

Sample for Discussion



*For 3 hypothetical  
single unit plants . . .*

**APPENDIX A**

**Analyzed Events and Accidents**

Analysis #	Summary Description of Event or Accident	Plant Mode	Reference Document(s)	ECL	Analysis Required?
1	Land and/or waterborne HOSTILE ACTION directed against the Protected Area by a HOSTILE FORCE. Assume adversary characteristics defined by the Design Basis Threat (DBT).	1	Security Plan	Site Area Emergency	Yes
2	Large-break Loss of Coolant Accident. Assume General Emergency declaration and a release that necessitates formulation of Protective Action Recommendations.	1	UFSAR section 15.6.5.	General Emergency	Yes
3	Fire requiring evacuation of the Control Room and plant shutdown from remote location(s).	1	Appendix R Fire Analysis	Alert	Yes
4					
5					
6	Sample for Discussion				
7	↑ - <i>This column, see step 3.2.1.1.a</i>		↑ - <i>This column, see step 3.2.1.1.c</i>	↑ - <i>This column, see step 3.2.1.1.d</i>	↑ - <i>This column, see step 3.2.1.1.e</i>
8					
9	<i>This column, see step 3.2.1.1.b →</i>				
10					

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Sample for Discussion

**APPENDIX B**

**On-Shift Staffing Analysis**

*See step 3.2.2.1 (same for subsequent pages)*

*See steps 3.2.2.f.1, 3.2.2.4.d.1, 3.2.2.5.e, and 3.2.2.6.c.1*

*Complete this appendix by following the instructions in section 3.2.2.*

This OSA is applicable to Analysis # 1 as identified in Appendix A.

*See steps 3.2.2.3.f, 3.2.2.4.d, 3.2.2.5.d, and 3.2.2.6.c*

*See step 3.2.3*

**TABLE 1 – On-shift Positions**

Line	On-shift Position	Emergency Plan Reference	Augmentation Elapsed Time (min)	Role in Table#/Line#	Unanalyzed Task?	TMS Required?
	↓ - This column, see step 3.2.2.2.a	↓ - This column, see step 3.2.2.2.b	↓ - This column, see step 3.2.2.2.c			
1.	Shift Manager	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L1 T5/L1 T5/L2 T5/L3 T5/L4 T5/L5 T5/L6 T5/L7 T5/L8 T5/L9 T5/L10 T5/L13	No	Yes
Sample for Discussion						
2.	Unit Supervisor	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L2	No	No
3.	Shift Technical Advisor	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L3	No	No
4.	Control Room Operator #1	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L4	No	No
5.	Control Room Operator #2	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L5 T5/L11	Yes	Yes
6.	Work Control Supervisor	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No

Line	On-shift Position	Emergency Plan Reference	Augmentation Elapsed Time (min)	Role in Table#/Line#	Unanalyzed Task?	TMS Required?
7.	Equipment Operator #1	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L6	No	No
8.	Equipment Operator #2	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L7	No	No
9.	Equipment Operator #3	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No
10.	Equipment Operator #4	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No
11.	Equipment Operator #5	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No
12.	Radiation Protection Technician	Emergency Plan Chapter 8, Figure 3.	60	N/A	No	No
13.	Chemistry Technician	Emergency Plan Chapter 8, Figure 3.	60	N/A	No	No
14.	Fire Brigade Leader	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No

