U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 31

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, 37, 39, 40, 70 and 71, 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 letter dated July 06, 2021,	4. Expiration Date: November 30, 2036
1. Alliance HealthCare Services, Inc. 2. 18201 Von Karman Ave. STE 600 Irvine, CA 92612	3. License No.: 47-25570-01 is amended in its entirety to read as follows:	5. Docket No.: 030-35774 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	9. Authorized use
A. Any byproduct material permitted by 10 CFR 35.200	A. Any	A. As Needed	A. For use in imaging and localization studies permitted by 10 CFR 35.200.
B. Strontium-82	B. Any Except Sealed Sources	B. 200 millicuries total	B. For decay in storage only in accordance with 10 CFR 35.92.
C. Strontium-85	C. Any Except Sealed Sources	C. 1 curie total	C. For decay in storage only in accordance with 10 CFR 35.92.
D. Germanium-68	D. Sealed Sources	D. 50 millicuries total	D. For storage only, limited to one year, incident to transfer in accordance with 10 CFR 30.41.

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CONDITIONS

10. A. Licensed material listed in Subitem No. 6.A. incident to mobile nuclear medicine activities shall be used or stored at temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material, including areas of exclusive Federal jurisdiction within Agreement States.

If the jurisdiction status of a Federal facility within an Agreement State is unknown, the licensee should contact the Federal agency controlling the job site in question to determine whether the proposed job site is an area of exclusive Federal jurisdiction. Authorization for use of radioactive materials at job sites in Agreement States not under exclusive Federal jurisdiction shall be obtained from the appropriate state regulatory agency.

B. Licensed material listed in Subitem Nos. 6.B and 6.C., limited to strontium waste generated incident to mobile nuclear medicine activities, shall be stored at the licensee's facilities located at 525 S Gould St., Owosso, Michigan, for decay in storage in accordance with 10 CFR 35.92.

C. Licensed material listed in Subitem No. 6.D., limited to germanium-68 sealed sources transferred from the licensee's mobile nuclear medicine vans, shall be stored at the licensee's facilities located at 525 S. Gould Street, Owosso, Michigan, for up to one year pending transfer to an authorized recipient in accordance with 10 CFR 30.41.

11. The Radiation Safety Officer for this license is Kay Kassel, M.S., C.N.M.T.

12. Licensed material shall only be used by, or under the supervision of:

A. Individuals permitted to work as authorized users in accordance with 10 CFR 35.13 and 10 CFR 35.14.

B. The following individuals are authorized users for the material and medical uses as indicated:

Authorized User (M.D.,D.O.,etc.)	Material and Use
David Abramowitz, M.D.	10 CFR 35.200

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Authorized User (M.D.,D.O.,etc.)	Material and Use
Irfan Ahmad, M.D.	10 CFR 35.200
Afzal Ahmed, M.D.	10 CFR 35.200
Mark J. Akers, M.D.	10 CFR 35.200
Paul D. Akers, M.D.	10 CFR 35.200
Syed I. Ali, M.D.	10 CFR 35.200
Rajaa M. Almestady, M.D.	10 CFR 35.200
Daniel Altman, M.D.	10 CFR 35.200
Marsha Anderson, M.D.	10 CFR 35.200
Mark C. Arvin, M.D.	10 CFR 35.200
Akhtar Ashraf, M.D.	10 CFR 35.200
James Baek, M.D.	10 CFR 35.200
Indraneel Banerji, M.D.	10 CFR 35.200
David Bauer, M.D.	10 CFR 35.200
James R. Bergh, M.D.	10 CFR 35.200
Richard R. Black, D.O.	10 CFR 35.200
Rodger Blake, M.D.	10 CFR 35.200
Paul Henry Blom, M.D.	10 CFR 35.200
Suzanne Bosman, M.D.	10 CFR 35.200
Joel A. Brake, M.D.	10 CFR 35.200
James M. Browne, M.D.	10 CFR 35.200
Douglas A. Bruns, D.O.	10 CFR 35.200
David J. Burkart, M.D.	10 CFR 35.200
Jeffery S. Cahoon, M.D.	10 CFR 35.200
James Paul Carl, M.D.	10 CFR 35.200

