030-33938

Nycomed Amersham

Nycomed Amersham Imaging

466 Devon Park Drive
P.O. Box 6630
Wayne, PA 19087-8630
610 225 4000

November 30, 1999

Ms. Pamela J. Henderson
Senior Health Physicist
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
United States Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

RE: License Number 37-30243-01

Dear Ms. Henderson:

Pursuant to our 13Aug99 and 8Sep99 letters notifying you of our intent to close the Torsten Almen Research Center in Wayne, Pennsylvania, Nycomed Amersham requests the termination of Our U.S. NRC license. The results of fixed and removable contamination measurements indicate no residual radioactivity above the lower detection limits of the instruments used. All radioactive material and waste have been shipped off site. A completed NRC form 314 is included.

We plan to terminate all operations at the site by year end. Please contact me to schedule the confirmatory survey as soon as possible. Thank you for your prompt attention to this matter. Please contact me if you have any questions concerning the information provided at (610) 225-4174. After 17Dec99, I can be reached through our Princeton office telephone number at 609-514-6000. Thank you for your time and consideration in this matter.

Sincerely,

Thomas F. Keelty
Assistant Director of Operations

127544

DEC - 2 1999

OFFICIAL RECORD COPY ML 10

NRC FORM 314 (7-1998) 10 CFR 30.36(d)(1)(iv) 10 CFR 40.42(d)(1)(iv) 10 CFR 70.38(d)(1)(iv)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0028 EXPIRES: 07/31/2001

Estimated burden per response to comply with this mandatory information collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility has been cleared of radioactive material before the facility is released for unrestricted use. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0028), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

CERTIFICATE OF DISPOSITION OF MATERIALS

INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED -- PRINT OR TYPE
SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE

LICENSEE NAME AND ADDRESS

NYCOMED AMERSHAM
P O BOX 6630
466 DEVON PARK DRIVE
WAYNE, PENNSYLVANIA 19087-8630

LICENSE NUMBER: 37-30243-01

LICENSE EXPIRATION DATE: OCTOBER 31, 2000

A. MATERIALS DATA *(Check one and complete as necessary)*

THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT:
(Check and/or complete the appropriate item(s) below.)

☐ 1. NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE.

OR

☑ 2. ALL ACTIVITIES AUTHORIZED BY THE LICENSE HAVE CEASED AND ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. *(If additional space is needed, use the reverse side or provide attachments.)*

Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the disposition of low-level radioactive waste, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable.

attachments

For transfers, specify the date of the transfer, the name of the licensed recipient, and the recipient's NRC license number or Agreement State name and license number.

If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the specific disposal procedures *(e.g., decay in storage)*.

B. OTHER DATA

☑ 1. OUR LICENSE HAS NOT YET EXPIRED; PLEASE TERMINATE IT.

2. A RADIATION SURVEY WAS CONDUCTED BY THE LICENSEE TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE.

☐ NO *(Attach explanation)*
☑ YES, THE RESULTS *(Check one)*
  ☑ ARE ATTACHED, or
  ☐ WERE FORWARDED TO NRC ON *(Date)*

3. THE PERSON TO BE CONTACTED REGARDING THE INFORMATION PROVIDED ON THIS FORM	NAME	TELEPHONE NUMBER *(Include Area Code)*
	Thomas F. Keelty	610 225 4174

4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO NYCOMED AMERSHAM
101 CARNEGIE CENTER, PRINCETON NJ 08540-9998
ATTN: THOMAS F. KEELTY

CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE	SIGNATURE	DATE
Thomas F. Keelty ASSISTANT Director, OPERATIONS	Thomas F. Keelty	30 Nov 99

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTIONS.

PRINTED ON RECYCLED PAPER

127544

DEC - 2 1999

11-29-99 01:28PM FROM RADIATION SCIENCE P03

Decommissioning Report for the Torsten Almen Research Center in Wayne, Pennsylvania

Prepared by:
Radiation Science Inc.
NRC License # 29-30310-01

Introduction

The Torsten Almen Research Center (TARC) is owned by Nycomed Amersham, and licensed by the US Nuclear Regulatory Commission (license number 37-30243-010) to use radioactive material for research and development. Administration of radio-labeled compounds to animals was authorized, sanitary sewer disposal of radioactive liquid waste was not. The first floor is approximately 14,000 ft^2, primarily laboratories, animal rooms, and some office space. No licensed radioactive material was used or stored on the second floor.

This report details the equipment, survey methodologies, and measurement results for the final status survey of the building. The classification scheme and recommended number of survey locations described in MARSSIM, ("Multi Agency Site Survey and Investigation Manual") was employed for this survey. Accordingly, the entire first floor was categorized based on the potential for contamination, as below.

- **Category 3**

Rm. 100	Rm. 104	Rm.108	Rm. 108A
Rm. 117	Rm. 118	Rm. 120	Rm. 112
Rm. 204	Rm. 421	Rm. 434	Rm. 438/440
Rm. 446	Rm. 461	Rm. 463	

- **Category 2**

  Rm. 196/197 Rm. 419 Rm. 444

  Service Corridors where radioactive material was transported. Designated Hallways A, b, and C.

- **Category 1**

  All other areas.

Category 3 areas were rooms where open form radioactive materials were used until the close of research activities, and/or material used in the past with half-lives greater than 65 day, and/or material with half-lives less than 65 days was used within two years of this decommissioning.

Category 2 areas were those areas where no work with isotopes having greater than 65 day half-lives had occurred within in the past two years.

Category 1 areas were the laboratories not authorized for radioactive material use, offices, hallways, storage areas, cafeteria, and mechanical spaces.

The enclosed facility diagrams illustrate the categorization of each area in the building.

Equipment

The type of detectors used for both scanning and fixed location measurements were gas proportional detectors. The large probe was attached to a cart when used to scan the floor, at a height of approximately ¼ inch. The probe was attached to a pole when used to survey the ceilings. A thin NaI crystal, optimized for low energy gammas, was used to scan the iodination suite and charcoal filter bank housing connected to the hoods in that suite. Table 1 lists the field detectors, laboratory equipment and their associated parameters. MDC's are based on one minute integrated counts with the gas proportional detectors, and a five minute integral count with the NaI probe.