*See steps 3.2.2.3.f, 3.2.2.4.d, 3.2.2.5.d, and 3.2.2.6.c*

Sample for Discussion

*See steps 3.2.2.f.1, 3.2.2.4.d.1, 3.2.2.5.e, and 3.2.2.6.c.1*

*See step 3.2.3*

**On-Shift Staffing Analysis**

**TABLE 2 – Plant Operations & Safe Shutdown**

Analysis # 1

**One Unit - One Control Room**

Applicable to site unit(s) # 1

**Minimum Operations Crew Necessary to Implement AOPs and EOPs, or SAMGs if applicable**

*See step 3.2.2.3.a*

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager	Shift Manager	Operator Training
2	Unit Supervisor	Unit Supervisor	Operator Training
3	Shift Technical Advisor	Shift Technical Advisor	Operator Training
4	Reactor Operator #1	Control Room Operator #1	Operator Training
5	Reactor Operator #2	Control Room Operator #2	Operator Training
6	Auxiliary Operator #1	Equipment Operator #1	Operator Training
7	Auxiliary Operator #2	Equipment Operator #2	Operator Training
8	Other	N/A	N/A
9	Other	N/A	N/A
10	Other	N/A	N/A
		↑ - This column, see step 3.2.2.3.b	↑ - This column, see step 3.2.2.3.e

**Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Mechanic	N/A	N/A
2	Electrician	N/A	N/A
3	I&C Technician	N/A	N/A
4	Other	N/A	N/A
		↑ - This column, see step 3.2.2.3.c	↑ - This column, see step 3.2.2.3.e

### On-Shift Staffing Analysis

**TABLE 2 – Plant Operations & Safe Shutdown**

Analysis # \_\_\_\_\_

**Two Units - One Control Room**

Applicable to site unit(s) # \_\_\_\_\_

**Minimum Operations Crew Necessary to Implement  
AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager		
2	Unit Supervisor		
3	Shift Technical Advisor		
4	Reactor Operator #1		
5	Reactor Operator #2		
6	Reactor Operator #3		
7	Auxiliary Operator #1		
8	Auxiliary Operator #2	Sample for Discussion	
9	Auxiliary Operator #3		
10	Other		
11	Other		
12	Other		

**Other (non-Operations) Personnel Necessary to Implement  
AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Mechanic		
2	Electrician		
3	I&C Technician		
4	Other		



**On-Shift Staffing Analysis**

**TABLE 2 – Plant Operations & Safe Shutdown (continued)**      Analysis # \_\_\_\_\_

**Two Units - Two Control Rooms**                      Applicable to site unit(s) # \_\_\_\_\_

**Minimum Operations Crew Necessary to Implement  
AOPs and EOPs, or SAMGs if applicable**

<b>Line</b>	<b>Generic Title/Role</b>	<b>On-Shift Position</b>	<b>Task Analysis Controlling Method</b>
1	Shift Manager		
2	Unit Supervisor #1		
3	Unit Supervisor #2		
4	Shift Technical Advisor		
5	Reactor Operator #1		
6	Reactor Operator #2		
7	Reactor Operator #3		
8	Reactor Operator #4		
9	Auxiliary Operator #1	Sample for Discussion	
10	Auxiliary Operator #2		
11	Auxiliary Operator #3		
12	Auxiliary Operator #4		
13	Other		
14	Other		
15	Other		
16	Other		

**Other (non-Operations) Personnel Necessary to Implement  
AOPs and EOPs, or SAMGs if applicable**

<b>Line</b>	<b>Generic Title/Role</b>	<b>On-Shift Position</b>	<b>Task Analysis Controlling Method</b>
1	Mechanic		
2	Electrician		
3	I&C Technician		
4	Other		

**On-Shift Staffing Analysis**

**TABLE 3 – Firefighting**

Analysis # 1

<b>Line</b>	<b>Performed By</b>	<b>Task Analysis Controlling Method</b>
1	N/A – no fire significant enough to warrant firefighting efforts prior to the arrival of offsite resources and/or the augmented ERO.	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A
	↑ - <i>This column, see step 3.2.2.4.a and b</i>	↑ - <i>This column, see step 3.2.2.4.c</i>

