



January 17, 2013

Reference: License #26-18033-01E

030-14382

Attention: Traci Kime / Anthony Kirkwood  
Nuclear Material Safety and Safeguards  
US Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: Annual Report of Byproduct Material Transfer

This report is required per VISHAY 's license with the USNRC and the State of Nebraska per Section 32.16, 10 CFR Part 32. Certain models of plasma display/ tubes manufactured at the Columbus site contain Kr-85. It is a controlled byproduct material. Kr-85 is the only radio nuclide transferred. Kr-85 gas concentrations used are 5.0, 2.5, 1.0 and 0.1 mCi per liter.

The US NRC allows VISHAY to sell / transfer product for use under Section 30.15, paragraph 8, IV, 10 CFR Part 30 pertaining to maximum allowed Kr-85 in a single electron tube. The State of Nebraska also requires the material be transferred in accordance with the provisions of 10 NAC 13.

The USNRC requires a breakdown per product type, pieces shipped, and amount of radio nuclide in each product type. The report summarizes the transfer of product from January 1, 2012 to December 31, 2012. The total number of devices and the total Kr-85 shipped is as follows:

<u>Type of Device</u>	<u># of Devices Shipped</u>	<u>Total Quantity Kr-85 Shipped</u>
<b>Plasma Units</b>	<b>15,097 pcs</b>	<b>7,922 uCi</b>

Please see the attached spreadsheet for a breakdown of transferred byproduct material per each VISHAY part number.

Sincerely,

*Dave Wolfe*

Dave Wolfe  
RSO / Sr. Process Engineer  
VISHAY Dale Electronics

CC: Valerie Paul                      Al Busboom                      Bill Fetterley  
      Keith Raysby                     Tom Bertsch

Vishay Dale Electronics, Incorporated

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MANUFACTURER OF THE WORLD'S BROADEST LINE OF DISCRETE SEMICONDUCTORS AND PASSIVE COMPONENTS

**VISHAY, Dale Elec. Byproduct Material Transfer Report for Year 2012**

USNRC License # 26-18033-01E

State of Nebraska License #10-02-01

<b>2012 Total</b>	<b>Reported 01-2013</b>	<b>Micro Curies</b>	<b>KR-85 Product Types Active in 2012</b>
<b>Display Type</b>	<b># Shipped</b>	<b>Radiation / Display</b>	<b>Radiation / Type ( uCi )</b>
PBG-12201	30	1.08	32.4
PBG-12203	31	1.5	46.5
A/PBG-12205,-1-5	243	1.19	289.17
PBG-12205-9	5	1.19	5.95
APD-28D023	681	1.23	837.63
APD-160G040	149	0.94	140.06
PD-08D023-8	557	0.49	272.93
PD-08D025-17	10	0.42	4.2
PD-09D025-1	177	0.41	72.57
PD-10D020-1	10	0.405	4.05
PD-10D023-9	15	0.553	8.295
PD-10D023-13	2722	0.553	1505.266
PD-10D025-10	250	0.52	130
PD-12D023-1	410	0.553	226.73
PD-13D025-1	23	1.124	25.852
PD-13D025-2	5	0.47	2.35
PD-14D025-5	330	0.667	220.11
PD-20D025-5	749	0.8	599.2
PD-20D025-7	56	0.65	36.4
PD-29D025-1	5	1.3	6.5
PD-50D023-4,-5	632	0.93	587.76
PD-133B011-1	1025	0.515	527.875
PD-133B011-2	150	0.527	79.05
PD-133B011-3	150	0.825	123.75
PD-140B011-1	224	0.607	135.968
PD-171B082-1	25	0.505	12.625
PD-171B082-2	25	1.15	28.75
PD-260B011-1	50	0.417	20.85
PDB-100	6,358	0.305	1939.19
<b>TOTAL DISPLAYS</b>	<b>15097</b>	<b>TOTAL RADIATION</b>	<b>7921.981</b>
<b>AVERAGE</b>	<b>RADIATION</b>	<b>PER UNIT</b>	<b>0.524738756</b>