	3.90	4.91	5.52	5.93	6.22	6.44	6.61	6.22	5.75	5.30
3 PM- 5 PM	1.95	2.27	2.43	2.53	2.59	2.64	2.67	2.49	2.27	2.08	1.94
5 PM- 7 PM	1.0	1.0	1.0	1.0	1.0	1.0	0.91	0.82	0.75	0.69	0.66
7 PM- 9 PM	1.0	1.0	1.0	1.0	1.0	0.90	0.80	0.72	0.66	0.63	0.66
9 PM- 11 PM	1.0	1.0	1.0	1.0	0.89	0.78	0.68	0.62	0.59	0.63	0.66

TABLE 4B: 60% CLOUD COVER (Oct. 26 - Feb. 15)

	Release Continuation Time (Hr)										
Current Time	4	6	8	10	12	14	16	18	20	22	24
11 PM- 1 AM	1.0	1.0	1.0	0.91	0.86	0.77	0.74	0.73	0.75	0.78	0.79
1 AM- 3 AM	1.0	1.0	0.89	0.83	0.73	0.71	0.69	0.73	0.75	0.78	0.79
3 AM- 5 AM	1.0	0.86	0.79	0.68	0.66	0.65	0.69	0.73	0.75	0.78	0.79
5 AM- 7 AM	0.79	0.72	0.60	0.59	0.59	0.65	0.69	0.73	0.75	0.78	0.79
7 AM- 9 AM	1.0	0.78	0.84	0.87	1.00	1.10	1.17	1.23	1.27	1.31	1.34
9 AM- 11 AM	0.68	0.78	0.84	1.01	1.12	1.20	1.26	1.31	1.34	1.37	1.34
11 AM- 1 PM	1.86	2.15	2.76	3.13	3.38	3.55	3.68	3.79	3.87	3.76	3.68
1 PM- 3 PM	1.0	1.22	1.34	1.41	1.45	1.49	1.51	1.53	1.48	1.43	1.34
3 PM- 5 PM	1.34	1.45	1.51	1.54	1.57	1.58	1.60	1.53	1.48	1.37	1.34
5 PM- 7 PM	1.0	1.0	1.0	1.0	1.0	1.0	0.94	0.90	0.84	0.81	0.79
7 PM- 9 PM	1.0	1.0	1.0	1.0	1.0	0.94	0.89	0.82	0.79	0.78	0.79
9 PM- 11 PM	1.0	1.0	1.0	1.0	0.93	0.88	0.80	0.77	0.75	0.78	0.79

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: RECORD OF CHANGES AND REVISIONS | FORM NO. 1000.06A

EMERGENCY PLAN PROCEDURE | REV. # 12 PC #

Safety Related YES ☒ NO ☐

EMERGENCY ACTION LEVEL RESPONSE
1903.10 Rev. 7

UN-Controlled Copy # 107

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APPROVED BY:

James M Levine
(General Manager)

APPROVAL DATE
1/12/85

REQUIRED EFFECTIVE DATE:

1.0 PURPOSE

This procedure defines conditions requiring response, delineates responsibilities for action and establishes required actions for each of four "Emergency Action Levels (EAL's)".

2.0 SCOPE

This procedure is applicable to Units 1 and 2 in all modes; it does not include specific plant casualty procedures or systems operations requirements, but rather provides administrative processes only.

This procedure describes actions for events which meet the criteria for the Emergency Action Levels only.

3.0 DESCRIPTION

3.1 This procedure is divided in four sections arranged in order of increasing severity, each defining and setting response requirements for individual EAL's. Each section is broken down into four subsections which include EAL classification criteria, personnel responsibilities and required actions, termination or escalation guidance and applicable forms.

3.2 This procedure is divided into the following sections:

4.0 REFERENCES

4.1 References Used in Procedure Preparation:

4.1.1 Arkansas Nuclear One Emergency Plan

4.2 References Used in Conjunction with this Procedure:

4.2.1 1903.32, "Area Evacuation"

4.2.2 1904.02, "Offsite Dose Projection - Pocket Computer Method"

4.3 Related ANO Procedures:

4.3.1 1043.06, "Bomb Threat"

4.3.2 1202.40, "Refueling Accidents"

4.3.3 1202.44, "Natural Emergencies"

4.3.4 1903.20, "Toxic Gas Release"

4.3.5 1903.21, "Arkla Natural Gas Line Rupture"

4.3.6 1903.22, "Fire or Explosion"

4.3.7 1903.23, "Personnel Emergency"

4.3.8 1903.40, "Duties of the Emergency Evacuation Team"

4.3.9 1903.41, "Duties of the Emergency Fire Team"

4.3.10 1903.42, "Duties of the Emergency Medical Team"

4.3.11 1903.43, "Duties of the Emergency Radiation Team"

4.4 Regulatory correspondence containing NRC commitments which are implemented in this procedure include:

4.4.1 0CAN018306

A. Section 6.2.3.B

B. Section 7.2.3.B

C. Section 8.2.3.B

D. Section 9.2.3.B

5.0 DEFINITIONS

5.1 Emergency Action Levels (EAL's) - A system of classification of unusual or emergency situations which categorizes the spectrum of possible emergency situations into four groups. Each classification is associated with a particular set of actions to be taken to cope with the situations included in that classification. The emergency action levels are graded to allow a situation to be escalated or de-escalated from one level to another should the severity of the situation change. The four emergency action levels are:

Unusual Event
Alert
Site Emergency
General Emergency

5.2 Unusual Event - This is the least severe of the four Emergency Action Levels. It includes those situations which, unless complicated by other factors, pose no harm to the public but for which contact is established with state and federal officials to provide them with current information on unusual events which are occuring or have occurred at ANO. Typically these situations are brought under control and terminated in less time than it takes to activate the emergency response organization. One of the purposes for this Emergency Action Level is to provide a random, unscheduled test of the communication link between the plant and state and federal officials.

5.3 Alert - This Emergency Action Level includes those situations for which plant, state and federal officials are notified in order to assure that emergency personnel are available to respond should the situation become more serious. These situations, unless upgraded to a more severe Emergency Action Level, pose no harm to the public but confirmatory radiation monitoring by the state may be desired in order to verify that no harm has occurred.

5.4 Site Emergency - This Emergency Action Level includes those situations for which plant, state and federal officials are mobilized so that emergency response centers are manned, and personnel required for evacuation of near site areas are available should the situation become more serious. Situations classified under the Site Emergency Action Level should also be those for which it is prudent to provide early warning to the population within the Emergency Planning Zone so they may be in a state of readiness should the situation become more serious.

5.5 General Emergency - This is the most severe of the four Emergency Action Levels. This Emergency Action Level includes those situations for which plant, state and federal officials are notified so they may take predetermined protective actions, such as sheltering or evacuation of the public, in order to minimize the potential for radiological exposure of the public. For these situations, early warning is provided to the population within the Emergency Planning Zone so they may be ready to take protective action.

5.6 Emergency Planning Zone (EPZ) - The EPZ considered by this procedure is the Inhalation Zone - that area within approximately a 10 mile radius of ANO.

5.7 Onsite - The area within the Exclusion Area Boundary.

5.8 Offsite - Those areas not covered by Section 5.7.

5.9 Onsite Technical Support Center - The location within the ANO Administration Building equipped with instrumentation and communication systems and facilities useful in monitoring the course of an accident; this center is located in the 3rd Floor Conference Room.

5.10 Onsite Operational Support Center - The ANO Administration Building; the normal work location for an individual is used as the reporting area in this center with the following exceptions:

5.10.1 Site Engineering Supervisor - Plant Analysis Superintendent's Office.

5.10.2 Radwaste Coordinator - individual's supervisor's office in the Administration Building.

5.10.3 Emergency Team Personnel

A. Evacuation - Main Guard Station (Material Management Personnel); Emergency Control Center [Secondary Operational Support Center (Training Personnel)]

B. Fire - 2nd floor conference room

C. Medical - First Aid Room/2nd floor break room

D. Radiation - (onsite team) Maintenance Coordinator's office area (First Floor Administration Building)

E. Recovery - same as 5.10.3.D

6.0 UNUSUAL EVENT

6.1 Classification Criteria

6.1.1 Projected summed releases from either unit exceed 1MPC for one hour at the site boundary assuming annual average χ/Q.

6.1.2 Abnormal RCS Conditions:

A. Margin to saturation of the RCS as indicated on margin-to-saturation meters or as calculated is less than 20°F for greater than 5 minutes.

B. RCS steady-state I^{131} dose equivalent activity in excess of the allowable Technical Specification limit.

C. Failure of the pressurizer relief valve to re-close after lifting.

D. Plant transients which result in emergency core cooling systems actuation.

6.1.3 Ongoing security compromise on site, but outside the Protected Area Security Fence Attempted entry or sabotage which has been stopped before an Alert, Site Emergency or General Emergency can be declared.

6.1.4 Rapid depressurization of the steam generator secondary system which results in automatic steam generator secondary isolation.

6.1.5 Reactor shutdown required by the Limiting Conditions for Operation of the unit's Technical Specifications.

6.1.6 Loss of ability to assess off-site radiological doses, or loss of radio communication with off-site agencies.

6.1.7 The occurrence of other unusual events:

A. Fire in a vital area not under control within 10 minutes.

B. Aircraft crash onsite.

C. Train derailment onsite.

D. Explosion on site resulting in equipment damage and/or personnel injury requiring hospitalization.

E. Toxic or flammable gas release onsite or affecting the site which requires a plant evacuation.

F. Medical emergency which requires transporting a radiologically contaminated individual from the site to an offsite hospital.

