A. Definitions: Section 1.0

Add new Technical Specification as follows:

1.6 Testing or Calibration Interval.

The period of time between normal checks for accuracy or operability of a system or component. The interval shall be interpreted as follows:

| Interval | Maximum Period Between Checks |
|---|---|
| Weekly | 9 days |
| Monthly | 6 weeks |
| Quarterly | 4 months |
| Semiannually or over | Interval plus 2 months |

Basis

The testing or calibration interval defined above permits time for proper scheduling and still reasonably ensures reliability. The time interval was previously undefined.

B. Reactor Cooling and Pool System: Section 4.0

Change the title to the following:

4.0 Reactor Cooling and Pool-Canal Systems.

C. Canal Temperature: Section 4.0

Add a new Technical Specification as follows:

4.6 The water temperature in the fuel storage canal shall be maintained below 130°F. If the water temperature exceeds 130°F, the canal cooling system shall be augmented by supplemental cooling until the water temperature is less than 130°F.

Basis

The evaluation of the thermal-hydraulic effects of a worst postulated seismic event on the GETR assumed a fuel storage canal water temperature of 130°F upon initiation of the event. Maintaining the water temperature below this limit provides reasonable assurance that the consequences of previously analyzed accidents are not increased.

Reference: General Electric Company, "Response to NRC Order to Show Cause Dated 10/24/77", November 11, 1977.

D. Canal Temperature: Section 4.0

Change Technical Specification 4.5 as follows:

4.5 The required pool and canal instrumentation shall be checked for operability before each startup following any shutdown of 24 hours or greater and shall be calibrated annually.

Basis

Incorporates the canal temperature instrumentation into the required checks. The required canal instrumentation is the canal temperature instrumentation.

Reference: General Electric Company, "Response to NRC Order to Show Cause Dated 10/24/77", November 11, 1977.

E. Seismic Scram and Trip: Section 6.0

Change seismic activity set point, Table II, to 0.01g + 5% (Note 5).

Add Note 5: Fuel Flooding System admission valve opening, emergency cooling trip and pressurizer isolation shall also occur.

Basis

The seismic scram system activates the Fuel Flooding System, emergency cooling trip and pressurizer isolation, in addition to the reactor scram. The seismic switches are conservatively set to trip at extremely low seismic activity levels to provide reasonable assurance that the scram function is completed before appreciable seismic-induced stresses are developed.

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated 10/24/77", June, 1978.

2) General Electric Company, Letter from R. W. Darmitzel to D. G. Eisenhut, USNRC, "Reliability and Response Action Time for the General Electric Test Reactor (GETR) Scram System", August 14, 1980.

3) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Resumption of Operation of the General Electric Test Reactor (GETR)", January 20, 1978.

4) General Electric Company, Letter from R. W. Darmitzel to Robert A. Clark, USNRC, submitting EDAC Report 117-258.03, "General Electric Test Reactor Response to Additional Information Request Regarding Seismic Scram System", September 16, 1980.

5) General Electric Company, Letter from R. W. Darmitzel to USNRC, "Responses to Additional Information Request Regarding Seismic Scram System for the General Electric Test Reactor", October 13, 1980.

F. Seismic Scram System: Section 6.0

Add a new Technical Specification as follows:

6.10 The seismic scram system shall be functionally tested annually.

Basis

The seismic scram system assures the depressurization of the primary system and the initiation of Fuel Flooding System water makeup. The seismic scram system is functionally tested annually to assure that the system performs as designed. A trip signal is introduced to the system, redundant components are verified to function, and the required valve action and rod magnet power interruption is confirmed. This specification, in conjunction with specification 6.8, provides reasonable assurance that the consequences of postulated accidents do not exceed those previously evaluated.

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated 10/24/77", June, 1978.

2) General Electric Company, Letter from R. W. Darmitzel to Robert A. Clark, USNRC, submitting EDAC Report 117-258.03, "General Electric Test Reactor Response to Additional Information Request Regarding Seismic Scram System", September 16, 1980.

3) General Electric Company, Letter from R. W. Darmitzel to USNRC, "Responses to Additional Information Request Regarding Seismic Scram System for the General Electric Test Reactor", October 13, 1980.

