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April 12, 2010

U.S. Nuclear Regulatory Commission  
ATTN. Document Control Desk  
Washington D.C. 20555

RE: Reply to a Notice of Unresolved Item.

The following is the response by the Department of Veterans Affairs Nebraska-Western Iowa Health Care System Alan J. Blotcky Reactor Facility to the NRC Unresolved Item 050-00131/09-04. License R-57, Docket # 50-131

**Unresolved Item**

One unresolved item was identified during the inspection involving your possible possession of a polonium-beryllium sealed source. An unresolved item is a matter about which more information is required to determine whether the issue in question is an acceptable item, a deviation, a nonconformance, or a violation. You provided additional information about one polonium-beryllium sealed source in your possession. Based on half-life of polonium and the age of the source, we understand that the source has decayed to a negligible radioactivity level. Also, your staff conducted a records review and visually observed the components currently being stored in the reactor pool. Based on these reviews and observations, your staff believes that your facility does not possess any additional sealed sources.

The license allowed you to possess up to 8 curies of polonium-beryllium sealed sources and up to 4 curies of americium-beryllium sealed sources. However, we are still unclear about how many sealed sources you previously possessed under the license. For example, the Annual Operating Report for 2003, submitted to the NRC by letter dated March 23, 2004, stated that americium-beryllium sources were transferred to the Department of Energy on July 24, 2003, licensed radioactive sources were removed and properly disposed, with the exception of americium-beryllium and polonium-beryllium sources". The Request for License Termination letter was submitted to the NRC after the annual report for 2003 was submitted. To the NRC suggesting that you were in possession of two or more sealed sources at that time.

In summary, the docket file records that we reviewed did not clearly provide an accounting of the sealed sources you had received, including which sources were transferred and disposed, and which sources

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were still in your possession. Therefore, you are requested to provide the following information to the NRC before we can close Unresolved Item 050-00131/0901-04:

A listing of all sealed sources received, including receipt date, sources type, source holder, source activity, and serial number, if known.

A listing of all sealed sources transferred or disposed, including date of transfer and disposal and serial number, if known.

A listing of sealed sources(s) still in possession, by serial number if possible.

A clarification of Section 1.4 in the Request for Termination Letter, specifically, to clarify whether the statement that you possessed multiple sealed sources at that time was accurate or whether this Section requires updating.

### Response to Unresolved Item

The staff at the Alan J. Blotcky Reactor Facility has conducted a records search as well as a physical search of the reactor facility to address the sealed source accounting the NRC has requested. To the best of our knowledge the following information given in the table below is accurate and includes all the sealed neutron sources the reactor facility has received since it was first licensed. The two Siemens sources were not neutron start up sources, but have been added for clarification. They were transferred to the Department of Energy's Off-Site Source Recovery Program along with the americium-beryllium sealed source on July 24, 2003.

Manufacturer	Received	Source Type	Initial Activity	Serial Number	Source holder	Transfer or Disposal	In Possession
Isotope Specialties	05/30/1959	Po <sup>210</sup> /Be	5 Ci	None		06/01/1963	No
U.S. Nuclear	07/13/1961	Po <sup>210</sup> /Be	7 Ci	B-673		06/01/1963	No
U.S. Nuclear	05/03/1963	Po <sup>210</sup> /Be	7 Ci	J-102		05/23/1966	No
U.S. Nuclear	07/02/1964	Po <sup>210</sup> /Be	7 Ci	L-202		05/23/1966	No
U.S. Nuclear	01/12/1966	Po <sup>210</sup> /Be	7 Ci	O-178		NA	Yes
U.S. Nuclear	01/29/1968	Am <sup>241</sup> /Be	2 Ci	618AM372		07/24/2003	No
Siemens	02/27/1987	Am <sup>241</sup>	12mCi	2824LA		07/24/2003	No
Siemens	06/24/1987	Am <sup>241</sup>	12mCi	5839LV		07/24/2003	No

### Neutron Source holder

The following information is all that is currently known about the source holder for the sealed sources.

The neutron source holder (Fig 1) is the same general size and shape as a fuel element; thus, it can be placed in any vacant fuel or graphite element location. The upper and lower portions of the holder are screwed together to enclose a cavity that contains the source. A shoulder at the upper end of the neutron source holder supports the assembly on the upper plate.

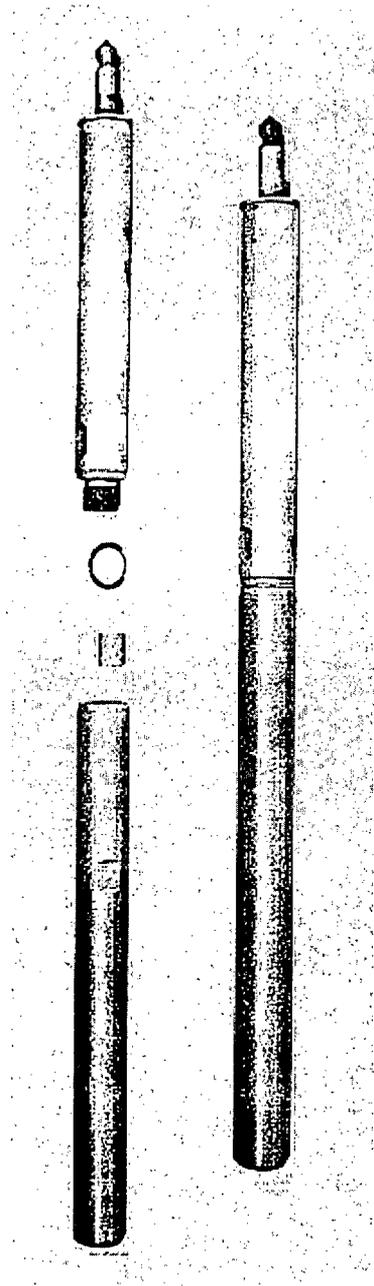


Fig. 1 SOURCE HOLDER

## Clarification of Request for License Termination Letter

The Reactor Safeguards Committee of the AJBRF wishes to correct an error in section 1.4 of the "Request for License Termination" letter dated September 21, 2004. The original wording in this section is as follows:

### 1.4 Nature of Sources

The radioactive materials licensed for use at the AJBRF primarily consisted of the reactor fuels and fission chambers which have since been transferred and sent for use in the United States Geologic Survey (USGS) reactor in Denver, Colorado. All licensed radioactive sources were removed and properly disposed, with the exception of Americium-Beryllium and Polonium-Beryllium sources.

The revised wording of this section should read as follows:

### 1.4 Nature of Sources

The radioactive materials licensed for use at the AJBRF primarily consisted of the reactor fuels and fission chambers which have since been transferred and sent for use in the United States Geologic Survey (USGS) reactor in Denver, Colorado. All licensed radioactive sources were removed and properly disposed, with the exception of one Polonium-Beryllium source. This start up source serial number O-178 is no longer significantly radioactive.



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