Sample for Discussion

## On-Shift Staffing Analysis

**TABLE 4 – Radiation Protection & Chemistry**

Analysis # 1

Line	Position Performing Function/Task	Performance Time Period After Emergency Declaration (minutes)																	
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey On-Shift Position: N/A	N/A – The performance of an in-plant survey is not necessary for initial implementation of the Emergency Plan, and not required by any procedure. On-shift personnel do not require in-plant surveys in order to perform in-plant EOP/shutdown actions. An in-plant survey team may be dispatched after activation of the OSC.																	
2	On-Site Survey On-Shift Position: N/A	N/A – no radiological release for this event.																	
3	Personnel Monitoring On-Shift Position: N/A	N/A – no radiological release for this event. Personnel can out-process from the Radiologically Controlled Area (RCA) using portal and small article monitors. On-shift personnel do not require monitoring support in order to perform in-plant EOP/shutdown actions.																	
4	Job Coverage On-Shift Position: N/A	Sample for Discussion																	
5	Offsite Radiological Assessment On-Shift Position: N/A	N/A – no radiological release for this event.																	
6	Other Site-Specific RP – Describe: N/A On-Shift Position: N/A																		

*This column, see steps 3.2.2.5.a and b*

*This column, see step 3.2.2.5.c*

Line	Position Performing Function/Task	Performance Time Period After Emergency Declaration (minutes)																		
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	
7	Chemistry function/task #1 – Describe: N/A On-Shift Position: N/A																			
8	Chemistry function/task #2 – Describe: N/A On-Shift Position: N/A																			

Sample for Discussion

**On-Shift Staffing Analysis**

**TABLE 5 – Emergency Plan Implementation**

Analysis # 1

<b>Line</b>	<b>Function/Task</b>	<b>On-Shift Position</b>	<b>Task Analysis Controlling Method</b>
1	Declare the Emergency Classification Level (ECL)	Shift Manager	Operations Training and EP Drill Program
2	Approve Offsite Protective Action Recommendations	Shift Manager	Operations Training and EP Drill Program
3	Approve content of State/local notifications	Shift Manager	Operations Training and EP Drill Program
4	Approve extension to allowable dose limits	Shift Manager	Operations Training and EP Drill Program
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	Shift Manager	Operations Training and EP Drill Program
6	ERO notification	Shift Manager	Operations Training and EP Drill Program
7	Abbreviated NRC notification for DBT event	Shift Manager	Operations Training and EP Drill Program
8	Complete State/local notification form	Shift Manager	Operations Training and EP Drill Program
9	Perform State/local notifications	Shift Manager	Operations Training and EP Drill Program
10	Complete NRC event notification form	Shift Manager	Operations Training and EP Drill Program
11	Activate ERDS	Control Room Operator #2	NV – Task not previously analyzed
12	Offsite radiological assessment	N/A – no release for this event	N/A
13	Perform NRC notifications	Shift Manager	Operations Training and EP Drill Program
14	Perform other site-specific event notifications (e.g., INPO, ANI, etc.)	N/A	N/A
15	Personnel accountability	Will be performed well after the threat is neutralized; coordinated with LLEA	N/A
16	Other: Specify	N/A	N/A
		↑ - This column, see steps 3.2.2.6.a	↑ - This column, see steps 3.2.2.6.b



**APPENDIX B**

**On-Shift Staffing Analysis**

*See step 3.2.2.1 (same for subsequent pages)*

*See steps 3.2.2.f.1, 3.2.2.4.d.1, 3.2.2.5.e, and 3.2.2.6.c.1*

*Complete this appendix by following the instructions in section 3.2.2.*

This OSA is applicable to Analysis # 2 as identified in Appendix A.

