

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		
1. Sample Manufacture License, Inc.		3. License Number 01-23456-78
2. 1234 Anywhere Street Anytown, State 01234		4. Expiration Date February 28, 2008
		5. Docket No. 030-01234 Reference No.
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 with atomic numbers 1 through 83	A. Any	A. Not to exceed 370 gigabecquerels (GBq) (10 curies (Ci)) per radionuclide and 3.7 terabecquerels (TBq) (100 Ci) total
B. Any byproduct material with atomic numbers 84 through 94	B. Any	B. Not to exceed 1.85 GBq (50 millicuries (mCi)) per radionuclide and 74 GBq (2 Ci) total
C. Hydrogen-3	C. Any	C. 3.7 petabecquerels (PBq) (100,000 Ci)
D. Carbon-14	D. Any	D. 18.5 TBq (500 Ci)
E. Phosphorus-32	E. Any	E. 3.7 TBq (100 Ci)
F. Phosphorus-33	F. Any	F. 740 GBq (20 Ci)
G. Sulfur-35	G. Any	G. 14.8 TBq (400 Ci)
9. Authorized Use		
A. through G.		
(1) Research and development as defined in 10 CFR 30.4.		
(2) For possession, use, and processing incident to manufacture of radiochemicals, radiopharmaceuticals and sealed sources. (Sealed sources are not identified by specific manufacturer model numbers because they will be distributed under a G-, E-, or MD-distribution license, and will be identified on that license.)		
(3) For storage prior to distribution of manufactured radiochemicals, radiopharmaceuticals and sealed sources.		

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- (4) For packaging and distribution of manufactured radiochemicals, radiopharmaceuticals, and sealed sources to persons authorized to receive the licensed material pursuant to the terms and conditions of specific licenses issued by the Nuclear Regulatory Commission or Agreement States.
- (5) For use in calibration of Sample Manufacture License, Inc. instruments.
- (6) For storage as radioactive wastes.
- (7) For return of spent generators, radiopharmaceuticals, and sealed sources to the Sample Manufacture License, Inc. facility in Anytown, State, for storage prior to disposal and/or processing.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities at 1234 Anywhere Street, 5678 East Anyplace Street, and 0123 and 4567 West Any Road, Anytown, State.
11. A. Licensed material shall be used by, or under the supervision of, individuals designated in writing by the Radiation Safety Committee, John Q. Public, Ph.D., CHP, Chairperson.
B. The Radiation Safety Officer for this license is John Doe, M.S., CHP
12. This license does not authorize commercial distribution of licensed material pursuant to 10 CFR 32.72 or 10 CFR 32.74 to persons generally licensed pursuant to 10 CFR Part 31 or equivalent regulations of any Agreement State; or to persons exempt from licensing pursuant to 10 CFR 30.14 through 30.20 inclusive, or equivalent regulations of any Agreement State.
13. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to be exceed three months.
C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
E. Sealed sources and detector cells need not be leak tested if:
 - (i) they contain only hydrogen-3; or
 - (ii) they contain only a radioactive gas; or
 - (iii) the half-life of the isotope is 30 days or less; or

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- (iv) they contain not more than 100 μCi of beta and/or gamma emitting material or not more than 10 μCi of alpha emitting material; or
- (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test intervals, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The test shall be capable of detecting the presence of 0.005 μCi of radioactive material on the test sample. If the test reveals the presence of 0.005 μCi or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.52(b)(2), and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region ____, ATTN: Chief, Nuclear Materials Safety Branch, (insert appropriate Regional address). The report shall specify the source or detector cell involved, the test results, and corrective action taken.
- G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
14. Licensed material shall not be used in or on human beings.
15. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
16. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.
17. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
18. The licensee is authorized to hold radioactive material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal in ordinary trash, provided:
- A. Waste to be disposed of in this manner shall be held for decay a minimum of ten half-lives.
- B. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.

