

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: Occupational Services, Inc.	3. License Number: 5149-37 Amendment Number: 48
2. Address: 6397 Nancy Ridge Drive, Suite B San Diego, CA 92121	4. Expiration date: August 31, 2019 (3)
Attention: Nicola Rinaldi, President Radiation Safety Officer	5. Inspection agency: Radiologic Health Branch South

License Number 5149-37 is hereby amended as follows:

6. Nuclide	7. Form	8. Possession Limit
A. Cesium-137	A. Sealed source (Tech/Ops Model 77302)	A. 2 sources not to exceed 7.4 gigabecquerels (200 millicuries) each. Total not to exceed 14.8 gigabecquerels (400 millicuries).
B. Any radionuclide with atomic numbers 3-83 except: 1. Strontium-90 2. Lead-210	B. Sealed sources manufactured, labeled, packaged, and distributed in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State.	B. Each source not to exceed 370 kilobecquerels (10 microcuries); total not to exceed 3.7 megabecquerels (100 microcuries).
C. Any radionuclide	C. Any	C. Total not to exceed 2.2 gigabecquerels (60 millicuries). (No single source to exceed 1.9 gigabecquerels (50 millicuries). In addition, the combination and/or quantities of isotopes cannot exceed limits (see Condition 31) specified in 10 CFR 30.35(d).
D. Cesium-137	D. Sealed sources (Atomic Products 101-356 or equivalent)	D. 2 sources not to exceed 11.1 megabecquerels (300 microcuries) each. Total not to exceed 22.2 megabecquerels (600 microcuries).
E. Barium-133	E. Sealed sources (Atomic Products 063-562 or equivalent)	E. 2 sources not to exceed 11.1 megabecquerels (300 microcuries) each. Total not to exceed 22.2 megabecquerels (600 microcuries).
F. Cobalt-57	F. Sealed sources-dose calibrator vial sources (Eckert and Ziegler Isotope Products Model RV-057 or equivalent)	F. 2 sources not to exceed 370 megabecquerels (10 millicuries) each. Total not to exceed 740 megabecquerels (20 millicuries).
G. Radium-226	G. Sealed source (Isotope Products Model GF-226)	G. 1 source not to exceed 3.7 kilobecquerels (0.1 microcurie).
H. Californium-252	H. Sealed sources (Frontier Technology	H. 2 sources not to exceed 199.8

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	Corporation, Models 10 and 100 series)	megabecquerels (5.4 millicuries) each. Total not to exceed 399.6 megabecquerels (10.8 millicuries).
I. Cesium-137	I. Sealed source (J.L. Shepherd and Associates, Model 6810)	I. 1 source not to exceed 22.2 megabecquerels (600 millicuries).
J. Americium-241	J. Electroplated source (Eckert & Ziegler Isotope Products, catalog number AF-241-A1, Type A-1 Disk)	J. 1 source not to exceed 370 becquerels (0.01 microcurie).
K. Plutonium-239	K. Electroplated source (Eckert & Ziegler Isotope Products, catalog number AF-239-A1, Type A-1 Disk)	K. 1 source not to exceed 370 becquerels (0.01 microcurie).
L. Strontium-90	L. Eckert & Ziegler Isotope Products, catalog number BF-090-A, Type A Disk with Aluminized Mylar cover.	L. 1 source not to exceed 370 becquerels (0.01 microcurie).
M. Technetium-99	M. Eckert & Ziegler Isotope Products, catalog number BF-099-A, Type A Disk with Aluminized Mylar cover.	M. 1 source not to exceed 3.7 kilobecquerels (0.1 microcurie).
N. Carbon-14	N. Eckert & Ziegler Isotope Products, catalog number BF-014-A, Type A Disk with Aluminized Mylar cover.	N. 1 source not to exceed 3.7 kilobecquerels (0.1 microcurie).
O. Hydrogen-3	O. Mb-microtec Models 400/1, 400/2, 400/3, 400/4, 400/5 and 400/6.	O. 10 timepieces, hands, dials or self-luminous devices not to exceed 4.4 gigabecquerels (120 millicuries) each. Total not to exceed 44.4 gigabecquerels (1.2 curies).
P. Krypton-85	P. Sealed source	P. Each source not to exceed 3.7 megabecquerels (100 microcuries). Total not to exceed 703 megabecquerels (19 millicuries).
Q. Any radionuclide atomic numbers 3-83	Q. Sealed source	Q. Each source not to exceed 370 kilobecquerels (10 microcuries). Total not to exceed 37 megabecquerels (1 millicurie).
R. Hydrogen-3	R. Sealed source	R. Each source not to exceed 37 megabecquerels (1 millicurie). Total not to exceed 740 megabecquerels (20 millicuries).
S. Krypton-85	S. Sealed source (Eckert & Ziegler Isotope Products Models NER-58a Series and KAC.Da Series)	S. Each source not to exceed 37 gigabecquerels (1 curie). Total not to exceed 74 gigabecquerels (2 curies).
T. Strontium-90	T. Sealed source (AEA Technology-QSA Incorporated Model SIC.LC1)	T. Each source not to exceed 2 gigabecquerels (54 millicuries). Total not to exceed 7.4