*See steps 3.2.2.3.f, 3.2.2.4.d, 3.2.2.5.d, and 3.2.2.6.c*

*See step 3.2.3*

**TABLE 1 – On-shift Positions**

Line	On-shift Position	Emergency Plan Reference	Augmentation Elapsed Time (min)	Role in Table#/Line#	Unanalyzed Task?	TMS Required?
	↓ - This column, see step 3.2.2.2.a	↓ - This column, see step 3.2.2.2.b	↓ - This column, see step 3.2.2.2.c			
1.	Shift Manager	Emergency Plan Chapter 8, Figure 3.  Sample for Discussion	N/A	T2/L1 T5/L1 T5/L2 T5/L3 T5/L4	No	No
2.	Unit Supervisor	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L2	No	No
3.	Shift Technical Advisor	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L3	No	No
4.	Control Room Operator #1	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L4	No	No
5.	Control Room Operator #2	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L5	No	No
6.	Work Control Supervisor	Emergency Plan Chapter 8, Figure 3.	N/A	T5/L5 T5/L8 T5/L9 T5/10 T5/L11 T5/13	No	No
7.	Equipment Operator #1	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L6	No	No

Line	On-shift Position	Emergency Plan Reference	Augmentation Elapsed Time (min)	Role in Table#/Line#	Unanalyzed Task?	TMS Required?
8.	Equipment Operator #2	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L7	No	No
9.	Equipment Operator #3	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No
10.	Equipment Operator #4	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No
11.	Radiation Protection Technician	Emergency Plan Chapter 8, Figure 3.	60	T4/L4 T4/L5	No	Yes
12.	Chemistry Technician	Emergency Plan Chapter 8, Figure 3.	60	N/A	No	No
13.	Fire Brigade Leader	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No
14.	Security Officer #1	Emergency Plan Chapter 8, Figure 3.	N/A	T5/L6	No	No
15.	Security Officer #2	Emergency Plan Chapter 8, Figure 3.	N/A	T5/15	No	No
16.	Electrician #1	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L12	No	No

*See steps 3.2.2.3.f, 3.2.2.4.d, 3.2.2.5.d, and 3.2.2.6.c*

*See steps 3.2.2.f.1, 3.2.2.4.d.1, 3.2.2.5.e, and 3.2.2.6.c.1*

*See step 3.2.3*



**On-Shift Staffing Analysis**

**TABLE 2 – Plant Operations & Safe Shutdown**

Analysis # 2

**One Unit - One Control Room**

Applicable to site unit(s) # 1

**Minimum Operations Crew Necessary to Implement AOPs and EOPs, or SAMGs if applicable**

See step 3.2.2.3.a

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager	Shift Manager	Operator Training
2	Unit Supervisor	Unit Supervisor	Operator Training
3	Shift Technical Advisor	Shift Technical Advisor	Operator Training
4	Reactor Operator #1	Control Room Operator #1	Operator Training
5	Reactor Operator #2	Control Room Operator #2	Operator Training
6	Auxiliary Operator #1	Equipment Operator #1	Operator Training
7	Auxiliary Operator #2	Equipment Operator #2	Operator Training
8	Other	N/A	N/A
9	Other	N/A	N/A
10	Other	N/A	N/A
		↑ - This column, see step 3.2.2.3.b	↑ - This column, see step 3.2.2.3.e

**Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
11	Mechanic	N/A	N/A
12	Electrician	Electrician #1	Maintenance Training Program
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
		↑ - This column, see step 3.2.2.3.c	↑ - This column, see step 3.2.2.3.e

**On-Shift Staffing Analysis**

**TABLE 2 – Plant Operations & Safe Shutdown**

Analysis # \_\_\_\_\_

**Two Units - One Control Room**

Applicable to site unit(s) # \_\_\_\_\_

**Minimum Operations Crew Necessary to Implement  
 AOPs and EOPs, or SAMGs if applicable**

<b>Line</b>	<b>Generic Title/Role</b>	<b>On-Shift Position</b>	<b>Task Analysis Controlling Method</b>
1	Shift Manager		
2	Unit Supervisor		
3	Shift Technical Advisor		
4	Reactor Operator #1		
5	Reactor Operator #2		
6	Reactor Operator #3		
7	Auxiliary Operator #1		
8	Auxiliary Operator #2	Sample for Discussion	
9	Auxiliary Operator #3		
10	Other		
11	Other		
12	Other		