G. Seismic Scram Delay Time: Section 6.0

Add a new Technical Specification as follows:

6.11 The seismic scram delay time shall not exceed 200 msec.

Basis

A seismic scram delay time of 200 msec is used in the evaluation of the thermal-hydraulic effects of a worst postulated seismic event. The seismic scram delay time is the elapsed time between the generation of a seismic scram trip signal and the actual start of motion of the control rods. The scram delay time is determined by measuring the time between seismic switch trip signal output and engaged switch closure. Operation in accordance with this specification and specification 6.2 provides reasonable assurance that the consequences of postulated accidents do not exceed those previously evaluated.

References:

1) General Electric Company, "Response to NRC Order to Show Cause Dated 10/24/77", November 11, 1977.

2) General Electric Company, "Updated Response to NRC Order to Show Cause Dated 10/24/77", June, 1978.

3) General Electric Company, Letter from R. W. Darmitzel to Darrell G. Eisenhut, USNRC, "Reliability and Response Action Time for the General Electric Test Reactor (GETR) Scram System", August 14, 1980.

4) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Resumption of Operation of the General Electric Test Reactor (GETR)", January 20, 1978.

5) General Electric Company, Letter from G. E. Cunningham to A. Schwencer, USNRC, "License TR-1, Docket 50-70", November 5, 1976.

6) General Electric Company, Letter from R. W. Darmitzel to Robert A. Clark, USNRC, submitting EDAC Report 117-258.03, "General Electric Test Reactor Response to Additional Information Request Regarding Seismic Scram System", September 16, 1980.

H. Seismic Scram Delay Time: Section 6.0

Add a new Technical Specification as follows:

6.12 The seismic scram delay time shall be measured 1) annually, or 2) after replacement of any component which could affect the delay time, or 3) after maintenance which could affect the delay time.

Basis

The seismic scram delay time is used in the evaluation of the thermal-hydraulic effects of a worst postulated seismic event. The seismic scram delay time is the elapsed time between the generation of a seismic scram trip signal and the actual start of motion of the control rods. This delay time is measured annually and is determined by measuring the time between seismic switch trip signal output and engaged switch closure. Operation in accordance with this specification provides reasonable assurance that the seismic scram delay time remains within specified limits.

I. Emergency Recirculation System: Section 7.0

Change Technical Specification 7.1 as follows:

7.1 The emergency recirculation system shall be operable any time draining of the reactor vessel could result in fuel clad temperatures in excess of 1,185°F. This system shall be tested for operability at least annually. If for any reason the coolant recirculation system is not operable, or if the emergency generator is not operable and cannot be made operable within 15 minutes at the time when the emergency coolant recirculation system is required to be operable, the reactor shall be shut down and defueled.

Basis

GETR fuel cladding will not melt below 1,185°F.

References:

1) General Electric Company, Letter from G. E. Cunningham to A. Schwencer, USNRC, "License TR-1, Docket 50-70", November 5, 1976.

2) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Resumption of Operation of the General Electric Test Reactor (GETR)", January 20, 1978.

J. Safety-Related Seismic Restraints: Section 7.0

Add a new Technical Specification as follows:

7.6 Safety-related seismic restraints shall be installed in accordance with their respective specifications whenever fuel in the pressure vessel or pool could attain cladding temperatures in excess of 1,185°F in air.

Basis

Safety-related seismic restraints described in the reference documents are installed on the reactor pressure vessel, primary piping, pressure vessel drain, pool drain, Fuel Flooding System, and the secondary shutdown system injection line. These restraints protect the reactor pressure vessel (and primary piping below core level) which contains the water necessary to cool the fuel. The restraints prevent high forces from being applied to the pressure vessel.

Additional safety-related seismic restraints are installed on the primary and pool heat exchangers. These restraints provide additional assurance that the heat exchangers cannot cause stresses in the primary piping which would exceed allowable limits.

GETR fuel cladding will not melt below 1,185°F. Requiring the safety-related seismic restraints to be installed in accordance with this specification provides added assurance that fuel damage will not result from a seismic event.

J. Safety-Related Seismic Restraints: Section 7.0 (Continued)

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated 10/24/77", June, 1978.