Detector*	Probe area (cm^2)	Background (cpm)	Efficiency (cpm/dpm) 4π	Approximate Sensitivity		
				L_c counts	L_D counts	MDA dpm/100 cm^2
43-68 #114376	126	270	0.07 (C-14)	38	79	896
43-68 #114376	126	275	0.07 (C-14)	39	80	907
236-1F # 116478	425	950	0.06 (C-14)	72	146	573
44-17 #136266	20	146	0.27 (I-129)	28	59	219
Beckman LSC 0-19 keV	N/A	13	0.61 (H-3)	8.4	19.8	65
Beckman LSC 19-156 keV	N/A	10	0.79 (C-14)	7.4	17.7	45
Beckman LSC 156-2000 keV	N/A	13	0.95 (P-32)	8.4	19.8	42

Table 1. Detection Sensitivities for Survey Instrumentation

Where ;

$$Lc = 2.33\sqrt{B} \qquad L_D = 3 + 4.65\sqrt{B} \qquad MDA = \frac{3 + 4.65\sqrt{C_B}}{T\,\varepsilon_T\,A}$$

* The meters used with the hand held probes are Ludlum model 3's. The meter used with the floor monitor is a Ludlum model 2221. All have both ratemeter and scaler capabilities.

The calibration procedures and daily operational and source checks are discussed in the quality assurance results section.

Survey Design

The number of data points required for each survey unit are determined by selecting the release limits, calculating the minimum detectable activity of the survey meters, then using an equation from MARSSIM. We define each "data point" as a measurement location for both an integrated surface activity count and wipe sample. These are in addition to the scanning surveys conducted in each survey unit. Survey units are defined as distinct rooms, laboratories, or hallways. The contamination limits for this decommissioning project are less than 1,000 dpm/100 cm^2 of removable activity, and less than 5,000 dpm/100 cm^2 for fixed radioactivity. The release limits are called Derived Concentration Guideline Levels (DCGL) in the MARSSIM document.

The number of data points necessary for a given survey unit in this survey plan is based on using the one sample Sign test for analysis of the data. The equation to be used is 5-2 from the MARSSIM manual;

$$N = \frac{(Z_{1-\alpha} + Z_{1-\beta})^2}{4(\text{sign } p - 0.5)^2}$$

This statistical test is appropriate when the contaminant is not present in background, or is present at such a small fraction of the DCGL as to be insignificant. In terms of data reduction, this means the survey units are not compared to a reference (i.e. non-impacted) area, but are compared directly to the DCGL.

The first step in determining the number of samples is to define the gray region. The gray region is the range of values where the consequences of making a decision error

are minor. Typically the lower boundary of the gray region (LBGR) is one half of the DCGL, therefore the shift or delta (Δ) is equal to DCGL-LBGR. For this project;

$$\Delta = 5{,}000 \text{ dpm}/100\text{cm}^2 - 2{,}500 \text{ dpm}/100\text{cm}^2$$

The next step is to estimate the standard deviation of the measurements of the contaminants. If no results are available, from characterization surveys for example, it is reasonable to assume a relative standard deviation of 30%.

The DCGL and LBGR are expressed in counts per minute based on 5% efficiency for the detection of C-14 and a 126 cm^2 probe. This would make the gray region from 315 cpm to 158 cpm. Thirty percent of the DCGL would give a standard deviation of 94.5. The relative shift would then be;

$$\Delta/\sigma = (315\text{-}158)/94.5 = 1.66$$

The values of sign p for a given relative shift as obtained from Table 5.4 in the MARSSIM manual is 0.955435.

The acceptable error rates for this project are 0.05 for both Type I and Type II errors. That is, there is a 5% chance of releasing a survey unit that, in reality does not meet the release criteria (Type I). Conversely, there is a 5% chance of not releasing a survey unit that truly does meet the release criteria.

The percentiles, $Z_{1-\alpha}$ and $Z_{1-\beta}$, represented by these decision errors are 1.645.

Substituting all the values determined above into equation 5.2 gives the number of data points, N as;

$$N = \frac{(1.645 + 1.645)^2}{4(0.955435\text{-}0.5)^2} = 13$$

The number of data points is increased by 20% to account for missing or unusable data, making

$$N = 13 \times 1.2 = 16$$

As a check on this calculation, the number of data points necessary based on the error rates and relative shift was also determined using Table 5.5 in MARSSIM. That value is 17 data points. Therefore, we obtained at least 17 data points in each survey unit. Included in that number are biased measurements, obtained in each hood and sink. The remaining measurements were obtained at random within equally sized grids within the survey unit.

Survey Methods

All areas to be surveyed were mostly empty. Any items remaining in the laboratories were surveyed for free release, decontaminated, or disposed as radioactive waste as necessary. Prior to surveying the laboratory, the floor plan and measurement locations are drawn on the survey form. The Liquid Scintillation Counter (LSC) rack number and total number of wipes are recorded in the space provided on the LSC log with the room description.

The scanning surveys were conducted first in each survey unit. If any area of increased activity (i.e. twice background) were detected via the audio output, the surveyor would stop, obtain a one-minute reading and mark the location with tape for further investigation. "Hotspots" located with the floor monitor were confirmed and measured with the hand held probe. The area covered during the scanning survey was variable based on the room Category.

All horizontal areas in Category 3 rooms were scanned with 100% coverage, the walls and ceilings with 20% coverage. The exceptions were the iodination suite (Labs 438/440) and the waste room (Rm. 204), which had 100% of the wall and ceiling areas scanned. Ceiling scans always included the area directly above any hoods in the room,

and the air return vents for the HVAC system. The wall area scanned in each lab was the two foot strip directly above the bench tops.

All horizontal areas in Category 2 rooms were scanned with 100% coverage, the walls and ceilings with 10% coverage. The wall and ceiling scans were "biased" to the same areas as in Category 3 labs. The corridors and receiving areas (Rms. 196 and 197) did not require walls and ceiling scans to be conducted.

Category 1 areas were required to have "spot surveys". Survey locations were chosen at random to provide even coverage throughout the first floor. All of Category 1 area was treated as a single survey unit, so a total of twenty measurement locations were chosen.

