

BUSHY RUN RESEARCH CENTER

R. D. 4, Mellon Road, Export, Pennsylvania 15632

Telephone (412) 733-5200

MS=16
K8

September 9, 1986

U. S. Nuclear Regulatory Commission
Region I 631 Park Avenue
King of Prussia, PA 19406
Attn: Lester Tipps

TRIPP

Dear Sir:

Enclosed are the corrections and additions that we discussed per telephone conversation (9-3-86). Also I am sending a description of the Kr85 sealed sources.

We trust you will find everything in order. If there are any further changes or questions, please contact me.

Sincerely,

Marilyn J. Tallant 11-10-86
Marilyn J. Tallant
Radiation Safety Officer

MJT/kam/0470K

Enclosures

8704230056 861229
REG1 LIC30
37-19533-01 PDR

61 Z WD 31 NOV 1986
RECEIVED-REGION 1

ML10

Bushy Run Research Center
A Joint Mellon Institute—Union Carbide Corporation Operation

"OFFICIAL RECORD COPY"

13 NOV 1986

104583

Corrections - Renewal of License #37-19533-01

ITEM 5: RADIOACTIVE MATERIAL

a. Element and mass number	b. Chemical and/or physical form	c. Maximum amount which will be possessed at any one time
5. Krypton 85	5. Sealed Sources	5. 2 Sources not to exceed 10 millicuries per source

These sources were not purchased. We only have the 7 sources (#6) 20 millicuries per source (delete #5 from license)

ITEM 6: PURPOSES FOR WHICH LICENSED MATERIAL WILL BE USED

4. For use in gas chromatographs for sample analysis

- a. Nickel 63 Hewlett Packard Gas Chromatogrph Model #18803-60520
- b. Nickel 63 Hewlett Packard Gas Chromatogrph Model #19312C
- c. Nickel 63 Perkin Elmer Gas Chromatogrph Model #3920

Wipe tests on sealed sources (Ni63) in the gas chromatograph will be performed on a semiannual basis. This test will be performed by standard smear test procedures. Radioactivity will be detected by liquid scintillation counting (Packard Model 2660 or TM Analytic 81) maximum permissible leakage of 5×10^{-3} microcurier will be observed.

6. For use in Aerosol Discharge Devices

Krypton 85 7 sealed sources similar to Amersham Capsule Model Xl62. Licensed material will be used for charge neutralization of aerosols and dusts in inhalation toxicology research. Leak tests on the sealed sources will be performed on a semiannual basis. Radioactivity will be detected by either a GM-Thin Window Meter, Mini Instruments, Model #5.10E, $0-2 \times 10^7$ millirens/hour or CPM or a Geiger Counter, Eberline Instruments Corp., Model E-120, $0-1 \times 10^6$ millirens/hr or CPM. Both are beta detectors. Description of Kr⁸⁵ sealed sources attached.

ITEM 10: RADIATION SAFETY PROGRAM

5. SURVEY PROCEDURES:

A. Radiation Detection Instruments

Type	Mfg.	Model No.	No. Aval.	Radiation Range Sensitivity (milli rens/HR or cpm)
G-M Thin Window Meter	Mini Inst.	5.10E	1	BETA 0-2 x 10 ⁷
Geiger Counter	Eberline Inst. Corp	E-120	1	BETA 0-1 x 10 ⁶
Liquid Scintillation Counter	Packard Inst.	2660	1	BETA 0-1 x 10 ⁶
Liquid Scintillation Counter	TM Analytic	81	1	BETA 0-1 x 10 ⁶