G. Any tornado causing facility damage.

6.2 ersonnel Responsibilities and Required Actions

For the Unusual Event Emergency Action Level, the following actions shall be taken by members of the Initial Response Organization, as described in the Arkansas Nuclear One Emergency Plan:

6.2.1 Shift Operations Supervisor

A. Once the Shift Operations Supervisor has determined that the Unusual Event Emergency Action Level should be declared, he shall:

1. Assure the appropriate procedures are being implemented to mitigate the consequences of the Unusual Event.

2. Implement the Unusual Event Emergency Action Level notifications, and record these notifications as shown on Form 1903.10A of this procedure.

3. Continue to monitor plant conditions in order to determine if upgrading to a higher Emergency Action Level becomes necessary.

4. Direct the activities of the Initial Response Organization (if activated) until relieved by the Duty Emergency Coordinator.

5. Direct operations personnel and unit operations.

6.2.2 Shift Technical Advisor

A. The Shift Technical Advisor shall assist the Shift Operations Supervisor in incident assessment.

6.2.3 Shift Administrative Assistant

A. When directed by the Shift Operations Supervisor the Shift Administrative Assistant shall initiate the Unusual Event Shift Administrative Assistant Notification List and Record, Form 1903.10B of this procedure. The Shift Administrative Assistant shall also respond to incoming calls to the control room during the incident for notification authentication.

B. In the absence of the Shift Adminstrative Assistant, the Shift Operations Supervisor shall appoint an individual to initiate the Unusual Event Shift Administrative Assistant Notification List and Record. If additional assistance is needed, the Shift Operations Supervisor may appoint individuals to assist in performing notifications (e.g. the Shift Administrative Assistant from the unaffected unit).

C. The Shift Administrative Assistant shall assist operations personnel as directed by the Shift Operations Supervisor.

6.2.4 Duty Emergency Coordinator

A. If not on site, and if deemed necessary, the Duty Emergency Coordinator may report to the site to direct any necessary emergency response operations, so as to free the Shift Operations Supervisor to direct reactor operations.

B. The Unusual Event Duty Emergency Coordinator Notification List and Record, Form 1903.10C of this procedure, shall be initiated by the Duty Emergency Coordinator.

C. At the termination of the event, the Duty Emergency Coordinator shall verbally close out the event and prepare a written summary for Plant Safety Committee review, in accordance with Section 6.3 below.

6.3 Termination or Escalation of Emergency Action Level

6.3.1 The Unusual Event Emergency Action Level may be terminated by the Duty Emergency Coordinator after review of the event and implementation of appropriate corrective action.

6.3.2 The Unusual Event Emergency Action Level may be escalated to a higher Emergency Action Level if the Criteria of Sections 7.0, 8.0, or 9.0 are met.

6.3.3 The Unusual Event Emergency Action Level may be closed out after being terminated by a verbal summary from the Duty Emergency Coordinator to offsite authorities who were contacted during the event. A written summary of the event shall be transmitted to the NRC and appropriate off-site authorities.

6.4 Forms

6.4.1 The following forms describe the notifications and records to be made by the appropriate individuals for the Unusual Event Emergency Action Level. Date the form where indicated (if the date changes before the form is complete, indicate the new date on the appropriate initial/time line). As notifications are completed, initial and time should be placed on the line in the right hand margin by each step. Other pertinent data (e.g. person contacted) may also be noted adjacent to each step, as appropriate.

6.4.2 Form 1903.10A - Unusual Event Shift Operations Supervisor Notification List and Record.

6.4.3 Form 1903.10B - Unusual Event Shift Administrative Assistant Notification List and Record.

6.4.4 Form 1903.10C - Unusual Event Duty Emergency Coordinator Notification List and Record.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE

FORM NO. 1903.10A

REV. # 7 PC #

UNUSUAL EVENT
SHIFT OPERATIONS SUPERVISOR
NOTIFICATION LIST AND RECORD

DATE _____

INITIALS/TIME

1. Unusual Event Emergency Action Level has been declared based on the following conditions (List): ____/____

   _____

   _____

   _____

   _____

2. Direct the Shift Technical Advisor to the Control Room. ____/____

3. Determine which of the following sections of the Staff Augmentation Group are needed, if any, to report onsite to aid in mitigating the consequences of the emergency situation (inform the Shift Administrative Assistant of the section(s) that must be notified):

   3.1 Health Physics _____

   3.2 Engineering/Technical Support Section _____

   3.3 None of the above _____

4. Direct the designated Shift Administrative Assistant to initiate the notifications specified on Form 1903.10B (the order of notification may be re-arranged as necessary). Assign/contact personnel to assist, as necessary. ____/____

5. If a radiological release is involved:

   5.1 Direct appropriate personnel to perform the calculations per 1904.02, "Offsite Dose Projection - Pocket Computer Method". ____/____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE | FORM NO. 1903.10A

REV. # 5 PC #

DATE _____

INITIALS/TIME

5.2 Provide radiological release information to the personnel responsible for making follow-up reports (SAA, TSC, ECC, ETC).

5.3 Direct the implementation of appropriate onsite protective actions.

6. Direct operating personnel to closely monitor plant parameters, (particularly those which are associated with the need to escalate to a higher Emergency Action Level).

7. Perform the duties of the Duty Emergency Coordinator until relieved of those responsibilities (refer to Form 1903.10C).

8. Maintain a log of the incident (this may be delegated to other personnel as available).

9. At the termination of the event, this Notification List and Record should be turned over to the Duty Emergency Coordinator.

_____
SHIFT OPERATIONS SUPERVISOR

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO.
REV. # PC #

UNUSUAL EVENT
SHIFT ADMINISTRATIVE ASSISTANT
NOTIFICATION LIST AND RECORD

Date

INITIALS/TIME

1. Complete as much of Form 1903.10M, "EAL Notification" as available information and time allows.

NOTE: The order of notification may be rearranged as dictated by the situation with approval of the Shift Operations Supervisor. These groups should be contacted by the most expedient means available (paging, contacting appropriate response center for relaying information, direct phone call, radio contact, etc.). The phone numbers (plant personnel) provided are for use if an individual is not onsite, the appropriate response center has not been manned, etc.

2. Provide the initial information on Form 1903.10M to the following groups:

2.1 Duty Emergency Coordinator (a duty roster is maintained in the Control Room area; beeper available; refer to Attachment 1 for telephone numbers as necessary). ____/____

2.2 Staff Augmentation Group (as directed by the Shift Operations Supervisor); (a duty roaster/call list is maintained in the Control Room area).

NOTE: The following minimum information should be provided to the section leader: affected unit, EAL declared, appropriate plant conditions/parameters, required response.

2.2.1 Health Physics/Radiochemistry Section (Beeper available) ____/____

2.2.2 Maintenance Section (Beeper available) ____/____

2.2.3 Technical Support Section (Beeper available) ____/____

2.3 Nuclear Regulatory Commission [Hotline; or • or Health Physics Network phone , or ____/____

2.4 Arkans- rtment of Health [• for contact the OES at • or via the OES radio channel and request them to notify the Health Department]. ____/____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE | FORM NO 1903.10B
REV. # 7 | PC #

DATE _____
INITIALS/TIME

2.5 Emergency Teams requiring immediate response only (refer to the individual attachment for call list if team personnel are not currently on site):

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, required response.

2.5.1 Security Personnel (•) or Evacuation Team (Attachment 2) ____/____

2.5.2 Fire Team (Attachment 3) ____/____

2.5.3 Medical Team (Attachment 4) ____/____

NOTE: If the Health Physics section of the Staff Augmentation Group has been activated, the personnel on the Radiation Team are already being contacted.

2.5.4 Radiation Team (Attachment 5) ____/____

2.6 Little Rock Control Center (• •; or contact either the OES or the MSS Dispatch Center and request them to notify the LRCC). ____/____

2.7 General Manager (• •) ____/____

2.8 NRC Resident Inspectors (either one): ____/____

2.8.1 •J. Cummins •

2.8.2 •L.J. Callan ( )•

3. Provide updates, as necessary, to the following groups:

3.1 Duty Emergency Coordinator

3.2 Nuclear Regulatory Commission (Include all available radiological release information)

3.3 Arkansas Department of Health

3.4 Little Rock Control Center

4. At the termination of the event, this form and other applicable information should be turned over to the Duty Emergency Coordinator.

_____
Shift Administrative Assistant

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE | FORM NO. 1903.10C | REV. # 7 | PC #

UNUSUAL EVENT
DUTY EMERGENCY COORDINATOR
NOTIFICATION LIST AND RECORD

DATE _____

INITIALS/TIME

1. Notified that an Unusual Event Emergency Action Level has been declared, based on the following conditions (List): _____ /

   _____

   _____

   _____

   _____

2. If on-site, or if deemed necessary to report to site, record the time that the Shift Operations Supervisor was relieved of Duty Emergency Coordinator responsibilities. _____ /

3. If a radiological release is involved:

   3.1 Relieve the Shift Operations Supervisor of responsibilities for calculating offsite dose projections. _____ /

4. Provide updates to the following groups, as necessary:

   4.1 General Manager •( )•

   4.2 NRC Resident Inspector (initially contacted)
   (Include all available radiological release information)

   4.2.1 •J. Cummins •

   4.2.2 •L.J. Callan •

5. At the termination of the event, provide a verbal summary to:

   5.1 Nuclear Regulatory Commission (Hotline; or •( )• _____ /

   5.2 Arkansas Department of Health •( )• _____ /

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE | FORM NO. 1903.10C
REV. # 2 PC #

DATE _____

INITIALS/TIME

6. Provide a written summary of the event to the groups indicated in step 5.0.

_____
DUTY EMERGENCY COORDINATOR

7.0 ALERT

7.1 Classification Criteria

7.1.1 Projected summed releases from either unit exceed 10 times MPC for one hour at the site boundary assuming annual average x/Q.

7.1.2 Abnormal RCS conditions:

A. Margin to saturation of the RCS as indicated on installed instrumentation or as calculated is less than 20°F for 10 minutes with no indication for immediate recovery.