**Other (non-Operations) Personnel Necessary to Implement  
 AOPs and EOPs, or SAMGs if applicable**

<b>Line</b>	<b>Generic Title/Role</b>	<b>On-Shift Position</b>	<b>Task Analysis Controlling Method</b>
13	Mechanic		
14	Electrician		
15	I&C Technician		
16	Other		

**On-Shift Staffing Analysis**

**TABLE 2 – Plant Operations & Safe Shutdown (continued)** Analysis # \_\_\_\_\_

**Two Units - Two Control Rooms** Applicable to site unit(s) # \_\_\_\_\_

**Minimum Operations Crew Necessary to Implement AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager		
2	Unit Supervisor #1		
3	Unit Supervisor #2		
4	Shift Technical Advisor		
5	Reactor Operator #1		
6	Reactor Operator #2		
7	Reactor Operator #3		
8	Reactor Operator #4		
9	Auxiliary Operator #1	Sample for Discussion	
10	Auxiliary Operator #2		
11	Auxiliary Operator #3		
12	Auxiliary Operator #4		
13	Other		
14	Other		
15	Other		
16	Other		

**Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
17	Mechanic		
18	Electrician		
19	I&C Technician		
20	Other		

**On-Shift Staffing Analysis**

**TABLE 3 – Firefighting**

Analysis # 2

<b>Line</b>	<b>Performed By</b>	<b>Task Analysis Controlling Method</b>
1	N/A – there is no fire associated with this accident.	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A
	↑ - <i>This column, see step 3.2.2.4.a and b</i>	↑ - <i>This column, see step 3.2.2.4.c</i>

Sample for Discussion

## On-Shift Staffing Analysis

**TABLE 4 – Radiation Protection & Chemistry**

Analysis # 2

Line	Position Performing Function/Task	Performance Time Period After Emergency Declaration (minutes)																	
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey On-Shift Position: N/A	N/A – The performance of an in-plant survey is not necessary for initial implementation of the Emergency Plan, and not required by any procedure. On-shift personnel do not require in-plant surveys in order to perform in-plant EOP/shutdown actions. An in-plant survey team may be dispatched after activation of the OSC.																	
2	On-Site Survey On-Shift Position: N/A	N/A – The performance of an on-site survey is not necessary for initial implementation of the Emergency Plan, and not required by any procedure. An on-site survey team may be dispatched after activation of the OSC.																	
3	Personnel Monitoring On-Shift Position: N/A	N/A – Personnel can out-process from the Radiologically Controlled Area (RCA) using portal and small article monitors. On-shift personnel do not require monitoring support in order to perform in-plant EOP/shutdown actions. If necessary, site evacuees would be monitored at the Remote Monitoring Area after arrival of augmented ERO personnel.																	
4	Job Coverage for Electrician entering ECCS room On-Shift Position: RP Technician #1		X	X	X														
5	Offsite Radiological Assessment On-Shift Position: RP Technician#1			X	X	X	X	X	X	X	X	X							
6	Other Site-Specific RP – Describe: N/A On-Shift Position: N/A																		

*This column, see steps 3.2.2.5.a and b*

*This column, see step 3.2.2.5.c*

Line	Position Performing Function/Task	Performance Time Period After Emergency Declaration (minutes)																	
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
7	Chemistry function/task #1 – Describe: N/A On-Shift Position: N/A																		
8	Chemistry function/task #2 – Describe: N/A On-Shift Position: N/A																		