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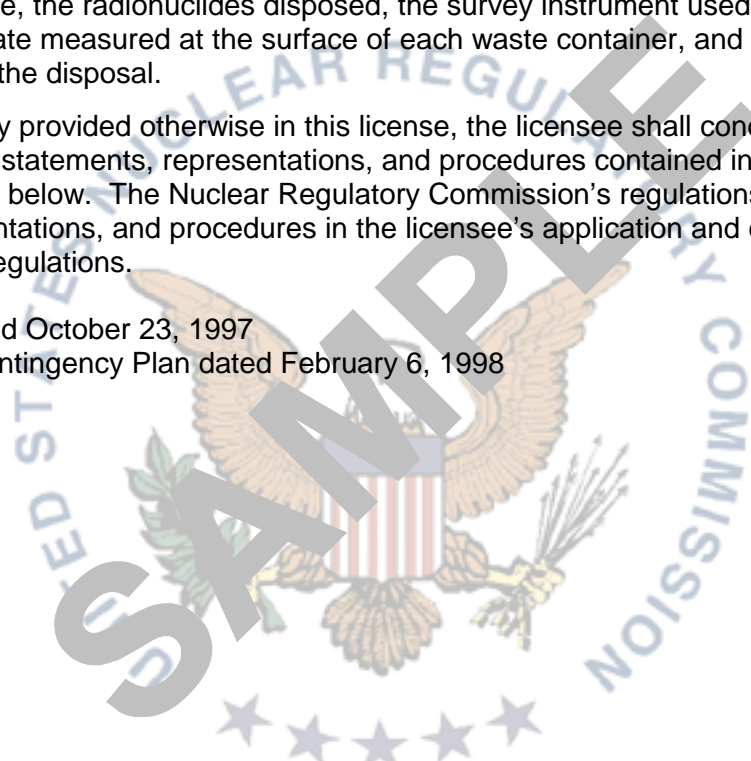
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- C. A record of each such disposal permitted under this License Condition shall be retained for three years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.
- 19. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosure, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
 - A. Application dated October 23, 1997
 - B. Radiological Contingency Plan dated February 6, 1998



For the U.S. Nuclear Regulatory Commission

Date: _____

By: _____

Division of Nuclear Materials Safety
Region ____
City, State Zip Code

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		
1. Sample Smoke Detector Company		3. License number 12-34567-89
2. 12345 South Any Street Any Town, State 12345-6789		4. Expiration date August 31, 2008
		5. Docket No. 030-12345 Reference No.
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. Americium-241	A. Foil sources (Amersham Int., Inc. Model No. AMM 1001H)	A. No single foil to exceed 33.3 kilobecquerels (kBq) (0.9 μ Ci), 1.665 gigabecquerels (GBq) (45 millicuries) total
9. Authorized Use:		
A. To be used for possession and storage in Sample Smoke Detector Company XY Series ionization smoke detectors incident to distribution in accordance with the conditions of NRC Byproduct Material License No. 12-34567-89E.		

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities located at 12345 South Any Street, Any Town, State.
11. Licensed material shall be used by, or under the supervision of, Named Person One or Named Person Two.
12. This license does not authorize commercial distribution of licensed material.
13. Licensed material shall not be used in or on human beings.
14. Sealed sources containing licensed material shall not be opened.
15. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license.
16. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
17. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including

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License Number
34-23772-01

Docket or Reference Number
030-31617

any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- A. Application dated July 25, 1998.



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: _____

By: _____

Reviewer's Name
Materials Licensing Branch
Region _____

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		
1. Sample Medical Calibration Source Distribution Company		3. License number 01-23456-78MD
2. 01234 North Any Street Any Town, State 01234-5678		4. Expiration date September 30, 2008
		5. Docket No. 030-01234 Reference No.
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. As specified in Condition 10	A. As specified in Condition 10	A. Not applicable

Authorized Use:

- A. Pursuant to 10 CFR Part 32.74, the licensee is authorized to distribute the sources specified in Condition 10 of this license to persons licensed pursuant to 10 CFR Part 35.57, or under equivalent licensees of Agreement States.

CONDITIONS

10. Each sealed source distributed under this license shall not contain, as of the assay date, more than the quantity of byproduct material listed in the following table:

Byproduct Material	Model No.	Chemical and/or Physical Form	Maximum Quality
A. Cobalt-60	NES-354	Dose calibrator reference source Solid epoxy matrix in vial E	1 millicurie
B. Cesium-137	NES-356	Dose calibrator reference source Solid epoxy matrix in vial E	1 millicurie
C. Barium-133	NES-358	Dose calibrator reference source Solid epoxy matrix in vial E	1 millicurie
D. Barium-133	NES-8060	Spot Marker reference source	200 μ Ci
E. Cesium-137	NES-8021	Dose calibrator reference source	50 μ Ci
F. Cesium-137	NES-8023	Dose calibrator reference source	50 μ Ci
G. Gadolinium-153	NES-8412 through NES-8425	Reference sources to be used in gamma cameras for medical imaging	1 curie

