ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION CHANGE

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE:

a. The Containment Atmosphere Gaseous Radioactivity Monitoring System,

b. ~~Either~~ The Containment Floor and Equipment Sump Level System ~~or the Flow Monitoring System~~, and

c. Either the Containment Ventilation Condensate Drain Tank Level Monitoring System or a Containment Atmosphere Particulate Radioactivity Monitoring System.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only two of the above required Leakage Detection Systems OPERABLE, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours when the required Gaseous or Particulate Radioactivity Monitoring System is inoperable; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection Systems shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Radioactivity Monitoring Systems-performance of CHANNEL CHECK, CHANNEL CALIBRATION and ANALOG CHANNEL OPERATIONAL TEST at the frequencies specified in Table 4.3-3,

b. Containment Floor and Equipment Sump Level System ~~and Flow Monitoring System~~-performance of CHANNEL CALIBRATION at least once per 18 months, and

c. Containment Ventilation Condensate Drain Tank Level Monitoring System-performance of CHANNEL CALIBRATION at least once per 18 months.

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ATTACHMENT 2

Background/Justification

Technical Specification 3/4.4.6 requires that leakage detection systems be operable during modes 1, 2, 3, and 4 to ensure that Reactor Coolant leakage is maintained within specified limits. The LCO for this specification allows use of either the Containment Floor and Equipment Sump Level System or the Flow Monitoring System to meet part b of the requirement. Instead of using the Containment Sump Discharge Flow indication for monitoring unidentified leakage in containment, the Containment Floor and Equipment Sump Level instrumentation is used. McGuire does not use the Flow Monitoring System due to its unreliability as a result of documented instrumentation inaccuracies. Inaccuracies are due to the as built piping configuration. The existing piping configuration does not ensure a water solid line which is necessary for the correct operation of any type of flow instrumentation. In order for the existing Flow Monitoring System to be operable, the piping configuration would require a modification to add a loop seal downstream of the flow element. The cost associated with this modification has been estimated at approximately $200,000. The addition of the loop seal would also create access difficulties as well as increase the potential for a radiological hazard in the form of a CRUD trap.

Since there is no intention of using the flow instrumentation in the future, it is proposed that the Flow Monitoring System be deleted from this LCO and associated Surveillance Requirements. This proposed deletion makes TS 3.4.6.1.b more restrictive (from a regulatory standpoint) in that there will no longer be a choice between the two systems. From an operational viewpoint, the deletion will have no impact based on long term McGuire experience and will facilitate simpler administrative control of TS 3/4.4.6.1.b.

The Flow Measurement system is not safety related. The instrumentation which will be removed is attached to Duke class E piping. Removal of the flow element instrumentation will not affect operation of the sump since this instrumentation does not have any control function. Measurement of the leakage into the Containment and equipment sumps will be determined using the Containment Floor and Equipment (CFAE) sump level system as specified in the SAR and Technical Specifications. Therefore, there will be no impact on plant operation or safety.

ATTACHMENT 3

No Significant Hazards Analysis

The following analysis, performed pursuant to 10 CFR 50.91, shows that the proposed amendment will not create a significant hazards consideration as defined by the criteria of 10 CFR 50.92.

1. This amendment will not significantly increase the probability or consequence of any accident previously evaluated.

   This change will not increase the probability or consequences of an accident since this Reactor Coolant Leakage Detection instrumentation is not an accident initiator or mitigator.

   This proposed Technical Specification change does not decrease the number of methods for Reactor Coolant leakage detection. This change will ensure there are still three distinctly separate methods of detecting NC leakage within the Containment Building. The first method will be detecting liquid leakage inside Containment via CFAE level monitoring. The second method is detecting an increase in Radiation levels inside Containment and the third method is detecting steam leakage inside Containment. All three methods satisfy the diversity requirements listed in Regulatory Guide 1.45 for detecting a Reactor Coolant leak inside Containment.

   The sensitivity requirement listed in Regulatory Guide 1.45 is to detect a Reactor Coolant leak of one (1) gpm in one (1) hour. The first method meets this by use of the Sump level monitoring and rate of increase alarm from this level monitoring device. There are two sumps inside containment and the levels for both sumps are combined for detecting a one (1) gpm leak. McGuire uses the Sump Level monitoring to adequately address liquid leakage detection inside Containment; therefore, a flow monitoring system on the Sump Discharge line is not necessary and can be deleted.

   The Radiation Monitors are also set up to the required Regulatory Guide 1.45 sensitivity for detecting Reactor Coolant leakage and are not designed for SSE events per the McGuire FSAR (see McGuire's Request for Amendment: Reactor Coolant Leakage Detection Systems, dated March 4, 1996.)

   The third method for detecting Reactor Coolant leakage is to monitor Containment Ventilation Condensate Drain Tank (VUCDT) flow, for which McGuire is also using a level monitor. As in the case of the CFAE Unit Sump Level monitor, level monitoring for leakage detection is more reliable than flow monitoring.

2. This amendment will not create the possibility of any new or different kind of accident not previously evaluated.

   The CFAE Flow Monitoring System has no control function, (ie. it is only a process monitor). Therefore, its deletion cannot create the posibility of a new or different kind of accident.

3. This amendment will not involve a significant reduction in a margin of safety.

This proposed Tech Spec change does not decrease the number of methods for Reactor Coolant leakage detection. This change will ensure there are still three distinctly separate methods of detecting Reactor Coolant leakage within the Containment Building.

Tech Spec 3.4.6.1 specifies two Radiation Monitors as two separate required methods for Reactor Coolant Leakage Detection with the Containment Ventilation condensate level monitoring as a backup. The third method is the Containment Sump level monitoring with the flow monitoring as a backup.

The new standardized Tech Spec 3.4.15, lists method one as Containment Sump (Level OR Discharge Flow) Monitoring Device. McGuire proposes to use a Sump Level monitoring device only. The second method listed is one Containment Radiation Monitor (either the gaseous or particulate monitor). McGuire will still have both available. The third method listed is one Containment air cooler condensate flow rate monitor for which McGuire plans to also use a level monitor. Liquid, Radiation, and Steam monitoring will still be accounted for in the Tech Spec, with the additional requirement of running a Reactor Coolant leak calculation if any of the methods are inoperable.

Since McGuire is retaining three distinct methods of Reactor Coolant leakage detection per current TS requirements (and in agreement with current ISTS requirements), the proposed Technical Specification amendment does not cause any reduction in safety margin.

ATTACHMENT 4

Environmental Impact Analysis

The proposed amendment has been reviewed against the criteria of 10 CFR 51.22 for environmental considerations. The proposed amendment does not involve any increase in the amounts and no change in the types of any effluent that may be released offsite. There is no increase in individual or cumulative occupational exposure. Therefore, the proposed amendment meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an environmental impact statement.