2) General Electric Company, Letter from G. E. Cunningham to A. Schwencer, USNRC, "License TR-1, Docket 50-70", November 5, 1976.

3) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Resumption of Operation of the General Electric Test Reactor (GETR)", January 20, 1978.

4) Reactor Materials Handbook, Volume 1, p. 174.

5) Engineering Decision Analysis Company, Inc., "Analysis of Lateral Restraints to Contain Heat Exchanger HE 102", prepared for General Electric Company, EDAC 117-217.10, June 1978.

6) Engineering Decision Analysis Company, Inc., "Seismic Analysis of Primary Cooling System and Reactor Pressure Vessel, General Electric Test Reactor", prepared for General Electric Company, EDAC 117-217.05, June 1978.

7) Engineering Decision Analysis Company, Inc., "Seismic Analysis of Primary Heat Exchanger, General Electric Test Reactor", prepared for General Electric Company, EDAC 117-217.06, June 1978.

8) Engineering Decision Analysis Company, Inc., "Seismic Analysis of Reactor Pressure Vessel and Pool Drain Lines and Poison Injection Line, General Electric Test Reactor", prepared for General Electric Company, EDAC 117-217.07, June 1978.

9) Engineering Decision Analysis Company, Inc., "Seismic Analysis of Fuel Flooding System, General Electric Test Reactor", prepared for General Electric Company, EDAC 117-217.08, June 1978.

K. Safety-Related Seismic Restraints: Section 7.0

Add a new Technical Specification as follows:

7.7 Safety-related seismic restraints shall be inspected triennially for structural integrity.

Basis

Safety-related seismic restraints are installed on the reactor pressure vessel, primary piping, pressure vessel drain, pool drain, pool and primary heat exchangers, and the secondary shutdown system injection line. These restraints are visually inspected for proper installation and functional capability. The inspections are for signs of deterioration, wear, corrosion, looseness, and any other anomolous condition. The pressure vessel restraints are 100% inspected each time. All other restraints are grouped as 1) primary pipe restraints, 2) primary heat exchanger restraints, 3) pool heat exchanger restraints, or 4) small pipe restraints. A representative portion of the restraints in each group is inspected every third year. A different portion is inspected each time until the restraints in that group are 100% inspected. This cycle is then repeated. Surveillance in accordance with this specification provides reasonable assurance that the safety-related seismic restraints remain functional throughout the life of the facility.

L. Missile Impact System: Section 7.0

Add a new Technical Specification as follows:

7.8 The Missile Impact System shall be operable whenever irradiated fuel that could exceed 1,185°F in air is in the pressure vessel or canal except when required maintenance that makes it inoperable is performed. The time the system is not operable shall be kept to a minimum. When the system is discovered to be inoperable, repairs shall be initiated within 24 hours and shall be expedited until completed.

Basis

The Missile Impact System consists of structures to prevent the polar crane from falling, polar crane trolley restraints, pool missile shield restraints, and refueling bridge restraints. The Missile Impact System protects the reactor fuel by preventing the polar crane, crane trolley, missile shield and refueling bridge from dropping on the reactor pressure vessel or the canal fuel storage tanks.

The Missile Impact System may not always be operable. Whenever maintenance is performed which could render the system inoperable, the time the system is not operable is kept to a minimum. When the system is discovered to be not fully operable, repairs are completed as quickly as possible.

Operation in accordance with this specification provides reasonable assurance that the consequences of postulated accidents do not exceed those previously analyzed.

M. Missile Impact System: Section 7.0

Add a new Technical Specification as follows:

7.9 The Missile Impact System shall be visually inspected for operability annually.

Basis

The Missile Impact System consists of beams and energy-absorbent material to prevent the polar crane from falling, polar crane trolley restraints, pool missile shield restraints, and refueling bridge restraints. The system protects the reactor fuel by preventing the polar crane, crane trolley, missile shield or refueling bridge from dropping on the reactor pressure vessel or the canal fuel storage tanks.

The Missile Impact System is inspected annually to verify that it is capable of performing its function. The energy absorber and restraints are inspected for proper installation and any anomolous conditions.

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated October 24, 1977", issued June, 1978.