B. RCS I^{131} dose equivalent activity is greater than 100 µCi/gm.

C. RCS leakage is greater than normal makeup capacity.

D. Inability to make or maintain the reactor subcritical when intended.

7.1.3 Ongoing security threat within the protected area security fence, but outside of plant buildings.

7.1.4 Evacuation of the Control Room required.

7.1.5 Loss of all redundant means of core cooling.

7.1.6 All safety-related annunicators lost for more than 5 minutes when above cold shutdown.

7.1.7 The occurrrence of other unusual events:

A. Earthquakes resulting in 0.1g trigger alarms actuation.

B. Lake Dardanelle level is greater than or equal to 350' (above sea level).

7.1.8 Radiation levels at two or more area radiation monitors in the Reactor Building increase by 2,000 mR/hr, or radiation levels at two or more area radiation monitors in the Auxiliary Building or the Fuel Building increase by 100 mR/hr due to a severe degradation in the control of radioactive materials.

7.2 Personnel Responsibilities and Required Actions

For the Alert Emergency Action Level, the following actions shall be taken by members of the Initial Response Organization, as defined in the Arkansas Nuclear One Emergency Plan:

7.2.1 Shift Operations Supervisor

A. Once the Shift Operations Supervisor has determined that the Alert Emergency Action Level should be placed into effect, he shall:

1. Assure the appropriate procedures are being implemented to mitigate the consequences of the unusual plant conditions.

2. Implement the Alert Emergency Action Level notifications, and record these notifications as shown on Form 1903.10D of this procedure.

3. Continue to monitor plant conditions in order to determine if upgrading to a higher Emergency Action Level becomes necessary.

4. Direct the activities of the Initial Response Organization until relieved by the Duty Emergency Coordinator.

5. Direct Operations personnel and unit operations.

7.2.2 Shift Technical Advisor

A. The Shift Technical Advisor shall assist the Shift Operations Supervisor in incident assessment.

7.2.3 Shift Administrative Assistant

A. When directed by the Shift Operations Supervisor, the Shift Administrative Assistant shall initiate the Alert Shift Administrative Assistant Notification List and Record, Form 1903.10E of this procedure. The Shift Administrative Assistant shall also respond to incoming calls to the control room during the incident.

B. In the absence of the Shift Administrative Assistant, the Shift Operations Supervisor shall appoint an individual to initiate the Alert Shift Administrative Assistant Notification List and Record. If additional assistance is needed, the Shift Operations Supervisor may appoint individuals to assist in performing notifications (e.g. the Shift Administrative Assistant from the unaffected unit).

C. The Shift Adminstrative Assistant shall assist operations personnel as directed by the Shift Operations Supervisor.

7.2.4 Duty Emergency Coordinator

A. If not on site, the Duty Emergency Coordinator shall report to the site when notified of an Alert. He shall direct emergency response operations so as to free the Shift Operations Supervisor to oversee reactor operations.

B. The Duty Emergency Coordinator shall initiate the Alert Duty Emergency Coordinator Notification List and Record, Form 1903.10F of this procedure.

7.2.5 Emergency Response Team Leaders

A. The Emergency Response Team Leaders or Alternates are notified by the Shift Administrative Assistant that an Alert has been declared.

B. For situations requiring the support of a particular Emergency Response Team, the Team Leader or Alternate shall be requested to call out and assemble the team. The Team Leader or Alternate shall report to the Duty Emergency Coordinator when the team is assembled.

C. For situations not requiring the immediate support of an Emergency Response Team, the Team Leader or Alternate shall contact the other team members and appraise them of the situation. The team members shall remain on call until notified that the Emergency Action Level has been terminated.

7.3 Termination or Escalation Of Emergency Action Level

7.3.1 The Alert Emergency Action Level may be de-escalated to a lower Emergency Action Level or be terminated by recovery from the event.

7.3.2 The Alert Emergency Action Level may be escalated to a higher Emergency Action Level if the criteria of Sections 8.0 or 9.0 is met.

7.3.3 The Alert Emergency Action Level may be closed out after being terminated by a verbal summary to offsite authorities who were contacted during the event. A written summary of the event shall be transmitted to the NRC and appropriate off-site authorities.

7.4 Forms

7.4.1 The following forms describe the notifications and records to be made by the appropriate individuals for the Alert Emergency Action Level. Date the form where indicated (if the date changes before the form is complete, indicate the new date on the appropriate initial/time line). As notifications are completed, initials and time should be placed on the line in the right hand margin by each step. Other pertinent data (e.g. person contacted) may also be noted adjacent to each step, as appropriate.

7.4.2 Form 1903.10D - Alert Shift Operations Supervisor Notification List and Record.

7.4.3 Form 1903.10E - Alert Shift Administrative Assistant Notification List and Record.

7.4.4 Form 1903.10F - Alert Duty Emergency Coordinator Notification List and Record.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: ~~EMERGENCY ACTION LEVEL RESPONSE~~ FORM NO. ~~1903.10D~~
REV. # 7 PC #

ALERT
SHIFT OPERATIONS SUPERVISOR
NOTIFICATION AND RECORD

DATE _____

INITIALS/TIME

1. The Alert Emergency Action Level has been declared based on the following conditions (List): _____ / _____

   _____

   _____

   _____

   _____

2. Direct the Shift Technical Advisor to the Control Room. _____ / _____

3. Determine which of the following sections of the Staff Augmentation Group are needed, if any, to report onsite to aid in mitigating the consequences of the emergency situation (inform the Shift Administrative Assistant of the section(s) that must be notified):

   3.1 Health Physics _____

   3.2 Engineering/Technical Support Section _____

   3.3 None of the above _____

4. Direct the Shift Administrative Assistant to initiate the the notifications specified on Form 1903.10E (the order of notifications may be rearranged as necessary). Assign/contact personnel to assist, as necessary. _____ / _____

5. If a radiological release is involved (unless previously relieved of this responsibility):

   5.1 Direct appropriate personnel to perform the calculations per 1904.02, "Offsite Dose Projection - Pocket Computer Method". _____ / _____

   5.2 Provide radiological release information to the personnel responsible for making follow-up reports (SAA, TSC, ECC, ETC.).

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE FORM NO. 1903.10D
REV. #6 PC #

DATE _____

INITIALS/TIME

5.3 Direct the implementation of appropriate onsite protective actions.

6. Direct the Facilities Maintenance Coordinator (J. Montgomery; see Attachment 8) to activate the Technical Support Center/Emergency Control Center. _____/_____

7. Notify onsite personnel that an Alert has been declared and describe the nature of the alert. _____/_____

8. Direct operating personnel to closely monitor plant parameters (particularly those identified with the need to escalate to a higher Emergency Action Level.)

9. Perform the duties of the Duty Emergency Coordinator until relieved of those responsibilities (refer to Form 1903.10F).

10. Maintain a log of the incident (this may be delegated to other personnel as available).

11. At the termination of the Emergency Action Level, this Notification List and Record should be turned over to the Duty Emergency Coordinator.

_____
SHIFT OPERATIONS SUPERVISOR

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO.
REV. # - PC #

ALERT
SHIFT ADMINISTRATIVE ASSISTANT
NOTIFICATION LIST AND RECORD

DATE
INITIALS/TIME

1. Complete as much of Form 1903.10M, "EAL Notification" as available information and time allows.

NOTE: The order of notification may be rearranged as the situation dictates with approval of the Shift Operations Supervisor. These groups should be contacted by the most expedient means available (paging, contacting appropriate response center for relaying information, direct phone call, radio contact, etc.). The phone numbers (plant personnel) provided are for use if an individual is not onsite, the appropriate response center has not been manned, etc.

2. Provide the initial information on Form 1903.10M to the following groups:

2.1 Duty Emergency Coordinator (a duty roster is maintained in the Control Room area; beeper available; refer to Attachment 1 for telephone numbers as necessary). ____/____

2.2 Staff Augmentation Group (as directed by the Shift Operations Supervisor); (a duty roster/call list is maintained in the Control Room area).

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, required response and suggested protective actions (if necessary).

2.2.1 Health Physics Section (Beeper available) ____/____

2.2.2 Engineering/Technical Support Section (Beeper available) ____/____

2.3 Nuclear Regulatory Commission [Hotline; or •. . ____/____
; or Health Physics Network phone or
•].

THE MATERIAL CONTAINED WITHIN THE SYMBOLS (•) IS PROPRIETARY OR PRIVATE INFORMATION.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE FORM NO.

REV. # 8 PC # .

DATE _____

INITIALS/TIME

2.4 Arkansas Department of Health [•6 •; or contact the OES (•. •) or use the OES radio channel] and request them to notify the Health Department. _____/_____

2.5 Emergency Teams requiring immediate response (refer to the indicated attachment for call out list if team personnel are not currently on site.) _____/_____

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, required response and suggested protective actions (if necessary).

2.5.1 Evacuation Team (Attachment 2) _____/_____

2.5.2 Fire Team (Attachment 3) _____/_____

2.5.3 Medical Team (Attachment 4) _____/_____

NOTE: If the Health Physics/Radiochemistry section of the Staff Augumentation Group has been activated, the personnel on the Radiation Team are already being contacted.

2.5.4 Radiation Team (Attachment 5) _____/_____

2.6 Operations Management (contact one of the following individuals): _____/_____

2.6.1 •B. A. Baker •

2.6.2 •S. J. McWilliams •

2.6.3 •R. P. Wewers (•

2.7 Little Rock Control Center (• •; or contact either the OES or the MSS Dispatch Center and request them to notify the LRCC). _____/_____

2.8 Emergency Teams not requiring immediate response (refer to the indicated attachment for call list if team personnel are not currently onsite):

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, time team placed "on call."

