

SPECIAL NUCLEAR MATERIAL LICENSE APPLICATION

NRC License Request Changes

Submitted to:

Mary Adams
Senior Project Manager
Fuel Manufacturing Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC, 20555

By:

Sensor Concepts & Applications, Inc.
5200 Glen Arm Road, Suite A
Glen Arm, Maryland 21057

2) Activity and location for Special Nuclear Material

Activity and location for which Special Nuclear Material License is requested:

Sensor Concepts & Application, Inc. (SCA) seeks to possess less than formula quantities of special nuclear material (SNM). At no time will SCA possess any combination in excess of 5,000 grams of SNM computed by the formula, $\text{grams} = (\text{grams contained U-235}) + 2.5 (\text{grams U-233} + \text{grams plutonium})$; or more than 10,000 grams or more of uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U-235 isotope).

At no time will SCA possess any SNM in a quantity exceeding one effective kilogram.

4) Description of Special Nuclear Material

I. Description of SNM Test objects

The SNM Test Objects are U.S. Government owned and as such their possession and use will be under a loan agreement with the U.S. Government suppliers (i.e., DOE national labs).

A. Low-enriched Uranium (LEU)

enriched DTRA design uranium plate with 3 to 5 mil
nickel plating and a total mass of . The mass of the U235 The
LEU is not in an unsealed state and is not dispersible.

At no time will SCA have in their possession more than four (4) of the LEU plates.

SPECIAL NUCLEAR MATERIAL LICENSE APPLICATION

B. Plutonium (Pu)

A Pu disc Pacific Northwest National Laboratory designed, tested and built this plutonium sealed source (AKA the "puck") for the Department of Homeland Security. This source was designed for use as either a calibration source in the development of new radiation detector systems or to test existing radiation detector systems. The Pu is encapsulated in a tantalum liner that provides an inert barrier between the plutonium disk and the stainless steel outer housing (

See Appendix B for drawing. The Pu is not in an unsealed state and is not dispersible.

At no time will SCA have in their possession more a single Pu puck.

C. Highly Enriched Uranium (HEU)

A disc enriched uranium, is encapsulated in a titanium housing See

Appendix B for drawing. The HEU is not in an unsealed state and is not dispersible.

At no time will SCA have in their possession more than three (3) of the HEU discs.

C. Uranium Oxides

UO₂

enriched UO₂ contained in a sealed canister

The mass of the contained U235 The UO₂ is not in an unsealed state and is not dispersible.

At no time will SCA have in their possession more than seven (7) of the UO₂ canisters.

U₃O₈

enriched U₃O₈ contained in a sealed canister

The mass of the U235 . The U₃O₈ is not in an unsealed state and is not dispersible.

At no time will SCA have in their possession more than ten (10) of the U₃O₈ canisters.

7) Safety Procedures to Protect Health and Minimize Danger to Life or Property

SCA has an established Radiation Protection Program that covers the safe conduct of activities with radioactive materials and radiation sources. These procedures in effect satisfy various requirements of the NRC and state licenses for radioactive materials. Procedures are reviewed and adjusted at regular intervals with updated training as required. See Appendix C for SCA's Radiation Protection Program.