

TABLE 3.3.2-1

ISOLATION ACTUATION INSTRUMENTATION

<u>TRIP FUNCTION</u>	<u>ISOLATION SIGNAL(s)<sup>(a)</sup></u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)</u>	<u>APPLICABLE OPERATIONAL CONDITION</u>	<u>ACTION</u>
<b>1. <u>PRIMARY CONTAINMENT ISOLATION</u></b>				
a. Reactor Vessel Water Level				
1) Low, Level 3	A	2	1, 2, 3	20
2) Low Low, Level 2	B	2	1, 2, 3	20
3) Low Low Low, Level 1	X	2	1, 2, 3	20
b. Drywell Pressure - High	Y,Z	2	1, 2, 3	20
c. Reactor Vessel Steam Dome Pressure - Low	N	2	1, 2, 3	20
d. Manual Initiation	NA	1	1, 2, 3	24
<b>2. <u>SECONDARY CONTAINMENT ISOLATION</u></b>				
a. Reactor Vessel Water Level - Low Low, Level 2	Y (c)	2	1, 2, 3 and *	25
b. Drywell Pressure - High	Y,Z (c)	2	1, 2, 3	25
c. Refuel Floor High Exhaust Duct Radiation - High	**	2	1, 2, 3 and *	25
d. Railroad Access Shaft Exhaust Duct Radiation - High	**	2	1, 2, 3 and *	25
e. Refuel Floor Wall Exhaust Duct Radiation - High	**	2	1, 2, 3 and *	25
f. Manual Initiation	NA	1	1, 2, 3 and *	24

SUSQUEHANNA - UNIT 1  
 B210080151 B21006  
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TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

SUSQUEHANNA - UNIT 1

TRIP FUNCTION

TRIP SETPOINT

ALLOWABLE VALUE

1. PRIMARY CONTAINMENT ISOLATION

- a. Reactor Vessel Water Level
  - 1) Low, Level 3
  - 2) Low Low, Level 2
- b. Drywell Pressure - High
- d. Manual Initiation

> 13.0 inches\*  
 > -38.0 inches\*  
 < 1.72 psig  
 NA

> 11.5 inches  
 > -45.0 inches  
 < 1.88 psig  
 NA

*Handwritten notes:*  
 ≥ -129 inches\*  
 ≥ 136 psig, decreasing  
 ≥ -136 inches  
 ≥ 416 psig, decreasing

2. SECONDARY CONTAINMENT ISOLATION

- a. Reactor Vessel Water Level - Low Low, Level 2
- b. Drywell Pressure - High
- c. Refuel Floor High Exhaust Duct Radiation - High
- d. Railroad Access Shaft Exhaust Duct Radiation - High
- e. Refuel Floor Wall Exhaust Duct Radiation - High
- f. Manual Initiation

≥ -38.0 inches\*  
 ≤ 1.72 psig  
 ≤ 2.5 mR/hr.\*\*  
 ≤ 2.5 mR/hr.\*\*  
 ≤ 2.5 mR/hr.\*\*  
 NA

≥ -45.0 inches  
 ≤ 1.88 psig  
 ≤ 4.0 mR/hr.\*\*  
 ≤ 4.0 mR/hr.\*\*  
 ≤ 4.0 mR/hr.\*\*  
 NA

3. MAIN STEAM LINE ISOLATION

- a. Reactor Vessel Water Level - Low Low, Level 2
- b. Main Steam Line Radiation - High
- c. Main Steam Line Pressure - Low
- d. Main Steam Line Flow - High

