

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

1040 Chestnut Street Tower II

April 17, 1984

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APR 23 P3:16

Mr. John Hickey
Division of Fuel Cycle and Material Safety
Mail Stop 396-SS
Washington, D.C. 20555

Dear Mr. Hickey:

RAPID SULFUR METER (RSM) - CONTINUOUS ONLINE NUCLEAR ANALYZER OF COAL
(CONAC) BY-PRODUCT MATERIAL LICENSE NO. 41-08165-12 REQUEST FOR AMENDMENT
NO. 06 CONTROL NO. 16948

As discussed between you and G. R. MacDonald, TVA is in the process of exchanging the Californium 252 (Cf^{252}) Amersham Custom Source, listed for use in our Science Applications, Inc. (SAI) Model RSM (SM-1002) rapid sulfur meter under by-product material license No. 41-08165-12. In our letter to you on January 3, we requested that our by-product material license be amended to incorporate a Cf^{252} -sealed source of 100 micrograms to allow us better coal elemental analysis. We have since concluded that a source of that size would require an in-depth technical upgrading of our computer analysis system. Due to the time required for the technical development, a Cf^{252} source of approximately 40 micrograms installed on a temporary basis would better serve our needs. Our license amendment No. 1 dated April 5, 1982 allows use of a Cf^{252} Amersham Custom Source at a maximum of 50 micrograms/30 millicuries.

TVA has recently taken the necessary steps to enter into an agreement with Savannah River, Department of Energy (DOE) to exchange the existing Amersham Custom Source for a DOE SR-CF-307 series 40-microgram (Cf^{252}) source. Our letter to Mr. E. Wright (NRC) on March 9, 1982 described a DOE SR-CF-100 series Cf^{252} source that is listed on our license amendment No. 2 for use in the CONAC device. It is our understanding that the DOE SR-CF-307 series Cf^{252} source is just slightly longer than the DOE SR-CF-100 series and is compatible with the SAI Model RSM (SM-1002) rapid sulfur meter and the SAI shipping cask.

We still plan to upgrade our analysis system to perform using the 100 microgram Cf^{252} source and would like to pursue amending the license to include this source at a future date. However, until the upgrading of the analysis system is complete, please take the necessary steps to amend our by-product material license to allow TVA to receive and use the Cf^{252} 40-microgram DOE SR-CF-307 series sealed source. We are presently scheduled to ship the source from DOE Savannah River; Aiken, South Carolina; on May 11.

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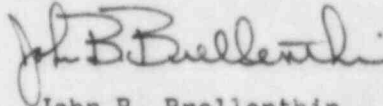
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Mr. John Hickey

April 17, 1984

If you have any questions or require additional information that will aide us in meeting the shipping date, please contact G. R. MacDonald at 1040 Chestnut Street Tower II; Chattanooga, Tennessee 37401; telephone FTS 858-5675; or me at 1040 Chestnut Street Tower II; Chattanooga, Tennessee 37401; telephone FTS 858-5672.

Sincerely,

A handwritten signature in dark ink, appearing to read "John B. Brellenthin". The signature is fluid and cursive, with the first name "John" and last name "Brellenthin" clearly distinguishable.

John B. Brellenthin
Supervisor
Environmental Support

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