Sample for Discussion

## On-Shift Staffing Analysis

**TABLE 5 – Emergency Plan Implementation**

Analysis # 2

Line	Function/Task	On-Shift Position	Task Analysis Controlling Method
1	Declare the Emergency Classification Level (ECL)	Shift Manager	Operations Training and EP Drill Program
2	Approve Offsite Protective Action Recommendations	Shift Manager	Operations Training and EP Drill Program
3	Approve content of State/local notifications	Shift Manager	Operations Training and EP Drill Program
4	Approve extension to allowable dose limits	Shift Manager	Operations Training and EP Drill Program
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	Work Control Supervisor	Operations Training and EP Drill Program
6	ERO notification	Security Officer #1	Security Training and EP Drill Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	Work Control Supervisor	Operations Training and EP Drill Program
9	Perform State/local notifications	Work Control Supervisor	Operations Training and EP Drill Program
10	Complete NRC event notification form	Work Control Supervisor	Operations Training and EP Drill Program
11	Activate ERDS	Work Control Supervisor	Operations Training and EP Drill Program
12	Offsite radiological assessment	N/A – performed by RP Technician #1	N/A
13	Perform NRC notifications	Work Control Supervisor	Operations Training and EP Drill Program
14	Perform other site-specific event notifications (e.g., INPO, ANI, etc.)	N/A	N/A
15	Personnel accountability	Security Officer #2	Security Training and EP Drill Program
16	Other: Specify	N/A	N/A
		↑ - This column, see steps 3.2.2.6.a	↑ - This column, see steps 3.2.2.6.b





**APPENDIX B**

**On-Shift Staffing Analysis**

*See step 3.2.2.1 (same for subsequent pages)*

*See steps 3.2.2.f.1, 3.2.2.4.d.1, 3.2.2.5.e, and 3.2.2.6.c.1*

*Complete this appendix by following the instructions in section 3.2.2.*

This OSA is applicable to Analysis # 3 as identified in Appendix A.

*See steps 3.2.2.3.f, 3.2.2.4.d, 3.2.2.5.d, and 3.2.2.6.c*

*See step 3.2.3*

**TABLE 1 – On-shift Positions**

Line	On-shift Position	Emergency Plan Reference	Augmentation Elapsed Time (min)	Role in Table#/Line#	Unanalyzed Task?	TMS Required?
1.	Shift Manager	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L1 T5/L1 T5/L2 T5/L3 T5/L4 T5/L5 T5/L8 T5/L9 T5/L10 T5/L11 T5/L13	No	Yes
Sample for Discussion						
2.	Unit Supervisor	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L2	No	No
3.	Shift Technical Advisor	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L3	No	No
4.	Control Room Operator #1	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L4	No	No
5.	Control Room Operator #2	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L5	No	No
6.	Work Control Supervisor	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L7	No	No
7.	Equipment Operator #1	Emergency Plan Chapter 8, Figure 3.	N/A	T2/L6	No	No
8.	Equipment Operator #2	Emergency Plan Chapter 8, Figure 3.	N/A	T3/L2	No	No
9.	Equipment Operator #3	Emergency Plan Chapter 8, Figure 3.	N/A	T3/L3	No	No

Line	On-shift Position	Emergency Plan Reference	Augmentation Elapsed Time (min)	Role in Table#/Line#	Unanalyzed Task?	TMS Required?
10.	Equipment Operator #4	Emergency Plan Chapter 8, Figure 3.	N/A	T3/L4	No	No
11.	Equipment Operator #5	Emergency Plan Chapter 8, Figure 3.	N/A	T3/L5	No	No
12.	Radiation Protection Technician	Emergency Plan Chapter 8, Figure 3.	60	N/A	No	No
13.	Chemistry Technician	Emergency Plan Chapter 8, Figure 3.	60	N/A	No	No
14.	Fire Brigade Leader	Emergency Plan Chapter 8, Figure 3.	N/A	T3/L1	No	No
15.	Security Officer #1	Emergency Plan Chapter 8, Figure 3.	N/A	T5/L6	No	No
16.	Security Officer #2	Emergency Plan Chapter 8, Figure 3.	N/A	T5/L15	No	No
17.	I&C Technician #1	Emergency Plan Chapter 8, Figure 3.	N/A	N/A	No	No

