

RAI 6.1-2, Supplement No. 2, (MFN 06-365 Supplement 1, 5/3/07)

The following issues were discussed with GE in a phone call on June 7, 2007.

A. The applicant provided its proposed revision of DCD, Tier 2, Table 6.1-1 to be included in DCD, Tier 2, Revision 4. The staff notes that some of the weld filler material classifications, E9018-B3L and ER90S-B3L, were discontinued by ASME several years ago and replaced with classifications E8018-B3L and ER80S-B3L. DCD, Tier 2, Revision 3, Table 5.2-4 contains similar inappropriate references to discontinued classifications. In order for the staff to determine that the weld filler materials used in the ESBWR design meet the requirements of ASME Code, Section II, Part C, the staff requests that the applicant modify Tables 5.2-4 and 6.1-1 to include the correct weld filler material classifications.

B. The applicant's proposed revision to Table 6.1-1 lists the weld filler material that will be used to weld P5C, G1 materials. After reviewing the ESF material specifications provided by the applicant in proposed revised Table 6.1-1, the staff is unable to identify any materials that are fall into the P5C, G1 category in accordance with ASME Code, Section IX, Table QW-422. In order for the staff to determine that the materials specifications and grades used in the ESBWR design meet the requirements of ASME Code, Section II, Parts A, B and C, the staff requests that the applicant identify the P5C, Group 1 materials used in the ESBWR design for ESF components or delete this information from the DCD if it does not apply. The staff notes that the same issue exists in DCD, Tier 2, Revision 3, Table 5.2-4, where P5C, G1 materials are referenced as requiring welding, but the staff cannot identify any P5C materials in the reactor coolant pressure boundary (RCPB). Therefore, the staff requests that the applicant also identify the P5C, Group 1 materials used in the ESBWR design for RCPB components or delete this information from the Table 5.2-4 if it does not apply.

C. The applicant's proposed revision to Table 6.1-1 identifies shielded manual arc welding (SMAW) filler material E8018-G for use in welding low alloy steel in the ESBWR design. In order for the staff to complete its review and evaluate the applicant's compliance with 10CFR 50.55a, the staff requests that the applicant provide the complete GE specification that will be used to purchase E8018-G which will be used to fabricate ASME Code, Section III, Class 1, 2 and 3 components. In addition, provide a technical justification for using the GE specification in lieu of using commercially available welding electrodes.