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TABLE 7.8-1

(Sheet 1)

REACTOR VESSEL INSTRUMENTATION *

| <u>Measured Variable</u> | <u>Instrument Type</u> | <u>Trip Setting</u> |
|--|------------------------|---------------------|
| Reactor vessel surface temperature | Thermocouple | - |
| Reactor Vessel top head surface temperature | Thermocouple | - |
| Reactor vessel top head flange surface temperature | Thermocouple | - |
| Reactor vessel surface temperature | Temperature recorder | - |
| Calibrated jet pump flow | Flow transmitter | - |
| Jet pump flow rate transmitter | Flow | - |

TABLE 7.8-1 (Cont'd)

(Sheet 2)

REACTOR VESSEL INSTRUMENTATION *

| <u>Measured Variable</u> | <u>Instrument Type</u> | <u>Trip Setting</u> |
|------------------------------|------------------------|---------------------|
| Calibrated jet pump flow | Flow indicator | - |
| Jet pump flow rate | Flow indicator | - |
| Calibrated jet pump flow | Square root extractor | - |
| Recirculation loop flow rate | Flow summer | - |
| Recirculation loop flow rate | Flow indicator | - |
| Core total flow | Flow summer | - |

*Other instruments measuring reactor vessel variables are discussed in sections of the Safety Analysis Report where the systems using the instruments are described.

**Four level ranges with corresponding level trip settings.

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TABLE 7.8-2

(Sheet 1)

PRIMARY CONTAINMENT
MONITORING INSTRUMENTATION

| <u>Instrument</u> | <u>Range</u> | <u>Instrument Location</u> | <u>Trip Function</u> |
|---|--|----------------------------|-------------------------------------|
| Drywell Pressure Indication | -15 to 65 psig 0-300 psig | Local and Control Room | - |
| Drywell Pressure Recorder | -15 to 65 psig 0-300 psig | Control Room | Alarm on High Pressure |
| Drywell Temperature Temperature Indication (2) | 0-400°F | Control Room Local | Alarm on High |
| Drywell Temperature Recorder Temperature | 0-400°F | Control Room | Alarm on High |
| Pressure Suppression Chamber Pressure Indicator | 0-60 psig | Local | - |
| Pressure Suppression Chamber Pressure Recorder | 0-60 psig | Control Room | - |
| Pressure Suppression Chamber Air Temperature Recorder | 0-400°F | Control Room | - |
| Pressure Suppression Chamber Water Level Indication (Narrow Range) | -15" to +10" (U3) -25" to +25" (U2) | Control Room | Alarm on High or Low Water Level |
| Pressure Suppression Chamber Water Level Indication and Recording (Wide Range) | 0-240" | Control Room | - |

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TABLE 7.8-2 (Cont')

(Sheet 2)

PRIMARY CONTAINMENT
MONITORING INSTRUMENTATION

| <u>Instrument</u> | <u>Range</u> | <u>Instrument Location</u> | <u>Trip Function</u> |
|--|-------------------------------------|------------------------------------|--|
| Pressure Suppression Chamber Water Temperature Indication | 30°-230°F | Control Room (2 Channels) Local | Alarm on High Temperature |
| Drywell Flood Level | 85' 4" above instrument penetration | Control Room | Alarm on High Level |
| Drywell Equipment Drain Sump Level | 0" to 40" above sump floor | Local | Alarm on decreasing level, on increasing level, and high fill rate |
| Drywell Floor Drain Sump Level | 0" to 40" above sump floor | Local | Alarm on decreasing level, increasing level, and high fill rate |
| Drywell Sump Level (measured by integrated sump pump flow recording) | 0-150 GPM | Control Room | - |
| Leak Detection Monitor Low Level Radiation | 10-10 ⁶ cpm | Local | Alarm on High Radiation |
| Oxygen analyzer* | 0-25%** 0-5% | Control Room | Alarm on High Oxygen Concentration |
| Postaccident Containment | | | |
| Atmosphere Monitoring System | | | |
| (1) High Level Radiation Recorder | 1-10 ⁷ R/Hr | Control Room | Alarm on High Radiation |
| (2) Hydrogen Analyzer | 0-20%** 0-100% | Control Room | Alarm on High Hydrogen Concentration |

* Monitor will be used in normal operation and in postaccident monitoring.

**Range can be selected.