TABLE 1

SUMMARY OF TMI-1C RVSP CAPSULE

FLUENCE ACCUMULATION

o EXPECTED CAPSULE ACCUMULATED FLUENCE IF TMI-1C REMOVED AFTER CR-3 5th CYCLE ANTICIPATED IN 1/85	8.5×10^{18} n/cm^2
o ESTIMATED PEAK TMI-1 VESSEL FLUENCE ACCUMULATION AS OF 12/31/82	1.8×10^{18}
o ESTIMATED PEAK TMI-1 VESSEL FLUENCE ACCUMULATION AT 32EFPY (ASSUMING LOW LEAKAGE CORE)	1.3×10^{19}
o ESTIMATED 1/4T TMI-1 VESSEL FLUENCE ACCUMULATION AT 32EFPY (ASSUMING LOW LEAKAGE CORE)	7.2×10^{18}

CONCLUSION:

WITHDRAW TMI-1C AT THE NEXT CR-3 OUTAGE DATE (1/85) TO OBTAIN APPROXIMATE 1/4T EOL FLUENCE CONSISTENT WITH THE INTENT OF 10CFR50 APPENDIX H AND OBTAIN DATA ON WF-25 WELD METAL.

4.2 REACTOR COOLANT SYSTEM INSERVICE INSPECTION

Applicability

This technical specification applies to the inservice inspection of the reactor coolant system pressure boundary and portions of other safety oriented system pressure boundaries.

Objective

The objective of this inservice inspection program is to provide assurance of the continuing integrity of the reactor coolant system while at the same time minimizing radiation exposure to personnel in the performance of inservice inspection.

Specification

4.2.1 Inservice Inspection of ASME Code Class 1, Class 2, and Class 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the NRC.

4.2.2 Inservice testing of ASME Code Class 1, Class 2 and Class 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the NRC.

4.2.3 The reactor vessel material irradiation surveillance capsules removed from TMI-1 during 1976 shall be inserted, irradiated in and withdrawn from Crystal River Unit No. 3 (CR-3) in accordance with the capsule withdrawal schedule shown in Table 4.2-2.

4.2.4 The accessible portions of one reactor coolant pump motor flywheel assembly will be ultrasonically inspected within 3-1/3 years, two within 6-2/3 years, and all four by the end of the 10 year inspection interval. However, the U.T. procedure is developmental and will be used only to the extent that it is shown to be meaningful. The extent of coverage will be limited to those areas of the flywheel which are accessible without motor disassembly, i.e., can be reached through the access ports. Also, if radiation levels at the lower access ports are prohibitive, only the upper access ports will be used.

4.2.5 (DELETED)

4.2.6 (DELETED)

4.2.7 A surveillance program for the pressure isolation valves between the primary coolant system and the low pressure injection system shall be as follows:

1. Periodic leakage testing[a] at test differential pressure greater than 150 psig shall be accomplished for the valves listed in Table 3.1.6.1 for the following conditions:

   (a) prior to achieving hot shutdown after returning the valve to service following maintenance repair or replacement work, and

   (b) prior to achieving hot shutdown following a cold shutdown of greater than 72 hours duration unless testing has been performed within the previous 9 months.

2. Whenever integrity of a pressure isolation valve listed in Table 3.1.6.1 cannot be demonstrated, the integrity of the other remaining valve in each high pressure line having a leaking valve shall be determined and recorded daily. In addition, the position of one other valve located in the high pressure piping shall be recorded daily.

(a) To satisfy ALARA requirements, leakage may be measured indirectly (as from the performance of pressure indicators) if accomplished in accordance with approved procedures and supported by computations showing that the method is capable of demonstrating valve compliance with leakage criteria.

b. Because of damage to the surveillance capsule holder tubes originally installed in TMI-1, irradiation of the TMI-1 capsules was to be conducted in TMI-2 pursuant to 10CFR50, Appendix H, Section II.C.4. One of the five remaining TMI-1 capsules (Capsule E had been withdrawn and tested earlier) was installed in a holder tube in the TMI-2 reactor at the initial startup of TMI-2. The other four capsules were scheduled for later insertions. However, due to the TMI-2 Incident, Unit 2 will be out of operation for a considerably longer period of time than will be TMI-1. So that TMI-1 will have an ongoing surveillance program, a TMI-1 capsule was inserted into a holder tube in the Crystal River Unit 3 (CR-3) reactor. Because similarities exist between TMI-1 and CR-3, appropriate adjustments and margins were imposed to the surveillance capsule irradiation in CR-3 to account for such differences that may exist in the irradiation exposure of the TMI-1 reactor vessel and the surveillance capsule.

The withdrawal schedule has been formulated to optimize the availability of irradiation data from all the capsules being irradiated in the CR-3 reactor.

TABLE 4.2-2

A. SURVEILLANCE CAPSULE INSERTION & WITHDRAWAL SCHEDULE

Sequence of Withdrawal	Target Purpose
1	Highest material RT_{NDT} of encapsulated 50F
2	Capsule fluence midway between first and third capsule
3	Capsule fluence corresponds to that of the EOL fluence of the reactor vessel 1/4T location
4	Capsule fluence corresponds to that of the EOL fluence of the reactor vessel inner surface location
5	Standby; Capsule fluence correspond to not less than once nor greater than twice the EOL fluence of the reactor vessel inner surface location

Capsule identification, position in the reactor vessel, and withdrawal time will be as stated in BAW-1543*.

Capsule TMI-1A is in TMI-2 and therefore is of uncertain status. It is currently not included in this program.

The licensee shall be responsible for the examination of these specimens and for submission of reports of test results in accordance with 10 CFR 50, Appendix H.

*BAW-1543, "Integrated Reactor Vessel Material Surveillance Program" a Babcock & Wilcox Report, prepared for the B&W Owners Group Materials Committee and submitted to the NRC.