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO.
REV. # 7 PC #

DATE _____

INITIALS/TIME

2.8.1 Evacuation Team (Attachment 2) ____/____

2.8.2 Fire Team (Attachment 3) ____/____

2.8.3 Medical Team (Attachment 4) ____/____

2.8.4 Radiation Team (Attachment 5) ____/____

2.9 General Manager •,)• ____/____

2.10 NRC Resident Inspectors (either one) ____/____

2.10.1 •J. Cummins)•

2.10.2 L.J. Callan •( )•

3. Notify the Duty Emergency Coordinator that the initial notifications have been made (inform him of any individuals that contact could not be made with). ____/____

4. Provide updates to the following groups until relieved of this responsibility:

4.1 Duty Emergency Coordinator

4.2 Nuclear Regulatory Commission (Include all available radiological release information)

4.3 Arkansas Department of Health (unless otherwise directed)

4.4 Little Rock Control Center (unless otherwise directed)

5. Unless required to report onsite, at the termination of the event, notify the individuals contacted in Step 2.8 above to secure from "on call" status. ____/____

6. At the termination of the event, this form and other applicable information should be turned over to the Duty Emergency Coordinator.

Shift Administrative Assistant

THE MATERIAL CONTAINED WITHIN THE SYMBOLS (•) IS PROPRIETARY OR PRIVATE INFORMATION.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE FORM NO. 1903.10F
REV. # 7 PC #

ALERT
DUTY EMERGENCY COORDINATOR
NOTIFICATION LIST AND RECORD

DATE _____

INITIALS/TIME

1. Notified that an Alert Emergency Action Level has been declared, based on the following conditions (list): _____/_____

   _____

   _____

   _____

   _____

2. Record time that the Shift Operations Supervisor was relieved of the following Duty Emergency Coordinator responsibilities: _____/_____

   2.1 Providing direction to the emergency response personnel.

   2.2 Calculating offsite dose projections.

   2.3 Performing follow-up notifications to the following groups:

   2.3.1 Nuclear Regulatory Commission (Include all available radiological release information)

   2.3.2 Arkansas Department of Health (unless otherwise directed)

   2.3.4 General Manager.

3. Dispatch individual to the National Guard Armory to act as the TOCC Liasion with the Department of Health.

   3.1 Refer to Attacment B, "Technical/Advisory Personnel Roster/Call List". _____/_____

4. If deemed necessary, activate the Technical Support Center staff (refer to Attachment 6 for call list as necessary). _____/_____

5. If deemed necessary, activate the Operational Support Center staff (refer to Attachment 7 for call list). _____/_____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: ~~EMERGENCY ACTION LEVEL RESPONSE~~ FORM NO.
REV. # 7 PC #

DATE _____

INITIALS/TIME

6. If deemed necessary, assign personnel to perform the following duties: _____/_____

   6.1 Man open phone links between the Control Room and the Technical Support Center (refer to Attachment 8).

   6.2 Man the Secondary Technical Support Center, if activated (QA personnel to be used as communicators; refer to Attachment 8, "Emergency Control Center Communications Personnel Roster/Call List").

   6.3 Man the Training Center Switchboard and the ANO Plant Switchboard (contact M. K. Bishop per Attachment 7).

   6.4 Update status boards.

   6.5 Perform offsite dose projections.

   6.6 Other duties as necessary to support the incident response.

7. Update the Control Room periodically on the status of personnel reporting onsite or emergency response centers being activated.

8. At the termination of the event, the following summaries shall be provided:

   8.1 A verbal summary to:

      8.1.1 Nuclear Regulatory Commission _____/_____

      8.1.2 Arkansas Department of Health _____/_____

   8.2 A written summary of the event (provided to the groups indicated in Step 8.1).

_____
Duty Emergency Coordinator

8.0 SITE EMERGENCY

8.1 Classifications Criteria

8.1.1 Projected summed off-site dose rates from either unit exceed 50mR/hr whole body or 150 mR/hr thyroid dose rate assuming actual meteorological conditions.

8.1.2 Installed instrumentation or as calculated indicates the RCS is in a saturated condition.

8.1.3 Ongoing security threat within plant buildings, but not within the Control Room or vital areas.

8.1.4 Evacuation of the Control Room required and control of systems required for maintaining the unit in a safe condition cannot be established.

8.2 Personnel Responsibilities and Required Actions

For the Site Emergency Emergency Action Level, the following actions shall be taken by members of the Initial Response Organization and the Emergency Response Organization, as defined in the Arkansas Nuclear One Emergency Plan:

8.2.1 Shift Operations Supervisor

A. Once the Shift Operations Supervisor has determined that the Site Emergency Emergency Action Level should be placed into effect, he shall:

1. Assure the appropriate procedures are being implemented to mitigate the consequences of the unusual plant conditions.

2. Implement the Site Emergency Emergency Action Level notifications, and record these notifications as shown on Form 1903.10G of this procedure.

3. Continue to monitor plant conditions in order to determine if upgrading to a higher Emergency Action Level becomes necessary.

4. Direct the activities of the Initial Response Organization until relieved by the Duty Emergency Coordinator.

5. Direct Operations personnel and unit operations.

8.2.2 Shift Technical Advisor

A. The Shift Technical Advisor shall assist the Shift Operations Supervisor in incident assessment.

8.2.3 Shift Administrative Assistant

A. When directed by the Shift Operations Supervisor, the Shift Adminstrative Assistant shall initiate the Site Emergency Shift Administrative Assistant Notification List and Record, Form 1903.10H of this procedure. The Shift Administrative Assistant shall also respond to incoming calls to the control room during the incident.

B. In the absence of the Shift Administrative Assistant, the Shift Operations Supervisor shall appoint an individual to initiate the Site Emergency Shift Administrative Assistant Notification List and Record. If additional assistance is needed, the Shift Operations Supervisor may appoint individuals to assist in performing notifications (e.g. the Shift Administrative Assistant from the unaffected unit).

C. The Shift Administrative Assistant shall assist operations personnel as directed by the Shift Operations Supervisor.

8.2.4 Duty Emergency Coordinator

A. If not on site, the Duty Emergency Coordinator shall report to the site when notified of a Site Emergency. He shall direct emergency response operations so as to free the Shift Operations Supervisor to oversee reactor operations.

B. The Duty Emergency Coordinator shall initiate the Site Emergency Duty Emergency Coordinator Notification List and Record, Form 1903.10I of this procedure.

C. If a radiological release is involved, the Duty Emergency Coordinator shall direct the implementation of appropriate onsite protective actions, and shall provide offsite radiological assessment information to offsite authorities responsible for implementing offsite emergency measures.

8.2.5 Emergency Response Team Leaders

A. The Emergency Response Team Leaders or Alternates are notified by the Shift Administrative Assistant that a Site Emergency has been declared.

B. The Emergency Response Team Leader or Alternates shall call out and assemble the teams. The Team Leader or Alternate shall report to the Duty Emergency Coordinator when the team is assembled.

8.2.6 Incident Response Director

A. The Incident Response Director is notified by the Little Rock Control Center that a Site Emergency has been declared.

B. The Incident Response Director shall report to the Emergency Control Center when notified that a Site Emergency has been declared.

C. The Incident Response Director shall activate the General Office portions of the Emergency Response Organization, as needed.

8.2.7 Recovery Manager

A. The Recovery Manager is notified by the Shift Ad inistrative Assistant that a Site Emergency has been declared.

B. The Recovery Manager shall immediately report to the Onsite Technical Support Center when notified that a Site Emergency has been declared.

8.2.8 Operations Manager

A. The Operations Manager is notified by the Shift Administrative Assistant that a Site Emergency has been declared.

B. The Operations Manager shall immediately report to the Onsite Technical Support Center when notified that a Site Emergency has been declared.

8.2.9 Maintenance Manager

A. The Maintenance Manager is notified by the Shift Administrative Assistant that a Site Emergency has been declared.

B. The Maintenance Manager shall immediately report to the Onsite Technical Support Center when notified that a Site Emergency has been declared.

8.2.10 Operations Superintendents

A. The Operations Superintendent are notified by the Shift Administrative Assistant that a Site Emergency has been declared.

B. The Operations Superintendents shall immediately report to the Control Rooms of their respective Units and inform the Onsite Technical Support Center of his presence in the Control Room.

8.2.11 Health Physics Superintendent and Technical Analysis Superintendent

A. The Health Physics Superintendent and Technical Analysis Superintendent are notified by the Shift Administrative Assistant that a Site Emergency has been declared.

B. The Health Physics Superintendent and Technical Analysis Superintendent shall immediately report to the Onsite Technical Support Center when notified that a Site Emergency has been declared.

8.2.12 Nuclear and Engineering Support Superintendent

A. The Nuclear and Engineering Support Superintendent is notified by the Shift Administrative Assistant that a Site Emergency has been declared.

B. The Nuclear and Engineering Support Superintendent shall immediately report to the Onsite Technical Support Center when notified that a Site Emergency has been declared.

8.2.13 Maintenance Superintendents

A. The Maintenance Superintendents are notified by the Shift Administrative Assistant that a Site Emergency has been declared.

B. The Maintenance Superintendents shall immediately report to the Onsite Operational Support Center when notified that a Site Emergency has been declared.

8.3 Termination or Escalation of Emergency Action Level

8.3.1 The Site Emergency Emergency Action Level may be de-escalated to a lower Emergency Action Level or be terminated by recovery from the event.

8.3.2 The Site Emergency Emergency Action Level may be escalated to a General Emergency Emergency Action Level if the criteria of section 9.0 is met.

8.3.3 The Site Emergency Emergency Action Level may be closed out after being terminated by a briefing by the Incident Response Director to the appropriate offsite authorities. A written summary of the event shall be transmitted to the NRC and appropriate offsite authorities.