The fixed location measurements were both biased and random. The hoods and sinks in each Category 3 and 2 room were always chosen as sample locations, with the remaining locations chosen at random within the room to provide even coverage.

The wipes were obtained at the same spot as the fixed measurements. Wipe samples were obtained by wiping at least 100 cm^2 with a 4.25 cm diameter, dry filter paper. After the sample is obtained, it is placed directly into a plastic scintillation vial (7 ml capacity), in a LSC rack labeled with a unique identification number. The sample remained in that vial throughout the preparation and analysis.

In addition to the general area wipes, biased samples were obtained in the following locations. A wipe was obtained behind the lowest baffle opening of each hood in Category 2 and 3 laboratories. In addition, the duct opening at the top interior of the hood was sampled by removing the upper most baffle and reaching into the duct six to ten inches.

Wipe samples were obtained on the vacuum line nozzles in each category 2 and 3 laboratory.

A cotton swab was inserted into each sink drain down to the level of the trap. One or two sinks had very long pipes and the trap had to be dismantled to obtain a sample. Several of the floor drains in the animal rooms required taping two swabs together to reach the level of the trap.

Analytical Methods

Beta Analysis

Upon returning to the RSI laboratory, 6 milliliters of Readysafe™ liquid scintillation cocktail were added to each vial. The vial was then capped, shaken, and returned to the rack. All racks are loaded into the LSC and allowed to dark adapt prior to counting. The LSC logsheet is placed on top of the counter as a notice of which samples are being analyzed.

Wipes exhibiting activity above the MDA were recounted for five minutes, three times, and the results reported herein as the best estimate of removable radioactivity.

Analysis is conducted by setting three energy windows on the LSC. The low energy window is set for optimal tritium efficiency (0-19 keV), the second window for carbon-14 (19-156 keV), and the third window for phosphorus-32 (156-2000 keV

Gamma Analysis

Analysis for gamma emitters is conducted on the same wipe as that for beta analysis. After LSC analysis, the 7 ml vials are placed into 25 ml vials which are compatible with the gamma counter rack system. The LSC cocktail and two walls of plastic do not significantly attenuate gamma rays, and in fact more closely simulate the density of the standards (epoxy resin/plastic) than would a dry paper wipe in a single vial.

The three windows of the gamma counter are set for I-125 (15-80 keV), cobalt-57 (80 - 165 keV), and all other higher energy emitters (165 - 2,000 Kev). If samples are positive in the third channel, they are recounted using another program with the window settings of 240-470 keV(I-131 and Cr-51), and 940-1400 keV (Fe-59).

Survey Results

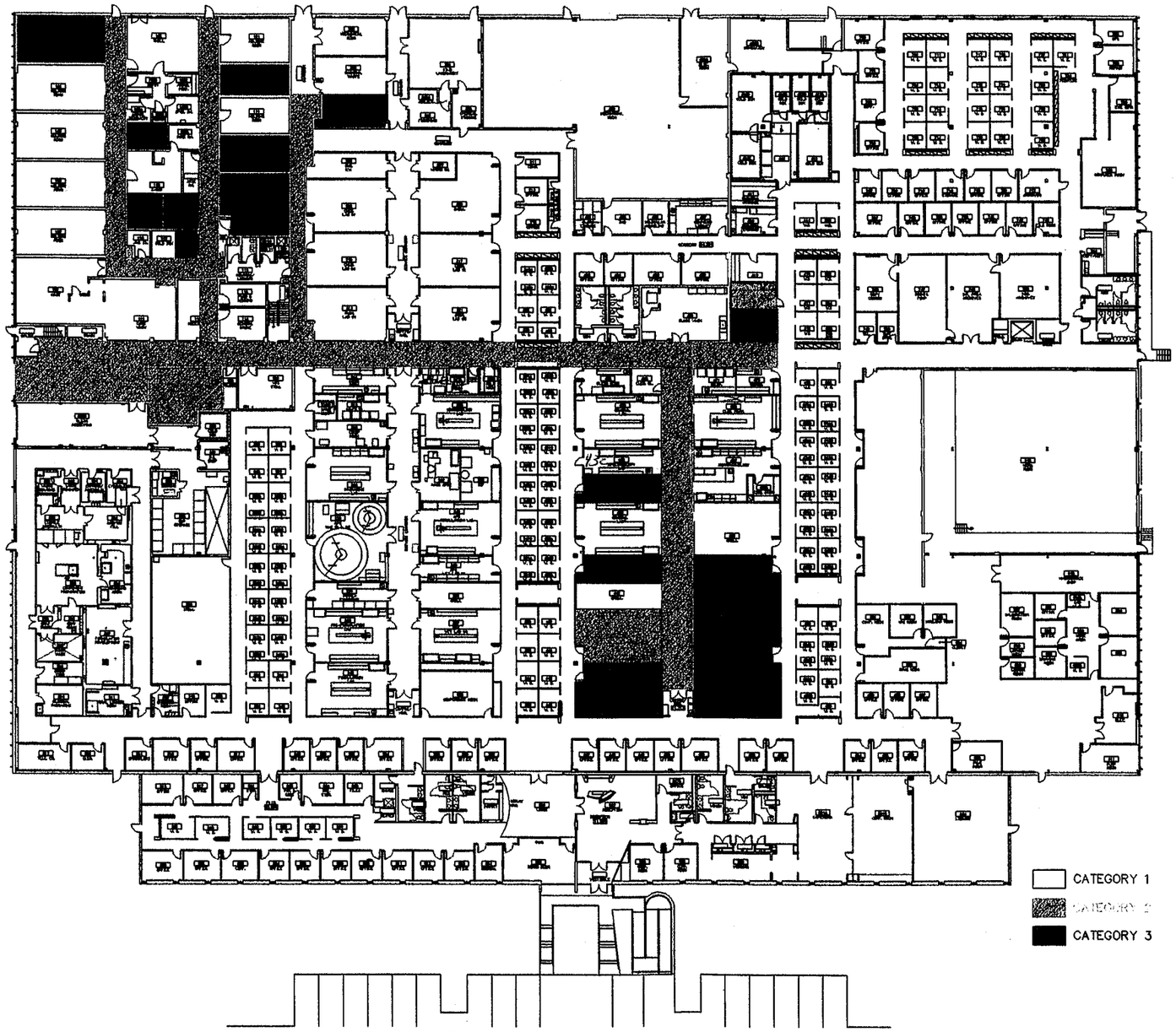
Measurement locations are indicated on the room diagrams contained in this report. Analytical results are presented on the page following each diagram. Results are reported as less than the Minimum Detectable Activity (MDA) of the instruments where appropriate. The MDAs are typically less than 20% of the DCGL's.

