



INTEREX CORPORATION

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August 13, 1981

Paul R. Guinn
U. S. Nuclear Regulatory Commission
Materials Licensing Branch
Division of Fuel Cycle and Material Safety
Washington DC 20555

Reference: FCMLB:LT
Mail Control No. 07652
License 20-14082-02

Dear Mr. Guinn:

Enclosed please find the information you requested. I hope this will enable you to continue processing our application.

If you need any additional information, please do not hesitate to contact me.

William Karp
William Karp
Manager
Health Physics

WK/lmf

Enc:

ML10

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8510300267 850920
REG1 LIC30
20-14082-02 PDR

*new
added.*



Instrument Calibration Procedure (add to paragraph K)

- a. Calibration standards conform to "specifications for Radioactive Reference Standards" (attached) and are normally obtained from EPA-Las Vegas.
- b. Solutions are diluted as given in the counter calibration procedure CC-4 (attached)
- c. Solutions are normally better than $\pm 5\%$ and are NBS traceable through the EPA
- d. See CC-4
- e. Calibrations are normally performed by Mr. Joseph Lentini under the direction of Dr. Richard C. Fix. See attached resumes.



Leak Test Procedure (see paragraph M)

- (1) See e. on previous page
- (2) All surfaces are wiped with a moistened cotton swab. The swab is placed into a test tube for counting.
- (3) See "Counting Systems" No. 23
- (4) See previous page
- (5)
$$U \text{ Ci} = \frac{\text{net cpm}}{2.22 \times 10^6 \times E}$$

E= efficiency = .3 for <30 lab and .095 for the Cs-137 photopeak

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COUNTING SYSTEMS

System No. -----	Description -----	Components -----
1-12	Low-Background Beta G-M System	LNL Model 49301 Detectors Bedford Engr. Custom Electronics
13,14	Low-Background Beta G-M System	Bedford Engr. Detectors Bedford Engr. Custom Electronics
15	Beta-Gamma Coincidence System	Custom Gamma-Well and Beta Scintillation Detectors Baird Model 240 Amplifier- Analyzer ND Model 520 Preamplifier ND Model 530 HV Supply Bedford Engr. Scaler-Timer
21	Alpha-Beta Proportional System	Nuclear-Chicago Model 480 Flow Detector Model 8712 Scaler, Timer, HV Supply Model 1150 Sample Changer
22	Alpha-Beta Proportional System	Baird Corp. Model 912080 Flow Det. Model SSC-4 Sample Changer Model 516 Matrix Printer Polyspec Spectrometer
23	Gamma Well Spectrometer System	Packard Instrument Co. 5000 Series Spectrometer Model 5052 Detector
24-1	GeLi Spectrometry System	PGT Model LGC16SD Detector Nuclear Data 4420 Data Acquisition and Processing System
24-2	GeLi Spectrometry System	PGT Model LGC15SD Detector ND 4420 System
25-1, 2,3	NaI Spectrometry Systems	Bichron Model 3M3 Detectors ND 4420 System

SPECIFICATIONS
for
RADIOACTIVE REFERENCE STANDARDS

Radioactive reference standards are those solutions or solids which have accurately known radioactivity concentrations and which are therefore used to determine the absolute efficiency of a counting system.

These standards must conform to the following specifications:

1. The calibration should be traceable to the NBS when possible. Standards from the NBS or EPA are suitable.
2. If a standard as given in 1. above is not available, a reliable alternate supplier may be used. Amersham and New England Nuclear are acceptable.
3. Standards should be unsealed immediately prior to use for calibration.
4. If a standard as given in 3. above is not available, a standard originally opened at Interex and stored in a suitable container for less than 6 months may be used. Bottles with polyseal tops and scintillation vials with parafilm plus foil liners are suitable for liquids and solids respectively.
5. Only materials which have been received at Interex in sealed containers may be used.
6. Calibration certificates from the supplier must be on hand.
7. Standards may not be used after the expiration date given by the supplier or 4 half-lives whichever is shorter.