

# Honeywell

Name Ralph  
Ref# 7788  
Date Rec'd 8-2-94  
Amt Rec'd 1200.00

## RECEIVED

AUG 02 1994

July 29, 1994

RADIOACTIVE MATERIALS PROGRAM

Georgia Department of Natural Resources  
Radiological Health Section  
Attn.: Mr. Tom Hill  
4244 International Parkway  
Atlanta, GA 30354

Dear Mr. Hill:

Honeywell (Radioactive Materials License GA.832-1G) is requesting an amendment to Device Registration GA.571D101G for Lippke System devices MV-KR, MV-FE, MV-PM and MV-SR Types I, II and III as follows. A check in the amount of \$1,200.00 is attached to cover the cost of processing this amendment request.

1. The 'Model' section of the Device Registration states:  
Lippke System with: MV-SR, MV-KR, MV-PM (Beta Gauges) and/or  
MV-FE (Gamma Gauge) Types I, II or III

Honeywell is requesting that the list of Types include a new Type IV. The new Type IV represents modifications and improvements listed in Item #2 below.

2. The 'Description' section of the Device Registration states that "Each device is constructed of machined steel, brass and aluminum with lead and/or tungsten shielding." Honeywell is requesting that this sentence be changed to "Each device is constructed of machined steel, brass, and aluminum for models MV-KR, MV-FE, MV-PM and MV-SR Types I, II and III with lead and/or tungsten shielding. Some components including the device housing and mounting plate, excluding shielding components or the shutter mechanism, may be constructed alternatively of a high temperature plastic or polymer material with or without glass fiber fillers for models MV-KR, MV-FE, MV-PM and MV-SR Type IV devices.

This modification does not affect the design of the shutter mechanism or shielding. The radiation profiles are only negligibly changed (lower), resulting in an unchanged ANSI classification. The purpose of this design change is to lower the incidence of heat transfer by the shutter housing, previously made of aluminum. Also, some web-guiding devices and air jets have been added to the exterior of the housing, which have no affect on the function of the shutter mechanism, safety issues or shielding. The mounting plate and device housing are of different

dimensions for the Type IV device, but again, this does not affect radiation profiles or any safety features.


3. The 'Description' section of the Device Registration states that a Lippke System model MV-KR or MV-SR Type I, II or III device loaded with either 400 mCi or Kr-85 or 20 mCi of Sr-90 respectively should always be located in the center position of the scanning plate for distance and shielding reasons. This was originally written up this way because there were no physical reasons why these devices would ever need to be located in the side position. This restriction was requested by the manufacturer for ALARA reasons only. Honeywell is applying to have this restriction removed. The reason for this involves the functioning of web-cleaning devices and has nothing to do with the functioning of the device shutter mechanism. Radiation levels at 5, 30 and 100 cm are virtually unchanged and changes to the ANSI classification are unnecessary.
4. The 'Conditions of Normal Use' section of the Device Registration states that the maximum ambient temperature range that a Lippke System device model MV-KR, MV-FE, MV-PM or MV-SR Type I, II or III can be installed in is 0° to 85° C. Honeywell is applying to have this range changed to -40° to 105° C. This temperature range does not exceed the temperature ranges for the sealed radiation sources authorized for use in these devices, and does not affect radiation levels, function or other safety-related issues. The devices themselves are constructed to withstand even wider temperature ranges and have been tested by the manufacturer at temperatures exceeding 120° C. with no increase in the failure rate. Additionally, the temperature inside the device housing where the shutter assembly and source are located is much lower than the ambient temperature due to conduction of heat to the mounting frame which is cooled by water and/or air.
5. Honeywell is requesting that the ANSI classifications listed in the 'Prototype Testing and External Radiation Levels' section of the Device Registration be changed as indicated. The changes reflect a revised temperature range as discussed in item 4 above.

<u>Device Model</u>	<u>ANSI Classification</u>
MV-SR	54-774-985-R1
MV-KR (200 mCi)	54-454-775-R1
MV-KR (400 mCi)	54-564-775-R1
MV-PM	54-985-985-R1
MV-FE	54-464-985-R1

I have included a re-written version of the Device Registration document reflecting the various amendments that Honeywell is requesting.

If you have any questions, please let me know. Thanks for your help.

Sincerely,

A handwritten signature in black ink, appearing to read "G L Caines".

Gary L Caines,  
Radiation Safety Officer

Enclosure:     One

Copies:        Mike Chunko  
                 Jay Corley  
                 Bruce Kopkin