Stationary surface activity measurements were obtained in counts per minute and recorded in the field. The reported results have been corrected for background, and are based on the meters efficiency to Carbon-14.

The raw data for the wipe analysis is provided in the Appendix of this report. The LSC Log Sheets correlate the rack and position number to the room and wipe location. The LSC racks were not analyzed in the same order as the sample were obtained.

Room	Measurement	Room	Measurement
100	3 μR/hr	197	4 μR/hr
104	3 μR/hr	204	4 μR/hr
108	4 μR/hr	419	4 μR/hr
108A	2 μR/hr	421	3 μR/hr
112	3 μR/hr	434	3 μR/hr
116A	4 μR/hr	438	3 μR/hr
116B	3 μR/hr	440	3 μR/hr
117	4 μR/hr	444	4 μR/hr
118	4 μR/hr	446	5 μR/hr
120	2 μR/hr	461	5 μR/hr
196	4 μR/hr	463	5 μR/hr

Table 1. - Waist Level Dose Rates



Nycomed Amersham
Nycomed Amersham Imaging

Engineering & Maintenance
480 Devon Park Drive
Wayne , PA. 19087
(610) 825-4350 Fax (610) 225-4408

ΔTARC

Torsten Almen Research Center
BUILDING OUR FUTURE

KEY PLAN
NO SCALE

Cad Project #	Start Date: 03/26/99
Project Number	Drawn by: P.JL
Scale: 1/16"=1'-0"	Checked by: GC

Drawing Title:
Radioisotope Usage

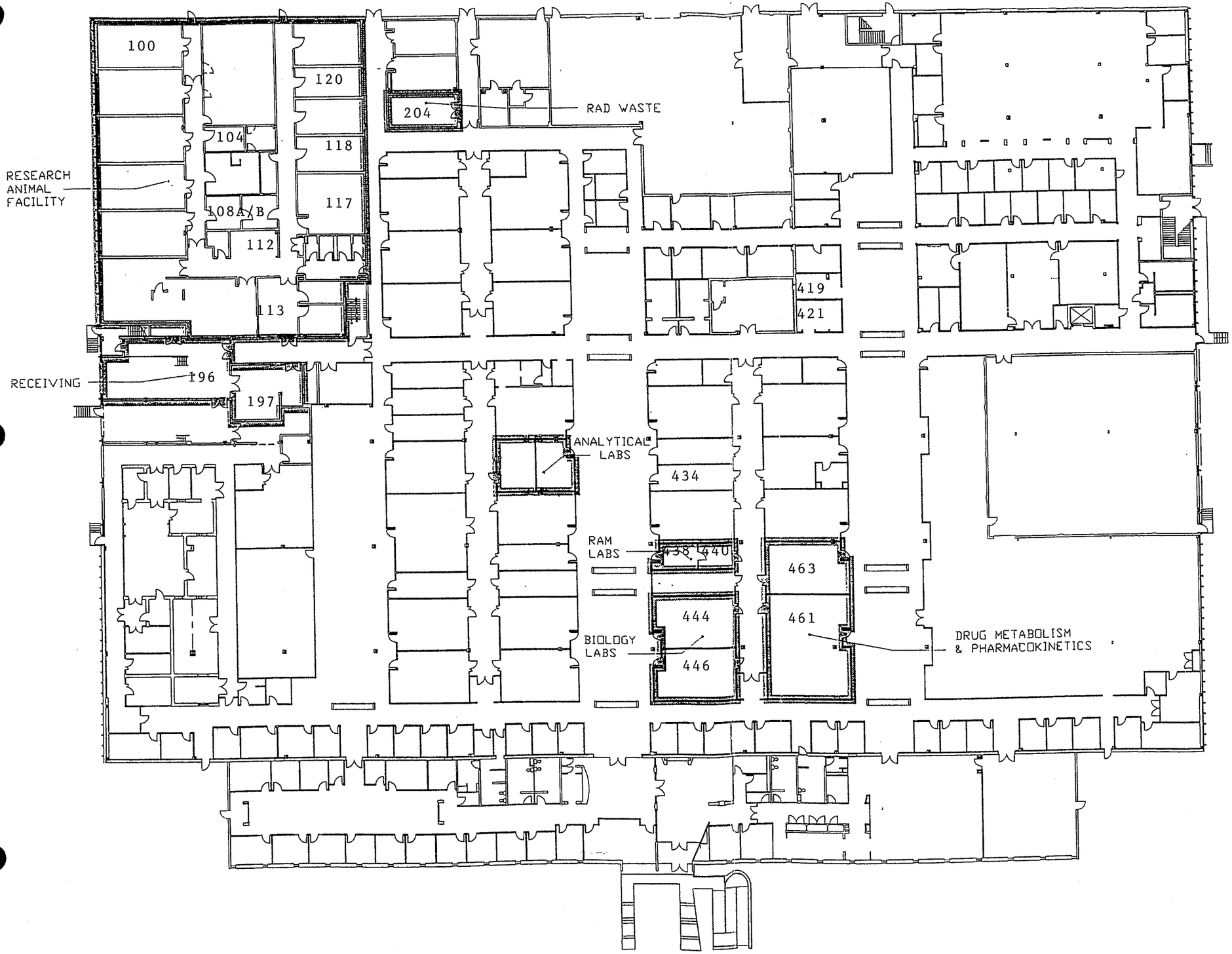
1 2 7 5 4 4

Drawing Number:

A-1

Computer File Name:
NYC01-CAT.DWG

Date: 08/19/99
Paper Size: M30X42 (E)



NYCOMED

RADIOACTIVE MATERIALS (RAM) DIAGRAM

Category 3 and 2 Laboratories and Rooms.

