


<b>NRC FORM 7</b> (07-2019) 10 CFR 110		<b>U. S. NUCLEAR REGULATORY COMMISSION</b>		<b>APPROVED BY OMB: NO. 3150-0027</b>		<b>EXPIRES: 02/28/2022</b>	
		<b>APPLICATION FOR NRC EXPORT OR IMPORT LICENSE, AMENDMENT, RENEWAL, OR CONSENT REQUEST(S)</b> <i>(See Instructions on Pages 4 and 5)</i>				Estimated burden per response to comply with this mandatory collection request: 2.4 hours. This submittal is reviewed to ensure that the applicable statutory, regulatory, and policy considerations are satisfied. Send comments regarding burden estimate to the Information Services Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0027), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.	
<b>PART A. FOR NRC USE ONLY</b>		<input checked="" type="checkbox"/> Public <b>OR</b> <input type="checkbox"/> Non-Public		Date Received <b>03/01/2021 JMS</b>			
License Number <b>XB1351</b>		Docket Number <b>11006404</b>		Adams Accession Number			
<b>PART B. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS, OR CONSENT REQUESTS</b> (If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)							
1. Name and Address of Applicant/Licensee <b>Siemens Medical Solution USA, Inc.</b> <b>3850 Quadrangle Boulevard</b> <b>Orlando, FL 32817.</b>			1a. Name of Applicant's Contact <b>Prasanta Rijal</b>		1b. Applicant's Reference Number <b>NRC7174</b>		
			1c. Office Telephone Number <b>(407) 619 - 3526</b>		1d. Office Facsimile Telephone Number <b>N/A</b>		
			1e. Applicant's E-mail Address <b>prasanta.rijal@siemens-healthineers.com</b>				
2. Type of Action Requested (Check one)		<input checked="" type="checkbox"/> Export (Parts B, C, E)		<input type="checkbox"/> Amendment/Renewal		Current License Number:	
		<input type="checkbox"/> Import (Parts B, D, E)		<input type="checkbox"/> Consent Request (Parts B, C)		Current License Number:	
3. Contract Number(s) <b>4504014305</b>				4. First Shipment Date <b>01/15/2021</b>	5. Last Shipment Date <b>01/14/2023</b>	6. Proposed Expiration Date <b>07/20/2023</b>	
<b>PART C. TO BE COMPLETED FOR EXPORT LICENSES, AMENDMENTS, OR RENEWALS</b> (If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)							
7. Name(s)/Address(es) of U. S. Suppliers and/or other U. S. Parties to the Export <b>Siemens Medical Solution USA, Inc.</b> <b>810 Innovation Drive</b> <b>Knoxville, TN 37932</b> <b>United State of America.</b>  Please see page no. 3 of 4 for additional parties to export.			8. Name(s)/Address(es) of Intermediate Foreign Consignee(s) <b>Siemens Healthcare GmbH</b> <b>Rittigfeld 1</b> <b>91301 Forchheim</b> <b>Germany.</b>		9. Name(s)/Address(es) of Ultimate Foreign Consignee(s)  <b>Karachi Institute of Radiotherapy and Nuclear Medicine</b>  Please see page no. 3 of 4 for addresses and other details		
7a. Function(s) Performed/Service(s) Provided <b>Source Manufacturer</b> Please see page no. 3 of 4			8a. Intermediate Use(s) Please see page no. 3 of 4 details		9a. Ultimate End Use(s) <b>Sources for Biograph mCT medical imaging system</b>		
10. Description of Radioactive Materials, Sealed Sources, Nuclear Facilities, Equipment, or Components; for Nuclear Equipment include Total Dollar Value of Equipment for Export  <b>Germanium -68 Solid Polymer</b>  <b>Eight kits of Ge-68.</b> <b>Each kit contains one unit of CS-27 and two units of LS-LA.</b>  <b>Maximum activity per kit 185 MBq</b>  <b>see page 4 of 4 for additional details.</b>				10a. Maximum Total Volume/Element WGT (KG), or Total Activity (TBq)  <b>1) CS-27:11.7 Kg; Max. Activity 92.5 MBq</b> <b>2) LS-LA set Up rod 4.8 Grams. Max Activity 46.25</b>  .	10b. Max Enrichment or WGT%  <b>1)CS-27 contains 0.026% Ge-68.</b> <b>2) LS-LA contains 0.26% Ge-68</b>	10c. Max Isotope WGT (KG)  <b>1)CS-27 contains 3 grams of Ge-68.</b> <b>2) LS-LA contains 0.0125 grams of Ge-68 per rod.</b>	
11. Foreign origin (or obligations by country and, if known, by percentage of maximum total volume) <b>None: 100% US Obligated.</b>							

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**PART D. TO BE COMPLETED FOR IMPORT LICENSES, AMENDMENTS, OR RENEWALS**

(If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)