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Authorized User (M.D.,D.O.,etc.)	Material and Use
Peter Chirico, M.D.	10 CFR 35.200
Corey W. Chopra, M.D.	10 CFR 35.200
Jesse A. Cole, M.D.	10 CFR 35.200
Ricky J. Compton, M.D.	10 CFR 35.200
John Phillip Cox, D.O.	10 CFR 35.200
Robert J. Cure, M.D.	10 CFR 35.200
Anthony R. D'Amico, M.D.	10 CFR 35.200
Ryan Daily, M.D.	10 CFR 35.200
Kyle L. Dale, M.D.	10 CFR 35.200
Daniel J. Daunhauer, M.D.	10 CFR 35.200
Vu Quoc Do, M.D.	10 CFR 35.200
Sarsfield Patrick Dougherty, M.D.	10 CFR 35.200
Hans G. Dransfeld, M.D.	10 CFR 35.200
Joseph W. Dransfeld, M.D.	10 CFR 35.200
Nathaniel D. Dueker, M.D.	10 CFR 35.200
Douglas M. Dunco, M.D.	10 CFR 35.200
Rodney A. Dunseath, D.O.	10 CFR 35.200
Paul H. Eikens, M.D.	10 CFR 35.200
Mark W. Elliott, M.D.	10 CFR 35.200
Susannah G. Ellsworth, M.D	10 CFR 35.200
Adwoa Essel, M.D.	10 CFR 35.200
Hilary Ann Evans, M.D.	10 CFR 35.200
Thomas H. Farquhar, M.D., Ph.D.	10 CFR 35.200
Angelo Steven Ferraro, M.D.	10 CFR 35.200

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Authorized User (M.D.,D.O.,etc.)	Material and Use
Luke Gerges, D.O.	10 CFR 35.200
Joshua Dale Gibson, M.D.	10 CFR 35.200
Kendall Goldschmidt, M.D.	10 CFR 35.200
Lee Corey Haikal, M.D.	10 CFR 35.200
Nathan R. Hatfield, M.D.	10 CFR 35.200
David Damion Hazlett, Jr., M.D.	10 CFR 35.200
Jeffrey A. Hicklin, M.D.	10 CFR 35.200
Robert Hills, D.O.	10 CFR 35.200
Ronald D. Jenkins, M.D.	10 CFR 35.200
John Kalabat, M.D.	10 CFR 35.200
Craig S. Kamen, M.D.	10 CFR 35.200
Prasanta K. Karak, M.D.	10 CFR 35.200
Kevin Matthew Kavanaugh, M.D.	10 CFR 35.200
Jeffrey Kaye, M.D.	10 CFR 35.200
Imran Kazem, M.D.	10 CFR 35.200
Stephen Joowhan Kim, M.D.	10 CFR 35.200
Philip Kohanski, M.D.	10 CFR 35.200
Kenneth L. Koontz, M.D.	10 CFR 35.200
Michael V. Korona, Jr., M.D.	10 CFR 35.200
Gary W. Kravetz, M.D.	10 CFR 35.200
Adam Thomas Krompecher, M.D.	10 CFR 35.200
Francisco J. Lammoglia, M.D.	10 CFR 35.200
Christopher J. Leary, M.D.	10 CFR 35.200
Terry S. Lee, M.D.	10 CFR 35.200

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Authorized User (M.D.,D.O.,etc.)	Material and Use
Eric L. Leonard, M.D.	10 CFR 35.200
Donald Lewis, M.D.	10 CFR 35.200
Edward J. Maas, M.D.	10 CFR 35.200
Colleen M. Madden, M.D.	10 CFR 35.200
Mrinal Mali, M.D.	10 CFR 35.200
Michael J. Malnofski, M.D.	10 CFR 35.200
A. Jane MaLoof, M.D.	10 CFR 35.200
Jack D. Markiewicz, M.D.	10 CFR 35.200
Phyllis Martin-Simmerman, M.D.	10 CFR 35.200
William Mason, M.D.	10 CFR 35.200
Matthew E. Maxwell, M.D.	10 CFR 35.200
Marco S. Mazzella, M.D.	10 CFR 35.200
Elvin McCarl, M.D.	10 CFR 35.200
Richard D. Miller, M.D.	10 CFR 35.200
Steve Min, D.O.	10 CFR 35.200
Virginia Molleran, M.D.	10 CFR 35.200
Craig Moore, M.D.	10 CFR 35.200
Joshua A. Nepute, M.D.	10 CFR 35.200
Kevin O'Brien, M.D.	10 CFR 35.200
Patrick M. O'Toole, M.D.	10 CFR 35.200
Dana Olson, M.D.	10 CFR 35.200
Robert Oostveen, M.D.	10 CFR 35.200
Samir Parikh, M.D.	10 CFR 35.200
Bharat Patel, M.D.	10 CFR 35.200