ITEM 11: WASTE MANAGEMENT
GSX Services, Inc.
Laurel, MD 20707

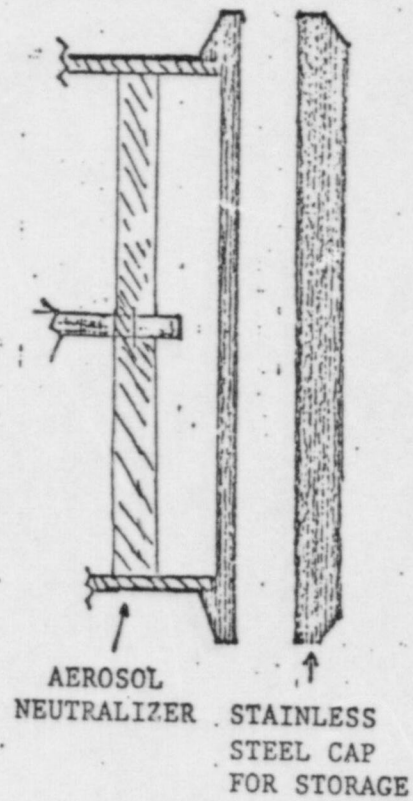
0470K

Description of Sealed Source

Stainless steel holders for the sources will be fabricated by the applicant according to the design of Teague, et al.* as shown in the attached drawings. The holders will be shipped to Amersham, Inc., Arlington Hts., IL, where sealed nickel tubes containing the krypton gas (similar to Amersham capsule X162) will be inserted in the holders. Amersham will then return the sources to the applicant.

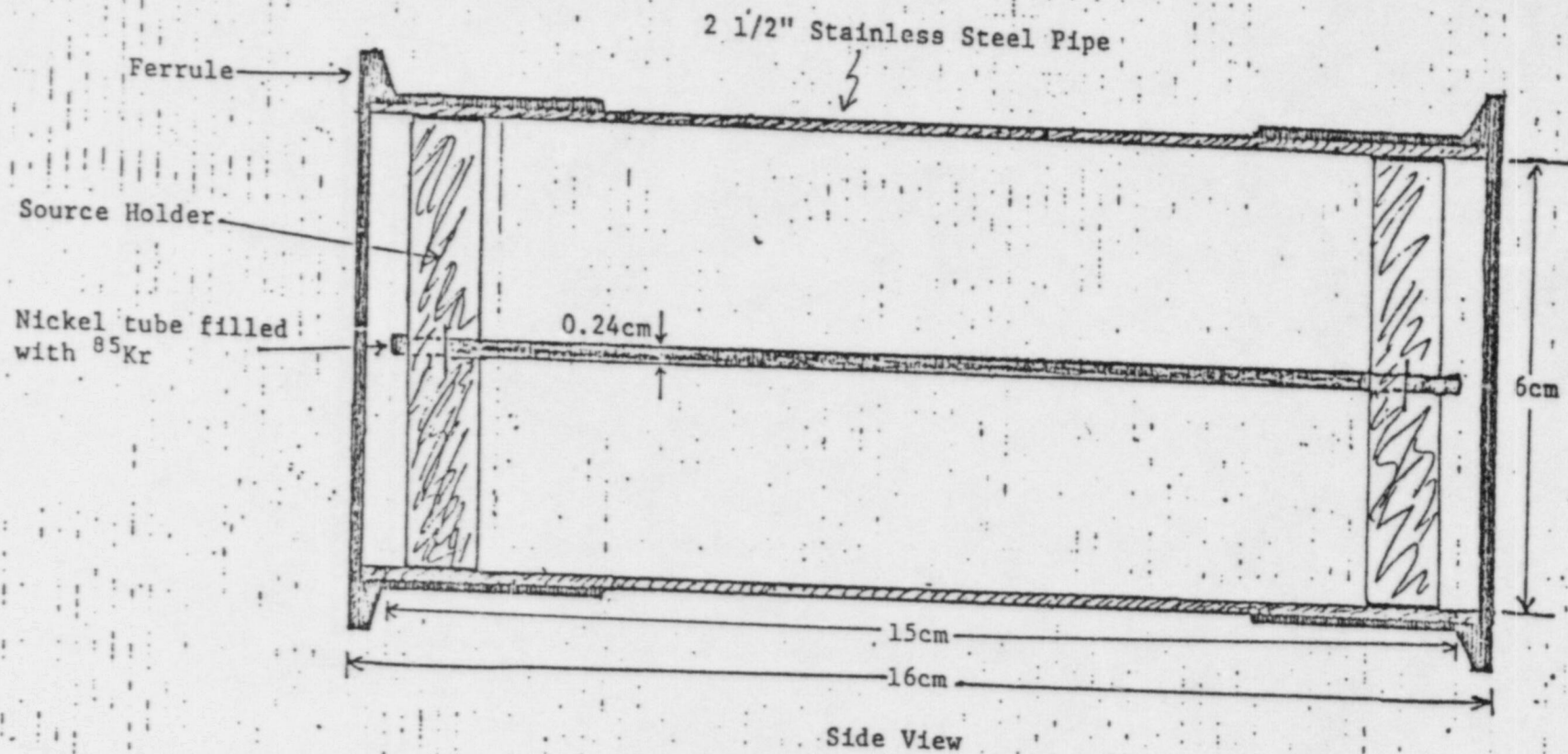
*Teague, S. V., H. C. Yeh, G. J. Newton, Fabrication and use of Krypton-85 Aerosol Discharge Devices, Health Physics 35:392-395, 1978.