≥ -38 inches\*  
 < 3 X full power background  
 ≥ 861 psig  
 ≤ 107 psid

≥ -45.0 inches  
 < 3.6 X full power background  
 ≥ 841 psig  
 ≤ 110 psid

3) Low, Low, Low Level  
 C. Reactor Vessel Steam  
 Dome Pressure - Low  
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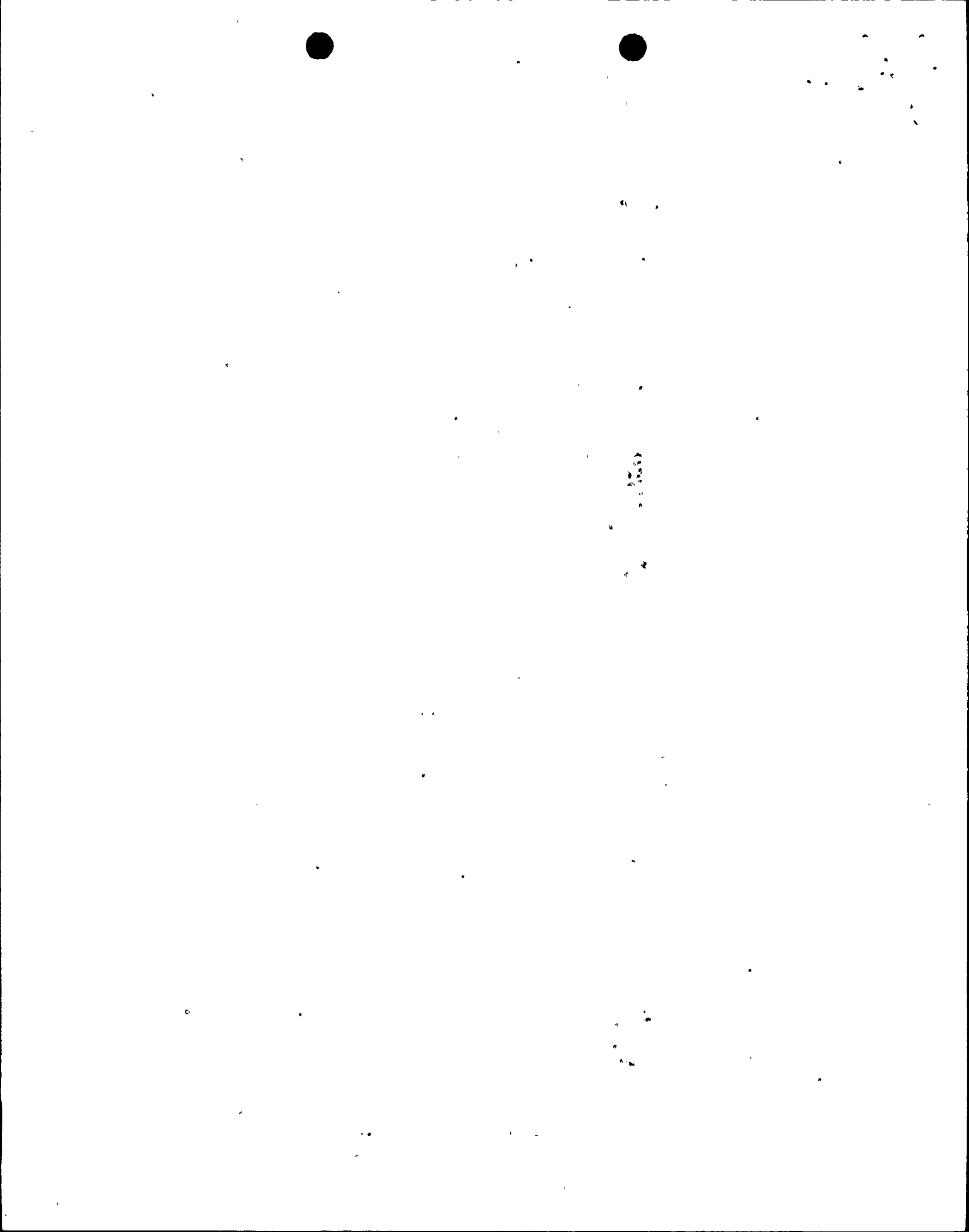


