

10 CFR PART 71 QUALITY ASSURANCE PROGRAM  
FOR SHIPMENT OF <sup>239</sup>PLUTONIUM-BERYLLIUM NEUTRON SOURCES  
(Please Type)

Site Name and Address: University of Pennsylvania, 418 Service Drive,  
Philadelphia, PA 19104/6021

This Quality Assurance (QA) Program is limited to the shipment of <sup>239</sup>Plutonium-Beryllium (<sup>239</sup>PuBe) neutron sources in model DOT 6M packaging from University of Pennsylvania (Site Name) to the United States Department of Energy, Los Alamos National Laboratory (LANL), Los Alamos, New Mexico. It is designed to meet the requirements of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material." The anticipated date of each shipment that will be made, the contents of each shipment, and the serial number of each <sup>239</sup>PuBe neutron source is provided below.

Estimated Shipment Date: April 14, 1997

Number of DOT 6Ms: one

<sup>239</sup>PuBe Neutron Source Information:

SERIAL #	<u>M119</u>	ELEMENT	<u>15g</u>	ISOTOPE	<u>14g</u>	CURIES	<u>1.0</u>
SERIAL #	<u>M143</u>	ELEMENT	<u>15g</u>	ISOTOPE	<u>14g</u>	CURIES	<u>1.0</u>
SERIAL #	<u></u>	ELEMENT	<u></u>	ISOTOPE	<u></u>	CURIES	<u></u>
SERIAL #	<u></u>	ELEMENT	<u></u>	ISOTOPE	<u></u>	CURIES	<u></u>
SERIAL #	<u></u>	ELEMENT	<u></u>	ISOTOPE	<u></u>	CURIES	<u></u>
SERIAL #	<u></u>	ELEMENT	<u></u>	ISOTOPE	<u></u>	CURIES	<u></u>
SERIAL #	<u></u>	ELEMENT	<u></u>	ISOTOPE	<u></u>	CURIES	<u></u>
SERIAL #	<u></u>	ELEMENT	<u></u>	ISOTOPE	<u></u>	CURIES	<u></u>
SERIAL #	<u></u>	ELEMENT	<u></u>	ISOTOPE	<u></u>	CURIES	<u></u>
SERIAL #	<u></u>	ELEMENT	<u></u>	ISOTOPE	<u></u>	CURIES	<u></u>

1. Organization (10 CFR § 71.103)

The final responsibility for the QA program for 10 CFR Part 71 Subpart H Requirement resides with University of Pennsylvania  
(Site Name)

The QA Program is implemented by Joseph McCue, Associate Director,  
Radiation Safety Office  
(Name, Title & Department of Person Responsible for the Shipment)

The Associate Director, Radiation Safety is responsible for the overall  
(Title of responsible individual)  
administration of this QA program, including training of personnel and all quality-related activities regarding the shipment of  $^{239}\text{PuBe}$  neutron sources. These quality-related activities include, but are not limited to, inspection and identification of each DOT 6M upon receipt from LANL, or a Shipping Broker, as well as proper handling, packaging, inspecting, testing, and recording each shipment.

2. Quality Assurance Program (10 CFR § 71.105)

The management of University of Pennsylvania establishes and  
(Site Name)  
implements this QA Program based on the LANL manual "Plutonium Beryllium ( $^{239}\text{PuBe}$ ) Neutron Source Recovery Program", dated March 1997, which is part of this QA Program. Training on the LANL manual for all QA functions is required before any quality-related activities are performed. The QA Program will emphasize control of the characteristics of the transportation package which are critical to safety.

3. Document Control (10 CFR § 71.113)

All documents related to each shipment of  $^{239}\text{PuBe}$  neutron sources will be controlled. The Associate Director, Radiation Safety shall assure that all  
(Title of responsible individual)  
QA functions are performed in accordance with the LANL manual.

4. Handling, Storage, and Shipping Control (10 CFR § 71.127)

The procedures in the LANL manual will be followed concerning the handling, storage, and shipping of transportation packages. Shipments will not be made unless tests, certifications, acceptances, and final inspections have been completed.

5. Inspection, Test, and Operating Status (10 CFR § 71.129)

Inspection, test, and operating status of each transportation package for shipment of  $^{239}\text{PuBe}$  neutron sources will be documented. Transportation package status will be indicated by tag, label marking, or log entry.

Nonconforming parts or transportation packages will be positively identified and segregated to avoid inadvertent use.

6. Quality Assurance Records (10 CFR § 71.135)

Records of transportation package inspections and tests will be retained for three years beyond the date this QA program ends. Records of each shipment will be retained for three years after each shipment occurs. The records will be identified and retrievable.

RESPONSIBLE OFFICIAL

Name: Joseph McCue Title: Associate Director  
(Type) (Type)

Signature: Joseph McCue Date: February 27, 1997