NEUTRALIZER AND STORAGE CAPS OR ADAPTERS WILL BE CONNECTED BY STAINLESS STEEL TRI-CLAMP® FITTINGS.

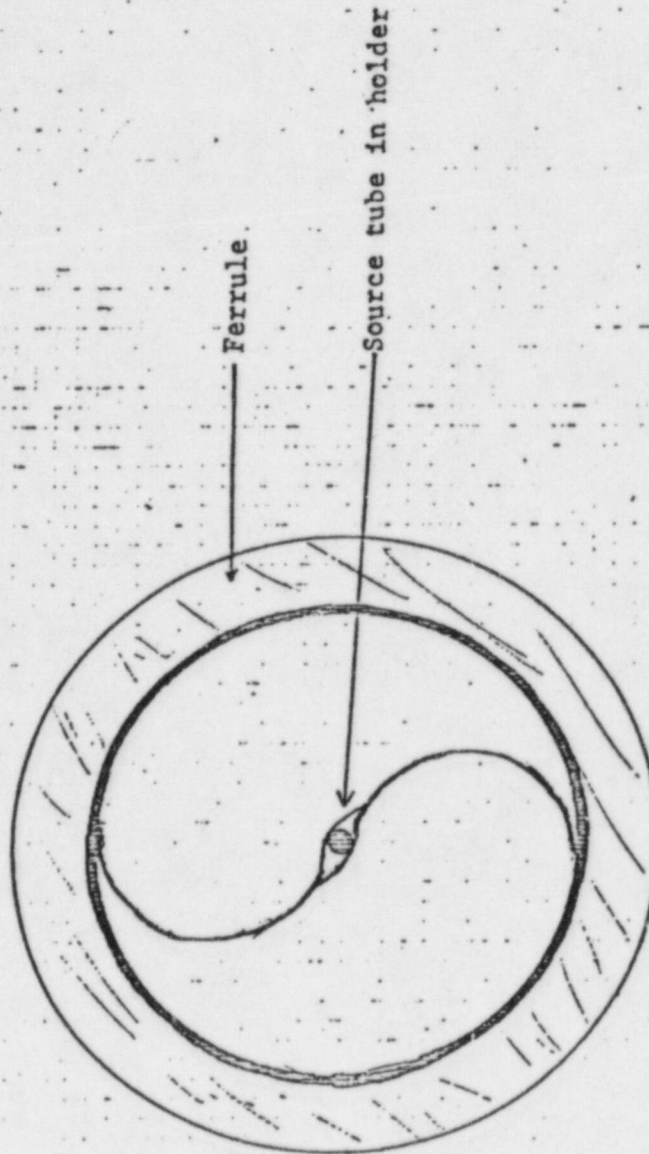


STAINLESS STEEL AND COPPER ADAPTER
FOR PUTTING NEUTRALIZER IN LINE
WITH AEROSOL GENERATOR.

ELG
8-14-81



8-4-81



End View

8-4-81
P/O

9/3/86

TELEPHONE OR VERBAL CONVERSATION RECORD

TIME

1:00

☐ A.M.
☒ P.M.

☐ INCOMING CALL

☒ OUTGOING CALL

☐ VISIT

PERSON CALLING

JMTripz

OFFICE/ADDRESS

Region 1

PHONE NUMBER

EXTENSION

215 337 5396

PERSON CALLED

Marilyn Tallant

OFFICE/ADDRESS

Union Carbide

PHONE NUMBER

EXTENSION

412-733-5245

CONVERSATION

SUBJECT

Telephone Deficiency-Renewal 37-19533-01

SUMMARY

To submit:

- 1- manufacturer & model # of aerosol neutralizer
Item 6:6 renewal application
- 2- manufacturer & model # of s.s. in aerosol neutralizer and
aerosol discharge devices
- 3- manufacturer & model # of GC & ECD
- 4- leak test procedures & instrumentation
- 5- number, manufacturers & model numbers of survey
instruments
- 6- Name of waste broker

ML10

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REFERRED TO:

ACTION REQUESTED

above information 2/B forwarded

☐ ADVISE ME OF
ACTION TAKEN.

INITIALS

DATE

ACTION TAKEN

INITIALS

DATE