



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food & Drug Administration  
1090 Tusculum Avenue  
Cincinnati OH 45226

August 22, 1989

Mr. John Madera  
Materials Licensing Branch  
U.S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Dear Mr. Madera:

I am writing this letter to inform you that our laboratory situated at 1090 Tusculum Avenue, Cincinnati, Ohio 45226 will be shut down permanently effective September 1, 1989. Therefore, I request that the license # 34-01825-02, under which we were using radionuclides, be terminated immediately.

I am herewith enclosing documents related to the disposal of radionuclides since 1984 to date, including final survey of laboratory work areas whenever the close down occurred.

I hope the information provided are satisfactory.

I will be retiring from Federal Services on September 1, 1989. All permanent records related to this license # 34-01825-02 have been transferred to Ms. Doris E. Waddrick, (HFF-14), Safety Officer, Room 6025C, Food and Drug Administration, FB-8, 200 C Street, SW; Washington, DC 20204 Telephone No. (202) 245-1281.

The Facility at 1090 Tusculum Avenue will be taken over by the National Institute for Occupational Health and Safety, 4676 Columbia Parkway, Cincinnati, Ohio 45226.

Yours Sincerely,

*Gopala K. Murthy*

Gopala K. Murthy

9002050220 B41031  
REG3 LIC30  
34-01825-02 PDR

cc: Ms. Doris Waddick, FDA  
Mr. Frank Godbey, Safety Officer, NIOSH

FEE EXEMPT  
*Adler*

RECEIVED  
AUG 24 1989  
REGION III

CONTROL NO. 87840

6861 48 00V  
AUG 24 1989  
AUG 24 1989

August 11, 1989

Final disposal of radioactive waste materials stored in the barn area

The following radioactive waste materials were disposed off through the contractor, US Ecology, Inc.

- (1) 0.254 mCi of Hydrogen-3 in LSV
- (2) 0.05 mCi of Hydrogen-3 in aqueous liquid waste

0.069 mCi of Sulphur-35 solid waste

$1.65 \times 10^{-5}$  mCi of Sodium-22

$4.10 \times 10^{-5}$  mCi of Cobalt-60

$8.60 \times 10^{-5}$  mCi of Cesium-137

$5.20 \times 10^{-5}$  mCi of Barium-133

} Standards

110 grams of laboratory chemical, Uraniumoxyacetate

*Gopala K. Murthy*  
Gopala K. Murthy  
(RSO)

August 15, 1989

Final survey of the storage area in the barn

Surveys made using Nuclear Model 2650 survey meter (calibrated on 7/17/89) were.

(1) Rack      0.02 mR/hr  
                 0.02 mR/hr  
                 0.01 mR/hr  
                 0.02 mR/hr

(2) Floor      0.00 mR/hr  
                 0.01 mR/hr  
                 0.00 mR/hr

Following removal of racks, smear samples were taken of floor at two locations:

Floor            0.00 net counts/min  
                 0.00 net counts/min

*Gopala K. Murthy*  
Gopala K. Murthy  
(RSO)

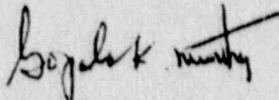
Disposal of radioactive waste materials: (Sulphur-35), (T-1E Laboratory)

4-26-89 0.085 mCi of Sulphur-35, aqueous liquid waste was diluted with water and disposed into the sanitary sewer with flow of water in the sink.

Water usage at 1090 Tusculum Avenue is about  $6.3 \times 10^4$  liters per day. Therefore, the activity in water is  $1.35 \times 10^{-3}$   $\mu$ Ci per liter per day.

Solid waste and the remaining stock solution were stored for radioactive decay. Barn area.

8-11-89 0.069 mCi (solid and the decayed stock solution) was disposed off through the contractor, US Ecology, Inc.

  
Gopala K. Murthy  
(RSO)

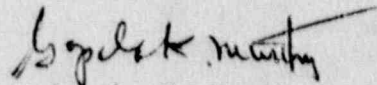


Final smear test in locations T-10 and T1-E laboratories

<u>Date</u>	<u>Laboratory</u>	<u>Work area<sup>a</sup></u>	<u>Net counts/min<sup>b</sup></u>
1-27-89	T-10	Bench	0
		Shaker incubator	0
		Refrigerator	0
4-27-89	T1-E	Bench-4	0
		Bench-3	0
		Waste storage area	0
		Floor	0

<sup>a</sup>All work areas were cleaned with radioac wash solution before taking smear samples, except the floor.

<sup>b</sup>Counted on Beckman LSP-100 Liquid Scintillation Spectrometer, located on 4676 Columbia Parkway, National Institute of Occupational Safety and Health.

  
Gopala K. Murthy  
(RSO)

Disposal of radioactive waste materials: (Carbon-14) (T1-E & T10 Labs)

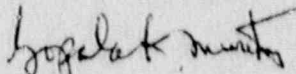
<u>Date</u>	<u>Liquid waste</u> <sup>a</sup>		<u>Solid waste</u> <sup>b</sup>	
	Amount (mCi)	$\mu\text{Ci/liter/day}$	Amount (mCi)	$\mu\text{Ci/gram}$
7-28-87 (T1-E)	0.250	$3.968 \times 10^{-3}$	-	-
1-18-89 (T10)	0.001	$1.576 \times 10^{-5}$	0.00026	$4 \times 10^{-5}$
1-20-89 (T10)	0.04875	$7.738 \times 10^{-4}$	-	-

<sup>a</sup>Liquid waste was diluted with water and disposed off into the sanitary sewer with continuous flow of water for 3 to 4 hours in the sink.

Water usage at 1090 Tusculum Avenue is about  $6.3 \times 10^4$  liters/day.

<sup>b</sup>Solid waste was mixed with nonradioactive waste to reduce the activity to below  $0.05 \mu\text{Ci/gram}$  before disposal.

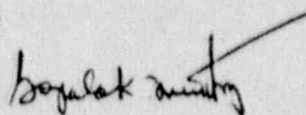
Liquid waste was counted on Beckman LSP 100 Liquid Scintillation spectrometer located at 4676 Columbia Parkway.

  
Gopala K. Murthy  
(RSO)

Reinitiation of use radioactive materials at 1090 Tusculum facility

February 1988, Building T-10, Carbon-14

August 1988, Building T1-E, Sulphur-35

  
Gopala K. Murthy  
(RSO)

Disposal of radioactive waste materials: (Iodine-125) Green House  
Support Room 2, Hood Working area

All liquid and solid wastes generated from experiments, including the stock solution of Iodine-125 were stored in the barn for decay as follows:

<u>Date</u>	<u>original stock</u> (mCi)	<u>Liquid waste<sup>a</sup></u> ( $\mu$ Ci)	<u>Solid waste<sup>b</sup></u> ( $\mu$ Ci)
12-11-84	5.0	-	-
3-27-85		36.11	34.78
4-16-85	5.0	-	-
6-24-85		50.79	176.48
9-24-85		246.90	94.70

After decay:

<u>Date</u>	<u>Original stock</u> ( $\mu$ Ci)	<u>Liquid waste</u>		<u>Solid waste</u>	
		<u>Amount</u> ( $\mu$ Ci)	<u>pCi/Titer</u> day	<u>Amount</u> (pCi)	<u>pCi/gram</u>
5-13-87	0.513	0.312	4.0	-	-
5-11-89	-	-	-	38.0	0

<sup>a</sup>Liquid waste plus the original stock were combined, diluted with water and disposed off into the sewer system with continuous flow of water for 3 to 4 hours in the sink.

Water usage at 1090 Tusculum Avenue is about  $6.3 \times 10^4$  liters/day.

<sup>b</sup>Solid waste containing about 38 pCi of Iodine-125 was mixed with nonradioactive waste and disposed off as ordinary waste.

Liquid waste was counted on Packard 500 gamma spectrometer located at 1090 Tusculum Avenue.

*Gopala K. Murthy*  
Gopala K. Murthy  
(RSO)



September 4, 1987

Wipe test on liquid scintillation counter, Packard Model 3385-21591, following dismantling and making it ready for storage.

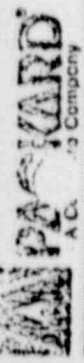
<u>Sample No.</u>	<u>Description</u>	<u>Hydrogen-3<sup>a</sup></u>	<u>Phosphorous-32<sup>a</sup></u>
		(Net counts/min)	
1	Pedestal & load tube	0.30	1.40
2	Sample chamber & load ring	3.00	-5.40
3	Freezer insides	-1.40	-3.00
4	Freezer bottom	-2.30	0.20
5	Freezer outside lid	1.30	-4.40
6	Control surface	-1.40	-0.30

The radioactive source which was in the instrument was shipped to the company (Packard Instruments) by the contractor, who maintained the instrument.

<sup>a</sup>Counted on the Beckman LSP 100 Liquid Scintillation spectrometer located at 4676 Columbia Parkway.

*Gopala K. Murthy*  
Gopala K. Murthy  
(RSO)





PACKARD INSTRUMENT COMPANY, INC.  
 2200 WARRENVILLE ROAD • DOWNERS GROVE, ILL. 60515  
 312/009-8000

SERVICE ORDER NO. 6 63694

USER'S NAME: 513-533-8624  
 INSTRUMENT LOCATION (DEPT.): RETEL KALIF MARY  
 INSTITUTION'S NAME: DR. MARY  
 ADDRESS: PACHO BLOODE  
 U.S. FOOD & DRUG ADMINISTRATION  
 1090 TASCULUM AVE.  
 CITY: CINCINNATI, OHIO 45220  
 STATE: OHIO ZIP CODE: 45220

ISS NO: 60341731810698  
 SYSTEM SERIAL NUMBER: 05887  
 CALL BACK REF. NO. NUMBER: 09081  
 TYPE OF SERVICE: 6  
 PURPOSE OF CALL: 7  
 DIST. NO: 1  
 TERM: 1  
 DATE OF SERVICE: 08/28/81  
 SERVICE HRS: 05  
 TRAVEL HRS: 03

LOWEST LEVEL SUB ASSEMBLY NO.	FAIL MODE	PART NUMBER OF REPLACED ITEM	LOCATION CODE	DESCRIPTION	QTY.	UNIT PRICE	TOTAL PRICE	ITEM	ZONE 1 MIN.	LABOR	SUB TOTAL	MATERIAL	SHIPPING	VENDOR CHARGES	SUB TOTAL	TRAVEL	TAX	TOTAL	HOURS	RATES	CHARGES

ORIGINAL INVOICE

PLEASE REFER TO INVOICE NO.  
 REMIT TO PACKARD INSTRUMENT CO.

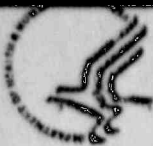
CUSTOMER'S P.O. NO. (IF MISSING EXPLAIN)  
 TSE SIGNATURE: [Signature]  
 CUSTOMER SIGNATURE: Peter, H. Johnson

FAILURE HOURS	TYPE OF SERVICE
1 BUILT	46 LOAN
2 OPEN	47 HIRE
3 OUT OF TOLERANCE	48 LEASE
4 ADJUSTMENTS	49 WARRANTY REPLACEMENTS
5 PHYSICAL DAMAGE	50 ENG. CHANGES
	51 INSTALLATION
	52 CUSTOMER ACCOMMODATIONS
	53 SALES ASSISTANCE
	54 MAINT. CONTRACT (LABOR & PARTS)
	55 MAINT. CONTRACT (LABOR ONLY)
	56 BILLABLE

TOTAL MATERIAL

EXPLANATION: SHUT DOWN & PREPARE FOR STORAGE. NOW  
 REFERRED TO DET. REMOVE PACK GS SOURCE &  
 RETURN TO PACKARD. REMOVE X-PACK PARTS.  
 FOR STORAGE. REMOVE PACK CABLES.  
 ASSIST IN WIRE TESTS.

SYSTEM SERIAL NUMBER:



Memorandum

Date June 26, 1987  
From Dr. G. K. Murthy  
Radiation Safety Officer, CRO  
Subject Radiation Safety, T-9 and T-1 Laboratories  
To Mr. Roger W. Dickerson, Jr.  
Director, CRO

The use of radionuclides in the T-9 and T-1 laboratories was discontinued as of June 12 and 19, respectively. Following clean-up of the usage areas by the radionuclide users, the laboratories were monitored and found to have no detectable radiation levels. Therefore, these two laboratories have been declared as safe for use by other CRO personnel.

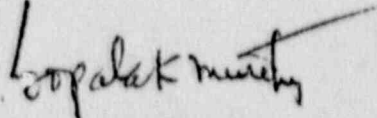
G. K. Murthy, Ph.D.

cc: Dr. J. Lovett  
Dr. J. Messer  
Mrs. Garrison  
Mr. P. Kauffman

June 23, 1987

Final Smear test in locations T-1E and T-9 laboratories

	<u>Area</u>	<u>Net counts/min</u>	<u>Activity(pCi)<sup>a</sup></u>
(3H)	T-1E, Bench 1	-1	0
	Bench 2	1	3
	Bench 3	1	3
	Hood 1	-1	0
	Hood 2	-1	0
	Hood 3	1	3
	Waste storage area	-1	0
	Rad source area	2	6
	Sink	-1	0
	(Phosphorous-32)	T-9 Bench 1	-1
Bench 2		-3	0
Refrigerator 1		-1	0
Refrigerator 2		-1	0
Centrifuge 1		-1	0
Centrifuge 2		-3	0
Freezer		0	0
Dark room		1	3
Hood		-1	0

  
Gopala K. Murthy  
(RSO)

<sup>a</sup>Note: Counted on Packard 3385 Liquid Scintillation Spectrometer located at 1090 Tusculum Avenue.

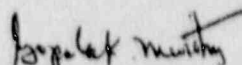
Disposal of radioactive waste materials:(Phosphorus-32) (T 9 Laboratory)

<u>Date</u>	<u>Liquid waste</u> <sup>a</sup>		<u>Solid waste</u> <sup>b</sup>
	Amount ( $\mu$ Ci)	$\mu$ Ci/liter/day	Amount ( $\mu$ Ci)
2-25-85	18.1	$2.87 \times 10^{-4}$	
6-24-85	3.2	$0.51 \times 10^{-4}$	
9-12-85	2.75	$0.43 \times 10^{-4}$	
9-30-86	3.90	$0.62 \times 10^{-4}$	309
11-28-86	9.20	$1.46 \times 10^{-4}$	348
3-24-87	-	-	146
5-20-87	-	-	25
6-8 -87	14.4	$2.29 \times 10^{-4}$	516

<sup>a</sup>Liquid waste was diluted with water and disposed off into the sanitary sewer with continuous flow of water for 3 to 4 hours in the sink.

Water usage at 1090 Tusculum Avenue is about  $6.3 \times 10^4$  liters per day.

<sup>b</sup>All solid waste was stored for radioactive decay. On May 11, 1989, the solid waste was disposed off as ordinary waste in the garbage.

  
Gopala K. Murthy  
(RSO)



June 13, 1986

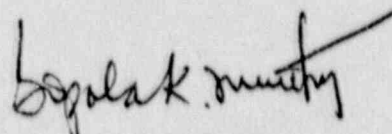
All activities related to the use of Hydrogen-3 in Room 361, 4676 Columbia Parkway were terminated. Radioactive waste and the leftover Hydrogen-3 were brought to the storage area in 1090 Tusculum Avenue before disposal.

Work areas in the laboratory were cleaned up with Radiacwash solution and smear samples were taken for counting.

<u>Work area</u>	<u>Net counts/min</u>
Bench	-0.6
Hood	-1.4
Floor	0

Smear samples were counted on the Packard 3385 Liquid Scintillation Spectrometer.

Based on the results, the laboratory was declared as safe for use by other personnel.



Gopala K. Murthy  
(RSO)

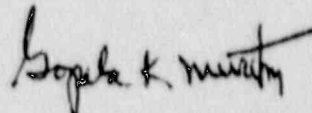
October 1, 1985

All activities related to use of Iodine-125 in GH, Rm 2, Hood working area were discontinued. All liquid and solid wastes were transferred to the storage area in the barn for radioactive decay. The work area was cleaned up using radioacwash solution and smear samples were taken for counting.

<u>Work area</u>	<u>Net counts/min</u>
Hood	-1
Floor	-1

The samples were counted on the Packard 500 gamma spectrometer located at 1090 Tusculum Avenue.

Based on the smear test, the GH, Rm 2 area was declared as safe for use by other personnel.

  
Gopala K. Murthy  
(RSO)

Disposal of radioactive waste materials. (Hydrogen-3) (T1-E & T-9 Labs)

Date	Liquid waste <sup>a</sup>		Solid waste <sup>b</sup>	
	Amount (mCi)	$\mu$ Ci/liter/day	Amount (mCi)	$\mu$ Ci/gram
3-30-85 (T1-E)	2.612	0.0415	0.022	0.02
12-30-85 (T1-E)	1.453	0.0231	1.57	0.02
3-30-86 (T1-E)	1.722	0.0273	0.582	0.032
6-30-86 (T1-E)	2.498	0.0397	0.635	0.028
9-30-86 (T1-E)	0.542	0.00862	0.402	0.022
12-30-86 (T1-E)	0.390	0.00619		
7-24-87 (T-9)	3.000	0.0476		
7-28-87 (T-9)	1.2278	0.0195		
7-29-87 (T1-E)	3.1000	0.0492		
8-06-87 (T1-E)	2.050	0.0325		
8-25-87 (T1-E)	0.00214	$0.0339 \times 10^{-3}$		

<sup>a</sup>Liquid waste was diluted with water and disposed off into the sanitary sewer with continuous flow of water for 3 to 4 hours in the sink.

Water usage at 1090 Tusculum Avenue is about  $6.3 \times 10^4$  liters/day.

Liquid waste was counted on Packard Scintillation Spectrometer, model 3385 located at 1090 Tusculum Avenue.

<sup>b</sup>Solid waste was mixed with nonradioactive waste to reduce the activity to below  $0.05 \mu$ Ci/gram before disposal.

*Gopala K. Murthy*  
Gopala K. Murthy  
(RSO)

Disposal of radioactive waste materials: (Cadmium-109 and Iron-59) (Green House)

9-21-84 There were no radionuclide experiments carried out during 1984, therefore all the radioactive waste materials were placed in 17H DOT drums (Cadmium-109 and Iron-59 separately) and stored in a corner of green house until disposal. The green house was thoroughly cleaned, including the support areas. The areas were monitored with the use survey meter (Nuclear Chicago, Model 2650, calibrated on 6-8-84) and by wipe tests. Survey meter readings were 0.02 to 0.03 mR/hour in all the areas.

Wipe tests

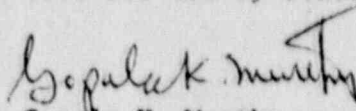
<u>Location</u>	<u>Net counts/min</u>
Green house floor	0
Floor outside green house	6
<u>Support area</u>	
Room 1, floor	1
Room 2, floor	0
Hood skirt	6
Hood inside	0

Background counts were 51 and 61 with an average of 56.

The counts were made on Packard 500 gamma spectrometer.

- 11-27-84 Cadmium-109, 16.03 mCi, in solid waste was disposed off through the contractor, US Ecology, Inc.
- 7-29-85 Iron-59, 676.29  $\mu$ Ci, in solid waste equivalent to  $5.05 \times 10^{-4}$   $\mu$ Ci/gram was disposed off as ordinary garbage.

Based on survey meter readings and wipe test results, the Green House and the support area were declared as safe for use by others.

  
Gopala K. Murthy  
(RSO)



May 11, 1983

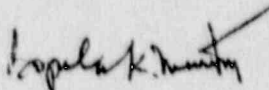
All activities related to the use of Iodine-125 in Room 18, Building T-6 were terminated at the end of April 1983.

Final smear tests of the work area

<u>Work Area</u> <sup>a</sup>	<u>Net counts/min</u>	<u>Activity</u> pCi
Bench	1	0
Floor	3	2.8
Hood	0	0
Floor	3	2.8

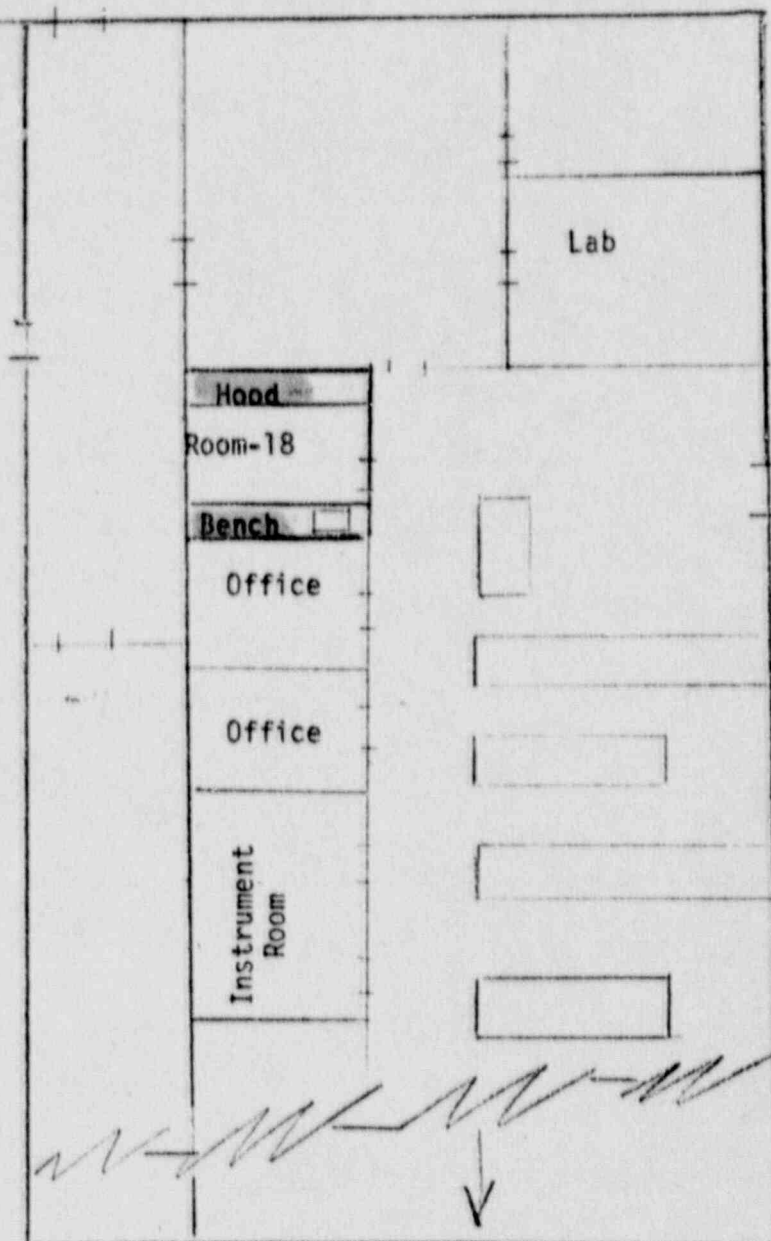
<sup>a</sup>Work areas, bench and the hood were cleaned with the Radiac wash solution before taking smear samples.

Based on smear test results, the laboratory, Room 18 was declared as safe for use by others.

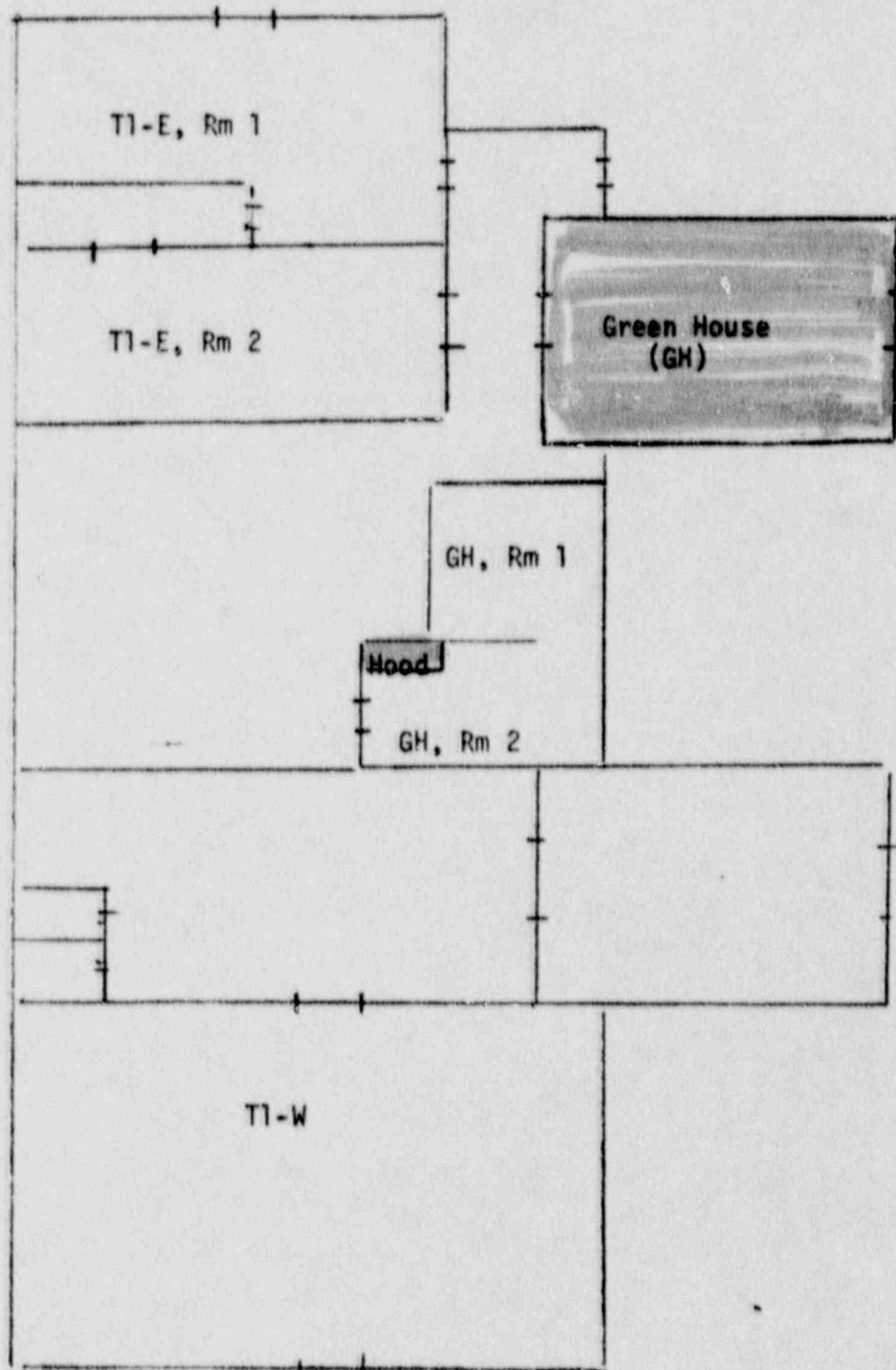
  
Gopala K. Murthy  
(RSO)

CONTROL NO. 87840

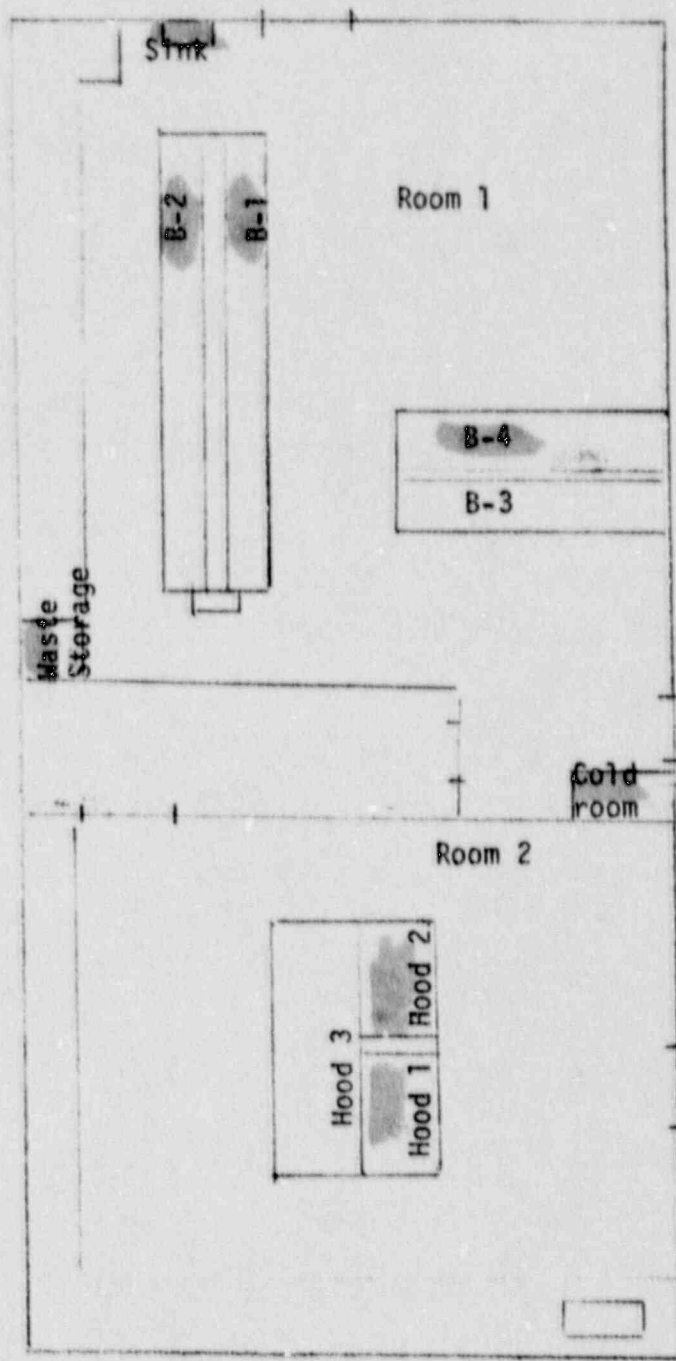
T-6 Laboratory



T 1 Laboratory facility



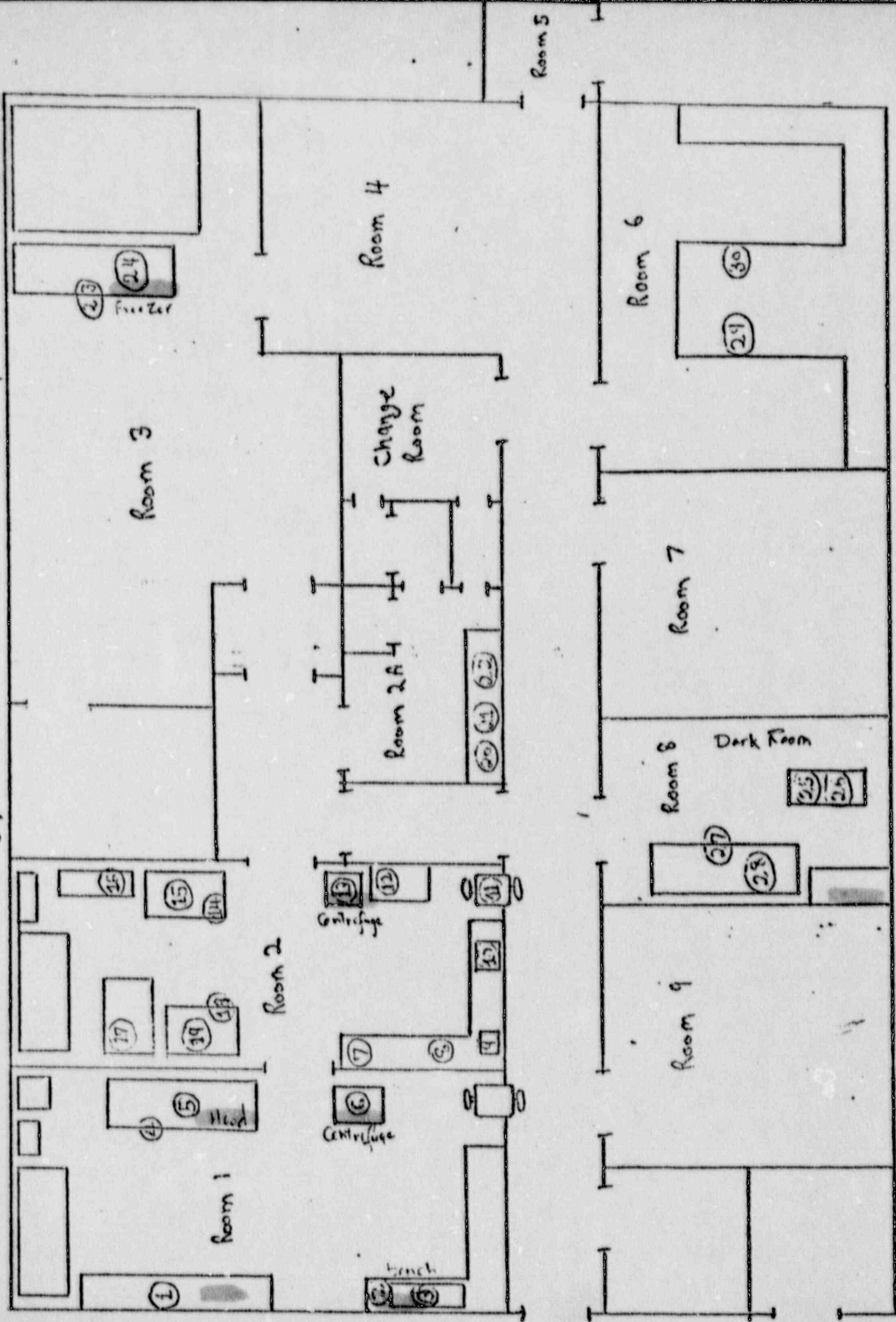
T1-E Laborato.



Note: B-4 in Rm 1 was used during 1988-89 only for Sulphur-35  
All other areas were used up to June 1987 for Hydrogen-3

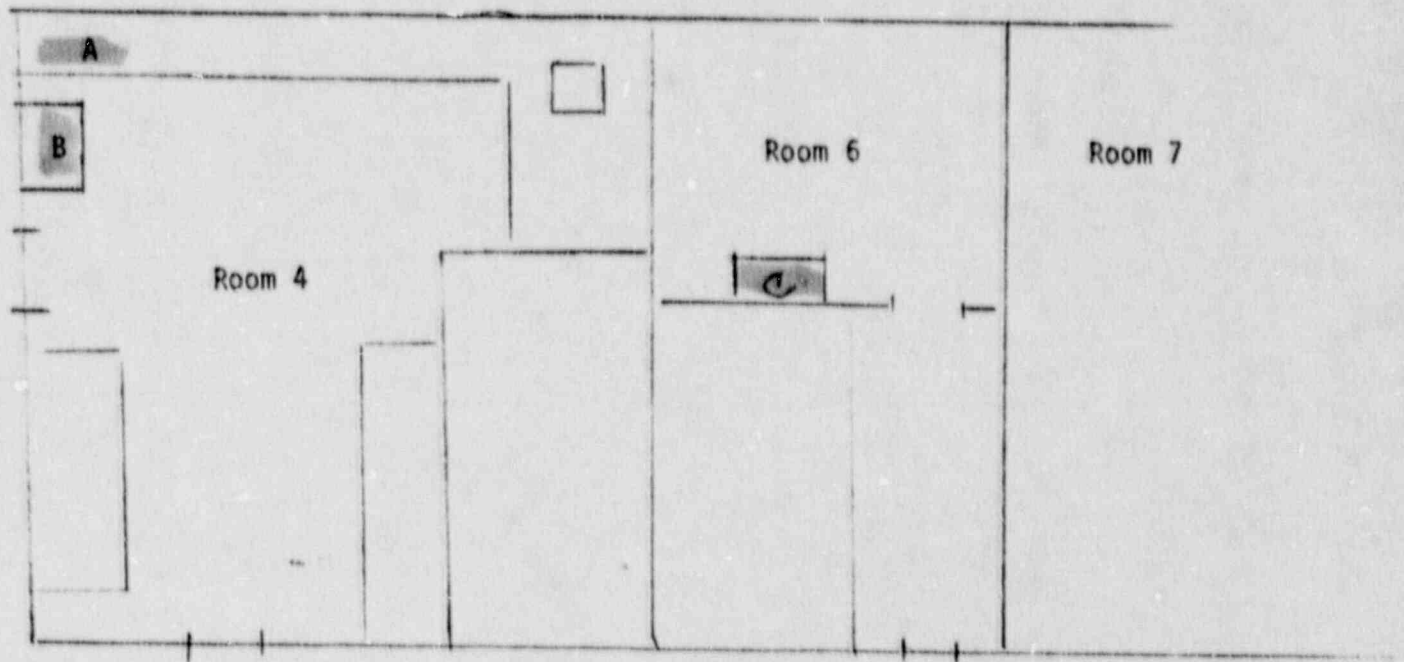


# Virology Labs, Building T-9



Smear Test Locations

F-10 Laboratory



A: Bench top work area

B: Shaker incubator

C: Refrigerator

"BARN"

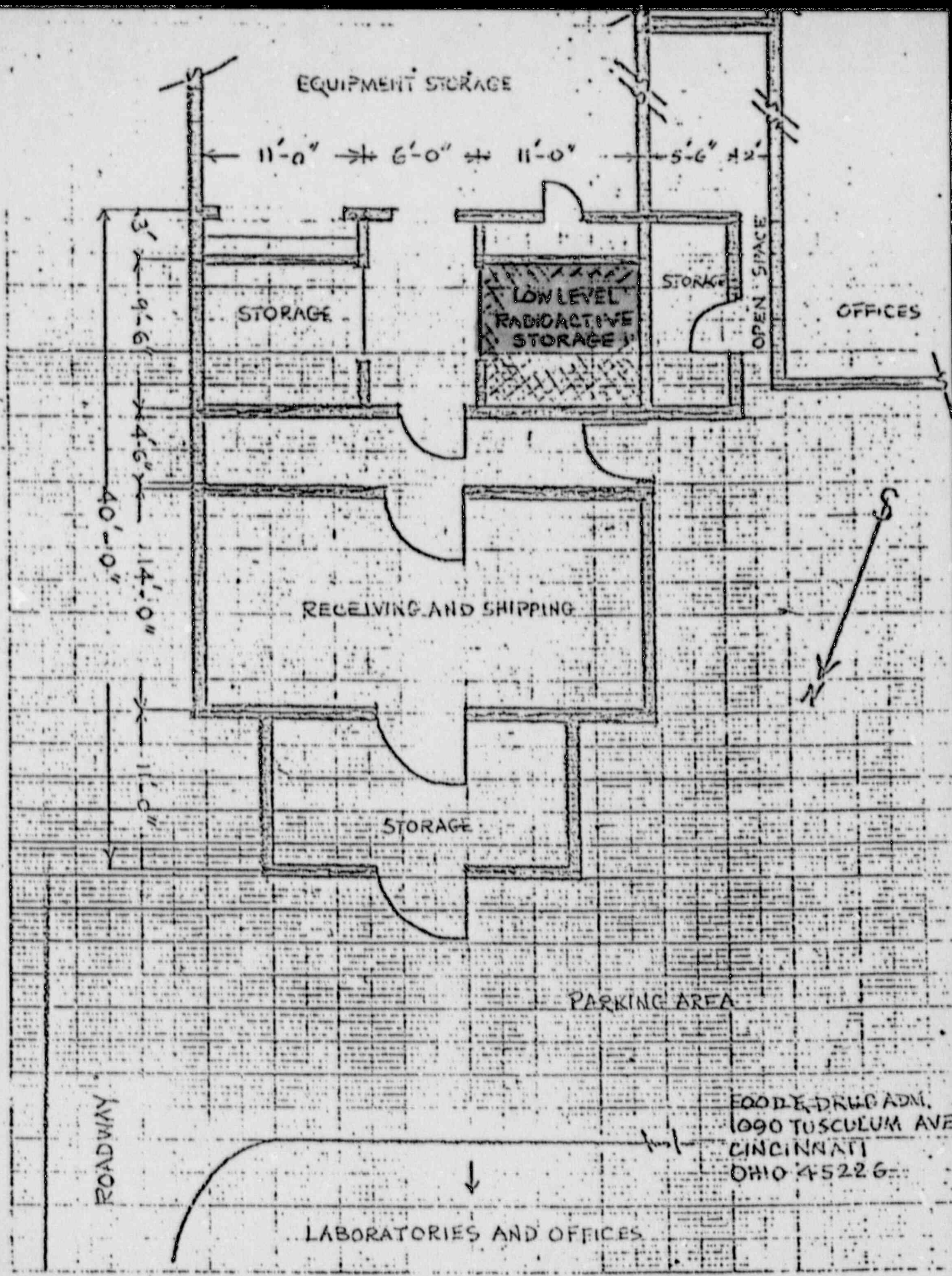


Figure 1.



SUGGESTED DRAFT FORMAT FOR THE REPORTING OF RECORDED  
PERSONNEL WHOLE BODY EXPOSURES FOR CALENDAR YEAR 19 89

Licensee Reporting (Name & Address)	NRC License No(s).
US DHHS PHS, FOOD DRUG ADMINISTRATION 1090 TUSCULUM AVENUE CINCINNATI, OHIO 45226	34-01825-02

IF PERSONNEL MONITORING WAS NOT REQUIRED DURING THE YEAR, CHECK THIS BOX.

OTHERWISE, COMPLETE THE FOLLOWING TABLE:

Annual Whole Body Dose Ranges * (Rems)	Number of Individuals in Each Range
No Measurable Exposure	4
Measurable Exposure Less Than 0.100	
0.100 -- 0.250	
0.250 -- 0.500	
0.500 -- 0.750	
0.750 -- 1.000	
1.000 -- 2.000	
2.000 -- 3.000	
3.000 -- 4.000	
4.000 -- 5.000	1
5.000 -- 6.000	
6.000 -- 7.000	
7.000 -- 8.000	
8.000 -- 9.000	
9.000 -- 10.000	
10.000 -- 11.000	
11.000 -- 12.000	
> 12.000	
Total number of individuals reported <u>4</u>	

The above information is submitted for the total number of individuals for whom personnel monitoring was (check one):

- required under 10 CFR 20.202(a) or 10 CFR 34.33(a) during the calendar year.
- provided during the calendar year, 1989

\*Individual values exactly equal to the values separating exposure ranges shall be reported in the higher range.

Report prepared by: Dr. Gopala K. Murthy *Gopala K. Murthy*

Name Telephone Number



SUGGESTED DRAFT FORMAT FOR THE REPORTING OF RECORDED  
PERSONNEL WHOLE BODY EXPOSURES FOR CALENDAR YEAR 1988

Licensee Reporting (Name & Address)  
US DHHS PHS, FOOD & DRUG ADMINISTRATION  
1090 TUSCULUM AVENUE  
CINCINNATI, OHIO 45226

NRC License No(s).  
34-01825-02

IF PERSONNEL MONITORING WAS NOT REQUIRED  
DURING THE YEAR, CHECK THIS BOX.

OTHERWISE, COMPLETE THE FOLLOWING TABLE:

Annual Whole Body Dose Ranges * (Rems)	Number of Individuals in Each Range
No Measurable Exposure	4
Measurable Exposure Less Than 0.100	
0.100 -- 0.250	
0.250 -- 0.500	
0.500 -- 0.750	
0.750 -- 1.000	
1.000 -- 2.000	
2.000 -- 3.000	
3.000 -- 4.000	
4.000 -- 5.000	1
5.000 -- 6.000	
6.000 -- 7.000	
7.000 -- 8.000	
8.000 -- 9.000	
9.000 -- 10.000	
10.000 -- 11.000	
11.000 -- 12.000	
> 12.000	

Total number of individuals reported 4

The above information is submitted for the total number of individuals for whom  
personnel monitoring was (check one):

required under 10 CFR 20.202(a) or 10 CFR 34.33(a) during the calendar  
year.

provided during the calendar year. 1989

\*Individual values exactly equal to the values separating exposure ranges shall  
be reported in the higher range.

Report prepared by: Dr. Gopala K. Murthy

Name

Telephone Number

SUGGESTED DRAFT FORMAT FOR THE REPORTING OF RECORDED  
PERSONNEL WHOLE BODY EXPOSURES FOR CALENDAR YEAR 1987

Licensee Reporting (Name & Address) U.S. DEPT. HHS, PHS FOOD & DRUG ADMINISTRATION 1090 TUSCULUM AVE. CINCINNATI, OH 45226	NRC License No(s).  34-01825-02
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IF PERSONNEL MONITORING WAS NOT REQUIRED DURING THE YEAR, CHECK THIS BOX.

OTHERWISE, COMPLETE THE FOLLOWING TABLE:

Annual Whole Body Dose Ranges * (Rems)	Number of Individuals in Each Range
No Measurable Exposure	6
Measurable Exposure Less Than 0.100	
0.100 -- 0.250	
0.250 -- 0.500	
0.500 -- 0.750	
0.750 -- 1.000	
1.000 -- 2.000	
2.000 -- 3.000	
3.000 -- 4.000	
4.000 -- 5.000	
5.000 -- 6.000	
6.000 -- 7.000	
7.000 -- 8.000	
8.000 -- 9.000	
9.000 -- 10.000	
10.000 -- 11.000	
11.000 -- 12.000	
> 12.000	

Total number of individuals reported 6

The above information is submitted for the total number of individuals for whom personnel monitoring was (check one):

- required under 10 CFR 20.202(a) or 10 CFR 34.33(a) during the calendar year.
- provided during the calendar year.

\*Individual values exactly equal to the values separating exposure ranges shall be reported in the higher range.

Report prepared by: DR. GOPALA K. MURTHY

Name

Telephone Number

CONTROL NO. 87840

SUGGESTED DRAFT FORMAT FOR THE REPORTING OF RECORDED  
PERSONNEL WHOLE BODY EXPOSURES FOR CALENDAR YEAR 1986

Licensee Reporting (Name & Address)	NRC License No(s).
US DHHS, PHS, FOOD & DRUG ADMINISTRATION 1090 TUSCULUM AVENUE CINCINNATI, OHIO 45226	34-01825-02

IF PERSONNEL MONITORING WAS NOT REQUIRED DURING THE YEAR, CHECK THIS BOX.

OTHERWISE, COMPLETE THE FOLLOWING TABLE:

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1.000 -- 2.000	
2.000 -- 3.000	
3.000 -- 4.000	
4.000 -- 5.000	
5.000 -- 6.000	
6.000 -- 7.000	
7.000 -- 8.000	
8.000 -- 9.000	
9.000 -- 10.000	
10.000 -- 11.000	
11.000 -- 12.000	
> 12.000	

Total number of individuals reported 6

The above information is submitted for the total number of individuals for whom personnel monitoring was (check one):

- required under 10 CFR 20.202(a) or 10 CFR 34.33(a) during the calendar year.
- provided during the calendar year. 1989

\*Individual values exactly equal to the values separating exposure ranges shall be reported in the higher range.

Report prepared by: Dr. Gopala K. Murthy

Name

Telephone Number

CONTROL NO 87840