EXPORT LI	CENSE				
NRC FORM 250 (10-07)	NRC LICENSE NO.: PXB221.00				
UNITED STA TES OF AMERICA	Page 1 of 3				
Nuclear Regulatory Commission Washington, D.C. 20555	NRC DOCKET NO.: 11006308				
	LICENSE EXPIRES: July 31, 2028				
Pursuant to the Atomic Energy Act of 1954, as amended, and the regulat thereto, and in reliance on statements and representations heretofore ma authorizing the licensee to export the byproduct materials listed below, s valid if the licensee or 'Other Party(ies) to Export' maintain the requisite LICENSEE	ions issued by the Nuclear Regulatory Commission (NRC) pursuan ade by the applicant/licensee, this license is hereby issued subject to the terms and conditions herein. This license is only NRC or Agreement State domestic license(s). ULTIMATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)				
NSSI, Sources & Services, Inc. 5711 Etheridge Street Houston, TX 77087 Attn: Gamaliel Torres	Eckert & Ziegler Cesio s.r.o. 10227 Prague 10 Radiova 1122/1, 10200 Praha 10 Czech Republic				
INTERMEDIATE CONSIGNEE(S) IN FOREIGN COUNTRY(IES)	OTHER U.S. PARTY(IES) TO EXPORT				
None	See page 2				
APPLICANT'S REFERENCE NO.: NRC5242018	ULTIMATE DESTINATION: Czech Republic				
CONDITIONS, NOTES, AND DESCRIPTIONS OF 10 CFR PART 110, APPENDIX P, RADIOACTIVE MATERIALS TO BE EXPORTED (NOTE: SEE PAGE 3 FOR DEFINITIONS OF CATEGORY 1 AND CATEGORY 2) Export to Czech Republic of Category 2 quantities of Am-241 (not to exceed 3.7 TBq), contained in sealed sources for					
Licensee is responsible for compliance with all applicable exponent all terms and conditions of domestic material possession licer application, must submit information required by 10 CFR § 10 CFR § 110.32(g) at least <b>24 hours prior to shipment</b> . See Licensee shall submit by February 1 of each year one copy of under a general license) during the previous calendar year re (1) A description of the material, including quantity; (2) Approx end users, and intended use keyed to the items shipped. License expiration date is based on established limits.	ort, and other domestic regulatory requirements, including nses. Licensee, if not already submitted with your 110.32(d) and pertinent documentation required by see page 3 for Mandatory Advanced Notifications. a report of all americium shipments (under this license o equired by 10 CFR §110.54(b). The report must include imate shipment dates; and (3) A list of recipient countries				
Neither this license nor any right under this license shall be assigned or otherwise transferred in violation of the provisions of the Atomic	THIS LICENSE IS INVALID UNLESS SIGNED BELOW BY AUTHORIZED NRC REPRESENTATIVE				
Energy Act of 1954, as amended. This license is subject to the right of recapture or control by Section 108 of the Atomic Energy Act of 1954, as amended, and to all of the other provisions of said Acts, now or hereafter in effect and to all valid rules and regulations of the NRC.	SIGNATURE: Mail L. Skeen, Deputy Director   NAME AND TITLE: David L. Skeen, Deputy Director   Office of International Programs   DATE OF ISSUANCE: JUL 1 9 2018				
EXPORT LICENSE					

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## OTHER U.S. PARTY(IES) TO EXPORT:

- 1. Eckert & Ziegler Isotope Products 24937 Avenue Tibbitts Valencia, CA 91355
- 2. LANS, LLC for U.S. DOE Bikini Atoll Road, SM30 Los Alamos, NM 87545

## MANDATORY ADVANCED NOTIFICATIONS PER 10 CFR PART 110.50(c)

The following Advanced Notifications must be made to both the NRC and, in case of exports, the government of the importing country in advance of each shipment:

Advanced Notifications to the NRC are to be emailed to <u>hoo.hoc@nrc.gov</u> (preferred method) or faxed to the NRC at 301-816-5151. In the subject line of the email or on the fax cover page include: "10 CFR 110.50(c) Notification." For technical assistance, use the same e-mail address or call 301-816-5100.