2) "Structural Analysis of Third Floor Missile Impact System, General Electric Test Reactor", prepared for General Electric Company by Structural Mechanics Associates, June, 1978.

N. Canal Impact Pad: Section 7.0

Add a new Technical Specification as follows:

7.10 The Canal Impact Pad shall be installed in accordance with specifications whenever shielded shipping containers over * inches tall are transferred over or lowered into the canal.

Basis

The Canal Impact Pad prevents casks over * inches tall sitting on the bottom of the canal from tipping and damaging the canal fuel storage tanks in the event of a postulated seismic event. When the Canal Impact Pad is not in place or in any way cannot perform its intended function, shielded shipping containers over * inches tall are not lowered into the canal or otherwise handled so that damage to the fuel storage tanks could occur as a result of a postulated seismic event. Operation in accordance with this specification provides reasonable assurance that the canal fuel storage tanks are not damaged by shielded shipping containers as a result of a seismic event.

*Proposed container height to be provided when the detailed design is complete.

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated October 24, 1977", June, 1978.

2) Engineering Decision Analysis Company, Inc., "Investigation of Potential Cask Drop Impact on General Electric Test Reactor Building Canal Floor Slab", prepared for General Electric Company (GETR), Pleasanton, California, EDAC 117-217.04, June 1978.

3) "Structural Analysis of Canal Impact Pad, General Electric Test Reactor", prepared for General Electric Company by Structural Mechanics Associates, to be published.

O. Permanent Pool Shielding Restraints: Section 7.0

Add a new Technical Specification as follows:

7.11 Permanent pool shielding restraints shall be installed in accordance with specifications anytime irradiated reactor fuel is in the pool or pressure vessel which could attain a clad temperature of 1,185°F in air. This specification shall be automatically deleted if the shield structure is removed from the pool.

Basis

Permanent pool shielding is located in the reactor pool to reduce radiation exposure to service and maintenance personnel working in the area during reactor shutdowns. The restraints prevent a postulated failure of the shielding resulting in damage to the pressure vessel, reactor piping below core level or the standpipes. The restraints are required whenever reactor fuel in the pressure vessel or pool could be damaged if the fuel were not submerged in coolant water. Operation in accordance with this specification provides reasonable assurance that irradiated fuel will not be damaged from postulated failures of the permanent pool shielding as a result of a seismic event.

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated October 24, 1977", June, 1978.

2) Engineering Decision Analysis Company, Inc., "Seismic Analysis of Reactor Building, General Electric Test Reactor - Phase 2", prepared for General Electric Company (GETR), Pleasanton, California, EDAC 117-217.03, June 1978.

P. Permanent Pool Shielding Restraints: Section 7.0

Add a new Technical Specification as follows:

7.12 The permanent pool shielding restraints shall be visually inspected for operability triennially as long as the shield structure is in the pool.

Basis

Permanent shielding is installed in the reactor pool to reduce radiation exposure to personnel performing shutdown work in that area. The restraints prevent a postulated failure of the shielding resulting in damage to the pressure vessel, reactor piping below core level or the standpipes. The restraints are periodically inspected for tightness, proper installation, good condition, and any anomolous conditions. Operation in accordance with this specification provides reasonable assurance that the permanent pool shielding restraints remain in good condition.

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated October 24, 1977", June, 1978.

2) Engineering Decision Analysis Company, Inc., "Seismic Analysis of Reactor Building, General Electric Test Reactor - Phase 2", prepared for General Electric Company (GETR), Pleasanton, California, EDAC 117-217.03, June 1978.

Q. Fuel Flooding System: Section 7.0

Add a new Technical Specification as follows:

7.13 Both divisions of the Fuel Flooding System shall be operable any time fuel in the canal fuel storage tanks or the pressure vessel could attain clad temperatures of 1,185°F in air except when maintenance or testing is performed on one division. The time when one division is inoperable shall be kept to a minimum. When one division of the system is discovered to be inoperable, repairs shall be initiated within 24 hours and shall be expedited until completed.