8.4 Forms

8.4.1 The following forms describe the notifications and records to be made by the appropriate individuals for the Site Emergency Emergency Action Level. Date the form where indicated (if the date changes before the form is complete, indicate the new date on the appropriate initial/time line). As notifications are completed, initials and time should be placed on the line in the right hand margin by each step. Other pertinent data (e.g. person contacted) may also be noted adjacent to each step, as appropriate.

8.4.2 Form 1903.10G - Site Emergency Shift Operations Supervisor Notification List and Record.

8.4.3 Form 1903.10H - Site Emergency Shift Administrative Assistant Notification List and Record.

8.4.4 Form 1903.10I - Site Emergency Duty Emergency Coordinator Notification List and Record.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO. 1903.10G
REV. # 7 PC #

SITE EMERGENCY
SHIFT OPERATIONS SUPERVISOR
NOTIFICATION LIST AND RECORD

DATE _____

INITIALS/TIME

1. The Site Emergency Emergency Action Level has been declared based on the following conditions (List): _____/_____

   _____

   _____

   _____

   _____

2. Direct the Shift Technical Advisor to the Control Room. _____/_____

3. Direct the Shift Administrative Assistant to initiate the notifications specified on Form 1903.10H (the order of notifications may be rearranged as necessary). Assign/contact personnel to assist as necessary. _____/_____

4. If a radiological release is involved (unless previously relieved of this responsibility):

   4.1 Direct appropriate personnel to perform the calculations per 1904.02, "Offsite Dose Projection - Pocket Computer Method". _____/_____

   4.2 Provide radiological release information to the personnel for making follow-up reports (SAA, TSC, ECC, etc.).

   4.3 Direct the implementation of appropriate onsite protective actions (unless previously relieved of this responsibility).

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE | FORM NO. 1903.10G
REV. # 5 PC #

DATE _____

INITIALS/TIME

5. Notify onsite personnel that a Site Emergency has been declared, and describe the nature of the emergency. _____/_____

6. Direct operating personnel to closely monitor plant parameters (particularly those identified with the need to escalate to a General Emergency Emergency Action Level).

7. Perform the duties of the Duty Emergency Coordinator until relieved of those responsibilities (refer to 1903.10I).

8. Maintain a log of the incident (this may be delegated to other personnel as available).

9. At the termination of the Emergency Action Level, this Notification List and Record should be turned over to the Recovery Manager.

_____
SHIFT OPERATIONS SUPERVISOR

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE FORM NO. 1903.10M
REV. # 7 PC #

SITE EMERGENCY
SHIFT ADMINISTRATIVE ASSISTANT
NOTIFICATION LIST AND RECORD

DATE _____
INITIALS/TIME

1. Complete as much of Form 1903.10M, "EAL Notification" as available information and time allows.

NOTE: The order of notification may be rearranged as the situation dictates with approval of the Shift Operations Supervisor. These groups should be contacted by the most expedient means available (paging, contacting appropriate response center for relaying information, direct phone call, radio contact, etc.). The phone numbers (plant personnel) provided are for use if an individual is not onsite, the appropriate response center has not been manned, etc.

2. Provide the initial information on Form 1903.10M to the following groups:

2.1 Duty Emergency Coordinator (a duty roster is maintained in the Shift Supervisor's office); if not on-site, refer to Attachment 1 for telephone numbers as necessary. ____/____

2.2 Staff Augmentation Group (a duty roster/call list is maintained in the Control Room area).

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, required response and suggested protective actions (if necessary).

2.2.1 Health Physics Section (Beeper available) ____/____

2.2.2 Engineering/Technical Support Section (Beeper available) ____/____

2.3 Nuclear Regulatory Commission [Hotline; or ____/____
•; or Health Physics Network phone or •].

NOTE: If the Technical Operations Control Center has been activated, the Technical Operations Control Officer may be contacted in lieu of the Health Department.

2.4 Arkansas Department of Health [• •; or contact ____/____
the OES (• • or use the OES radio channel) and request them to notify the Health Department].

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: ~~EMERGENCY ACTION LEVEL RESPONSE~~ FORM NO. ~~1903.10E~~

REV. # PC #

DATE _____

INITIALS/TIME

2.5 Emergency Teams requiring immediate response (refer to the indicated attachment for call list if team personnel are not currently onsite).

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, required response and suggested protective actions (if necessary).

2.5.1 Evacuation Team (Attachment 2) ____/____

2.5.2 Fire Team (Attachment 3) ____/____

2.5.3 Medical Team (Attachment 4) ____/____

NOTE: If the Health Physics/Radiochemistry section of the Staff Augmentation Group has been activated, the personnel on the Radiation Team are being contacted by this means.

2.5.4 Radiation Team (Attachment 5) ____/____

NOTE: If the Emergency Control Center has been activated, the Incident Response Director may be contacted in lieu of the Little Rock Control Center.

2.6 Little Rock Control Center (• •; or contact either the OES or the MSS Dispatch Center and request them to notify the LRCC). ____/____

2.7 Emergency Teams not requiring immediate response (refer to the indicated attachment for call list if team personnel are not currently onsite).

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/paramters, a request to assembly the team onsite and suggested protective actions (if necessary).

2.7.1 Evacuation Team (Attachment 2) ____/____

2.7.2 Fire Team (Attachment 3) ____/____

2.7.3 Medical Team (Attachment 4) ____/____

2.7.4 Radiation Team (Attachment 5) ____/____

NOTE: If the Technical Support Center has been activated, this center may be contacted in lieu of individual contacts.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE | FORM NO. 1903.10H

REV. # - PC #

DATE _____

INITIALS/TIME

2.8 Technical Support Center Personnel (refer to Attachment 6 for call list). ____/____

2.9 Operations Support Center Personnel (refer to Attachment 7 for call list). ____/____

2.10 Other Emergency Response Organization personnel (refer to Attachment 8 for call list). ____/____

NOTE: If the Technical Support Center has been activated, this center may be requested to contact the Resident NRC Inspectors.

2.11 NRC Resident Inspectors (either one) ____/____

2.11.1 •J. Cummins)•

2.11.2 •L.J. Callan •

3. Notify the Duty Emergency Coordinator/Recovery Manager that the initial notifications have been made (inform him of any individuals that contact could not be made with). ____/____

4. Provide updates to the following groups until relieved of responsibility:

4.1 Duty Emergency Coordinator/Recovery Manager

4.2 Nuclear Regulatory Commission (Include all available radiological release information)

4.3 Arkansas Department of Health or Technical Operations Control Center (as directed).

4.4 Little Rock Control Center or Emergency Control Center (as directed).

5. At the termination of the event, this form and other applicable information should be turned over to the Duty Emergency Coordinator/Recovery Manager.

_____
Shift Administrative Assistant

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE

FORM NO. 1903.10

REV. # 7 PC #

SITE EMERGENCY
DUTY EMERGENCY COORDINATOR
NOTIFICATION LIST AND RECORD

DATE _____

INITIALS/TIME

1. Notified that Site Emergency Emergency Action Level has been declared, based on the following conditions (list): ____/____

   _____

   _____

   _____

   _____

2. Relieve the Shift Operations Supervisor of the following Duty Emergency Coordinator responsibilities, if not previously accomplished: ____/____

   2.1 Providing direction to emergency response personnel.

   2.2 Calculating the offsite dose projections.

   2.3 Performing follow-up notifications to the following groups:

   2.3.1 Nuclear Regulatory Commission (Include all available radiological release information)

   2.3.2 Arkansas Department of Health or Technical Operations Control Center (as directed)

   2.3.3 Little Rock Control Center or Emergency Control Center (as directed)

   2.3.4 General Manager

   2.4 Directing onsite protective actions. ____/____

3. Activate the Technical Support Center Staff, if not previously done (refer to Attachment 6 for call list as necessary). ____/____

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE FORM NO. 1903.101
REV. # 7 PC #

DATE _____

INITIALS/TIME

4. Activate the Operational Support Center Staff, if not previously done (refer to Attachment 7 for call list as necessary). ____/____

5. Notify remaining (plant staff) Emergency Response Organization personnel (refer to Attachment 8 for call list as necessary). ____/____

6. Assign personnel to perform the following duties if not previously done: ____/____

   6.1 Man open phone links between the Control Room and the Technical Support Center (refer to Attachment 8).

   6.2 Man the Secondary Technical Support Center, if activated (QA personnel to be used as communicators; refer to Attachment 8, "Emergency Control Center Communications Personnel Roster/Call List").

   6.3 Man the Training Center Switchboard and the ANO Plant Switchboard (contact M. K. Bishop per Attachment 7).

   6.4 Update status boards.

   6.5 Perform offsite dose projections.

   6.6 Maintain a log of personnel reporting to the Technical Support Center or the Emergency Control Center.

   6.7 Other duties as necessary to support the incident response.

7. Update the Control Room periodically on the status of personnel reporting onsite or emergency response centers being activated.