Advanced Notifications to the government of the importing country must be emailed or faxed to the appropriate foreign government authorities. To locate the point-of-contact for international Prior Shipment Notifications see: <u>http://www-ns.iaea.org/downloads/rw/imp-export/import-export-contact-points.pdf</u>. In the subject line of the email or on the fax cover page include: "NOTIFICATION TO THE IMPORTING STATE PRIOR TO SHIPMENT OF CATEGORY 1 OR 2 RADIOACTIVE SOURCES." For technical assistance or for countries not listed, contact the Office of International Programs' export/import staff at 301-287-9056.

## Table 1: Appendix P to Part 110 Category 1 and Category 2 Radioactive Material Threshold Limits

Radioactive	Category 1		Category 2	
Material	Terabequerels (TBq)	Curies (Ci) <sup>1</sup>	Terabequerels (TBq)	Curies(Ci) <sup>1</sup>
, Americium-241 (Am-241)	60	1,600	0.6	16
Americium-241/Beryllium (Am- 241/Be)	60	1,600	0.6	16
Californium-252 (Cf-252)	20	540	0.2	5.4
Curium-244 (Cm-244)	50	1,400	0.5	. 14
Cobalt-60 (Co-60)	30	810	0.3	8.1
Cesium-137 (Cs-137)	100	2,700	1.0	27
Gadolinium-153 (Gd-153)	1,000	27,000	10.0	270
Iridium-192 (Ir-192)	80	2,200	0.8	22
Plutonium-238 <sup>2</sup> (Pu-238)	60	1,600	0.6	16
Plutonium-239/Beryllium <sup>2</sup> (Pu-239/Be)	60	1,600	0.6	16
Promethium-147 (Pm-147)	40,000	1,100,000	400	11,000
Radium-226 <sup>3</sup> (Ra-226)	40	1,100	0.4	· 11
Selenium-75 (Se-75)	200	5,400	2.0	54
Strontium-90 (Y-90)	1,000	27,000	10.0	270
Thulium-170 (Tm-170)	20,000	540,000	200	5,400
Ytterbium-169 (Yb-169)	300	8,100	3.0	81

alculation of Shipment	s Containing Multiple	Sources or	Radionuclides:

The "sum of fractions" methodology for evaluating combinations of radionuclides being transported is to be used when import or export shipments contain multiple sources or multiple radionuclides. The threshold limit values used in a sum of the fractions calculation must be the metric values (i.e., TBg).

I. If multiple sources and/or multiple radionuclides are present in an import or export shipment, the sum of the fractions of the activity of each radionuclide must be determined to verify the shipment is less than the Category 1 or 2 limits of Table 1, as appropriate. If the calculated sum of the fractions ratio, using the following equation, is greater than or equal to 1.0, then the import or export shipment exceeds the threshold limits of Table 1 and the applicable security provisions of this part apply.

II. Use the equation below to calculate the sum of the fractions ratio by inserting the actual activity of the applicable radionuclides or of the individual sources (of the same radionuclides) in the numerator of the equation and the corresponding threshold activity limit from the Table 1 in the denominator of the equation. Ensure the numerator and denominator values are in the same units and all calculations must be performed using the TBq (i.e., metric) values of Table 1.

R1 = activity for radionuclides or source number 1 R2 = activity for radionuclides or source number 2 RN = activity for radionuclides or source number n AR1 = activity limit for radionuclides or source number 1 AR2 = activity limit for radionuclides or source number 2 ARN = activity limit for radionuclides or source number n

$$\sum_{1}^{n} \left[ \frac{R_{1}}{AR_{1}} + \frac{R_{2}}{AR_{2}} + \frac{R_{n}}{AR_{n}} \right] \ge 1$$

<sup>1</sup> The values to be used to determine whether a license is required are given in TBq. Curie (Ci) values are provided for practical usefulness only and are rounded after conversion.

<sup>2</sup> The limits for exports of Pu-238 and Pu-239/Be can be found in § 110.21.

<sup>3</sup> Discrete sources of Radium-226.