

Wagner, Katie

From: Rodriguez-Luccioni, Hector
Sent: Tuesday, June 07, 2016 2:57 PM
To: Wagner, Katie
Subject: FW: FW: Missing and Transfer/Disposal of Generally Licensed Items
Attachments: [Untitled].pdf

-----Original Message-----

From: Borisky, Michael J CIV USARMY RDECOM ARL (US) [mailto:michael.j.borisky.civ@mail.mil]
Sent: Tuesday, June 07, 2016 2:37 PM
To: Rodriguez-Luccioni, Hector <Hector.Rodriguez-Luccioni@nrc.gov>
Subject: [External_Sender] FW: Missing and Transfer/Disposal of Generally Licensed Items

Dear Hector,

Attached are two letters we mailed today to report a missing generally licensed source, and the transfer for disposal of other generally licensed sources. I promised these to you a few weeks ago when we talked on the phone after I called to report what we had discovered. If you have any questions, please call me at 301-394-6310.

Michael Borisky
Radiation Safety Officer
301-394-6310

-----Original Message-----

From: LOF_ALC-SAFETY OFFICE [mailto:tracy.v.thomas2.ctr@mail.mil]
Sent: Tuesday, June 07, 2016 2:28 PM
To: Borisky, Michael J CIV USARMY RDECOM ARL (US) <michael.j.borisky.civ@mail.mil>
Subject:

GLTS



REPLY TO
ATTENTION OF

RDRL-LOF

DEPARTMENT OF THE ARMY
US ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
ARMY RESEARCH LABORATORY
2800 POWDER MILL ROAD
ADELPHI MD 20783-1197

MEMORANDUM FOR Director, Office of Nuclear Materials Safety and Safeguards,
ATTN: Document Control Desk/GLTS, U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Report to NRC of missing generally licensed Radioactive Source

On March 21, 2016, our Radiation Safety Officer, Mr. Michael Borisky, became aware that a generally licensed sealed C-14 reference light source is missing from a photometer that we have used in our research over nearly three decades. The missing sealed source is C-14, 50 micro-curies, model AAC40108, serial number 263, originally distributed under NRC general license 2189-59 assigned to Photo Research Division of the Kollmorgen Corporation. In preparation for disposal of the photometer, Mr. Borisky was attempting to remove the sealed C-14 source from inside a Photo Research photometer (model 1980, serial number A332) when he found the source was missing. The source is normally located inside the photometer in a position that can't be seen without some disassembly. On April 19, 2016, in an effort to meet the spirit of the NRC's thirty day reporting requirement, Mr. Borisky called and notified Mr. Hector Rodriguez of your agency of the missing source, and promised to investigate and follow-up with details and findings.

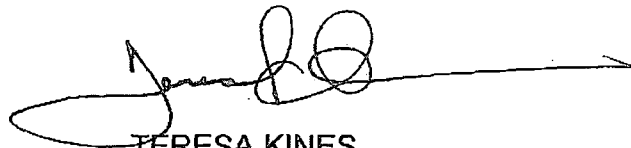
Dr. Dave Morton has had possession of the photometer and used it for his research of the last few decades. He said that he remembers removing the C-14 source circa 1990 when he was working for an Army Research Lab (ARL) predecessor organization, the Army Electronic Technology and Devices Laboratory (ETDL) located at Ft. Monmouth, New Jersey. He said he removed the sealed C-14 source to allow him to couple the photometer to fiber optics as part of his research efforts. He said he gave the sealed C-14 source to the Army Communications and Electronics Command (CECOM) Safety Office at that time for safe keeping and disposal, although we have no documentation to support this transfer. At that time, and until ETDL personnel were re-located to Maryland circa 1997, the CECOM Safety Office provided the radiation safety program support to ETDL through an Inter-Service Support Agreement. The CECOM Safety Office was also located at Ft. Monmouth.

The CECOM Safety Office as well as the Army Rad Waste Disposal Office in Rock Island, Illinois have reviewed their records in an attempt to locate records regarding the missing source. To date, no serial number specific reference to the missing C-14 sealed source has been found. The 1994-1997 CECOM inventories indicate that four photometers at 50 uCi each with Dr. Morton were inventoried at Ft. Monmouth up until he relocated to Maryland circa 1998. And the CECOM Safety Office inventory records from 1998 do show a "Photometer" entry of 50 uCi C-14 well after Dr. Morton's four

photometers had been transferred to Maryland. For this source, it appears that "6730-00-PHOTOMETER" was coined by the inventory person as a serial number for this source. Although this "serial number" does not match the serial number of the missing source, which is 263, it may be the missing source. CECOM has records that indicate that this source was included in a disposal action that took place in 2007. Also, in an earlier disposal action in 1998, a different 50 uCi C-14 source described as an "unlicensed source" was transferred to the disposal agent. No serial number was indicated, but this likewise might be the missing source. What further supports the possibility that one of these two sources was the missing source is that both the CECOM Safety personnel and Dr. Morton are not aware of any other photometer users at Ft. Monmouth during that period. So the likely source for any 50 uCi C-14 sources at Ft. Monmouth was Dr. Morton's photometers.

