

ATTACHMENT A
EXISTING SPECIFICATION - UNIT 2

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TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

| <u>FUNCTIONAL UNIT</u> | <u>TOTAL NO. OF CHANNELS</u> | <u>CHANNELS TO TRIP</u> | <u>MINIMUM CHANNELS OPERABLE</u> | <u>APPLICABLE MODES</u> | <u>ACTION</u> |
|----------------------------------|----------------------------------|-----------------------------|--|-----------------------------|---------------|
| 9. CONTROL ROOM ISOLATION (CRIS) | | | | | |
| a. Manual CRIS (Trip Buttons) | 2 | 1 | 1 | A11 | 13*// |
| b. Manual SIAS (Trip Buttons) | 2 sets of 2/unit | 1 set of 2 | 2 sets of 2/unit | 1, 2, 3, 4 | 8 |
| c. Airborne Radiation | | | | | |
| i. Particulate/Iodine | 2 | 1 | 1 | A11 | 13*// |
| ii. Gaseous | 2 | 1 | 1 | A11 | 13*// |
| d. Automatic Actuation Logic | 1/train | 1 | 1 | A11 | 13*// |
| 10. TOXIC GAS ISOLATION (TGIS) | | | | | |
| a. Manual (Trip Buttons) | 2 | 1 | 1 | A11 | 14*//, 15*// |
| b. Chlorine - High | 2 | 1 | 1 | A11 | 14*//, 15*// |
| c. Ammonia - High | 2 | 1 | 1 | A11 | 14*//, 15*// |
| d. Butane/Propane - High | 2 | 1 | 1 | A11 | 14*//, 15*// |
| e. Carbon Dioxide - High | 2 | 1 | 1 | A11 | 14*//, 15*// |
| f. Automatic Actuation Logic | 1/train | 1 | 1 | A11 | 14*//, 15*// |

Table 3.3-5 (Continued)

| <u>INITIATING SIGNAL AND FUNCTION</u> | <u>RESPONSE TIME (SEC)</u> |
|---|----------------------------|
| 13. <u>Control Room Toxic Gas (Butane/Propane)</u> | |
| TGIS | |
| Control Room Ventilation - Isolation Mode | 36 (NOTE 5) |
| 14. <u>Control Room Toxic Gas (Carbon Dioxide)</u> | |
| TGIS | |
| Control Room Ventilation - Isolation Mode | 36 (NOTE 5) |
| 15. <u>Fuel Handling Building Airborne Radiation</u> | |
| FHIS | |
| Fuel Handling Building Post-Accident Cleanup Filter System | Not Applicable |
| 16. <u>Containment Airborne Radiation</u> | |
| CPIS | |
| Containment Purge Isolation | 2 (NOTE 2) |
| 17. <u>Containment Area Radiation</u> | |
| CPIS | |
| Containment Purge Isolation | 2 (NOTE 2) |

NOTES:

1. Response times include movement of valves and attainment of pump or blower discharge pressure as applicable.
2. Response time includes emergency diesel generator starting delay (applicable to A.C. motor-operated valves other than containment purge valves), instrumentation and logic response only. Refer to Table 3.6-1 for containment isolation valve closure times.
3. All CIAS-actuated valves except MSIVs, MFIVs, and CCW Valves 2HV-6211 and 2HV-6216.
- 4a. CCW noncritical loop isolation Valves 2HV-6212, 2HV-6213, 2HV-6218, and 2HV-6219 close.
- 4b. Containment emergency cooler CCW isolation Valves 2HV-6366, 2HV-6367, 2HV-6368, 2HV-6369, 2HV-6370, 2HV-6371, 2HV-6372, and 2HV-6373 open.
5. Response time includes instrumentation, logic, and isolation damper closure times only.
6. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.
- * Emergency diesel generator starting delay (10 sec.) and sequence loading delays for SIAS are included.
- ** Emergency diesel generator starting delay (10 sec.) is included.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| FUNCTIONAL UNIT | CHANNEL CHECK | CHANNEL CALIBRATION | CHANNEL FUNCTIONAL TEST | MODES FOR WHICH SURVEILLANCE IS REQUIRED |
|--|------------------|------------------------|-------------------------------|--|
| 7. LOSS OF POWER (LOV) | | | | |
| a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage and Degraded Voltage) | S | R | R | 1, 2, 3, 4 |
| 8. EMERGENCY FEEDWATER (EFAS) | | | | |
| a. Manual (Trip Buttons) | N.A. | N.A. | R | 1, 2, 3 |
| b. SG Level (A/B)-Low and ΔP (A/B) - High | S | R | M | 1, 2, 3 |
| c. SG Level (A/B) - Low and No Pressure - Low Trip (A/B) | S | R | M | 1, 2, 3 |
| d. Automatic Actuation Logic | N.A. | N.A. | M(1)(3), SA(4) | 1, 2, 3 |
| 9. CONTROL ROOM ISOLATION (CRIS) | | | | |
| a. Manual CRIS (Trip Buttons) | N.A. | N.A. | R | N.A. |
| b. Manual SIAS (Trip Buttons) | N.A. | N.A. | R | N.A. |
| c. Airborne Radiation | | | | |
| i. Particulate/Iodine | S | R | M | All |
| ii. Gaseous | S | R | M | All |
| d. Automatic Actuation Logic | N.A. | N.A. | R(3) | All |
| 10. TOXIC GAS ISOLATION (TGIS) | | | | |
| a. Manual (Trip Buttons) | N.A. | N.A. | R | N.A. |
| b. Chlorine - High | S | R | M | All |
| c. Ammonia - High | S | R | M | All |
| d. Butane/Propane - High | S | R | M | All |
| e. Carbon Dioxide - High | S | R | M | All |
| f. Automatic Actuation Logic | N.A. | N.A. | R (3) | All |