8. Dispatch the Offsite Radiological Monitoring Section of the Emergency Radiation Team to assess the effects of the situation on the environment. ____/____

9. Consider use of the following protective actions:

   9.1 Limit access to site.

   9.2 Plant Evacuation.

   9.3 Exclusion Area Evacuation.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO. 1903.10I
REV. # 7 PC # 1

DATE _____
INITIALS/TIME

9.4 Area Evacuation (if an Area Evacuation is deemed necessary, contact one of the following groups per 1903.32, "Area Evacuation" (call in the order indicated until contact is made):

9.4.1 Arkansas Department of Health or Technical Operations Control Center (as directed)

9.4.2 Arkansas Nuclear Planning and Response Program (968-7171)

9.4.3 Appropriate County Sheriff (Refer to Attachment 1, "Emergency Telephone Numbers" for phone numbers)

10. When the following Emergency Response Organization personnel arrive onsite, transfer the indicated responsibilities to them:

10.1 Recovery Manager (Assumes responsibility for direction of corrective and recovery actions) _____/_____

10.2 Site Security Coordinator (Assumes responsibility for direction of Security/Evacuation Team personnel) _____/_____

10.3 Emergency Services Coordinator (Assumes responsibility for direction of the Fire and Medical Team personnel) _____/_____

10.4 Health Physics Superintendent (Assumes responsibility for direction of the Onsite Radiological Monitoring Section of the Emergency Radiation Team) _____/_____

10.5 Technical Support Manager (Assumes responsibility for direction of the Offsite Radiological Monitoring Section of the Emergency Radiation Team and dose assessment activities). _____/_____

10.6 Incident Response Director (Assumes responsibilities for direction of the overall response to the incident). _____/_____

11. When item (10) has been completed, turn over this notification. List and record and other pertinent documents to the Recovery Manager. _____/_____

12. At the termination of the event, the following summaries shall be provided:

12.1 A verbal summary to:

12.1.1 Nuclear Regulatory Commission _____/_____

12.1.2 Arkansas Department of Health _____/_____

12.2 A written summary of the event (provided to the groups indicated in Step 12.1).

_____
Duty Emergency Coordinator

9.0 GENERAL EMERGENCY

9.1 Classification Criteria

9.1.1 Projected or measured dose rates at the site boundary from either unit exceeds 250 mR/hr whole body or 500 mR/hr to the thyroid for actual meterological conditions.

9.1.2 Loss of two out of three fission product barriers with a potential loss of the third barrier. Loss of fuel cladding integrity must involve greater than 1% failed fuel (or equivalent reactor coolant system activity); loss of reactor coolant system integrity must involve leakage in excess of makeup capacity; loss of containment integrity must involve mechanical equipment failure (containment purge valves not closed, airlock cannot be closed) or structural damage which would result in uncontrolled leakage from the reactor building.

9.1.3 Ongoing security threat within the Control Room or vital areas. Criteria for imposing any of the emergency classifications and the appropriate protective action are not limted to those listed.

9.2 Personnel Responsibilities And Required Actions

For the General Emergency Emergency Action Level, the following actions shall be taken by members of the Initial Response Organization and Emergency Response Organization, as defined in the Arkansas Nuclear One Emergency Plan:

9.2.1 Shift Operations Supervisor

A. Once the Shift Operations Supervisor has determined that the General Emergency Action Level should be placed into effect, he shall:

1. Assure the appropriate procedures are being implemented to mitigate the consequences of the unusual plant conditions.

2. Implement the General Emergency Emergency Action Level notifications, and record these notifications as shown on Form 1903.10J of this procedure.

3. Direct the activities of the Initial Response Organization until relieved by the Duty Emergency Coordinator.

4. Direct Operations personnel and unit operations.

9.2.2 Shift Technical Advisor

A. The Shift Technical Advisor shall assist the Shift Operations Supervisor in incident assessment.

9.2.3 Shift Administrative Assistant

A. When directed by the Shift Operations Supervisor, the Shift Administrative Assistant shall initiate the General Emergency Shift Administrative Assistant Notification List and Record, Form 1903.10K of this procedure. The Shift Administrative Assistant shall also respond to incoming calls to the control room during the incident.

B. In the absence of the Shift Administrative Assistant, the Shift Operations Supervisor shall appoint an individual to initiate the General Emergency Shift Administrative Assistant Notification List and Record. If additional assistance is needed, the Shift Operations Supervisor may appoint individuals to assist in performing notifications (e.g. the Shift Administrative Assistant from the unaffected unit).

C. The Shift Adminstrative Assistant shall assist operations personnel as directed by the Shift Operations Supervisor.

9.2.4 Duty Emergency Coordinator

A. If not on site, the Duty Emergency Coordinator shall report to the site when notified of a General Emergency. He shall direct emergency response operations so as to free the Shift Operations Supervisor to oversee reactor operations.

B. The Duty Emergency Coordinator shall initiate the General Emergency Duty Emergency Coordinator Notification List and Record, Form 1903.10L of this procedure.

C. If a radiological release is involved, the Duty Emergency Coordinator shall direct the implementation of appropriate onsite protective actions, and shall provide offsite radiological assessment information to offsite authorities responsible for implementing offsite emergency measures.

9.2.5 Emergency Response Team Leaders

A. The Emergency Response Team Leaders or Alternates are notified by the Shift Administrative Assistant that a General Emergency has been declared.

B. The Emergency Response Team Leader or Alternates shall call out and assemble the teams. The Team Leader or Alternate shall report to the Duty Emergency Coordinator when the team is assembled.

9.2.6 Incident Response Director

A. The Incident Response Director is notified by the Little Rock Control Center that a General Emergency has been declared.

B. The Incident Response Director shall report to the Emergency Control Center when notified that a General Emergency has been declared.

C. The Incident Response Director shall activate the General Office portions of the Emergency Response Organization, as needed.

9.2.7 Recovery Manager

A. The Recovery Manager is notified by the Shift Administrative Assistant that a General Emergency has been declared.

B. The Recovery Manager shall immediately report to the Onsite Technical Support Center when notified that a General Emergency has been declared.

9.2.8 Operations Manager

A. The Operations Manager is notified by the Shift Administrative Assistant that a General Emergency has been declared.

B. The Operations Manager shall immediately report to the Onsite Technical Support Center when notified that a General Emergency has been declared.

9.2.9 Maintenance Manager

A. The Maintenance Manager is notified by the Shift Administrative Assistant that a Site Emergency has been declared.

B. The Maintenance Manager shall immediately report to the Onsite Technical Support Center when notified that a Site Emergency has been declared.

9.2.10 Operations Superintendents

A. The Operations Superintendents are notified by the Shift Administrative Assistant that a General Emergency has been declared.

B. The Operations Superintendents shall immediately report to the Control Rooms of their respective [illegible] and inform the Onsite Technical Support Center of his presence in the Control Room.

9.2.11 Health Physics Superintendent and Technical Analysis Superintendent

A. The Health Physics Superintendent and Technical Analysis Superintendent are notified by the Shift Administrative Assistant that a General Emergency has been declared.

B. The Health Physics Superintendent and Technical Analysis Superintendent shall immediately report to the Onsite Technical Support Center when notified that a General Emergency has been declared.

9.2.12 Nuclear and Engineering Support Superintendent

A. The Nuclear and Engineering Support Superintendent is notified by the Shift Administrative Assistant that a General Emergency has been declared.

B. The Nuclear and Engineering Support Superintendent shall immediately report to the Onsite Technical Support Center when notified that a General Emergency has been declared.

9.2.13 Maintenance Superintendents

A. The Maintenance Superintendents are notified by the Shift Administrative Assistant that a General Emergency has been declared.

B. The Maintenance Superintendents shall immediately report to the Onsite Operational Support Center when notified that a General Emergency has been declared.

9.3 Termination of Emergency Action Level

9.3.1 The General Emergency Emergencey Action Level may be de-escalated to a lower Emergency Action Level or be terminated by recovery from the event.

9.3.2 The General Emergency Emergency Action Level may be closed out after being terminated by a briefing by the Incident Response Director of the appropriate offsite authorities. A written summary of the event shall be transmitted to the NRC and appropriate offsite authorities.

9.4 Forms

9.4.1 The following forms describe the notifications and records to be made by the appropriate individuals for the General Emergency Action Level. Date the form where indicated (if the date changes before the form is complete, indicate the new date on the appropriate initial/time line). As notifications are completed, initials and time should be placed on the line in the right hand margin by each step. Other pertinent data (e.g. person contacted) may also be noted adjacent to each step, as appropriate.

9.4.2 Form 1903.10J - General Emergency Shift Operations Supervisor Notification List and Record.

9.4.3 Form 1903.10K - General Emergency Shift Administrative Assistant Notification List and Record.

9.4.4 Form 1903.10L - General Emergency Duty Emergency Coordinator Notification List and Record.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO. 1903.10J
REV. # 7 PC #

GENERAL EMERGENCY
SHIFT OPERATIONS SUPERVISOR
NOTIFICATION LIST AND RECORD

DATE _____

INITIALS/TIME

1. The General Emergency Emergency Action Level has been declared based on the following conditions (List): _____ / Units

_____

_____

_____

_____

2. Direct the Shift Technical Advisor to the Control room. _____ / Notified.

3. Direct the Shift Administrative Assistant to initiate the notifications specified on Form 1903.10K (the order of notifications may be rearranged as necessary). Assign/ contact personnel to assist as necessary. _____ / Declared.

4. If a radiological release is involved (unless previously relieved of this responsibility):

   4.1 Direct appropriate personnel to perform the calculations per 1904.02, "Offsite Dose Projection - Pocket Computer Method". _____ /

   4.2 Provide radiological release information to the personnel responsible for making follow-up reports (SAA, TSC, ECC, etc.).

   4.3 Direct the implementation of appropriate onsite protective actions (unless relieved of this responsibility).

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO. 1903.10J
REV. # 5 PC #

DATE _____

INITIALS/TIME

5. Notify onsite personnel that a General Emergency has been declared, and describe the nature of the emergency. _____/_____

6. Direct operating personnel to continue to closely monitor plant parameters (provide specific parameters as dictated by the situation).

7. Perform the duties of the Duty Emergency Coordinator until relieved of those responsibilities (refer to 1903.10L).

8. Maintain a log of the incident (this may be delegated to other personnel as available).

9. At the termination of the Emergency Action Level, this Notification List and Record should be turned over to the Recovery Manager.