JACOBS WYPER ARCHITECTS

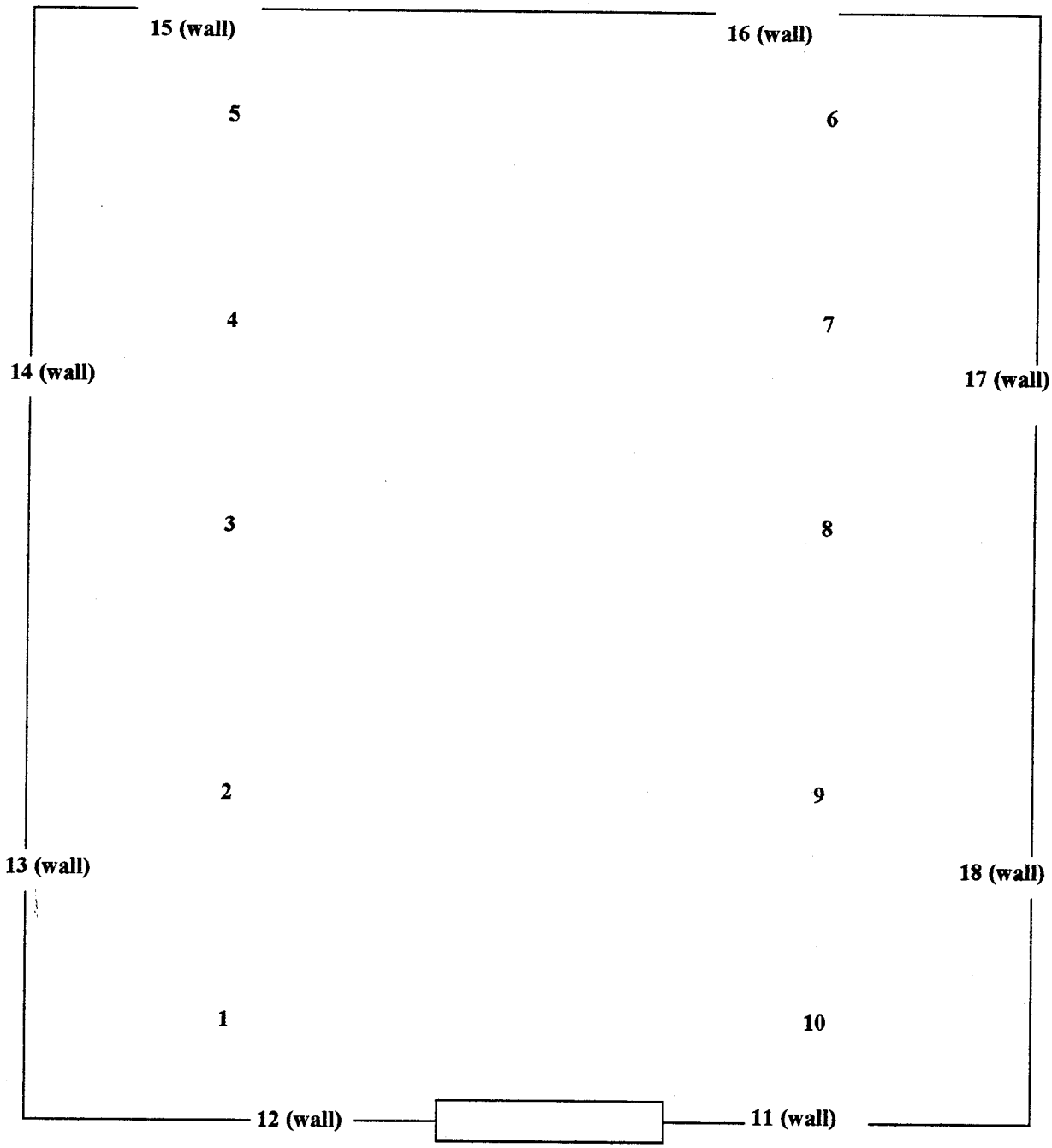
1232 Chancellor Street
Philadelphia, PA 19107
215 985 0400

127544

scale: none AUG-1995 file: 437-R/

Category 3 Rooms

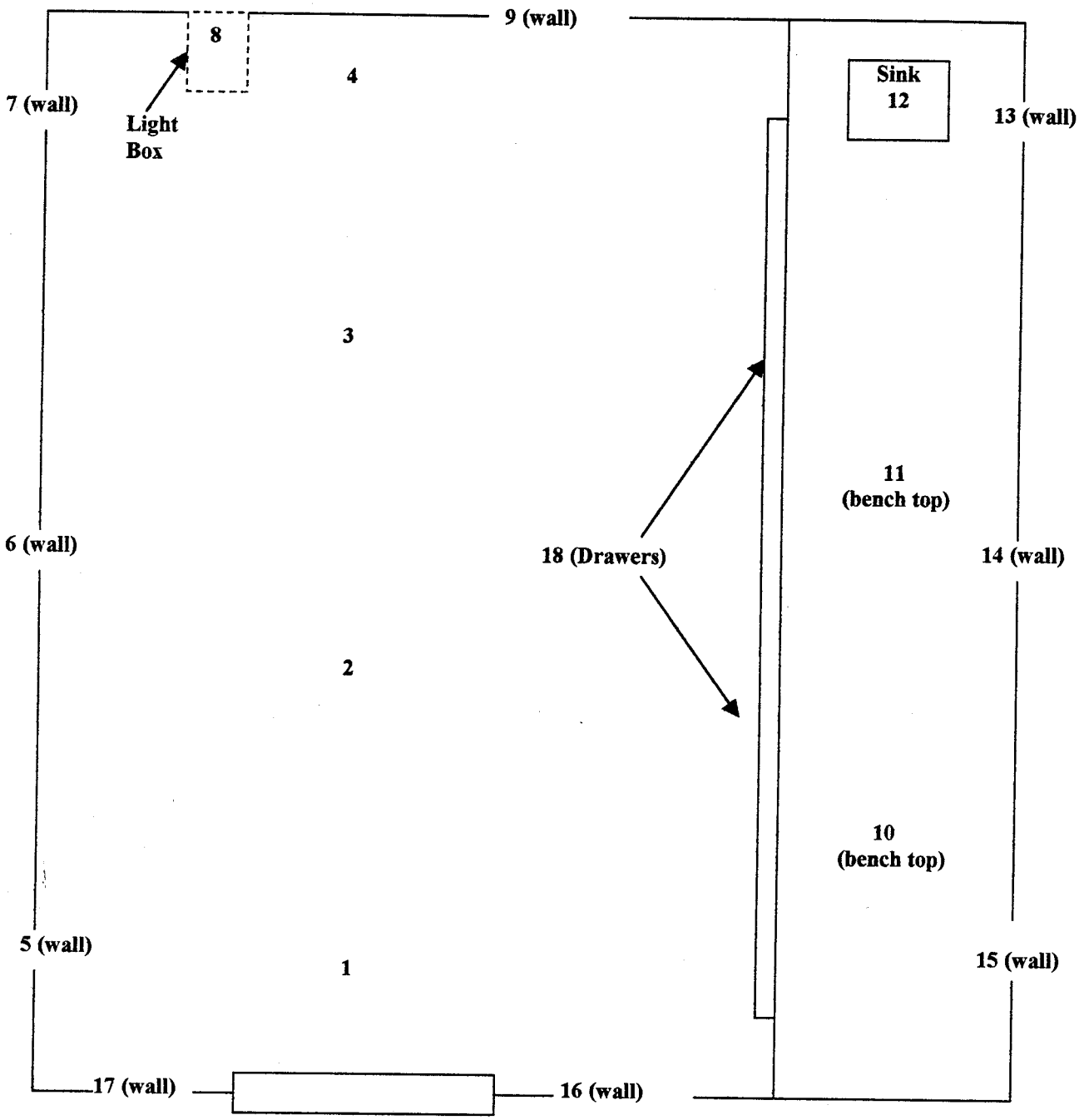
Room 100 (Category 3)