ATTACHMENT B
EXISTING SPECIFICATION - UNIT 3

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

| <u>FUNCTIONAL UNIT</u> | <u>TOTAL NO. OF CHANNELS</u> | <u>CHANNELS TO TRIP</u> | <u>MINIMUM CHANNELS OPERABLE</u> | <u>APPLICABLE MODES</u> | <u>ACTION</u> |
|----------------------------------|----------------------------------|-----------------------------|--|-----------------------------|---------------|
| 9. CONTROL ROOM ISOLATION (CRIS) | | | | | |
| a. Manual CRIS (Trip Buttons) | 2 | 1 | 1 | A11 | 13*# |
| b. Manual SIAS (Trip Buttons) | 2 sets of 2/unit | 1 set of 2 | 2 sets of 2/unit | 1, 2, 3, 4 | 8 |
| c. Airborne Radiation | | | | | |
| i. Particulate/Iodine | 2 | 1 | 1 | A11 | 13*# |
| ii. Gaseous | 2 | 1 | 1 | A11 | 13*# |
| d. Automatic Actuation Logic | 1/train | 1 | 1 | A11 | 13*# |
| 10. TOXIC GAS ISOLATION (TGIS) | | | | | |
| a. Manual (Trip Buttons) | 2 | 1 | 1 | A11 | 14*#, 15*# |
| b. Chlorine - High | 2 | 1 | 1 | A11 | 14*#, 15*# |
| c. Ammonia - High | 2 | 1 | 1 | A11 | 14*#, 15*# |
| d. Butane/Propane - High | 2 | 1 | 1 | A11 | 14*#, 15*# |
| e. Carbon Dioxide - High | 2 | 1 | 1 | A11 | 14*#, 15*# |
| f. Automatic Actuation Logic | 1/train | 1 | 1 | A11 | 14*#, 15*# |

Table 3.3-5 (continued)

| <u>INITIATING SIGNAL AND FUNCTION</u> | <u>RESPONSE TIME (SEC)</u> |
|---|----------------------------|
| 13. <u>Control Room Toxic Gas (Butane/Propane)</u> | |
| TGIS | |
| Control Room Ventilation - Isolation Mode | 36 (NOTE 5) |
| 14. <u>Control Room Toxic Gas (Carbon Dioxide)</u> | |
| TGIS | |
| Control Room Ventilation - Isolation Mode | 36 (NOTE 5) |
| 15. <u>Fuel Handling Building Airborne Radiation</u> | |
| FHIS | |
| Fuel Handling Building Post-Accident Cleanup Filter System | Not Applicable |
| 16. <u>Containment Airborne Radiation</u> | |
| CPIS | |
| Containment Purge Isolation | 2 (NOTE 2) |
| 17. <u>Containment Area Radiation</u> | |
| CPIS | |
| Containment Purge Isolation | 2 (NOTE 2) |

NOTES:

1. Response times include movement of valves and attainment of pump or blower discharge pressure as applicable.
2. Response time includes emergency diesel generator starting delay (applicable to AC motor operated valves other than containment purge valves), instrumentation and logic response only. Refer to Table 3.6-1 for containment isolation valve closure times.
3. All CIAS-Actuated valves except MSIVs and MFIVs and CCW valves 3HV-6211 and 3HV-6216.
- 4a. CCW non-critical loop isolation valves 3HV-6212, 3HV-6213, 3HV-6218 and 3HV-6219 close.
- 4b. Containment emergency cooler CCW isolation valves 3HV-6366, 3HV-6367, 3HV-6368, 3HV-6369, 3HV-6370, 3HV-6371, 3HV-6372 and 3HV-6373 open.
5. Response time includes instrumentation, logic, and isolation damper closure times only.
6. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.
- * Emergency diesel generator starting delay (10 seconds) and sequence loading delays for SIAS are included.
- ** Emergency diesel generator starting delay (10 seconds) is included.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>FUNCTIONAL UNIT</u> | <u>CHANNEL CHECK</u> | <u>CHANNEL CALIBRATION</u> | <u>CHANNEL FUNCTIONAL TEST</u> | <u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u> |
|--|----------------------------------|----------------------------------|--------------------------------|---|
| 7. LOSS OF POWER (LOV) a. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage and Degraded Voltage) | S | R | R | 1, 2, 3, 4 |
| 8. EMERGENCY FEEDWATER (EFAS) a. Manual (Trip Buttons) b. SG Level (A/B)-Low and ΔP (A/B) - High c. SG Level (A/B) - Low and No Pressure - Low Trip (A/B) d. Automatic Actuation Logic | N.A. S S N.A. | N.A. R R N.A. | R M M M(1)(3), SA(4) | 1, 2, 3 1, 2, 3 1, 2, 3 1, 2, 3 |
| 9. CONTROL ROOM ISOLATION (CRIS) a. Manual CRIS (Trip Buttons) b. Manual SIAS (Trip Buttons) c. Airborne Radiation i. Particulate/Iodine ii. Gaseous d. Automatic Actuation Logic | N.A. N.A. S S N.A. | N.A. N.A. R R N.A. | R R M M R(3) | N.A. N.A. All All All |
| 10. TOXIC GAS ISOLATION (TGIS) a. Manual (Trip Buttons) b. Chlorine - High c. Ammonia - High d. Butane/Propane - High e. Carbon Dioxide - High f. Automatic Actuation Logic | N.A. S S S S N.A. | N.A. R R R R N.A. | R M M M M R (3) | N.A. All All All All All |

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ATTACHMENT C
PROPOSED SPECIFICATION - UNIT 2

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

| FUNCTIONAL UNIT | TOTAL NO. OF CHANNELS | CHANNELS TO TRIP | MINIMUM CHANNELS OPERABLE | APPLICABLE MODES | ACTION |
|----------------------------------|--------------------------|---------------------|---------------------------------|---------------------|--------------|
| 9. CONTROL ROOM ISOLATION (CRIS) | | | | | |
| a. Manual CRIS (Trip Buttons) | 2 | 1 | 1 | All | 13*// |
| b. Manual SIAS (Trip Buttons) | 2 sets of 2/unit | 1 set of 2 | 2 sets of 2/unit | 1, 2, 3, 4 | 8 |
| c. Airborne Radiation | | | | | |
| i. Particulate/Iodine | 2 | 1 | 1 | All | 13*// |
| ii. Gaseous | 2 | 1 | 1 | All | 13*// |
| d. Automatic Actuation Logic | 1/train | 1 | 1 | All | 13*// |
| 10. TOXIC GAS ISOLATION (TGIS) | | | | | |
| a. Manual (Trip Buttons) | 2 | 1 | 1 | All | 14*//, 15*// |
| b. Chlorine - High | 2 | 1 | 1 | All | 14*//, 15*// |
| c. Ammonia - High | 2 | 1 | 1 | All | 14*//, 15*// |
| d. Butane/Propane - High | 2 | 1 | 1 | All | 14*//, 15*// |
| e. Automatic Actuation Logic | 1/train | 1 | 1 | All | 14*//, 15*// |

Table 3.3-5 (Continued)

INITIATING SIGNAL AND FUNCTION

RESPONSE TIME (SEC)