_____
SHIFT OPERATIONS SUPERVISOR

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO. 1903.10K
REV. # 7 PC #

GENERAL EMERGENCY
SHIFT ADMINISTRATIVE ASSISTANT
NOTIFICATION LIST AND RECORD

DATE / INITIALS/TIME

1. Complete as much of Form 1903.10M, "EAL Notification" as available information and time allows.

NOTE: The order of notification may be rearranged as the situation dictates with approval of the Shift Operations Supervisor. These groups should be contacted by the most expedient means available (paging, contacting appropriate response center for relaying information, direct phone call, radio contact, etc.). The phone numbers (plant personnel) provided are for use if an individual is not onsite, the appropriate response center has not been manned, etc.

2. Provide the initial information on Form 1903.10M to the following groups:

2.1 Duty Emergency Coordinator (a duty roster is maintained in the Control Room area); beeper available; refer to Attachment 1 for telephone numbers as necessary. ___/___

2.2 Staff Augmentation Group (a duty roster/call list is maintained in the Control Room area).

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, required response and suggested protective actions (if necessary).

2.2.1 Health Physics (Beeper available) ___/___

2.2.2 Engineering/Technical Support Section (Beeper available) ___/___

2.3 Nuclear Regulatory Commission [Hotline; or •, •; or Health Physics Network phone , or •]. ___/___

NOTE: If the Technical Operations Control Center has been activated, the Technical Operations Control Officer may be contacted in lieu of the Health Department.

2.4 Arkansas Department of Health [• •; or contact the OES (• •) or use the OES radio channel) and request them to notify the Health Department]. ___/___

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE FORM NO. 1903.10C

REV. # 7 PC #

DATE _____

INITIALS/TIME

2.5 Emergency Teams requiring immediate response (refer to the indicated attachment for call list if team personnel are not currently onsite).

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, required response and suggested protective actions (if necessary).

2.5.1 Evacuation Team (Attachment 2) ____/____

2.5.2 Fire Team (Attachment 3) ____/____

2.5.3 Medical Team (Attachment 4) ____/____

NOTE: If the Health Physics section of the Staff Augumentation Group has been activated, the personnel on the Radiation Team are being contacted by this means.

2.5.4 Radiation Team (Attachment 5) ____/____

NOTE: If the Emergency Control Center has been activated, the Incident Response Director may be contacted in lieu of the Little Rock Control Center.

2.6 Little Rock Control Center (•_ •; or contact either the OES or the MSS Dispatch Center and request them to notify the LRCC). ____/____

2.7 Emergency Teams not requiring immediate response (refer to the indicated attachment for call list if team personnel are not currently onsite).

NOTE: The following minimum information should be provided to the team leader: affected unit, EAL declared, appropriate plant conditions/parameters, a request to assembly the team onsite and suggested protective actions (if necessary).

2.7.1 Evacuation Team (Attachment 2) ____/____

2.7.2 Fire Team (Attachment 3) ____/____

2.7.3 Medical Team (Attachment 4) ____/____

2.7.4 Radiation Team (Attachment 5) ____/____

NOTE: If the Technical Support Center has been activated, this center may be contacted in lieu of individual contacts.

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE
FORM NO. 1903.10K
REV. # 7 PC #

DATE _____

INITIALS/TIME

2.7 Technical Support Center Personnel (refer to Attachment 6 for call list). ____/____

2.8 Operations Support Center Personnel (refer to Attachment 7 for call list). ____/____

2.9 Other Emergency Response Organization personnel (refer to Attachment 8 for call list). ____/____

NOTE: If the Technical Support Center has been activated, this center may be requested to contact the Resident NRC Inspectors.

2.10 NRC Resident Inspectors (either one) ____/____

2.10.1 •J. Cummins)•

2.10.2 •L.J. Callan •

3. Notify the Duty Emergency Coordinator/Recovery Manager that the initial notifications have been made (inform him of any individuals that contact could not be made with). ____/____

4. Provide updates to the following groups until relieved of responsibility:

4.1 Duty Emergency Coordinator/Recovery Manager

4.2 Nuclear Regulatory Commission (Include all available radiological release information)

4.3 Arkansas Department of Health or Technical Operations Control Center (as directed).

4.4 Little Rock Control Center or Emergency Control Center (as directed).

5. At the termination of the event, this form and other applicable information should be turned over to the Duty Emergency Coordinator/Recovery Manager.

_____
Shift Administrative Assistant

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL RESPONSE	FORM NO. 1903.10L
	REV. # PC #

GENERAL EMERGENCY
DUTY EMERGENCY COORDINATOR
NOTIFICATION LIST AND RECORD

DATE _____

INITIALS/TIME

1. Notified that General Emergency Emergency Action Level has been declared, based on the following conditions (list): _____/_____

   _____

   _____

   _____

   _____

2. If not previously accomplished, complete the Site Emergency Emergency Duty Emergency Coordinator Notification List and Record (Form 1903.10I).

3. Turn over this Notification List and Record and other pertinent documents and notes to the Recovery Manager.

_____
Duty Emergency Coordinator

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL (EAL) NOTIFICATION
FORM NO. 1903.10M
REV. # 7 PC #

CAUTION: NOTIFICATIONS TO THE STATE OF ARKANSAS WILL REQUIRE USE OF AUTHENTICATION TABLES (ITEM NUMBER 11).

This is (identify yourself) at Arkansas Nuclear One with an Emergency Action Level Notification Report. Acknowledge when you are ready to proceed.

1. ( ) INITIAL ( ) FOLLOW-UP NO._____

2. N/A

3. N/A

4. Date/Time of Declaration _____ _____
DD MON YY HHMM

5. Unit: ( ) One ( ) Two

6. Class of EAL:

( ) A. UNUSUAL EVENT
( ) B. ALERT
( ) C. SITE EMERGENCY
( ) D. GENERAL EMERGENCY
( ) E. NONE

7. Conditions Requiring EAL:_____

_____

8. Areas Affected (Sectors/Distances):_____

_____

9. Onsite Situation:

A. Prognosis of Situation:

( ) Improving
( ) Stable
( ) Degrading

B. General Population Protective Actions Recommended:

( ) None
( ) Shelter
( ) Evacuation

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL (EAL) NOTIFICATION FORM NO. 1903.10M
REV. # 7 PC #

C. Institutionalized Protective Actions Recommended:

( ) None
( ) Shelter
( ) Evacuation

D. Radiation Monitoring Teams Activated:

( ) Yes
( ) No

E. Emergency Response Centers Activated:

( ) None
( ) TSC
( ) ECC

F. Local Assistance Requested:

( ) Fire
( ) Police
( ) Ambulance
( ) Other_____

G. Evacuation of Onsite Personnel:

( ) Yes
( ) No
( ) Some

H. Other Emergency Response Actions Underway: _____

_____ _____

10. Message Sent By: _____ / _____
NAME POSITION

11. Message Authenticated By: A B C D E F G H I J K L M N O (None) / _____
INDICATE ALPHABETICAL CHARACTERS CHALLENGED RESPONSE GIVEN

12. Type of Release:

( ) None
( ) Potential
( ) Actual
( ) Airborne
( ) Waterborne
( ) Surface Spill

ARKANSAS POWER & LIGHT COMPANY
Arkansas Nuclear One

TITLE: EMERGENCY ACTION LEVEL (EAL) NOTIFICATION | FORM NO. 1903.10M | REV. # 7 | PC #

13. Description of Released Material (Chemical & Physical Form, Estimate of Equivalent Curies of I-131 & XE-133 Released, Release Rate (Ci/sec), Iodine/Noble Gas Ratio, etc): _____

14. A. Wind Direction: (From) _____°

    B. Wind Speed: _____MPH

15. Temperature: _____°F

16. Form of Precipitation: _____

17. Atmospheric Stability: _____

18. Estimated Start/Duration Time of the Release:

    _____(START) _____(DURATION)

19. Dose Rate at the Exclusion Area Boundary (0.65 miles):

    _____mR/hr ( ) Projected ( ) Child Thyroid
    ( ) Actual ( ) Whole Body

20. Projected Dose:

    _____mR/hr ( ) Whole Body ( ) Child Thyroid at _____ ____miles

21. REMARKS: _____

10.0 ATTACHMENTS

NOTE: The forms relating to specific Emergency Action Levels are located at the end of their respective Emergency Action Level Sections.

10.1 Form 1903.10A - Unusual Event Shift Operations Supervisor Notification List and Record; (Section 6.4).

10.2 Form 1903.10B - Unusual Event Shift Administrative Assistant Notification List and Record; (Section 6.4).

10.3 Form 1903.10C - Unusual Event Duty Emergency Coordinator Notification List and Record; (Section 6.4).

10.4 Form 1903.10D - Alert Shift Operations Supervisor Notification List and Record; (Section 7.4).

10.5 Form 1903.10E - Alert Shift Administrative Assistant Notification List and Record; (Section 7.4).

10.6 Form 1903.10F - Alert Duty Emergency Coordinator Notification List and Record; (Section 7.4).

10.7 Form 1903.10G - Site Emergency Shift Operators Supervisor Notification List and Record; (Section 8.4).

10.8 Form 1903.10H - Site Emergency Shift Administrative Assistant Notification List and Record; (Section 8.4).

10.9 Form 1903.10I - Site Emergency Duty Emergency Coordinator Notification List and Record; (Section 8.4).

10.10 Form 1903.10J - General Emergency Shift Operations Supervisor Notification List and Record; (Section 9.4).

10.11 Form 1903.10K - General Emergency Shift Administrative Assistant Notification List and Record; (Section 9.4).

10.12 Form 1903.10L - General Emergency Duty Emergency Coordinator Notification List and Record; (Section 9.4).

10.13 Form 1903.10M - Emergency Action Level Notification; (Section 10.0).

10.14 Attachment 1 - Duty Emergency Coordinator Roster/Call List; (Section 10.0)

10.15 Attachment 2 - Emergency Evacuation Team Roster/Call List; (Section 10.0)

10.16 Attachment 3- Emergency Fire Team Roster/Call List; (Section 10.0)

10.17 Attachment 4 - Emergency Medical Team Roster/Call List (Section 10.0)

10.18 Attachment 5 - Emergency Radiation Team Roster/Call List; (Section 10.0)

10.19 Attachment 6 - Technical Support Center Roster/Call List; (Section 10.0)

10.20 Attachment 7 - Operational Support Center Roster/Call List (Section 10.0)

10.21 Attachment 8 - Remaining Emergency Response Organization (Plant Staff) and Communications Personnel Roster/Call List; (Section 10.0)

