

**From:** Ennis, Rick  
**Sent:** Thursday, January 28, 2010 7:12 AM  
**To:** Jeff Keenan  
**Cc:** Paul Duke; Feintuch, Karl; Lingam, Siva; Panicker, Mathew; Blumberg, Mark; Garry, Steven  
**Subject:** Acceptance Review for TAC ME2949 - Hope Creek - License Amendment Request Regarding Use of ITAs for Cobalt-60 Production

Jeff,

By letter dated December 21, 2009 (ADAMS Accession No. ML093640193), PSEG Nuclear LLC (the licensee) submitted a license amendment request for Hope Creek Generating Station (HCGS). The proposed amendment would allow the production of Cobalt-60 by irradiating Cobalt-59 targets located in modified fuel assemblies called Isotope Test Assemblies (ITAs). The amendment would allow the licensee to load up to twelve ITAs into the HCGS reactor core beginning with the fall 2010 refueling outage (HCGS Reload 16 Cycle 17). The modified fuel assemblies, also referred to as GE14i ITAs, are planned to be in operation as part of a joint pilot program with Global Nuclear Fuel - Americas, LLC and GE - Hitachi Nuclear Energy Americas, LLC. The purpose of the pilot program is to obtain data to verify that the modified fuel assemblies perform satisfactorily in service prior to use on a production basis. The Cobalt-60 is ultimately intended for use in the medical industry for use in cancer treatments, and blood and instrument sterilization; in the radiography and security industries for imaging; and in the food industry for cold pasteurization and irradiation sterilization.

The purpose of this e-mail is to provide the results of the NRC staff's acceptance review of this amendment request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the TSs) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The NRC staff has reviewed your application and concluded that it does provide technical information in sufficient detail to enable the staff to proceed with its detailed technical review and make an independent assessment regarding the acceptability of the proposed amendment request in terms of regulatory requirements and the protection of public health and safety and the environment. Given the lesser scope and depth of the acceptance review as compared to the detailed technical review, there may be instances in which issues that impact the NRC staff's ability to complete the detailed technical review are identified despite completion of an adequate acceptance review. You will be advised of any further information needed to support the NRC staff's detailed technical review by separate correspondence.

If you have any questions, please contact me at (301) 415-1420.

Richard B. Ennis, Senior Project Manager  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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### E-mail Properties

Mail Envelope Properties (9E28710E0B702149AEC663972863644020E38D9172)

Subject: Acceptance Review for TAC ME2949 - Hope Creek - License Amendment  
Request Regarding Use of ITAs for Cobalt-60 Production  
Sent Date: 01/28/2010 7:11:57 AM  
Received Date: 01/28/2010 7:11:57 AM  
From: Ennis, Rick

Created By: Rick.Ennis@nrc.gov

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#### Options

Expiration Date:  
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Recipients received: