



The Harshaw Chemical Company

DIVISION OF KEWANEE OIL COMPANY

1945 EAST 97th STREET
CLEVELAND, OHIO 44106
Telephone: 216 • 721-8300

January 15, 1968

0131

U. S. Atomic Energy Commission
Division of Material Licensing
Washington, D. C. 20545

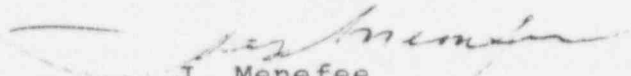
Attn: Director, Material Licensing

Gentlemen:

in compliance with Sec. 30.24 n (4) and Sec. 70.39 d, 10 CFR, we submit the attached listings to report the total quantities of Americium-241 and Plutonium-239 in the form of calibration sources distributed to persons generally licensed under 30.21 (e) and 70.19, 10 CFR for the year 1967. The distribution listings include no sources of Plutonium-239 in any form, one source of Americium-241 at the activity of 1.20×10^{-3} microcuries shipped to Denmark, and one source of Americium-241 at the activity of 4.58×10^{-2} microcuries to West Germany. Including the above sources the total of 1.16 microcuries of Americium-241 were distributed to 23 persons in the year 1967.

If this report lacks any item, please let us know. We shall promptly comply. We can be reached at Area Code 216, 721-8300, Ext. 429.

Very truly yours,


J. Menefee

Radiation Safety Director
Crystal-Solid State Dept.

JM/dm

9702260143 970218
PDR FOIA
BABCOCK96-529 PDR

B/S

REPORT OF RADIOACTIVE SOURCE DISTRIBUTION

For the Year 1967

p. 1 of 5 pages

ISOTOPE	ACTIVITY (μ c)	SOURCE FORM & DESCRIPTION	HARSHAW TYPE & SERIAL NO.	CUSTOMER NAME & ADDRESS	DATE SHIPPED
Am 241	2.46×10^{-2}	AM241 Doped NaI(Tl) Hermetically Sealed	AM1G1 CW 905	Univ. of Calif. 3775 Miramar Road La Jolla, Calif. 92038	3-10-67
Am 241	1.40×10^{-2}	"	AMK250G218K-X CW 907	Kirtland Air Force Base New Mexico 87117	3-17-67
Am 241	6.67×10^{-3}	"	AM7S8 CW 908	Hamner Electronics Co. Route 69 Pennington, N.J. 08560	3-17-67
Am 241	5.80×10^{-3}	"	AMK100050K-21-X CW 909	Univ. Of New Hamp. Duram, New Hampshire 03824	4-24 67
Am 241	6.75×10^{-2}	"	CW 910 (2 units)		
Am 241	1.733×10^{-1} (Total)		AM24MB16/5A-X CW 911, CW 912 CW 913, CW 914 CW 915, CW 916 (6 Units)	Hamner Electronic Co. Rout 69 Pennington, N J. 08540	4-24-67

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ISOTOPE	ACTIVITY (μ c)	SOURCE FORM & DESCRIPTION	HARSHAW TYPE & SERIAL NO.	CUSTOMER NAME & ADDRESS	DATE SHIPPED
Am 241	1.35×10^{-3}	AM 241 Doped NaI(Tl) Hermetically Sealed	AM12SW12-X CW 917	Packard Instrument Co 2200Warrensville Rd. Downers Grove, Ill. 60515	3-16-67
Am 241	6.90×10^{-2}	"	AM7 X 16MB16/3B-X CW 886	E. G. & G. Inc. 6456 S. Escondido Ave Las Vegas, Nevada 89101	3-31-67
Am 241	2.70×10^{-2}	"	AM24MB16/5A-X CW 920	Hamner Electronics Co. Route 69 Pennington, N.J. 08540	7-24-67
Am 241	2.70×10^{-2}	"	AM16B20 CW 921	Ohio State Univ. 2009 Service Bldg. Rd. Columbus, Ohio 43210	6-29-67
Am 241	1.62×10^{-3}	"	AM16MBS16/5B CW 922	Nuclear Chicago Corp. 333 East Howard St. Des Plaines, Ill 60018	6-30-67

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ISOTOPE	ACTIVITY (μc)	SOURCE FORM & DESCRIPTION	HARSHAW TYPE & SERIAL NO.	CUSTOMER NAME & ADDRESS	DATE SHIPPED
Am 241	1.40×10^{-3}	Am241 Doped NaI(Tl) Hermetically Sealed	Am12A12 CX 703	Westinghouse Elec. Corp. Naval Reactor Facility P.O. 73 L-11184 Idaho Falls, Idaho	6-30-67
Am 241	1.40×10^{-3}		CX 701 (2 Units)		
Am 241	2.70×10^{-2}		AM24MB16/5A-X CW 923	Hamner Electronics Co. Route 69 Pennington, N. J. 08540	7-24-67
Am 241	2.70×10^{-2}	"	CW 924 (2units)		
Am 241	1.08×10^{-2}	"	AM6S2/1-5-X CW926	Traxler Electronics Lab Highway 70, West P.O. Box 5536 Raleigh, N. Carolina 27607	7-28-67
Am 241	1.08×10^{-2}	"	Am10.5PA12-X CW 927	Atlantic Richfield Co. Product Research Cntr 3000 Dalas North Pkwy Plano, Texas	7-28-67
Am 241	2.7×10^{-2}	"	AM6PF48-X CW 936	Nassau Smelting & Refining Co. Nassau Place Staten Island, N. Y. 10307	8-22-67

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ISOTOPE	ACTIVITY (μc)	SOURCE FORM & DESCRIPTION	HARSHAW TYPE & SERIAL NO.	CUSTOMER NAME & ADDRESS	DATE SHIPPED
Am 241	1.20×10^{-3}	Am241 Doped NaI(Tl) Hermetically Sealed	Aml2S12L Cw 951	S.C Metric A/S Bulgar 6 Vedback, Denmark	9-1-67
Am 241	2.62×10^{-3}	"	Aml2S12 CW952	Texas A & M Univ. College Station, Texas, 77843	9-8-67
Am 241	2.51×10^{-3}	"	CW953 (2 Units)		
Am 241	5.68×10^{-1}	"	AM1.5G1.5-X	Bulova Watch Co. Inc. 75-20, Astoria Blvd. Jackson Heights, N.Y. 11370	10-19-67
Am 241	2.78×10^{-2} 2.84×10^{-2} 2.48×10^{-2}	"	AMK236Q236K-X CW955 CW957 CW956 (3Units)	Univ. of Calif. 3175 Miramar Rd. LaJolla, Calif. 92037	11-2-67
Am 241	4.58×10^{-2}	"	Aml2.5Q25M-X CW 958	Harshaw Chemie G.M.B H. Wiesenau 2, Frankfurt/Main West Germany	11-10-67

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ISOTOPE	ACTIVITY (μC)	SOURCE FORM & DESCRIPTION	HARSHAW TYPE & SERIAL NO.	CUSTOMER NAME & ADDRESS	DATE SHIPPED
Am 241	1.13×10^{-3}	Am241 Doped NaI(Tl)	AM8S8-X CW 959	General Electric Co. NMPO Bldg. D.	11-14-67
Am 241	2.25×10^{-4}		CW 960 (2 units)	Gate #4 Shepard Lane Evandale, Ohio	
Am 241	1.027×10^{-4}	"	AMK100G50K-X CW 961	Univ. of New Hamp. Dept. of Physics Demaref Hall Duram N.H. 03824	11-27-67
Am 241	1.35×10^{-3}	"	AM12S12	E.I. DuPont DeNemours Co. Eng. Test Center Milwark Cross Road Newark, Delaware	12-19-67
	Total <u>1.16uC</u>				