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		gigabecquerels (200 millicuries).
U. Thorium-230	U. Sealed source (Eckert and Ziegler Isotope Products Model AF-230 or EAB-230)	U. 2 sources not to exceed 370 becquerels (0.01 microcuries) each. Total not to exceed 740 becquerels (0.02 microcuries).

9. Authorized Use

- A. To be used in a Tech/Ops Calibrator, Model 773 or 77314, for calibration of survey instruments (in- house/as a customer service) with ranges up to 2R/hr and to be used for assessment of shielding in facilities as a customer service.
- B. & J. – N. To be used as either instrument check sources and/or calibration of instruments.
- C. To be used incidental to the sampling and analysis of leak test samples of sealed sources, wipe samples or bulk materials for contamination of structural or environmental surfaces or materials during assessment, survey, remediation, packaging, or decontamination efforts, and thyroid/urine bioassays as a customer service.
- D. - H. & U. To be used for calibration of instruments.
- I. To be used in J.L. Shepherd and Associates Model 28-6 Instrument Calibrator.
- A.- C. & E. - F. To be used for quality control testing of diagnostic and nuclear medicine equipment as a customer service.
- O. To be used for testing of timepieces, hands, dials, or self-luminous devices as a customer service in preparation for an NRC Exempt Sealed Source and Device Registry Application or NRC Exempt Distribution License Application.
- P.-R. To be used for testing as a customer service in preparation for an NRC Exempt Sealed Source and Device Registry Application or NRC Exempt Distribution License Application.
- S.-T. To be used for testing in gauges as a customer service in preparation for General License Sealed Source and Device Registry Application or General Distribution License Application.**

LICENSE CONDITIONS

10. Radioactive material shall be used only at the following locations:

- (a) 6397 Nancy Ridge Drive, Suite B, San Diego, CA.
- (b) Temporary job sites of the licensee in areas not under exclusive (see Condition 24) federal jurisdiction throughout the State of California.