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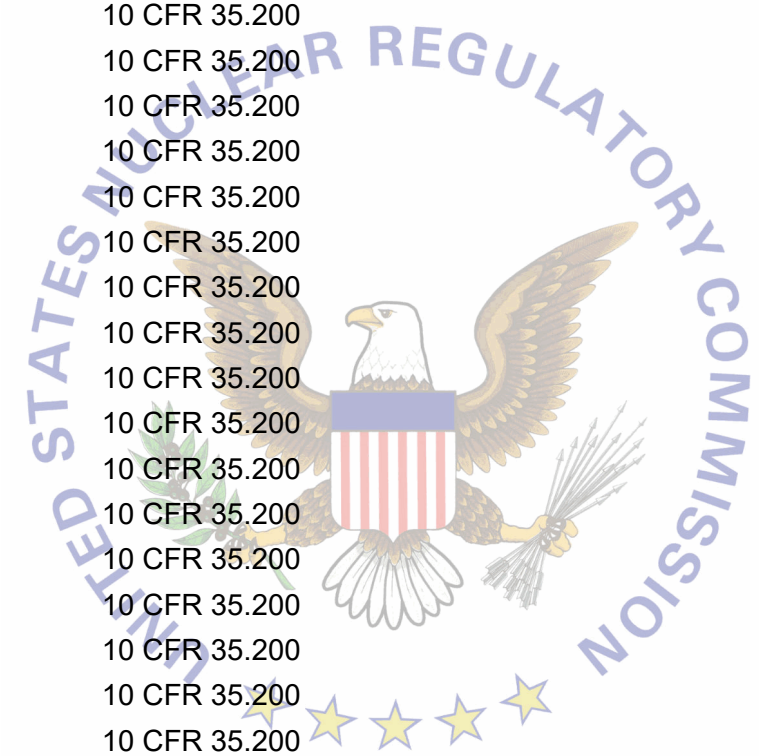
Authorized User (M.D.,D.O.,etc.)	Material and Use
Grant D. Petty, M.D.	10 CFR 35.200
Krishna R. Pillai, M.D.	10 CFR 35.200
James Milton Reynolds, M.D.	10 CFR 35.200
Reuben Rock, M.D.	10 CFR 35.200
Daniel Adam Rodgers, M.D.	10 CFR 35.200
Colin Rose, M.D.	10 CFR 35.200
Heather Rose, M.D.	10 CFR 35.200
Ronald J. Rosenberg, M.D.	10 CFR 35.200
Aldo Ruffolo, M.D.	10 CFR 35.200
Paul Sanchirico, M.D.	10 CFR 35.200
Mark Shaman, M.D.	10 CFR 35.200
Paul W. Sheets, M.D.	10 CFR 35.200
Steven K. Shekut, M.D.	10 CFR 35.200
Charles W. Siegler, M.D.	10 CFR 35.200
Justin Sims, M.D.	10 CFR 35.200
Stacy L. Spooner, M.D.	10 CFR 35.200
Gregory R. Spurling, M.D.	10 CFR 35.200
Michael A. Stewart, M.D.	10 CFR 35.200
LeAnn Stidham, M.D.	10 CFR 35.200
Nathan M. Strabala, M.D.	10 CFR 35.200
Victoria A. Swegles, D.O.	10 CFR 35.200
Sanjay J. Talati, M.D.	10 CFR 35.200
Shrey K. Thawait, M.D.	10 CFR 35.200
Smari Thordarson, M.D.	10 CFR 35.200



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Authorized User (M.D.,D.O.,etc.)	Material and Use
Walter Parke Thrush, M.D.	10 CFR 35.200
Paul E. Timperman, M.D.	10 CFR 35.200
Gregory T. Turner, M.D.	10 CFR 35.200
Torin P. Walters, M.D.	10 CFR 35.200
James K. Watson, M.D.	10 CFR 35.200
Ronald R. Weis, M.D.	10 CFR 35.200
Jonathan W. Weiss, M.D.	10 CFR 35.200
Michael Whisenant, M.D.	10 CFR 35.200
Thomas T. Win, M.D.	10 CFR 35.200
Milton R. Wolf, M.D.	10 CFR 35.200
Ehab H. Youssef, M.D.	10 CFR 35.200
John S. Yungmeyer, M.D.	10 CFR 35.200
Roy W. "Chip" Zimmer, III, M.D.	10 CFR 35.200

C. The following individuals are authorized users for nonmedical uses as indicated:

Non-Medical Use	Material and Use
Kay Kassel, M.S., C.N.M.T.	Strontium-82/85 for decay-in-storage; Germanium-68 sealed sources for storage only

13. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 3 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.

14. Sealed sources containing licensed material shall not be opened by the licensee, except as specifically authorized.

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15. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State. In the absence of a registration certificate, sealed sources shall be tested for leakage and/or contamination at intervals not to exceed 6 months, or at such other intervals as specified.

B. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.

C. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.

D. Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

E. The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample. If the test reveals the presence of 185 becquerels (0.005 microcuries) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.

F. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

G. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for 3 years.

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16. 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. This license condition applies only to those statements, representations, and procedures that are required to be submitted in accordance with the regulations. Additionally, this license condition does not limit the licensee's ability to make changes to the radiation protection program as provided for in 10 CFR 35.26. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence impose on the licensee requirements that are more restrictive than or in addition to the regulations.

A. Letter, Application, and Delegation of Authority dated June 3, 2021, excluding Radiation Safety Program policies and procedures (ML21172A247)
B. Letter dated July 6, 2021 (ML21197A087)
C. Letter dated October 18, 2021 (ML21299A298)

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date: December 13, 2021

By: Magdalena R. Gryglak Digitally signed by Magdalena R. Gryglak Date: 2021.12.13 09:16:17 -06'00'

Magdalena R. Gryglak
Region 3