

Sealed Source Files

February 4, 1959

Isotopes Branch
Division of Licensing and Regulation
U. S. Atomic Energy Commission
1717 H Street, N. W.
Washington 25, D. C.

Attention: Mr. James R. Watson, Chief
Isotopes Extension
Division of Licensing and Regulation

Gentlemen:

The purpose of this letter is to request that an amendment be issued to our license to permit us to distribute our Models ASR-3, PG, and LR density gauges as generally licensed it is pursuant to 30.21(c) of 10 CFR Part 30.

In requesting this license, we would like to point out that all units sold under this provision will be installed on the pipe section by The Chasart Corporation or by another person holding a specific license to install or service our devices. Furthermore, if a unit is to be removed from a pipe section, this will also only be done by The Chasart Corporation or a specifically licensed individual. Pipe tests will be carried out as required according to AEC approved procedures and also other mechanical tests required will be conducted. To assure that this is done and that the user understands his responsibilities, a tag containing the information shown in Attachment 1 will be permanently affixed to the measuring assembly, in addition to the radioactivity tag shown as Attachment 2. Also, each general licensee to whom a unit is shipped will be furnished with a copy of Section 30.21(c).

To complete your files, we are attaching radiation profiles of our Models ASR-3, PG, and LR measuring assemblies. In reviewing these you should recognize that in all cases the radiation field intensities as listed are surface field intensities, and the profiles were made under the conditions of the pipe being empty and with the shutter open, if one is provided. Thus, these represent the worst conditions that would be encountered by the user. From this you can see that all equipment to be used under this type of license will have a maximum field intensity of less than 7 MR/HR on all surfaces to assure that under ordinary circumstances of use no person will receive a radiation exposure to a major portion of their body in excess of 0.5 rem/yr even though they may work in direct contact with a gauge for as much as 100 hours per year. However, to further make

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certain that excessive exposure will not be received. The Chmert Corporation will require occupancy data on each installation.

Upon reviewing the profile of the ASB-3, you will observe that after installation the maximum field intensity is 7.5 MR/HR at Point 9. Since this unit is occasionally used with sources as large as 750 millicuries, this log has been lengthened six inches which brings the radiation field intensity at this point down to below 5 MR/HR with 750 millicuries and the pipe empty. This change has also reduced the field intensity at Point 1 from 40 MR/HR to 5 MR/HR.

Referring to the profiles of the FG and LR measuring assemblies, it should be pointed out that these are taken as being representative only, because the one for the FG assembly was made with a six inch pipe whereas the unit will actually be operated with from three to ten inch pipe, and the profile for the LR was made with a ten inch pipe, whereas actually it will be operated with pipes from ten through sixteen inches. Therefore, with the FG assembly, the source at times may be as large as 200 millicuries, and with the LR assembly as large as 500 millicuries. However, every instrument manufactured by The Chmert Corporation for distribution to general licensees will be individually surveyed to assure that the radiation field intensity on all surfaces with the pipe empty does not exceed 7 MR/HR. The results of this survey will be kept as part of the permanent record which will be available to Atomic Energy Commission personnel at any time.

In submitting these data we would appreciate it if you would consider design information and radiation profiles as being confidential.

We trust this answers any questions you might have. However, if you require any additional information we will be very glad to forward it.

Sincerely,

THE CHMERT CORPORATION

Philip E. Chmert
President

FED/nj
Enclosures

cc: H. L. Cook, Jr.

ATTACHMENT 1: SAFETY PRECAUTIONS

Each instrument distributed to general licensees will bear a label as follows:

SAFETY PRECAUTIONS:

1. Installation, reinstallation, or removal of this equipment may be done only by The Chmart Corporation or an individual specifically licensed to perform such functions.
2. Upon any indication of possible failure or damage to the source shielding mechanism, the following must be done immediately:
 - a) Restrict access of personnel
 - b) Notify The Chmart Corporation or a specifically licensed individual who will determine the extent of damage and the procedure to be followed to assure safe handling.
3. Atomic Energy Commission regulations concerning the operation of this device require the source to be tested for possible leakage and that any shutter mechanism be tested for proper operation at six-month intervals by The Chmart Corporation or a specifically licensed individual.

Removal of this label is prohibited by The Atomic Energy Commission.