10.22 Attachment 9 - Emergency Telephone Numbers (Outside Assistance); (Section 10.0).

ATTACHMENT 1

DUTY EMERGENCY COORDINATOR ROSTER/CALL LIST

NAME	BADGE	WORK	HOME
•J. M. Levine (Gen. Manager)			•
•Basil Baker			•
•Early Ewing			•
•Bob Terwilliger			•
•E. L. Sanders			•
•L. W. Humphrey			•
•T. C. Baker			•
•L. J. Dugger			•

(DEC = Beeper Number 602)

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ATTACHMENT 2

EMERGENCY EVACUATION TEAM ROSTER/CALL LIST

	BADGE	WORK	HOME
TEAM LEADER:			
•Jackie Crow			•
ALTERNATE TEAM LEADERS:			
•J. C. Garrett			•
•Bruno Hampton			•
•Wes McDaniel			•
MEMBERS:			
•Mike Myers			•
•John Beaty, Jr.			•
•Roger Hooper			•
•James Starr			•
•Barbara Wade			•
•Barbara Dunn			•
•J. Don Moore			•
•Jim Wilson			•
•Tracey Green			•
•Ira Mosquito			•

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ATTACHMENT 3

EMERGENCY FIRE TEAM ROSTER/CALL LIST

	BADGE	WORK	HOME
TEAM LEADER:			
•Jim Bob Jackson			•
ALTERNATE TEAM LEADERS:			
•Larry Munson			•
•David Eichenberger			•
MEMBERS:			
•Charles May			•
•Barry Waldron			•
•Tom Wilkins			•
•Glenn Brooks			•
•Chester Wetzel			•
•Johnny Walker			•
•Marion Hall			•
•Tim A. Smith			•

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ATTACHMENT 4

EMERGENCY MEDICAL TEAM ROSTER/CALL LIST

NOTE: During non-routine working hours, notify the Shift Maintenance Medical Team - 3142/3411.

	BADGE	WORK	HOME
TEAM LEADER:			
•Dennis Calloway			•
ALTERNATE TEAM LEADERS:			
•Charles Adams			•
MEMBERS:			
•Richard Moredock			•
•Steve Stork			•
•Mike Hoyt			•
•Gerald Bartlett			•
•Debby Moore			•
•Bill McCord			•
•Wayne Cheatham			•
•Shirman Yancy			•
•KaSandra Delph			•
•Eileen Goulet			•
•Paul Ford			•
•Curt Bailey			

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ATTACHMENT 5

EMERGENCY RADIATION TEAM ROSTER/CALL LIST

	BADGE	WORK	HOME
TEAM LEADER:			
•Dale Wagner			•
ALTERNATE TEAM LEADERS:			
•Tom Nickels			•
•Robert Green			•
•Chuck Burchard			•
•Walt Hada			•
MEMBERS:			
•Jeff Garren			•
•Ken Zelnick			•
•Tim Smith			•
•Steve Fowler			•
•Maurice Ward			•
•Wayne Wright			•
•Danny Akins			•
•Harold Bishop			•
•George Cooper			•
•James Deal			•
•Jeril Fancher			•
•Richard Grom			•
•George Hamra			•
•Vicki Hughes			•
•Monty Manning			•
•Danny Martin			•
•Mikel McIntosh			•
•Lloyd Qualls			•
•Stanley Robinson			•
•Dale Smith			•
•Brian Walker			•
•William Wiley			•
•Lynn Anderson			•
•David Moore			•
•Don Moore			•

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ATTACHMENT 6

TECHNICAL SUPPORT CENTER STAFF ROSTER/CALL LIST

	BADGE	WORK	HOME	
•J. M. Levine			•	(Beeper = 601)
•E. L. Sanders			•	
•B. A. Baker			•	
•T. C. Baker			•	
•M. J. Bolanis			•	
•E. C. Ewing			•	
•A. B. McGregor			•	

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ATTACHMENT 7

OPERATIONAL SUPPORT CENTER STAFF ROSTER/CALL LIST

	BADGE	WORK/OSC	HOME
•P. Jones			
•V. C. Pettus			•
•H. R. Tucker			•
•G. L. Fiser			•
•R. D. Gillespie			•
•C. Fellhauer			•
•J. B. Lamb			•
•H. L. Hollis			•
•M. K. Bishop			•
•S. J. McWilliams			•
•R. Wewers			•
•G. D. Helmick			•
•C. N. Shively			•

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ATTACHMENT 8
REMAINING EMERGENCY RESPONSE ORGANIZATION
(PLANT STAFF) ROSTER/CALL LIST

NAME	BADGE	WORK	HOME
•L. W. Humphrey			•[redacted]•
•J. H. Montgomery			•[redacted]•

CONTROL ROOM/TECHNICAL SUPPORT CENTER COMMUNICATIONS PERSONNEL ROSTER/CALL LIST

•W. E. Converse			•[redacted]•
•K. Morton			•[redacted]•
•A. J. Gertsch			•[redacted]•
•L. S. Bramlett			•[redacted]•
•M. A. Smith			•[redacted]•
•M. J. Konya			•[redacted]•
•D. B. Lomax			•[redacted]•
•R. M. Copp			•[redacted]•

EMERGENCY CONTROL CENTER COMMUNICATIONS PERSONNEL ROSTER/CALL LIST

•G. D. Provencher			•[redacted]•
•J. R. Brown			•[redacted]•
•R. M. McFarland			•[redacted]•
•R. M. Cooper			•[redacted]•
•B. L. Bata			•[redacted]•

TECHNICAL ADVISORY PERSONNEL ROSTER/CALL LIST

•J. Vandergrift			•[redacted]•
•J. Waid			•[redacted]•
•J. Constantin			•[redacted]•
•D. Barton			•[redacted]•
•R. Hargrove			•[redacted]•
•J. Simmons			•[redacted]•
•E. Wentz			•[redacted]•
•E. Force			•[redacted]•

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ATTACHMENT 9 Page 1 of 3

EMERGENCY TELEPHONE NUMBERS
(OUTSIDE ASSISTANCE)

NOTE: All area codes are 501 unless otherwise noted.

FEDERAL	
Corps of Engineers (Dardanelle)	968-5008
Department of Energy (Radiological Emergency Assistance Team)	615-576-1005
Nuclear Regulatory Commission, Region IV	817-860-8100
STATE	
Arkansas Nuclear Planning & Response Program (Russellville)	968-7171
Arkansas State Department of Health (Bureau of Environmental Health Services)	• • • •
Arkansas State Police (Clarksville)	754-3096 754-8696
Office of Emergency Services (Conway)	• • • •
Technical Operations Control Center (TOCC)	
Technical Operations Control Officer	968-4704 968-4706
Public Notification	968-4700 968-4701
LOCAL	
POPE: Ambulance Service	968-4567
Sheriff's Department	968-2558
Emergency Operations Center	968-2558
YELL: Sheriff's Department	229-4175
Emergency Operations Center	495-7131
JOHNSON: Sheriff's Department	754-2200
Emergency Operations Center	754-6383
LOGAN: Sheriff's Department	963-3271
Emergency Operations Center	963-3218

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LOCAL CONT.

RUSSELLVILLE:	Millard Henry Clinic	968-2345 968-6211
	Russellville Fire Department	968-8110
	St. Mary's Hospital	968-6211 968-2841
	Arkla Gas Company	968-2588 318-226-2700
	Missouri-Pacific Railway Co.	968-4167 800-482-5950
	KARV	968-1184

ARKANSAS POWER LIGHT

ARKANSAS NUCLEAR ONE:	Emergency Control Center		•	•
	Main Guard Station		•	•
	Unit One Control Room		•	•
	Unit Two Control Room		•	•
LITTLE ROCK	Senior Vice President, Energy Supply	(Office)	•	•
	•(W. Cavanaugh)•	(Home)	•	•
	Vice President, Nuclear Operations	(Office)	•	•
	•(J. Griffin)•	(Home)	•	•
	Director, Technical & Environmental	(Office)	•	•
	•Services (D. Rueter)•	(Home)	•	•
	Director, Fossil Operations	(Office)	•	•
	•(D. Sikes)•	(Home)	•	•
	Vice President, Corporate Communications	(Office)	•	•
	•(C. Kelly)•	(Home)	•	•
	Manager, Corporate Security	(Office)	•	•
	•(C. Dunn)•	(Home)	•	•
	Little Rock Control Center		•	•
RUSSELLVILLE:	District Office: •E. Deaton•	(Office)	•	•
		(Home)	•	•
	•J. Lee•	(Office)	•	•
		(Home)	•	•
	•W. Harris•	(Office)	•	•
		(Home)	•	•
	Emergency Control Office		•	•

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OTHER AGENCIES

BABCOCK & WILCOX:	Site Representative •(T. Scott)	(Home)	•
	Emergency Response Center	•	•
COMBUSTION ENGINEERING:	Site Representative •(R. E. Sykes)	(Home)	
	Emergency Response Center	•	•
BECHTEL			415-768-3840 415-768-3841
INSTITUTE OF NUCLEAR POWER OPERATIONS			404-953-0904
NUCLEAR SAFETY ANALYSIS CENTER			415-855-2000
NUCLEAR ENERGY LIABILITY PROPERTY INSURANCE ASSOCIATION			203-677-7305