13. Control Room Toxic Gas (Butane/Propane)

TGIS

Control Room Ventilation -
Isolation Mode

36 (NOTE 5)

14. Fuel Handling Building Airborne Radiation

FHIS

Fuel Handling Building Post-Accident
Cleanup Filter System

Not Applicable

15. Containment Airborne Radiation

CPIS

Containment Purge Isolation

2 (NOTE 2)

16. Containment Area Radiation

CPIS

Containment Purge Isolation

2 (NOTE 2)

NOTES:

1. Response times include movement of valves and attainment of pump or blower discharge pressure as applicable.
2. Response time includes emergency diesel generator starting delay (applicable to A.C. motor-operated valves other than containment purge valves), instrumentation and logic response only. Refer to Table 3.6-1 for containment isolation valve closure times.
3. All CIAS-actuated valves except MSIVs, MFIVs, and CCW Valves 2HV-6211 and 2HV-6216.
- 4a. CCW noncritical loop isolation Valves 2HV-6212, 2HV-6213, 2HV-6218, and 2HV-6219 close.
- 4b. Containment emergency cooler CCW isolation Valves 2HV-6366, 2HV-6367, 2HV-6368, 2HV-6369, 2HV-6370, 2HV-6371, 2HV-6372, and 2HV-6373 open.
5. Response time includes instrumentation, logic, and isolation damper closure times only.
6. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.
- * Emergency diesel generator starting delay (10 sec.) and sequence loading delays for SIAS are included.
- ** Emergency diesel generator starting delay (10 sec.) is included.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| FUNCTIONAL UNIT | CHANNEL CHECK | CHANNEL CALIBRATION | CHANNEL FUNCTIONAL TEST | MODES FOR WHICH SURVEILLANCE IS REQUIRED |
|--|------------------|------------------------|-------------------------------|--|
| 7. LOSS OF POWER (LOV) | | | | |
| a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage and Degraded Voltage) | S | R | R | 1, 2, 3, 4 |
| 8. EMERGENCY FEEDWATER (EFAS) | | | | |
| a. Manual (Trip Buttons) | N.A. | N.A. | R | 1, 2, 3 |
| b. SG Level (A/D)-Low and ΔP (A/B) - High | S | R | M | 1, 2, 3 |
| c. SG Level (A/D) - Low and No Pressure - Low Trip (A/D) | S | R | M | 1, 2, 3 |
| d. Automatic Actuation Logic | N.A. | N.A. | M(1)(3), SA(4) | 1, 2, 3 |
| 9. CONTROL ROOM ISOLATION (CRIS) | | | | |
| a. Manual CRIS (Trip Buttons) | N.A. | N.A. | R | N.A. |
| b. Manual SIAS (Trip Buttons) | N.A. | N.A. | R | N.A. |
| c. Airborne Radiation | | | | |
| i. Particulate/Iodine | S | R | M | A11 |
| ii. Gaseous | S | R | M | A11 |
| d. Automatic Actuation Logic | N.A. | N.A. | R(3) | A11 |
| 10. TOXIC GAS ISOLATION (TGIS) | | | | |
| a. Manual (Trip Buttons) | N.A. | N.A. | R | N.A. |
| b. Chlorine - High | S | R | M | A11 |
| c. Ammonia - High | S | R | M | A11 |
| d. Butane/Propane - High | S | R | M | A11 |
| e. Automatic Actuation Logic | N.A. | N.A. | R (3) | A11 |

ATTACHMENT D

PROPOSED SPECIFICATION - UNIT 3

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

| <u>FUNCTIONAL UNIT</u> | <u>TOTAL NO. OF CHANNELS</u> | <u>CHANNELS TO TRIP</u> | <u>MINIMUM CHANNELS OPERABLE</u> | <u>APPLICABLE MODES</u> | <u>ACTION</u> |
|----------------------------------|----------------------------------|-----------------------------|--|-----------------------------|---------------|
| 9. CONTROL ROOM ISOLATION (CRIS) | | | | | |
| a. Manual CRIS (Trip Buttons) | 2 | 1 | 1 | A11 | 13*# |
| b. Manual SIAS (Trip Buttons) | 2 sets of 2/unit | 1 set of 2 | 2 sets of 2/unit | 1, 2, 3, 4 | 8 |
| c. Airborne Radiation | | | | | |
| i. Particulate/Iodine | 2 | 1 | 1 | A11 | 13*# |
| ii. Gaseous | 2 | 1 | 1 | A11 | 13*# |
| d. Automatic Actuation Logic | 1/train | 1 | 1 | A11 | 13*# |
| 10. TOXIC GAS ISOLATION (TGIS) | | | | | |
| a. Manual (Trip Buttons) | 2 | 1 | 1 | A11 | 14*#, 15*# |
| b. Chlorine - High | 2 | 1 | 1 | A11 | 14*#, 15*# |
| c. Ammonia - High | 2 | 1 | 1 | A11 | 14*#, 15*# |
| d. Butane/Propane - High | 2 | 1 | 1 | A11 | 14*#, 15*# |
| e. Automatic Actuation Logic | 1/train | 1 | 1 | A11 | 14*#, 15*# |