*See steps 3.2.2.3.f, 3.2.2.4.d, 3.2.2.5.d, and 3.2.2.6.c*

Sample for Discussion

*See steps 3.2.2.f.1, 3.2.2.4.d.1, 3.2.2.5.e, and 3.2.2.6.c.1*

*See step 3.2.3*

**On-Shift Staffing Analysis**

**TABLE 2 – Plant Operations & Safe Shutdown**

Analysis # 3

**One Unit - One Control Room**

Applicable to site unit(s) # 1

**Minimum Operations Crew Necessary to Implement AOPs and EOPs, or SAMGs if applicable**

See step 3.2.2.3.a

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager	Shift Manager	Operator Training
2	Unit Supervisor	Unit Supervisor	Operator Training
3	Shift Technical Advisor	Shift Technical Advisor	Operator Training
4	Reactor Operator #1	Control Room Operator #1	Operator Training
5	Reactor Operator #2	Control Room Operator #2	Operator Training
6	Auxiliary Operator #1	Equipment Operator #1	Operator Training
7	Auxiliary Operator #2	Work Control Supervisor	Operator Training
8	Other	N/A	N/A
9	Other	N/A	N/A
10	Other	N/A	N/A
		↑ - This column, see step 3.2.2.3.b	↑ - This column, see step 3.2.2.3.e

**Other (non-Operations) Personnel Necessary to Implement AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
11	Mechanic	N/A	N/A
12	Electrician	N/A	N/A
13	I&C Technician	N/A	N/A
14	Other	N/A	N/A
		↑ - This column, see step 3.2.2.3.c	↑ - This column, see step 3.2.2.3.e

**On-Shift Staffing Analysis**

**TABLE 2 – Plant Operations & Safe Shutdown**

Analysis # \_\_\_\_\_

**Two Units - One Control Room**

Applicable to site unit(s) # \_\_\_\_\_

**Minimum Operations Crew Necessary to Implement  
 AOPs and EOPs, or SAMGs if applicable**

<b>Line</b>	<b>Generic Title/Role</b>	<b>On-Shift Position</b>	<b>Task Analysis Controlling Method</b>
1	Shift Manager		
2	Unit Supervisor		
3	Shift Technical Advisor		
4	Reactor Operator #1		
5	Reactor Operator #2		
6	Reactor Operator #3		
7	Auxiliary Operator #1		
8	Auxiliary Operator #2	Sample for Discussion	
9	Auxiliary Operator #3		
10	Other		
11	Other		
12	Other		

**Other (non-Operations) Personnel Necessary to Implement  
 AOPs and EOPs, or SAMGs if applicable**

<b>Line</b>	<b>Generic Title/Role</b>	<b>On-Shift Position</b>	<b>Task Analysis Controlling Method</b>
13	Mechanic		
14	Electrician		
15	I&C Technician		
16	Other		

**On-Shift Staffing Analysis**

**TABLE 2 – Plant Operations & Safe Shutdown (continued)** Analysis # \_\_\_\_\_

**Two Units - Two Control Rooms** Applicable to site unit(s) # \_\_\_\_\_

**Minimum Operations Crew Necessary to Implement  
AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
1	Shift Manager		
2	Unit Supervisor #1		
3	Unit Supervisor #2		
4	Shift Technical Advisor		
5	Reactor Operator #1		
6	Reactor Operator #2		
7	Reactor Operator #3		
8	Reactor Operator #4		
9	Auxiliary Operator #1	Sample for Discussion	
10	Auxiliary Operator #2		
11	Auxiliary Operator #3		
12	Auxiliary Operator #4		
13	Other		
14	Other		
15	Other		
16	Other		

**Other (non-Operations) Personnel Necessary to Implement  
AOPs and EOPs, or SAMGs if applicable**

Line	Generic Title/Role	On-Shift Position	Task Analysis Controlling Method
17	Mechanic		
18	Electrician		
19	I&C Technician		
20	Other		