12. Name(s)/Address(es) of Foreign Suppliers and/or other Foreign Parties to Import	13. Name(s)/Address(es) of Foreign or U. S. Intermediate Consignee(s)	14. Name(s)/Address(es) of Ultimate U. S. Consignee(s)	
12a. NRC Export License Number(s) (if applicable)	13a. License Number(s) / Expiration Date(s)	14a. License Number(s) / Expiration Date(s)	
	13b. Intermediate Use(s)	14b. Ultimate End Use(s)	
15. Description of Radioactive Materials, Sealed Sources, Nuclear Facilities	15a. Maximum Total Volume/ Element WGT (KG), or Total Activity (TBq)	15b. Max Enrichment or WGT%	15c. Max Isotope WGT (KG)

16. Foreign obligations (By country and by Percentage of Maximum Total Volume)


**PART E. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS OR CONSENT REQUEST(S)**

(If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)

17. Additional Information provided on pages 3, 4, and/or separate sheets? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	17a. Copies of Recipient's Authorizations Provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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18. Certification:

**I, the applicant's authorized official, hereby certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, and that all information provided is correct to the best of my knowledge.**

18a. Print Name and Title of Authorized Official Prasanta Rijal, Director Import Export Compliance Siemens Medical Solutions USA Inc.	18b. Signature -- Authorized Official  Digitally signed by Rijal Prasanta DN: cn=Rijal Prasanta, o=Siemens, email=prasanta.rijal@siemens- healthineers.com Date: 2021.01.08 16:48:58 -05'00'	18c. Date 01/08/2021
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Additional Information (Reference applicable block numbers from page 1 and/or page 2 for each entry)

**Block 7)**

Bollore Logistics USA-Chicago Branch 10700 Waveland Avenue Franklin Park, IL, 60131

**Block 7a)**

Bollore Logistics USA is freight forwarder that will ship directly to the ultimate consignees located in Pakistan.

**Block 8a)**

Siemens Healthcare GmbH, Rittigfeld 1, 91301 Forchheim, Germany received order from the end user in Pakistan as listed on block 9 of the application. As part of fulfillment to the order, Siemens Healthcare GmbH issued purchase orders 4504014305 to Siemens Medical Solutions (SMS) USA to drop ship item mentioned in block 10 to the end user.

**Block 9)**

Karachi Institute of Radiotherapy and Nuclear Medicine (KIRAN) near Safoora Goath, Off University Road, RDA Scheme - 33 Gulzar E Hijri, Karachi, Pakistan.

Contact: Dr. Akhtar Ahmed, Phone: +92-21-99261601-4, Fax: +92-21-99261610

Karachi Institute of Radiotherapy and Nuclear Medicine (KIRAN) is end user for Ge-68 source kits for use with Medical Imaging System Biograph mCT. Karachi Institute of Radiotherapy and Nuclear Medicine (KIRAN) is also importer of record.

End user may receive maximum of four kits during the validity of the license. After the first delivery of the kits, replacement kits will be delivered to the end user only as needed until the expiration of the license.

**Block 9a)**

Sealed sources Ge-68 is for use with Biograph mCT medical imaging systems

Biograph mCT PET/CT medical imaging system. Positron emission tomography (PET) is a nuclear medicine, functional imaging technique that is used to observe metabolic processes in the body. The medical system detects cancers, tumors, brain diseases etc. The system detects pairs of gamma rays emitted indirectly by a positron-emitting radionuclide (or tracers), which is introduced into the body on a biologically active molecule. Three-dimensional images of tracer concentration within the body are then constructed by computer analysis. In modern PET-CT scanners, three dimensional imaging is often accomplished with the aid of a CT X-Ray scan performed on the patient during the same session, in the same machine. Images delivered by Biograph mCT are used by trained medical professionals as an aid in diagnosis, treatment preparation and radiation therapy planning.

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Block10)

The model CS-27 is the Siemens product name for our 27 cm uniform phantom. A uniform phantom is a cylindrical source that is mechanically sealed with a uniform mixture of solid Ge-68 and polymer inside. The uniform phantom is used to set up the system as well as perform the daily quality control on the scanner. The primary purpose of this scan is to quality control the scanner's detectors prior to scanning a patient to ensure everything is operating correctly.

The model LS-LA set up rods are rod (also called line) sources that are used primarily to align the PET scanner with the CT scanner. The rods are made of a solid Ge-68 and polymer mixture that is welded on each end to seal the source. The rods are placed in the scanner field of view and a scan is performed. The PET scanner images the radiation inside the rods and the CT images the physical rod. The two scanners are successfully aligned to create one unit when the two images align.

The PET-CT Phantom includes internal structures which, when imaged with both modalities, can demonstrate how accurately the two image sets are aligned. In addition, a single sample of radioactive water is attenuated by water, bone, and CT contrast material (as

well as air only) to determine how accurately the CT-based PET attenuation correction works.