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

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12. Radioactive material may be used only by, or under the supervision of, individuals designated by the Radiation Safety Officer.
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 dated July 13, 2007 as clarified by the letters with attachments dated June 17, and August 13, 2009 each signed by Nicola Rinaldi, Radiation Safety Officer and includes Attachment 4 OSI's "List of Customer Services" and the application dated November 19, 2008 signed by Nicola Rinaldi describing the QC program for the liquid scintillation and gamma counters.
 - (b) The amendment applications with attachments, dated April 14, 2010, July 1, 2010, and July 8, 2010, all signed by Nicola Rinaldi, radiation safety officer, regarding relocation of the J. L. Shepherd Model 28-6 instrument calibrator within the same facility, and release of the existing room for unrestricted use, and the amendment application dated February 22, 2010, signed by Nick Rinaldi, Radiation Safety Officer, regarding deletion of sub-item 6.J. to be used in J.L. Shepherd and Associates Model 142-12S Irradiator/Calibrator. The requested training has not been authorized yet.
 - (c) The letter with attachments dated November 14, 2011, signed by Nicola Rinaldi, President, regarding increase in possession limit, updated Radiation Safety Program, add alternate Radiation Safety Officer, and an updated emergency contact phone numbers. Email with attachment dated December 8, 2011, received from Linda Bray, Alternate Radiation Safety Officer, regarding the packaging procedures.
 - (d) The letter with attachments dated December 29, 2011, as modified by the letter with attachments dated February 20, 2012, regarding the training, emergency telephone contact list, instrument calibration, and Radiation Safety Program dated February 20, 2012; and the letter dated February 28, 2012, regarding decommissioning requirements, all signed by Nicola Rinaldi, President.
 - (e) The letter with attachment dated April 2, 2014, signed by Nicola Rinaldi, Radiation Safety Officer, regarding providing customer service for thyroid bioassays.
 - (f) The letters dated July 9, 2014 and July 23, 2014, both signed by Nicola Rinaldi, Radiation Safety Officer, regarding providing customer services related to physics quality control testing of diagnostic imaging and nuclear medicine equipment and shielding assessments.
 - (g) The letters dated April 16, 2015, and April 17, 2015, both signed by Nicola Rinaldi, President and Radiation Safety Officer, regarding providing customer service related to testing of luminous time pieces.
 - (h) The letter dated June 29, 2015, signed by Nicola Rinaldi, President and Radiation Safety Officer, and letter dated July 14, 2015, with attachments, signed by Linda Bray, Alternate Radiation Safety Officer regarding customer service related to testing of devices in support of exempt sealed source and device application.
 - (i) **The letters dated July 15, 2016 and December 16, 2016, as modified by letters dated January 10, 2017, with attachment, and January 13, 2017, all signed by Nicola Rinaldi, President and Radiation Safety Officer, regarding providing testing of sealed sources as a customer service in preparation for general licensed sealed source and device registry application or general distribution license application and letter dated January 23, 2017, signed by Nicola Rinaldi, President and Radiation Safety Officer, regarding calibration of instruments.**
14. (a) The Radiation Safety Officer in this program shall be Nicola Rinaldi.

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- (b) The Alternate Radiation Safety Officer in this program shall be Linda Bray.
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).
 16. 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, Mail Stop 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.
 17. The following individuals are authorized to collect wipe test samples of sealed sources possessed under this license using leak test kits acceptable to the California Department of Public Health:
 - (a) The Radiation Safety Officer
 - (b) Qualified individuals designated in writing by the Radiation Safety Officer.
 18. 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) Analysis of materials as stated in (a) above for the amount of radioactivity. Reports to customers of analysis shall be in microcuries.
 19. 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.
 20. The licensee is authorized to calibrate radiation detection instruments as a customer service and for his own use. Each radiation detection instrument shall be calibrated as specified in ANSI N323a, 1997 or by the instrument manufacturer.
 21. The licensee shall comply with all requirements of Title 17, California Code of Regulations, Section 30373 when transporting or delivering radioactive materials to a carrier for shipment. These requirements include: packaging, marking, labeling, loading, storage, placarding, monitoring, and accident reporting. Shipping papers shall be maintained for inspection pursuant to the U.S. Department of Transportation requirements (Title 49, Code of Federal Regulations, Part 172, Sections 172.200 through 172.204).
 22. 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 20.1204.
 23. The licensee is authorized to hold radioactive materials with a physical half-life of less than 90 days including Co-57 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 10 half-lives. Co-57 shall be held for decay for at least 15 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.