TABLE 3.3.2-3

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

<u>TRIP FUNCTION</u>	<u>RESPONSE TIME (Seconds)#</u>
<b>1. PRIMARY CONTAINMENT ISOLATION</b>	
a. Reactor Vessel Water Level	
1) Low, Level 3	$<10^{(a)}$
2) Low Low, Level 2	$<1.0^{*}/<10^{(a)**}$
3) Low Low Low, Level 1	$\leq 10^{(a)}$
b. Drywell Pressure - High, and Reactor Vessel Steam Dome Pressure - Low	$<10^{(a)}$
c. Manual Initiation	NA
<b>2. SECONDARY CONTAINMENT ISOLATION</b>	
a. Reactor Vessel Water Level-Low Low, Level 2	$<10^{(a)}$
b. Drywell Pressure - High	$<10^{(a)}$
c. Refuel Floor High Exhaust Duct Radiation - High <sup>(b)</sup>	$<10^{(a)}$
d. Railroad Access Shaft Exhaust Duct Radiation - High <sup>(b)</sup>	$<10^{(a)}$
e. Refuel Floor Wall Exhaust Duct Radiation -High <sup>(b)</sup>	$<10^{(a)}$
f. Manual Initiation	NA
<b>3. MAIN STEAM LINE ISOLATION</b>	
a. Reactor Vessel Water Level- Low Low, Level 2 <sup>(a)(b)</sup>	$<10^{(a)}$
b. Main Steam Line Radiation - High	$<1.0^{*}/<10^{(a)**}$
c. Main Steam Line Pressure - Low	$<1.0^{*}/<10^{(a)**}$
d. Main Steam Line Flow-High	$<0.5^{*}/<10^{(a)**}$
e. Condenser Vacuum - Low	NA
f. Main Steam Line Tunnel Temperature - High	NA
g. Main Steam Line Tunnel $\Delta$ Temperature - High	NA
h. Manual Initiation	NA
<b>4. REACTOR WATER CLEANUP SYSTEM ISOLATION</b>	
a. RWCS $\Delta$ Flow - High	$<10^{(a)##}$
b. RWCS Area Temperature - High	NA
c. RWCS Area Ventilation Temperature $\Delta T$ - High	NA
d. SLCS Initiation	NA
e. Reactor Vessel Water Level - Low Low, Level 2	$<10^{(a)}$
f. RWCS $\Delta$ Pressure - High	NA
g. Manual Initiation	NA
<b>5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION</b>	
a. RCIC Steam Line $\Delta$ Pressure - High	$<10^{(a)###}$
b. RCIC Steam Supply Pressure - Low	$<10^{(a)}$
c. RCIC Turbine Exhaust Diaphragm Pressure - High	NA
d. RCIC Equipment Room Temperature - High	NA
e. RCIC Equipment Room $\Delta$ Temperature - High	NA
f. RCIC Pipe Routing Area Temperature - High	NA
g. RCIC Pipe Routing Area $\Delta$ Temperature - High	NA
h. RCIC Emergency Area Cooler Temperature - High	NA
i. Manual Initiation	NA

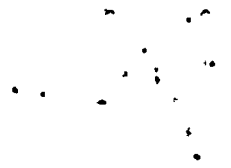


TABLE 4.3.2.1-1

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>TRIP FUNCTION</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>	<u>OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED</u>
<u>1. PRIMARY CONTAINMENT ISOLATION</u>				
a. Reactor Vessel Water Level -				
1) Low, Level 3	S	M	R	1, 2, 3
2) Low Low, Level 2	S	M	R	1, 2, 3
3) Low Low Low, Level 1	S	M	R	1, 2, 3
b. Drywell Pressure - High	NA	M	R	1, 2, 3
c. Reactor Vessel Steam Dome Pressure - Low	NA	M	Q	1, 2, 3
d. Manual Initiation	NA	R	NA	1, 2, 3
<u>2. SECONDARY CONTAINMENT ISOLATION</u>				
a. Reactor Vessel Water Level - Low Low, Level 2	S	M	R	1, 2, 3 and *
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Refuel Floor High Exhaust Duct Radiation - High	S	M	R	1, 2, 3 and *
d. Railroad Access Shaft Exhaust Duct Radiation - High	S	M	R	1, 2, 3 and *
e. Refuel Floor Wall Exhaust Duct Radiation - High	S	M	R	1, 2, 3 and *
f. Manual Initiation	NA	R	NA	1, 2, 3 and *

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

<u>VALVE FUNCTION AND NUMBER</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>	<u>ISOLATION SIGNAL(s)<sup>(a)</sup></u>
<u>Automatic Isolation Valves<sup>(b)</sup> (Continued)</u>		
<u>Containment Instrument Gas</u>		
HV-12603	20	X X, Z
SV-12605	N/A	X X, Z
SV-12651	N/A	X X, Z
SV-12661	N/A	Y
SV-12671	N/A	Y
<u>RBCCW</u>		
HV-11313	30	X X, Z
HV-11314	30	X X, Z
HV-11345	30	X X, Z
HV-11346	30	X X, Z
<u>Containment Purge</u>		
HV-15703	19	Y, R
HV-15704	19	Y, R
HV-15705	5	Y, R
HV-15711	5	Y, R
HV-15713	30	Y, R
HV-15714	30	Y, R
HV-15721	6	Y, R
HV-15722	30	Y, R
HV-15723	30	Y, R
HV-15724	19	Y, R
HV-15725	19	Y, R
<u>RHR - Drywell Spray<sup>(f)</sup></u>		
HV-151F016 A,B	90	G
<u>RB Chilled Water</u>		
HV-18781 A1,A2,B1,B2	40	X X, Z
HV-18782 A1,A2,B1,B2	6	X X, Z
HV-18791 A1,A2,B1,B2	15	Y
HV-18792 A1,A2,B1,B2	4	Y