#### TABLE 3.3-5

#### ENGINEERED SAFETY FEATURES RESPONSE TIMES

#### INITIATING SIGNAL AND FUNCTION RESPONSE TIME IN SECONOS Manual 1. Safety Injection (ECCS) Not Applicable Feedwater Isolation Not Applicable Reactor Trip (SI) Not Applicable Containment Isolation-Phase "A" Not Applicable Containment Ventilation Isolation Not Applicable Auxiliary Feedwater Pumps Not Applicable Service Water System Not Applicable Containment Fan Cooler Not Applicable Containment Spray Not Applicable b. Containment Isolation-Phase "B" Not Applicable Containment Ventilation Isolation Not applicable Containment Isolation-Phase "A" Not Applicable C. Containment Ventilation Isolation Not Applicable Steam Line Isolation Not Applicable d. 2. Containment Pressure-High £ 27.0<sup>(1)</sup> Safety Injection (ECCS) 4. ≤ 2.0 Reactor Trip (from SI) b. ₹7.0 ≤ 10.0 Feedwater Isolation c. £ 17.0<sup>(2)</sup>/27.0<sup>(3)</sup> Containment Isolation-Phase "A" Containment Ventilation Isolation Not Applicable

1.

Auxiliary Feedwater Pumps

Service Water System

< 60

£ 13.0<sup>(2)</sup>/48.0<sup>(3)</sup>

#### ENGINEERED SAFETY FEATURES RESPONSE TIMES

#### INITIATING SIGNAL AND FUNCTION RESPONSE TIME IN SECONDS 3. Pressurizer Pressure-Low < 27.0(1)/12.0(2) a. Safety Injection (ECCS) < 2.0 b. Reactor Trip (from SI) <del><7.0</del> ≤ 10.0 c. Feedwater Isolation < 18.0(2) d. Containment Isolation-Phase "A" e. Containment Ventilation Isolation Not Applicable < 60 f. Auxiliary Feedwater Pumps < 49.0(1)/13.0(2) g. Service Water System 4. Differential Pressure Between Steam Lines-High < 12.0(2)/22.0(3) a. Safety Injection (ECCS) < 2.0 b. Reactor Trip (from SI) c. Feedwater Isolation <del><7.0</del> ≤ 10.0 $\leq 17.0(2)/27.0(3)$ d. Containment Isolation-Phase "A" e. Containment Ventilation Isolation Not Applicable < 60 f. Auxiliary Feedwater Pumps < 13.0(2)/48.0(3) g. Service Water System 5. Steam Flow in two Steam Lines - High Coincident with Tava -- Low-Low < 15.75(2)/25.75(3) a. Safety Injection (ECCS) b. Reactor Trip (from SI) < 5.75 ₹ 10.75 ≤ 15.0 c. Feedwater Isolation < 20.75(2)/30.75(3) d. Containment Isolation-Phase "A" e. Containment Ventilation Isolation Not Applicable < 61.75 f. Auxiliary Feedwater Pumps

g. Service Water System

h. Steam Line Isolation

< 10.75

< 15.75(2)/50.75(3)

# ENGINEERED SAFETY FEATURES RESPONSE TIMES

## INITIATING SIGNAL AND FUNCTION

# RESPONSE TIME IN SECONDS

	ncident with Steam Line Pressure-Low	
a.	Safety Injection (ECCS)	<b>1</b> 12.0 <sup>(2)</sup> /22.0 <sup>(3)</sup>
b.	Reactor Trip (from SI)	≦ 2.0
c	Feedwater Isolation	₹7.0 ≤ 10.0
d.	Containment Isolation-Phase "A"	$\leq 17.0^{(2)}/27.0^{(3)}$
e.	Containment Ventilation Isolation	Not Applicable
f.	Auxiliary Feedwater Pumps	≤ 60
g.	Service Water System	$\leq 14.0^{(2)}/48.0^{(3)}$
h.	Steam Line Isolation	≦ 8.0
Con	tainment PressureHigh-High	
a.	Containment Spray	≦ 45.0
b.	Containment Isolation-Phase "B"	Not Applicable
c.	Steam Line Isolation	≦ 7.0
d.	Containment Fan Cooler	≦ 40.0
Ste	am Generator Water LevelHigh-High	
a.	Turbine Trip	≤ 2.5
b.	Feedwater Isolation	€ 11.0 ≤ 10.0
Stea	am Generator Water LevelLow-Low	
а.	Motor-Driven Auxiliary Feedwater Pumps(4)	≦ 60.0
٥.	Turbine-Driven Auxiliary Feedwater Pumps(5)	≦ 60.0