Basis

The Fuel Flooding System provides additional assurance that irradiated GETR fuel is adequately cooled after postulated seismic events. The system is composed of two independent divisions. Each division consists of water storage tanks and an admission valve which opens automatically upon very low seismic levels. Water flows by gravity to the canal fuel storage tanks and the reactor pressure vessel. The Fuel Flooding System is considered operable if 1) the admission valves are open or capable of opening automatically upon seismic switch operation as required by Technical Specifications, and 2) water flow to the canal fuel storage tanks will be at least 2.9 gpm and water flow to the reactor pressure vessel will be at least 2.7 gpm for a minimum of five days without reservoir replenishment.

Q. Fuel Flooding System: Section 7.0 (Continued)

The minimum flow rate to the reactor pressure vessel is based upon the decay heat from a reactor core operated at 50 MW for 25 days. After this irradiation period, a seismic event is assumed to immediately cause the reactor pool water level to drop to the primary anti-siphon valve level. At this level there is about 2,000 gallons of water over the reactor core. This water is assumed to leak out in 2 hours. This leak rate is entirely incredible because 1) it is impractical to permit this large of a leak, and 2) the concrete pool structure will not be damaged to induce leakage following any postulated seismic event. The minimum Fuel Flooding System makeup rate to the reactor core, then, is equivalent to the water evaporation rate of the decay heat from a reactor core operated at 50 MW for 25 days with a 2-hour decay.

The minimum flow rate to the canal fuel storage baskets is based upon the decay heat from a reactor core operated at 50 MW for an infinite time period. After the irradiation period, there is a 2-hour cooldown period and a 2-hour defuel before a postulated seismic event is assumed to immediately drain the canal water down to the top of the canal fuel storage tanks. The minimum Fuel Flooding System makeup rate to the canal fuel storage tanks, then, is equivalent to the water evaporation rate of the decay heat from a reactor core operated for an infinite time at 50 MW with a 6-hour decay.

Both divisions of the Fuel Flooding System may not always be operable at the same time. Maintenance or testing which could render one division of the system inoperable is performed while the other division of the system is operable. In this way, the system is always capable of being activated and supplying

Q. Fuel Flooding System: Section 7.0 (Continued)

the required coolant water. Whenever one division of the system is discovered to be inoperable, repairs will be made as quickly as possible. The time the system is not fully operable and redundant will be kept to a minimum. Operation in accordance with this specification provides reasonable assurance the irradiated fuel will remain adequately cooled in the event of a postulated seismic event.

References:

1) General Electric Company, "Response to NRC Order to Show Cause Dated 10/24/77", November 11, 1977.

2) General Electric Company, "Updated Response to NRC Order to Show Cause Dated October 24, 1977", June, 1978.

3) Engineering Decision Analysis Company, Inc., "Seismic Analysis of Fuel Flooding System, General Electric Test Reactor", prepared for General Electric Company (GETR), Pleasanton, California, EDAC 117-217.08, June, 1978.

4) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Resumption of Operation of the General Electric Test Reactor (GETR)", January 20, 1978.

5) General Electric Company, Letter from R. W. Darmitzel to R. A. Clark, USNRC, "Responses to Information Request Regarding Fuel Flooding System Flow Rates - General Electric Test Reactor (GETR)", October 27, 1980.

6) General Electric Company, Letter from R. W. Darmitzel to R. W. Reid, USNRC, "Response to Recent Requests for Additional Information - General Electric Test Reactor", September 5, 1979.

7) General Electric Company, Letter from R. W. Darmitzel to R. W. Reid, USNRC, "Structural Modifications for the General Electric Test Reactor", July 9, 1979.

8) General Electric Company, Letter from R. W. Darmitzel to D. G. Eisenhut, USNRC, "Reliability and Response Action Time for the General Electric Test Reactor (GETR) Scram System", August 14, 1980.

9) General Electric Company, Letter from R. W. Darmitzel to R. A. Clark, USNRC, "Responses to Additional Information Request Regarding Seismic Scram System for the General Electric Test Reactor (GETR)", October 13, 1980.

Q. Fuel Flooding System: Section 7.0 (Continued)

10) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Update of Analytical and Modification Information", February 24, 1978.

