

RADIOACTIVE MATERIAL LICENSE

Pursuant to the California Code of Regulations, Division 1, Title 17, Chapter 5, Subchapter 4, Group 2, Licensing of Radioactive Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, use, possess, transfer, or dispose of radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the California Department of Public Health now or hereafter in effect and to any standard or specific condition specified in this license.

1. Licensee	Industrial Nuclear Co., Inc.	3. License Number	2229-01	Amendment Number : 63
2. Address	14320 Wicks Blvd. San Leandro, CA 94577	4. Expiration date	August 24, 2018	(5)
Attention:	E. W. Huddleston President	5. Inspection agency	Radiologic Health Branch North	

License Number 2229-01 is hereby administratively amended as follows:

6. Nuclide	7. Form	8. Possession Limit
A. Iridium-192	A. Pellets and sealed sources	A. Not to exceed 3, 500 curies total.
B. Iridium-192	B. Pellets	B. Not to exceed 25,000 curies total.
C. Iridium-192	C. Sealed sources	C. Not to exceed 6,000 curies total.
D. Cobalt-60	D. Sealed source (Tracerlab Model R-31)	D. 1 source not to exceed 5 millicuries.
E. Cobalt-60	E. Sealed source (INC custom source)	E. 1 source not to exceed 300 millicuries.
F. Cobalt-60	F. Sealed sources (U.S. Nuclear Model 339)	F. 4 sources not to exceed 50 millicuries each.
G. Cobalt-60	G. Sealed source (Amersham Model 571)	G. 1 source not to exceed 4.3 millicuries.
H. Cesium-137	H. Sealed sources (Gamma Industries Model VD(HP))	H. 15 sources not to exceed 225 millicuries each.
I. Cesium-137	I. Sealed source (NEN Model NER-570)	I. 1 source not to exceed 100 millicuries.
J. Cesium-137	J. Sealed sources (Amersham Model 77302)	J. 2 sources not to exceed 165 millicuries each.
K. Cesium-137	K. Sealed source (Victoreen Model 844-3-8)	K. 2 sources not to exceed 8 microcuries each.
L. Cesium-137	L. Sealed source (IPL Model 229R-1 or Amersham Model CDRQ5724)	L. 1 source not to exceed 10 microcuries.
M. Americium-241	M. Plated source (Amersham Model AMR-12 custom source)	M. 1 source not to exceed 0.02 microcurie.
N. Uranium (depleted)	N. Castings	N. Not to exceed 5,000 pounds (760 millicuries) total.
O. Iridium-192	O. Pellets and sealed sources	O. Not to exceed 10,000 curies total.

9. Authorized Use

- A. To be used for storage only.
- B. To be used for storage only.
- C. To be used for storage for sources received from customers.
- D., M. To be used for calibration of instruments as a customer service.
- E., F. To be used for storage only.
- G. To be used in Amersham Model 571 Calibrator.
- H. To be used as components of Gamma Industries Masterminder Model 1 exposure devices (for storage only).
- I. To be used as a component of an EON Corporation Model 64-764 instrument calibrator (for storage only).

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- J. To be used in Amersham Model 773 Calibrator for calibration of survey instruments, personnel dosimeters and rate alarms.
- K. To be used in Victoreen Model 3060 Dosimeter Calibrator.
- L. To be used in Dosimeter Corporation Model 3060 Dosimeter Calibrator.
- N. To be used for fabrication of radiographic exposure devices and source changers. Distribution of completed devices to specific licensees of the NRC or Agreement States is authorized.
- O. To be used for fabrication of sealed sources (Hot Cell 1 and 2) and distribution to specific licensees of the NRC, or Agreement States or Licensing States.

LICENSE CONDITIONS

- 10. Radioactive material shall be used only at the following location:
 - (a) 14320 Wicks Blvd., San Leandro, CA.
 - (b) Radioactive materials may be used at temporary job sites of the licensee in areas not under exclusive federal jurisdiction throughout the State of California only for retrieval of industrial radiography sources in accordance with the procedures described in Condition 13 of this license.
- 11. This license is subject to an annual fee for sources of radioactive material authorized to be possessed at any one time as specified in Items 6, 7, 8 and 9 of this license. The annual fee for this license is required by and computed in accordance with Title 17, California Code of Regulations, Sections 30230-30232 and is also subject to an annual cost-of-living adjustment pursuant to Section 100425 of the California Health and Safety Code.
- 12. Radioactive material shall be used by, or under the supervision and in the physical presence of, the following individuals:
 - (a) Mike J. Rose
 - (b) Leonid Shikhman
 - (c) E. W. Huddleston
 - (d) Kulwant S. Gill
 - (e) Tom Cuthbertson
 - (f) Jerry Tucker
- 13. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 7, 8 and 9 of this license in accordance with the statements, representations, and procedures contained in the documents listed below. The Department's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
 - (a) The renewal application with attachments, dated July 24, 2007, signed by Jerry A. Tucker, Radiation Safety Officer and the letter dated November 20, 2008, signed by the same clarifying Section XIV, 11.0 of the Radiation Safety Program.
- 14.
 - (a) The Radiation Safety Officer in this program shall be Jerry Tucker.
 - (b) The Alternate Radiation Safety Officers in this program shall be E. W. Huddleston and Mike Rose.
- 15. Sealed sources possessed under this license shall be tested for leakage and/or contamination as required by Title 17, California Code of Regulations, Section 30275 (c).