### TABLE 3:6-1 (Contd.)



#### CONTAINMENT ISOLATION VALVES

VA	LVE NUMBER	FUNCTION	ISOLATION TIME (Seconds)
D.	FEEDWATER ISO	LATION	
1.	21 BF 19#	Main Feedwater Isolation	-≤5 Sec. ≤ 9 SEc.
2.	22 BF 19#	Main Feedwater Isolation	≤5 Sec. ≤ 9 SEC
3.	23 BF 19#	Main Feedwater Isolation	\$5 Sec. ≤ 9 S€C
4.	24 BF 19#	Main Feedwater Isolation	±5 Sec. ≤ 9 SEC
5.	21 BF 40#	Main Feedwater Isolation	45 Sec. ∠ 9 SEC
6.	22 BF 40#	Main Feedwater Isolation	45 Sec. 2 9 58C
7.	23 BF 40#	Main Feedwater Isolation	±5 Sec. ≥ 9 S€C
8.	24 BF 40#	Main Feedwater Isolation	±5 Sec. ≤ 9 Sec
E.	STEAM GENERAT	OR BLOWDOWN ISOLATION	
1.	21 GB 4#	Steam Generator Blowdown	≤10 Sec.
2.	22 GB 4#	Steam Generator Blowdown	≤10 Sec.
3.	23 GB 4#	Steam Generator Blowdown	≤10 Sec.
4.	24 GB 4#	Steam Generator Blowdown	≤10 Sec.
5.	21 SS 94#	SG Blowdown Sampling	≤10 Sec.
6.	22 SS 94#	SG Blowdown Sampling	≤10 Sec.
7.	23 SS 94#	SG Blowdown Sampling	≤10 Sec.
8.	24 SS 94#	SG Blowdown Sampling	≤10 Sec.
F.	CONTAINMENT P	URGE AND PRESSURE - VACUUM RELIEF	
1.	2 VC 1	Purge Supply	≤2 Sec.
2.	2 VC 2	Purge Supply	≤2 Sec.
3.		Purge Exhaust	≤2 Sec.
4.		Purge Exhaust	≤2 Sec.
5.	2 VC 5*	Pressure - Vacuum Relief	≤2 Sec.
6.	2 VC 6*	Pressure - Vacuum Relief	≤2 Sec.

### TAB LE 3.3-5

#### ENGINEERED SAFETY FEATURES RESPONSE ITEMS

#### INITIATING SIGNAL AND FUNCTION

#### RESPONSE TIME IN SECONDS

### 1. Manual

a.	Safety Injection (ECCS)	Not Applicable
	Feedwater Isolation	Not Applicable
	Reactor Trip (SI)	Not Applicable
	Containment Isolation-Phase "A"	Not Applicable
	Containment Ventilation Isolation	Not Applicable
	Auxiliary Feedwater Pumps	Not Applicable
	Service Water System	Not Applicable
	Containment Fan Cooler	Not Applicable
b.	Containment Spray	Not Applicable
	Containment Isolation-Phase "B"	Not Applicable
	Containment Ventilation Isolation	Not Applicable
c.	Containment Isolation-Phase "A"	Not Applicable
	Containment Ventilation Isolation	Not Applicable
d.	Steam Line Isolation	Not Applicable

### 2. Containment Pressure-High

2.	Safety Injection (ECCS)	< 27.0(1) −
b.	Reactor Trip (from SI)	< 2.0
c.	Feedwater Isolation	<del>&lt;7.0</del> ≤10.0
d.	Containment Isolation-Phase "A"	$\leq 17.0(2)/27.0(3)$
	Containment Ventilation Isolation	Not Applicable
f.	Auxiliary Feedwater Pumps	< 60
g.	Service Water System	< 13.0(2)/48.0(3)