R. Fuel Flooding System: Section 7.0

Add a new Technical Specification as follows:

7.14 The Fuel Flooding System shall be tested for operability annually.

Basis

The Fuel Flooding System provides additional assurance that irradiated GETR fuel is adequately cooled after postulated seismic events. The system is composed of two independent divisions. Each division consists of water storage tanks and an admission valve which opens automatically upon very low seismic levels. Water flows by gravity to the canal fuel storage tanks and the reactor pressure vessel via the primary system standpipes. The operability test includes an annual visual inspection of the system components for leakage, wear and/or damage. Measurement of the flow rates to the pressure vessel and canal to verify flow rates are within acceptable limits will also be performed. Operation in accordance with this specification provides reasonable assurance that the Fuel Flooding System is capable of supplying coolant water in the event of a postulated seismic event.

References:

1) General Electric Company, "Response to NRC Order to Show Cause Dated 10/24/77", November 11, 1977.

2) General Electric Company, "Updated Response to NRC Order to Show Cause Dated October 24, 1977", June, 1978.

3) Engineering Decision Analysis Company, Inc., "Seismic Analysis of Fuel Flooding System, General Electric Test Reactor", prepared for General Electric Company (GETR), Pleasanton, California, EDAC 117-217.08, June, 1978.

R. Fuel Flooding System: Section 7.0 (Continued)

4) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Resumption of Operation of the General Electric Test Reactor (GETR)", January 20, 1978.

5) General Electric Company, Letter from R. W. Darmitzel to R. A. Clark, USNRC, "Responses to Information Request Regarding Fuel Flooding System Flow Rates - General Electric Test Reactor (GETR)", October 27, 1980.

6) General Electric Company, Letter from R. W. Darmitzel to R. W. Reid, USNRC, "Response to Recent Requests for Additional Information - General Electric Test Reactor", September 5, 1979.

7) General Electric Company, Letter from R. W. Darmitzel to R. W. Reid, USNRC, "Structural Modifications for the General Electric Test Reactor". July 9, 1979.

8) General Electric Company, Letter from R. W. Darmitzel to D. G. Eisenhut, USNRC, "Reliability and Response Action Time for the General Electric Test Reactor (GETR) Scram System", August 14, 1980.

9) General Electric Company, Letter from R. W. Darmitzel to R. A. Clark, USNRC, "Responses to Additional Information Request Regarding Seismic Scram System for the General Electric Test Reactor (GETR)", October 13, 1980.

10) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Update of Analytical and Modification Information", February 24, 1978.

S. Safety-Related Valves: Section 7.0

Add a new Technical Specification as follows:

7.15 Seismic safety-related valves shall be tested for operability at least annually.

Basis

The seismic safety-related valves and their surveillance are described below.

1. The primary anti-siphon valves prevent reactor coolant siphoning in the event of a postulated primary system pipe break. These valves are tested semiannually in accordance with Technical Specification 4.4.

2. The emergency cooling power-operated valves provide rapid depressurization of the primary system in the event of specified off-normal conditions. These valves are tested prior to every initial startup for each operating cycle in accordance with Technical Specification 4.4.

3. The emergency cooling check valves open the bottom of the primary system to the pool and provide an inlet path for makeup water from the Fuel Flooding System. These valves are tested prior to every initial startup for each operating cycle in accordance with Technical Specification 4.4.

4. The primary pressurizer nitrogen supply valve and pressurizer to primary system isolation valve assure complete isolation of the nitrogen system from the primary coolant system. These valves close in the event of

S. Safety-Related Valves: Section 7.0 (Continued)

specified off-normal conditions. The valves are tested for operability annually.

5. The liquid poison system check valves prevent leakage of primary coolant water following a postulated failure of the liquid poison system line. These valves are tested for operability annually.

6. The pressure vessel drain line valve is a locked-closed manual valve in a room which is locked closed during reactor operation. The valve is additionally plugged or capped. The operability test consists of an inspection for damage and leakage annually.

7. The pool drain line valve is a locked-closed manual valve in a room which is locked closed during reactor operation. The valve is additionally plugged or capped. The operability test consists of an inspection for damage and leakage annually.

8. The capsule coolant system check valves prevent siphoning of pool coolant following a postulated failure of a capsule coolant system line. Capsule coolant system lines are small, 1¼-inch tubing which are additionally capped when not in use. Each check valve on a representative number of lines (10%) is tested annually for leakage.