We therefore offer that the missing source was probably one of the sources above, both of which were properly disposed of as radioactive waste. This report is offered not on behalf of the Army Research Lab in particular, but rather on behalf of the Army, since the possession history of the source included the CECOM Safety Office as well as ETDL. In order to help prevent any similar incidents, the Radiation Safety Officers in ARL will remind personnel that licensed items can't be procured without the prior review and approval of the Radiation Safety Officer (RSO). They will also be reminded that these items must be included in the radioactive material inventory, and can't be transferred or disposed of unless first coordinated through the Radiation Safety Officer to ensure that the NRC required reports are sent to the NRC within thirty days. And the workforce will be reminded that radioactive material stickers/labels must be removed (by the RSO) from items if and when the radioactive component is removed from inside.

If you need any additional information, please feel free to contact my Radiation Safety Officer, Mr. Michael Borisky, at 301-394-6310.

A handwritten signature in black ink, appearing to read "Teresa Kines", with a long horizontal line extending to the right.

TERESA KINES

Director for Laboratory Operations



DEPARTMENT OF THE ARMY
U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND
ARMY RESEARCH LABORATORY
2800 POWDER MILL ROAD
ADELPHI MD 20783-1138

REPLY TO
ATTENTION OF

RDRL-LO

MEMORANDUM FOR Director, Office of Nuclear Materials Safety and Safeguards,
ATTN: Document Control Desk/GLTS, US Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Report to NRC of transfer of generally licensed Radioactive Sources

As reported to Mr. Hector Rodriguez of your agency on 19 April 2016, we recently became aware of the requirement to report lost, missing, or transferred generally licensed items. To ensure full compliance with your regulations, we therefore went through our records dating back to 1981 to identify what generally licensed items we transferred or shipped or disposed from our Adelphi, Maryland location. Since 1981, our records indicate that only a few generally licensed items were transferred, and in each case, they were transferred for disposal. Disposal occurs through transfer to an Army rad waste broker under contract to the Army Radioactive Waste Disposal Office located at Rock Island Arsenal, Rock Island, Illinois. Our present Radiation Safety Officer, Mr. Michael Borisky, has been present at Adelphi since 1981, so locating and understanding the records was relatively easy. In fact, Mr. Borisky remembers all of the transfers.

On June 7, 1990, we transferred to Chem-Nuclear Systems Inc., DoD Consolidation Facility, P.O. Box 828, Two Osborn Rd, Snelling, S.C. 29812, six sources used for measuring thickness. The rad waste manifest number was US 81-88-399. The sources were as follows: Betascope source Pb-210, sn F203, 20 uCi; Betascope source Pm-147, sn C4302, 600 uCi; Betascope TI-204, sn 3542, 30 uCi; Microderm source Pm-147, model HH3, sn 45085, 75 uCi; Microderm source Sr-90, model TH1, sn 19755, 10 uCi; and Microderm source TI-204, model HH3, sn 27119.

On Jan 27, 2011, we transferred two electron capture detectors to Toxco MMC, 109 Flint Road, Oak Ridge, Tennessee, 37830 under rad waste manifest USA 2008-093-TOXCO. The sources were as follows: Hewlett Packard electron capture detector F4536, and Hewlett Packard electron capture detector U0284, 15 mCi Ni-63 each. These detectors were originally mounted in two Hewlett Packard gas chromatographs: model 5890 (serial number A5935), and model 6890 (serial number US00011059).

On April 5, 2012, we transferred nine sealed glass vials containing Pm-147 to EMC, 3106 S Faith Home Road, Turlock, California, 95380 under waste manifest USA2011-071/077. Each vial contained 30 uCi of Pm-147. Seven were Siemens surge voltage protector tubes, and two were Varian VDX items. Unfortunately, this is all the identification information we have for these items. We are not certain, but these items may have been exempt from general licensing per 10CFR31.15, which permits up to 30 uCi Pm-147 in each tube without general licensing.

On July 25, 2012, we transferred three General Electric (GE) products each containing radioactive material to EMC, 3106 South Faith Home Road, Turlock, California, 95380 under waste manifest USA-2012-071. These sources were as follows: from GE Itemizer 3, sn 0500449010329, 10 mCi Ni-63; from GE Vapor Tracer 2, sn 08034938099, 10 mCi Ni-63, and from another GE Vapor Tracer 2, sn 01034936805, 10 mCi Ni-63. Most recently, on Jan 28, 2015, we transferred to the Aberdeen Proving Ground Rad Waste Holding Facility, building 5111, Aberdeen Proving Ground, Maryland 21005 na SRB Technologies (Canada) model BX, serial number 0082018 exit sign containing 21.6 Curies of H-3 gas. This item is still awaiting transfer to an Army rad waste broker.

If you have any additional questions, please contact my Radiation Safety Officer, Mr. Michael Borisky, at 301-394-6310.

A handwritten signature in black ink, appearing to read 'Teresa Kines', followed by a long horizontal line extending to the right.

Teresa Kines
Director for Laboratory Operations