## ENGINEERED SAFETY FEATURES RESPONSE TIMES

IT IAT	ING SIGNAL AND FUNCTION	RESPONSE TIME IN SECOND
. Pre	essurizer Pressure-Low	
a.	Safety Injection (ECCS)	$\leq 27.0(1)/12.0(2)$
b.	Reactor Trip (from SI)	< 2.0
c.	Feedwater Isolation	₹7.0 ≤ 10.0
d.	Containment Isolation-Phase "A"	< 18.0(2)
e.	Containment Ventilation Isolation	Not Applicable
f.	Auxiliary Feedwater Pumps	<u>≺</u> 60
. g.	Service Water System	$\leq 49.0(1)/13.0(2)$
. Di i	ferential Pressure Between Steam Lines-High	
a.	Safety Injection (ECCS)	< 12.0(2)/22.0(3)
b.	Reactor Trip (from SI)	< 2.0
c.	Feedwater Isolation	<del>&lt;7.0</del> ≤ 10.0
d.	Containment Isolation-Phase "A"	< 17.0(2)/27.0(3)
e.	Containment Ventilation Isolation	Not Applicable
f.	Auxiliary Feedwater Pumps	< 60
g.	Service Water System	$\leq 13.0(2)/48.0(3)$
. <u>St</u>	eam Flow in two Steam Lines - High Coincident	
wit	th TavgLow-Low	
a.	Safety Injection (ECCS)	$\leq 15.75(2)/25.75(3)$
b.	Reactor Trip (from SI)	< 5.75
c.	Feedwater Isolation	₹ 10.75 ≤ 15.0
d.	Containment Isolation-Phase "A"	$\leq 20.75(2)/30.75(3)$
e.	Containment Ventilation Isolation	Not Applicable
f.	Auxiliary Feedwater Pumps	< 61.75
g.	Service Water System	< 15.75(2)/50.75(3)
h.	Steam Line Isolation	< 10.75

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SALEM - UNIT 1

Amendment No. 84

#### ENGINEERED SAFETY FEATURES RESPONSE TIMES

#### INITIATING SIGNAL AND FUNCTION

### RESPONSE TIME IN SECONDS

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6. Steam flow in Two Steam Lines-High	
Coincident with Steam Line Pressure-Lo	w
a. Safety Injection (ECCS)	< 12.0(2)/22.0(3)
b. Reactor Trip (from SI)	< 2.0
c. Feedwater Isolation	<del>&lt; 7.0</del> ≤ 10.0
d. Containment Isolation-Phase "A"	< 17.0(2)/27.0(3)
e. Containment Ventilation Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	<u>&lt;</u> 60
g. Service Water System	< 14.0(2)/48.0(3)
h. Steam Line Isolation	< 8.0
7. Containment PressureHigh-High	
a. Containment Spray	< 45.0
b. Containment Isolation-Phase "B"	Not applicable
c. Steam Line Isolation	< 7.0
d. Containment Fan Cooler	< 40.0
8. Steam Generator Water Level High-High	
a. Turbine Trip.	< 2.5
b. Feedwater Isolation	₹11.0 ≤10.0
9. Steam Generator Water LevelLow-Low	
a. Motor-Oriven Auxiliary Feedwater Pumps (4)	≤ 60.0
b. Turbine-Driven Auxiliary Feedwater Pumps(5)	< 60.0

TABLE 3.6-1 (Contd.)

#### CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	ISOLATION TIME (Seconds)
D. FEEDWATER ISOL	ATION	
1. 11 BF 19#	Main Feedwater Isolation	<u> </u>
2. 12 BF 19#	Main Feedwater Isolation	-≤8 Sec. ≤ 9 SEC
3. 13 BF 19#	Main Feedwater Isolation	-≤8 Sec. ≤ 9 SEC
4. 14 BF 19#	Main Feedwater Isolation	<del>≤8 Sec.</del> ≤ 9 sec
5. 11 BF 40#	Main Feedwater Isolation	-≤8 Sec. ∠ 9 SEC
6. 12 BF 40#	Main Feedwater Isolation	-≤8 Sec. ∠ 9 sec
7. 13 BF 40#	Main Feedwater Isolation	-≤8 Sec. < 9 sec
8. 14 BF 40#	Main Feedwater Isolation	≤8 Sec. ≤ 9 SEC
E. STEAM GENERAT	OR BLOWDOWN ISOLATION	
1. 11 GB 4#	Steam Generator Blowdown	≤10 Sec.
2. 12 GB 4#	Steam Generator Blowdown	≤10 Sec.
3. 13 GB 4#	Steam Generator Blowdown	≤10 Sec.
4. 14 GB 4#	Steam Generator Blowdown	≤10 Sec.
5. 11 SS 94#	SG Blowdown Sampling .	≤10 Sec.
6. 12 SS 94#	SG Blowdown Sampling	≤10 Sec.
7. 13 SS 94#	SG Blowdown Sampling	≤10 Sec.
8. 14 SS 94#	SG Blowdown Sampling	≤10 Sec.
F. CONTAINMENT PU	RGE AND PRESSURE - VACUUM RELIEF	
1. 1 VC 1	Purge Supply	≤2 Sec.
2. 1 VC 2	Purge Supply	≤2 Sec.
3. 1 VC 3	Purge Exhaust	≤2 Sec.
4. 1 VC 4	Purge Exhaust	≤2 Sec.
5. 1 VC 5*	Pressure - Vacuum Relief	≤2 Sec.
6. 1 VC 6*	Pressure - Vacuum Relief	≤2 Sec.