

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number

19-08330-02

Docket or Reference number

030-04545

Amendment No. 34

"OFFICIAL RECORD COPY"

Defense Nuclear Agency
Armed Forces Radiobiology
Research Institute
Bethesda, Maryland 20014

In accordance with letters dated March 19, 1985 and April 19, 1985 License Number 19-08330-02 is amended as follows:

Items 6., 7., 8., and 9. are amended to read:

- | | | |
|---|---|--|
| 6. Byproduct, source, and/or special nuclear material | 7. Chemical and/or physical form | 8. Maximum amount that licensee may possess at any one time under this license |
| A. Any byproduct material | A. Any | A. Not to exceed 1 curie per radionuclide and 30 curies total, except: Hydrogen 3 - 15 curies Carbon 14 - 2 curies Phosphorus 32 - 2 curies Molybdenum 99/ Technetium 99m - 2 curies Iodine 125 - 2 curies Xenon 133/133m - curies Polonium 210 - 20 millicuries Neptunium 237 - 20 millicuries |
| B. Cesium 137 | B. Sealed source (U.S. Nuclear Model 371) | B. 120 curies |
| C. Cesium 137 | C. Sealed source (Nuclear Chicago Model RR-137) | C. 88 millicuries |
| D. Cesium 137 | D. Sealed source (in Technical Operations dwg. No. SK-1371) | D. 3 curies |
| E. Cobalt 60 | E. Sealed sources (ORNL) | E. 4 curies |
| F. Americium 241 | F. Foils | F. Not to exceed 10 millicuries |
| G. Plutonium 239 | G. Fission foils | G. 100 grams |
| H. Plutonium 239 | H. Sealed source | H. 160 grams as Pu-Be neutron source |
| I. Plutonium | I. Accident Foils | I. 7.9 grams |
| J. Plutonium | J. Any | J. 0.1 gram |
| K. Uranium 235 | K. Fission foils | K. 30 grams |
| L. Uranium 235 | L. Any | L. 7 grams |
| M. Uranium 238 | M. Fission foils | M. 400 grams |
| N. Thallium 232 | N. Fission foils | N. 10 grams |

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(6., 7., 8., continued)

- | | | |
|--------------------------|--|--|
| O. Other source material | O. Foils | O. 59 grams |
| P. Depleted uranium | P. Source shield | P. 5500 grams |
| Q. Uranium 236/238 | Q. Any | Q. 4000 grams |
| R. Thorium | R. Any | R. 1000 grams |
| S. Neptunium 237 | S. Fission foils | S. 100 grams |
| T. Cesium 137 | T. Sealed sources (J.L. Shepherd Model Series 78 or 28 Calibrator sources) | T. Not to exceed 200 curies per source |
| U. Californium 252 | U. Sealed source (Savannah River SR-CF-2000) | U. 2.6 milligrams (1.4 curies) |

9. Authorized use

- A. through S. For research and development as defined in 10 CFR Part 30.4(q) and 10 CFR Part 70.4(j).
 T. For use in J. L. Shepherd Model 89 Calibrators to calibrate portable instruments.
 U. For use in Custom irradiator for research and development.

Conditions 10., 12., and 19. are amended to read:

10. Licensed material shall be used only at the licensee's facilities, Armed Forces Radiobiology Research Institute, Bethesda, Maryland, except as possessed off-site incident to transportation.
12. Licensed material shall be used by, or under the supervision of, individuals designated by the the Radionuclide and X-ray Safety Committee, CDR. Richard I. Walker, Chairman.
19. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated January 3, 1979; and letters dated April 9, 1979, October 30, 1979, September 22, 1980, December 24, 1980, February 2, 1981, May 28, 1981, July 27, 1981, August 31, 1981, September 30, 1981, June 16, 1982, September 24, 1982, January 25, 1983, March 10, 1983, March 19, 1985 and April 19, 1985. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

For the U.S. Nuclear Regulatory Commission

Original Signed By:

Jenny M. Johansen

By

Nuclear Materials Safety and
Safeguards Branch, Region I
King of Prussia, Pennsylvania 19406

Date JUL 12 1985