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- (c) Records shall be maintained of the disposal of licensed materials made by decay in storage. These records shall be sufficient to demonstrate compliance with this license condition and shall be retained for 3 years after the record is made.
24. Before radioactive materials may be used at a temporary job site at any federal facility, the jurisdiction status of the job site must be determined. If the jurisdiction status is unknown, the federal agency should be contacted to determine if the job site is under exclusive federal jurisdiction. A response shall be obtained in writing or a record made of the name and title of the person at the federal agency who provided the determination and the date that it was provided. Authorization for use of radioactive materials at the job sites under exclusive federal jurisdiction shall be obtained either by:
- (a) Filing an NRC Form-241 in accordance with the Code of Federal Regulations, Title 10, Part 150.20 (b), "Recognition of Agreement State Licenses", or
- (b) By applying for a specific NRC license.
- Before radioactive material can be used at a temporary job site in another State, authorization shall be obtained from the State if it is an Agreement State, or from the NRC for any non-Agreement State, either by filing for reciprocity or applying for a specific license.
25. 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
26. At least 14 days before initiating activities at a temporary job site, including military or former military sites where the temporary job site is not under federal exclusive jurisdiction, the licensee shall notify, in writing, the California Department of Public Health, Radiologic Health Branch. The notification shall include the following information:
- (a) Site-specific radiological procedures if they have not been previously approved by the Department of Public Health.
- (b) Estimated type, quantity, and physical/chemical forms of radioactive material.
- (c) Specification of the site location.
- (d) Description of project activities that are planned for the site, including management and disposition of radioactive material.
- (e) Estimated project start date and duration of project.
- (f) Name, address, title, and phone number of a point of contact for the person managing radiological operations at the temporary job site.


Within 30 days of completing activities at each job site, the licensee shall notify, in writing, the California Department of Public Health, Radiologic Health Branch, regarding the radiological status of the temporary job site and the disposition of any licensed radioactive material.

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27. This license does not authorize the use of licensed material at temporary job sites for uses already specifically authorized by a customer's license. If a customer also holds a license issued by the NRC or an Agreement State, the licensee shall establish a written agreement between the licensee and the customer specifying which licensee activities shall be performed under the customer's license and supervision, and which licensee activities shall be performed under the licensee's supervision pursuant to this license. The agreement shall include a commitment by the licensee and the customer to ensure safety, and any commitments by the licensee to help the customer clean up the temporary job site if there is an accident. A copy of this agreement shall be included in the notification required by License Condition 26.
28. The licensee shall maintain records of information important to decommissioning each temporary job site at the applicable job site pursuant to Title 17, California Code of Regulations, section 30256. The records shall be made available to the Department for inspection and to the customer upon request during decommissioning activities, and shall be transferred to the customer for retention at the completion of activities at a temporary job site.
29. At least 30 days prior to vacating any address of use listed in Condition 10 of this license, the licensee shall provide written notification of intent to vacate to the California Department of Public Health, in accordance with Title 17, California Code of Regulations, Section 30256 (b). Control of all licensed areas must be maintained until such areas are released by the Department for unrestricted use or the license is terminated, in accordance with Title 17, California Code of Regulations, Section 30256 (j).
30. A copy of this license and a copy of all records and documents pertaining to this license shall be maintained available for inspection at 6397 Nancy Ridge Drive, Suite B, San Diego, CA.
31. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material so that at no time will the total quantity of radioactive material possessed require financial surety for decommissioning in accordance with the California Code of Regulations, Title 17, Section 30195.1. A value of 100 microcuries is assigned to Cobalt-57 to supplement the Code of Federal Regulations, Title 10, Part 30, Appendix B.

Issued for the California Department of Public HealthDate: February 1, 2017

By: _____


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February 12, 2016

Radiation Safety Program Files

Subject: List of Authorized Users for License Number: 5149-37

The RSO (Nick Rinaldi), alternate RSO (Linda Bray) and following individuals are authorized to receive, handle, store, use, and disposition radioactive materials unsupervised and to supervise the use of such material in accordance with the requirements of license 5149-37.

Todd Hansen
Chris Walton
Scott Tillinghast
Lloyd Castillo
Anthony Robe
Andrew Luckow
Tim Gray
Anne L. Rinaldi

A handwritten signature in black ink that reads "Nicola Rinaldi".

Nicola Rinaldi, President
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