

November 23, 2005

Mr. Michael G. Gaffney
Site Vice President
Kewaunee Power Station
Dominion Energy Kewaunee, Inc.
N490 Highway 42
Kewaunee, WI 54216-9511

SUBJECT: KEWAUNEE POWER STATION - EXTENSION OF SCHEDULE FOR
REPORTING SURVEILLANCE CAPSULE TEST RESULTS (TAC NO. MC8828)

Dear Mr. Gaffney:

By letter to the Nuclear Regulatory Commission (NRC) dated October 17, 2005, Dominion Energy Kewaunee, Inc. (DEK) requested a 1-year reporting date extension for the testing results of the reactor pressure vessel (RPV) surveillance capsule T (Capsule T) for the Kewaunee Power Station (KPS). The proposed extension, as noted in your October 17, letter, is needed to perform activities associated with preparation and performance of the Capsule T tests as required under Appendix H to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50. Consistent with Appendix H to 10 CFR Part 50, IV.A, you requested an extension of the date by which the results are required to be reported to the NRC until November 15, 2006.

Pursuant to 10 CFR Part 50, Appendix H, nuclear power plant licensees are required to implement RPV surveillance programs to "monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region...which result from exposure of these materials to neutron irradiation and the thermal environment." Appendix H to 10 CFR Part 50 incorporates by reference the editions of the American Society for Testing and Materials (ASTM) E 185, "Standard Practice for Conducting Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels," for RPV surveillance program specimen testing. The test procedures and reporting requirements must meet the 1982 edition of ASTM E 185 requirements, to the extent practical for the configuration of the specimens in the capsules. The 10 CFR Part 50, Appendix H, requirements further require that a licensee submit the summary report within 1 year of capsule withdrawal.

In its October 17, 2005, submittal, DEK stated that their reason for requesting the reporting extension of the KPS Capsule T testing results was to allow sufficient time for handling, machining, reconstitution, pre-cracking, fracture toughness testing, Charpy V-Notch impact testing, and analysis. By letter dated May 1, 2001, the NRC staff approved an exemption from certain requirements of 10 CFR 50, Appendix H for KPS. KPS requested this exemption in order to use new methodology to acquire fracture toughness information from the surveillance capsule Charpy test specimens. In addition to performing Charpy impact testing, KPS will pre-crack the specimens, perform 3-point bend fracture toughness testing, then reconstitute the specimens and retest them using Charpy impact testing. This process is much more time consuming than the standard surveillance capsule analysis. As a result, KPS has requested approval of an extension of the time allowed to perform and report the testing.

The NRC staff has determined that the materials property and dosimetry data that will be acquired and reported from the capsule in question is not necessary to support safe operation of the facility over the period of the deferral. DEK has previously withdrawn, analyzed and reported the results from four reactor vessel surveillance program capsules that were part of its Appendix H program. These previous data represent irradiations up to 3.45×10^{19} n/cm² for the most radiation sensitive material in the beltline. This level of neutron exposure approximates the neutron exposure expected at the peak location on the inside diameter surface of the KPS reactor vessel beltline at the expiration of its initial operating license term in the year 2013. On the basis of these results, KPS established pressure-temperature limit curves and overpressure protection set points that are currently valid through 31.1 effective full power years (EFPY). The surveillance capsules are attached to vessel internals, and are closer than the vessel wall is to the core. The data that has been collected, analyzed and reported to date, lead the embrittlement of the vessel beltline material until at least 2010. In addition, the dosimetry data acquired from previously tested surveillance capsules provides an adequate basis for projecting the KPS RPV fluence through 31.1 EFPY. Therefore, the NRC staff agrees that the data that will be acquired from Capsule T, which is the subject of the extension request, will not be required to support safe operation of the facility during the requested extension period.

The NRC staff has concluded that this extension in the reporting of the results from Capsule T will not change the overall effectiveness of the Appendix H program and will not affect the continued safe operation of KPS. Therefore, the request to extend this reporting requirement interval to November 16, 2006, is acceptable.

If you should have further questions regarding any matters associated with this letter, please contact David H. Jaffe at (301) 415-1439.

Sincerely,

/RA by Peter Tam for/

L. Raghavan, Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-305

cc: See next page

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