Measurement Results for Room 100

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	199	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	193	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	190	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	192	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	182	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	190	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	151	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	186	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	212	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	178	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	219	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	211	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	230	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	209	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	186	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	236	< MDA

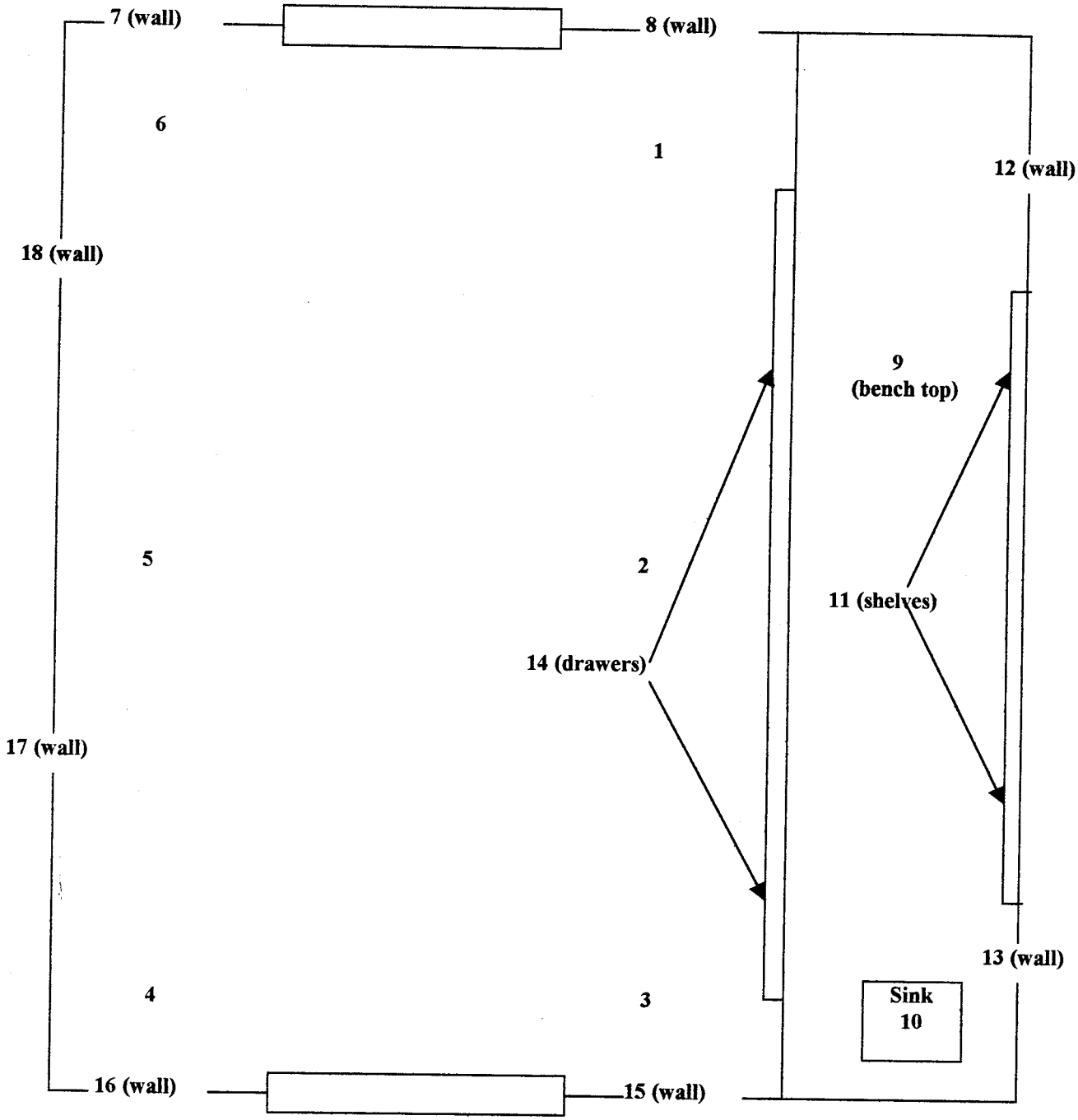
Room 104 (Category 3)



Measurement Results for Room 104

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	228	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	216	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	181	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	230	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	226	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	202	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	221	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	165	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	234	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	188	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	219	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	220	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	221	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	242	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	228	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	183	< MDA

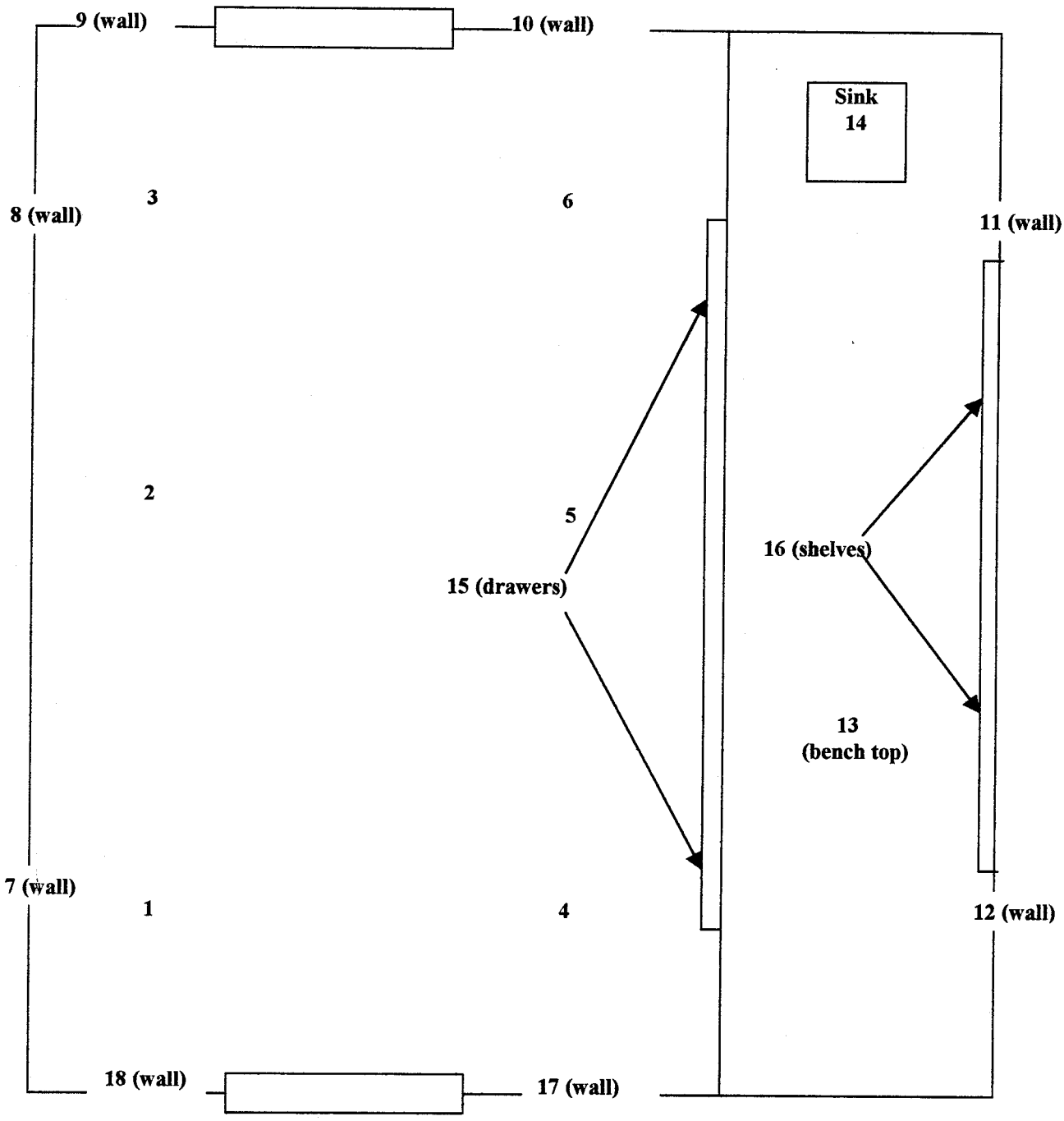
Room 108 (Category 3)



Measurement Results for Room 108

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	192	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	182	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	196	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	183	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	175	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	190	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	213	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	197	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	170	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	159	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	139	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	153	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	185	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	184	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	189	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	206	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	224	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	176	< MDA

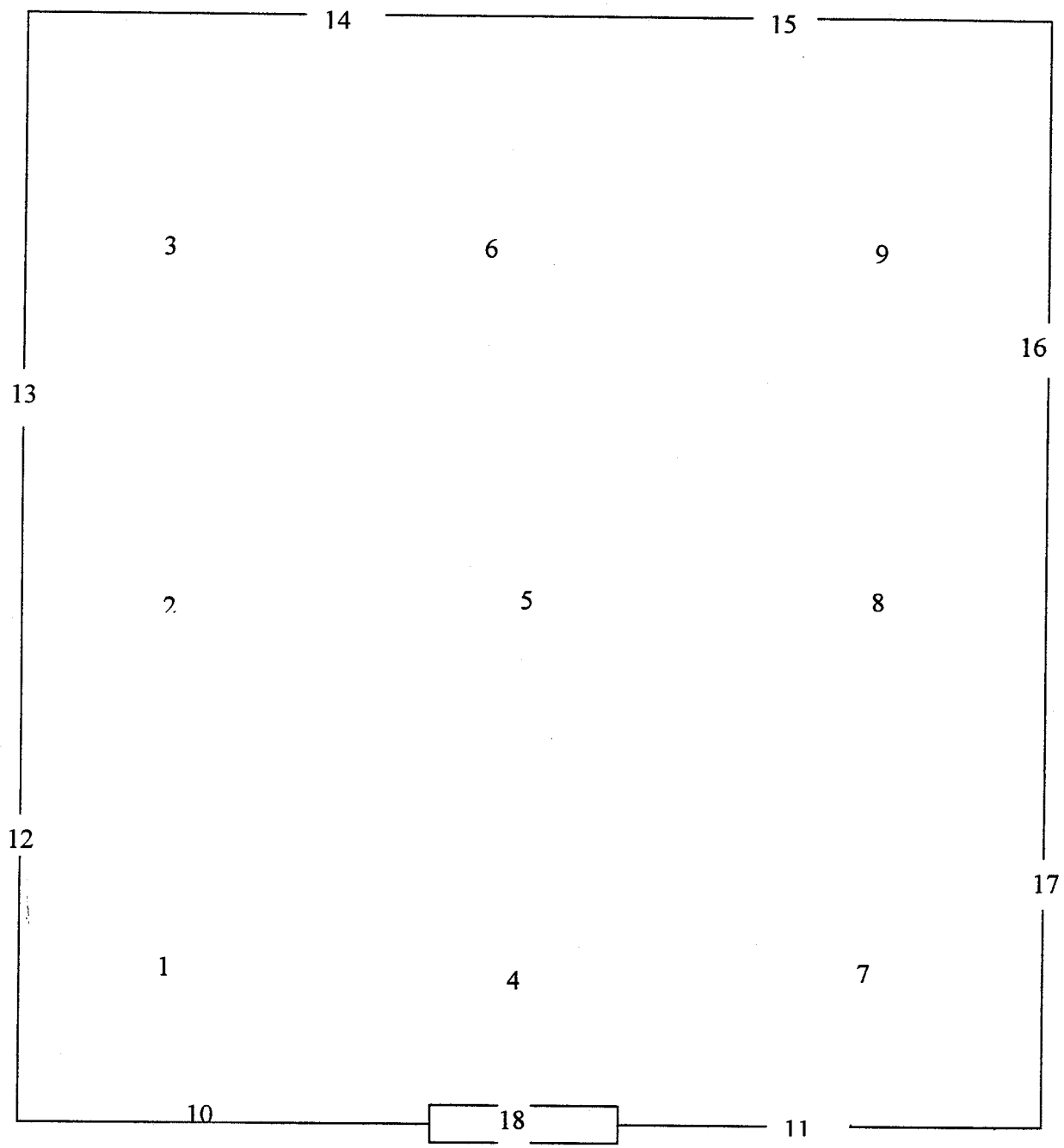
Room 108A (Category 3)