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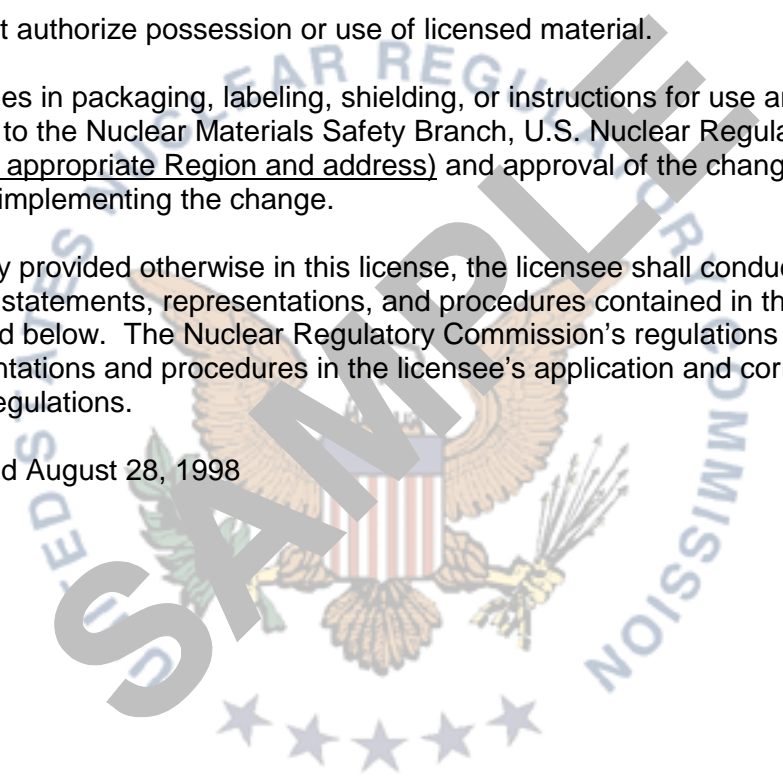
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11. The licensee is authorized to distribute the licensed materials listed in Condition 10 of this license from 01234 North Any Street, Any Town, State.
12. This license does not authorize possession or use of licensed material.
13. Any proposed changes in packaging, labeling, shielding, or instructions for use and storage shall be submitted for review to the Nuclear Materials Safety Branch, U.S. Nuclear Regulatory Commission, Region ____, (insert appropriate Region and address) and approval of the changes shall be received by the licensee prior to implementing the change.
14. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.
 - A. Application dated August 28, 1998



FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: _____

By: _____

Division of Nuclear Materials Safety
Region ____
City, State Zip Code

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Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		In accordance with the letter dated April 13, 1995,
1. Sample Radiopharmaceutical Distribution Only License, Inc.		3. License number 01-23456-04MD is amended in its entirety to read as follows:
2. P.O. Box 191 City, State Zip Code		4. Expiration date March 31, 2008
		5. Docket No. 030-56789 Reference No.
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. Chromium-51	A. Sodium Chromate (NDA 13-993)	A. Not applicable
B. Iodine-131	B. Sodium Iodohippurate (NDA 16-666)	B. Not applicable
C. Iodine-131	C. Sodium Iodide (NDA 10-929/S-01, S-002)	C. Not applicable

9. Authorized Use:
A. through C.

Pursuant to Section 32.72 of 10 CFR Part 32, the licensee is authorized to distribute the byproduct material described in Items 6 and 7 of this license to persons licensed pursuant to Sections 35.100, 35.200 and 35.300 of 10 CFR Part 35, or under equivalent licenses of Agreement States.

CONDITIONS

10. Each product distributed under this licensee shall not contain as of the assay date, more than the quantity of byproduct material listed in the following table.

Byproduct Material	Product Name	Maximum Quantity
A. Chromium-51	Chromitope Sodium Injection	37 megabecquerels (MBq) (1.0 millicurie (mCi))
B. Iodine-131	Hippuran I 131 Injection	74 MBq (2.0 mCi)
C. Iodine-131	Iodotope Therapeutic Capsules	5.55 gigabecquerels (G bq) (150 mCi)
D. Iodine-131	Iodotope Therapeutic Oral	3.959 GBq (107 mCi)

11. The licensee may distribute material from licensee's facilities located at 1 Medical Drive, Any Town, Any State.

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License Number
01-23456-04MD

Docket or Reference Number
030-56789

- 12. This license does not authorize possession or use of licensed material.
- 13. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
 - A. Application dated January 27, 1998
 - B. Letter dated February 10, 1998
 - C. Letter dated March 2, 1998

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: _____

By: _____

Division of Nuclear Materials Safety
Region _____
City, State Zip Code