### On-Shift Staffing Analysis

**TABLE 3 – Firefighting**

Analysis # 3

<b>Line</b>	<b>Performed By</b>	<b>Task Analysis Controlling Method</b>
1	Fire Brigade Leader	Firefighter Training Program
2	Equipment Operator #2	Firefighter Training Program
3	Equipment Operator #3	Firefighter Training Program
4	Equipment Operator #4	Firefighter Training Program
5	Equipment Operator #5	Firefighter Training Program
	↑ - <i>This column, see step 3.2.2.4.a and b</i>	↑ - <i>This column, see step 3.2.2.4.c</i>

Sample for Discussion

## On-Shift Staffing Analysis

**TABLE 4 – Radiation Protection & Chemistry**

Analysis # 3

Line	Position Performing Function/Task	Performance Time Period After Emergency Declaration (minutes)																	
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
1	In-Plant Survey On-Shift Position: N/A	N/A – The performance of an in-plant survey is not necessary for initial implementation of the Emergency Plan, and not required by any procedure. On-shift personnel do not require in-plant surveys in order to perform in-plant EOP/shutdown actions. An in-plant survey team may be dispatched after activation of the OSC.																	
2	On-Site Survey On-Shift Position: N/A	N/A – no radiological release for this event.																	
3	Personnel Monitoring On-Shift Position: N/A	N/A – Personnel can out-process from the Radiologically Controlled Area (RCA) using portal and small article monitors. On-shift personnel do not require monitoring support in order to perform in-plant EOP/shutdown actions. If necessary, site evacuees would be monitored at the Remote Monitoring Area after arrival of augmented ERO personnel.																	
4	Job Coverage On-Shift Position: N/A	N/A – The performance of job coverage is not necessary for initial implementation of the Emergency Plan, and not required by any procedure. On-shift personnel do not require job coverage in order to perform in-plant EOP/shutdown actions.																	
5	Offsite Radiological Assessment On-Shift Position: N/A	N/A – no radiological release for this event.																	
6	Other Site-Specific RP – Describe: N/A On-Shift Position: N/A																		

*This column, see steps 3.2.2.5.a and b*

*This column, see step 3.2.2.5.c*

Line	Position Performing Function/Task	Performance Time Period After Emergency Declaration (minutes)																	
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90
7	Chemistry function/task #1 – Describe: N/A On-Shift Position: N/A																		
8	Chemistry function/task #2 – Describe: N/A On-Shift Position: N/A																		

Sample for Discussion



## On-Shift Staffing Analysis

**TABLE 5 – Emergency Plan Implementation**

Analysis # 3

Line	Function/Task	On-Shift Position	Task Analysis Controlling Method
1	Declare the Emergency Classification Level (ECL)*	Shift Manager	Operations Training and EP Drill Program
2	Approve Offsite Protective Action Recommendations*	Shift Manager	Operations Training and EP Drill Program
3	Approve content of State/local notifications*	Shift Manager	Operations Training and EP Drill Program
4	Approve extension to allowable dose limits*	Shift Manager	Operations Training and EP Drill Program
5	Notification and direction to on-shift staff (e.g., to assemble, evacuate, etc.)	Shift Manager	Operations Training and EP Drill Program
6	ERO notification	Security Officer #1	Security Training and EP Drill Program
7	Abbreviated NRC notification for DBT event	N/A	N/A
8	Complete State/local notification form	Shift Manager	Operations Training and EP Drill Program
9	Perform State/local notifications	Shift Manager	Operations Training and EP Drill Program
10	Complete NRC event notification form	Shift Manager	Operations Training and EP Drill Program
11	Activate ERDS	Shift Manager	Operations Training and EP Drill Program
12	Offsite radiological assessment	N/A – no radiological release	N/A
13	Perform NRC notifications	Shift Manager	Operations Training and EP Drill Program
14	Perform other site-specific event notifications (e.g., INPO, ANI, etc.)	N/A	N/A
15	Personnel accountability	Security Officer #2	Security Training and EP Drill Program
16	Other: Specify	N/A	N/A
		↑ - This column, see steps 3.2.2.6.a	↑ - This column, see steps 3.2.2.6.b

## Sample for Discussion