9. The Canal Recirculation System (CRS) anti-siphon devices prevent siphoning of canal water following a postulated failure of the CRS piping. Each anti-siphon device is tested annually.

S. Safety-Related Valves: Section 7.0 (Continued)

10. Fuel Flooding System (FFS) valves include 1) an admission valve to initiate coolant makeup water, 2) anti-siphon valves to prevent siphoning of pool or canal water following a postulated failure of an FFS line, and 3) a check valve to maintain containment building integrity following a postulated non-seismic related failure of an FFS line. The admission and anti-siphon valves are tested for operability and the check valves are leak tested annually.

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated October 24, 1977", June, 1978.

2) General Electric Company, "Response to NRC Order to Show Cause Dated 10/24/77", November 11, 1977.

3) Engineering Decision Analysis Company, Inc., "Qualification of Safety-Related Valves, General Electric Test Reactor", prepared for General Electric Company (GETR), Pleasanton, California, EDAC 117-217.09, June, 1978.

T. Canal Fuel Storage Tanks: Section 8.0

Add a new Technical Specification as follows:

8.2 All irradiated reactor fuel elements whose clad surface temperatures could exceed 1,185°F in air shall be stored in the canal fuel storage tanks or the reactor pressure vessel.

Basis

The canal fuel storage tanks are sealed tanks with connections to the Fuel Flooding System, which provides a source of emergency makeup water. Any fuel which could attain a clad temperature of 1,185°F, if not kept submerged in water, is stored in the canal fuel storage tanks when it is not in the reactor pressure vessel. Operation in accordance with this specification provides additional assurance that stored fuel whose clad temperature could exceed 1,185°F in air will remain submerged in water under all circumstances.

References:

1) General Electric Company, "Updated Response to NRC Order to Show Cause Dated October 24, 1977", June, 1978.

2) General Electric Company, Letter from G. E. Cunningham to A. Schwencer, USNRC, "License TR-1, Docket 50-70", November 5, 1976.

3) General Electric Company, Letter from R. W. Darmitzel to V. Stello, USNRC, "Resumption of Operation of the General Electric Test Reactor (GETR)", January 20, 1978.

U. Canal Fuel Storage: Section 8.0

Eliminate the second sentence in Technical Specification 8.1.

Basis

This requirement is incorporated into new Technical Specification 8.2.

V. System Specifications: Section 9.0

Change Technical Specification 9.5 to read as follows:

9.5 Any additions, modifications or maintenance to the containment building or its isolation system, the reactor, the primary coolant system, auxiliary fluid systems connected thereto, the reactor safety system, or the safety-related seismic systems shall be designed, fabricated and tested in accordance with the original specifications or specifications subsequently reviewed in accordance with Technical Specification 9.2.3 and approved by the facility manager.

Basis

This Technical Specification includes design and fabrication specification control for the safety-related seismic modifications with other systems. Changes to the original specifications become necessary for a variety of reasons. For example, a trade name is specified and the vendor goes out of business, or an ASTM specification is discontinued. Operation in accordance with this specification provides reasonable assurance that additions, modifications or maintenance are performed in accordance with specifications which provide a high margin of quality and safety.

W. Experiments: Section 10.0

Add a new Technical Specification as follows:

10.6 The combined fission product inventory of BWRSD-type experiments with failed fuel cladding and the Experiment Effluent Holdup System shall not exceed the inventory equivalent to five BWRSD experiments, each operated at 40.4 kW for 21 days.

Basis

Experimental fuel pins are irradiated in experiment encapsulations. The fuel cladding of these fuel pins may fail, releasing fission products to the experiment capsule. The pressure leads on some types of capsules are flushed to an Experiment Effluent Holdup System tank after reactor shutdown. Limiting the combined fission product inventory of the holdup tank and the experiments with failed fuel cladding to that specified assures that the consequences of postulated accidents will not exceed those that have been previously analyzed.

References:

1) General Electric Company, "Response to NRC Order to Show Cause Dated October 24, 1977", November 11, 1977.

2) General Electric Company, Letter from R. W. Darmitzel to Robert A. Clark, USNRC, "Responses to Questions Regarding the General Electric Test Reactor (GETR) Fuel and Experimental Capsules", September 23, 1980.