Table 3.3-5 (continued)

INITIATING SIGNAL AND FUNCTION

RESPONSE TIME (SEC)

13. Control Room Toxic Gas (Butane/Propane)

TGIS

Control Room Ventilation -
Isolation Mode

36 (NOTE 5)

14. Fuel Handling Building Airborne Radiation

FHIS

Fuel Handling Building Post-Accident
Cleanup Filter System

Not Applicable

15. Containment Airborne Radiation

CPIS

Containment Purge Isolation

2 (NOTE 2)

16. Containment Area Radiation

CPIS

Containment Purge Isolation

2 (NOTE 2)

NOTES:

1. Response times include movement of valves and attainment of pump or blower discharge pressure as applicable.
2. Response time includes emergency diesel generator starting delay (applicable to AC motor operated valves other than containment purge valves), instrumentation and logic response only. Refer to Table 3.6-1 for containment isolation valve closure times.
3. All CIAS-Actuated valves except MSIVs and MFIVs and CCW valves 3HV-6211 and 3HV-6216.
- 4a. CCW non-critical loop isolation valves 3HV-6212, 3HV-6213, 3HV-6218 and 3HV-6219 close.
- 4b. Containment emergency cooler CCW isolation valves 3HV-6366, 3HV-6367, 3HV-6368, 3HV-6369, 3HV-6370, 3HV-6371, 3HV-6372 and 3HV-6373 open.
5. Response time includes instrumentation, logic, and isolation damper closure times only.
6. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.
- * Emergency diesel generator starting delay (10 seconds) and sequence loading delays for SIAS are included.
- ** Emergency diesel generator starting delay (10 seconds) is included.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>FUNCTIONAL UNIT</u> | <u>CHANNEL CHECK</u> | <u>CHANNEL CALIBRATION</u> | <u>CHANNEL FUNCTIONAL TEST</u> | <u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u> |
|--|----------------------|----------------------------|--------------------------------|---|
| 7. LOSS OF POWER (LOV) | | | | |
| a. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage and Degraded Voltage) | S | R | R | 1, 2, 3, 4 |
| 8. EMERGENCY FEEDWATER (EFAS) | | | | |
| a. Manual (Trip Buttons) | N.A. | N.A. | R | 1, 2, 3 |
| b. SG Level (A/B)-Low and ΔP (A/B) - High | S | R | M | 1, 2, 3 |
| c. SG Level (A/B) - Low and No Pressure - Low Trip (A/B) | S | R | M | 1, 2, 3 |
| d. Automatic Actuation Logic | N.A. | N.A. | M(1)(3), SA(4) | 1, 2, 3 |
| 9. CONTROL ROOM ISOLATION (CRIS) | | | | |
| a. Manual CRIS (Trip Buttons) | N.A. | N.A. | R | N.A. |
| b. Manual SIAS (Trip Buttons) | N.A. | N.A. | R | N.A. |
| c. Airborne Radiation | | | | |
| i. Particulate/Iodine | S | R | M | A11 |
| ii. Gaseous | S | R | M | A11 |
| d. Automatic Actuation Logic | N.A. | N.A. | R(3) | A11 |
| 10. TOXIC GAS ISOLATION (TGIS) | | | | |
| a. Manual (Trip Buttons) | N.A. | N.A. | R | N.A. |
| b. Chlorine - High | S | R | M | A11 |
| c. Ammonia - High | S | R | M | A11 |
| d. Butane/Propane - High | S | R | M | A11 |
| e. Automatic Actuation Logic | N.A. | N.A. | R (3) | A11 |