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16. The licensee is authorized to perform tests for leakage and/or contamination of sealed sources. The following tests may be performed for sources possessed under this license and as a customer service:
 - (a) Collection of wipe test samples from sealed sources and devices containing sealed sources.
 - (b) Furnishing leak test kits Model INCA for sealed sources and devices containing sealed sources to customers authorized to use such leak test kits.
 - (c) Analysis of materials collected by the licensee as stated in (a) above and material returned by customers from leak test kits listed in (b) above for the amount of radioactivity. Reports to customers of analysis shall be in microcuries.
17. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and/or contamination prior to use or transfer as a sealed source. If the inspection or test reveals any construction defects or 0.005 microcuries or greater of contamination, the source shall not be used or transferred as a sealed source until it has been repaired, decontaminated, and re-tested.
18. Records of leak test results shall be kept in units of microcuries and maintained for inspection. Records may be disposed of following Department inspection. Any leak test revealing the presence of 0.005 microcuries or more of removable radioactive material shall be reported to the California Department of Public Health, Radiologic Health Branch MS 7610, P.O. Box 997414, Sacramento, CA 95899-7414, within five days of the test. This report shall include a description of the defective source or device, the results of the test, and the corrective action taken.
19. Except as noted below, the licensee shall distribute only sealed sources and/or devices for which a Sealed Source and Device Registry Certificate has been issued by the California Department of Public Health, the U.S. Nuclear Regulatory Commission, or other Agreement State. Sealed sources and/or devices distributed must adhere to the design specifications described in the Sealed Source and Device Registry Certificate. Any changes in the design or specifications of these sealed sources and/or devices require the manufacturer to apply for and receive an amendment to the Sealed Source and Device Registry Certificate prior to distribution. The licensee may distribute sources and/or devices without a Sealed Source and Device Registry Certificate provided the recipient is authorized to possess such items by license condition or applicable State or Federal regulations and laws.
20. The licensee is authorized to calibrate radiation detection instruments as a customer service/for his own use. Each calibration of a radiation detection instrument shall include not less than 2 points other than zero (separated by 50 percent of full scale) for each scale of the instrument certified by the licensee.
21. The licensee shall conduct a physical inventory every six months to account for all sealed sources and/or devices received and possessed under the license. Records of the inventories shall be maintained for inspection, and may be disposed of following Department inspection.
22. Pursuant to Title 17, California Code of Regulations, the licensee is authorized to possess up to 999 kilograms (2,203 pounds) of natural or depleted uranium used for purposes of shielding or collimation in radiographic exposure devices listed in Item 9 of this license.
23. Radioactive materials shall be used by occupational workers in such a manner that the dose limits specified in Title 10, Code of Federal Regulations, Part 20, Subpart C, Sections 20.1201 through 20.1208 are not exceeded.
24. The licensee shall monitor occupational exposures to radiation and shall supply and require the use of individual monitoring devices by personnel as required by Title 10, Code of Federal Regulations, Part 20, Section 20.1502 (a).

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25. The licensee shall monitor occupational intakes of radioactive material by, and assess the committed effective dose equivalent to, individuals who may have exceeded or are likely to exceed, the limits specified in Title 10, Code of Federal Regulations, Part 20, Section 20.1502 (b). Suitable and timely measurements used for determination of such internal exposures shall be performed as specified by Section 20.1504.
26. Each sealed source manufactured after February 6, 2007 that contains a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material (i.e. a nationally tracked source) listed in Appendix E of 10 CFR 20, Nationally Tracked Source Thresholds, as published in the November 8, 2006 publication of the Federal Register (71 FR 65685 (Nov. 8, 2006)) shall be assigned a unique serial number. Serial numbers shall be composed only of alpha-numeric characters.
27. The licensee is authorized to hold radioactive materials with a physical half-life of less than [65 or 90] days for decay in storage before disposal in ordinary trash provided:
- (a) Radioactive waste to be disposed of in this manner shall be held for decay in storage for at least [7 or 10] half-lives.
 - (b) Before disposal as normal waste, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
28. The licensee will provide the Low Level Radioactive Waste (LLRW) reports specified in the California Health and Safety Code section 115000.1(h) to the California Department of Public Health (CDPH) on an annual basis for both shipped and stored LLRW. Alternatively, LLRW shipment information may be provided on a per shipment basis. LLRW shipment information and annual reports shall be mailed to:


Attn: LLRW Tracking Program
California Department of Public Health
Radiologic Health Branch MS 7610
P.O. Box 997414
Sacramento, CA 95899-7414

29. The licensee shall comply with the inventory and transaction reporting requirements in 10 CFR 20.2207 (1-1-08 Edition) for nationally tracked sources. Note that transaction reports are required for any manufacture, transfer, receipt, disassembly, or disposal of a nationally tracked source, otherwise allowed by this license, by the next business day after the transaction. A nationally tracked source, as defined in 10 CFR 20.1003 (1-1-08 Edition) refers to a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive materials listed in Appendix E to 10 CFR Part 20 – “Nationally Tracked Source Thresholds.” (1-1-08 Edition).

Issued for the California Department of Public Health

Date: December 2, 2011

By: _____


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