Measurement Results for Room 108A

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	205	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	208	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	176	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	211	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	165	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	193	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	224	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	232	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	223	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	167	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	210	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	196	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	173	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	215	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA

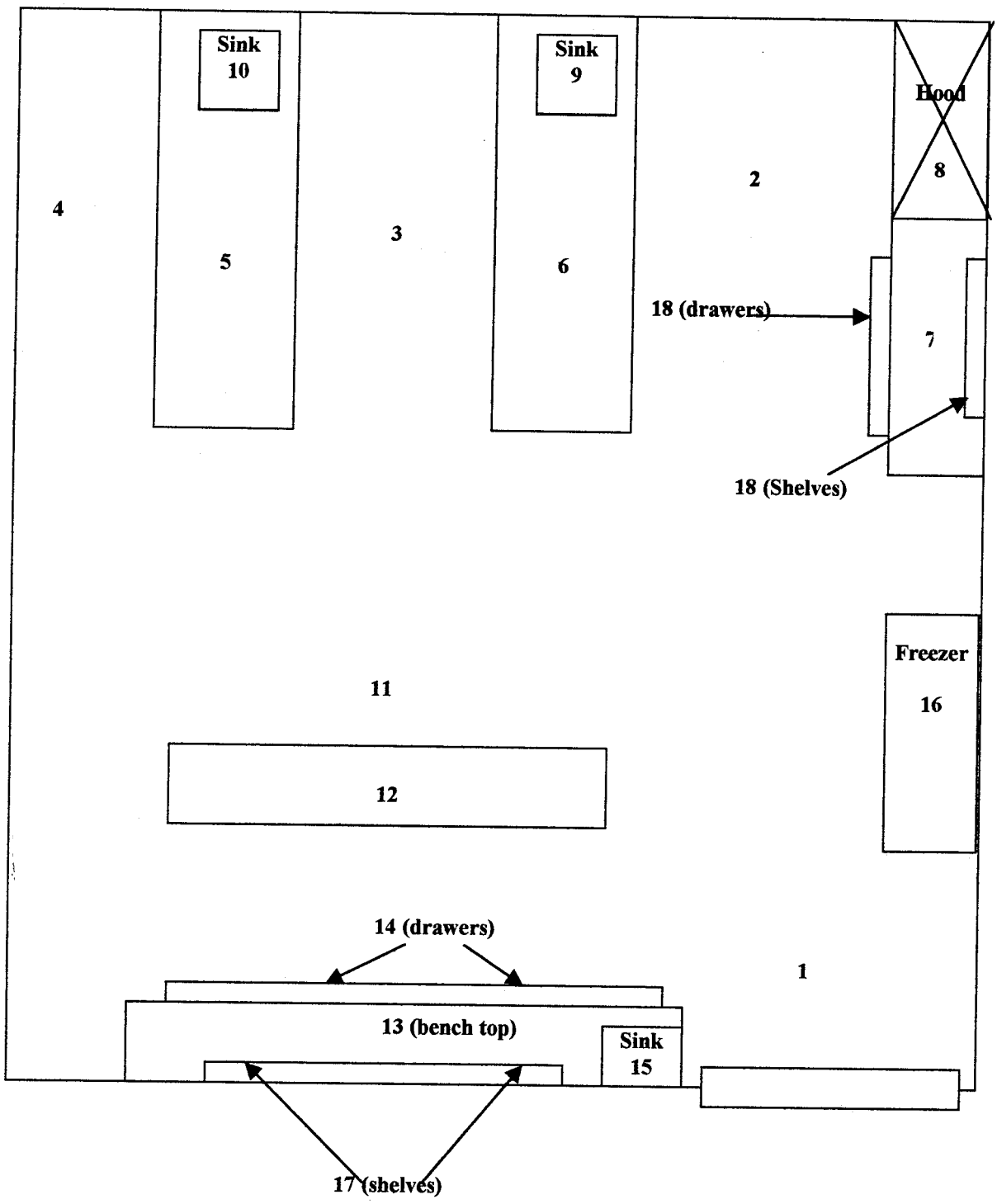
Room 112 (Category 3)



Measurement Results for Room 112

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	174	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	183	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	165	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	161	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	157	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	191	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	141	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	159	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	167	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	179	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	171	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	185	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	173	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	141	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	137	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	159	< MDA

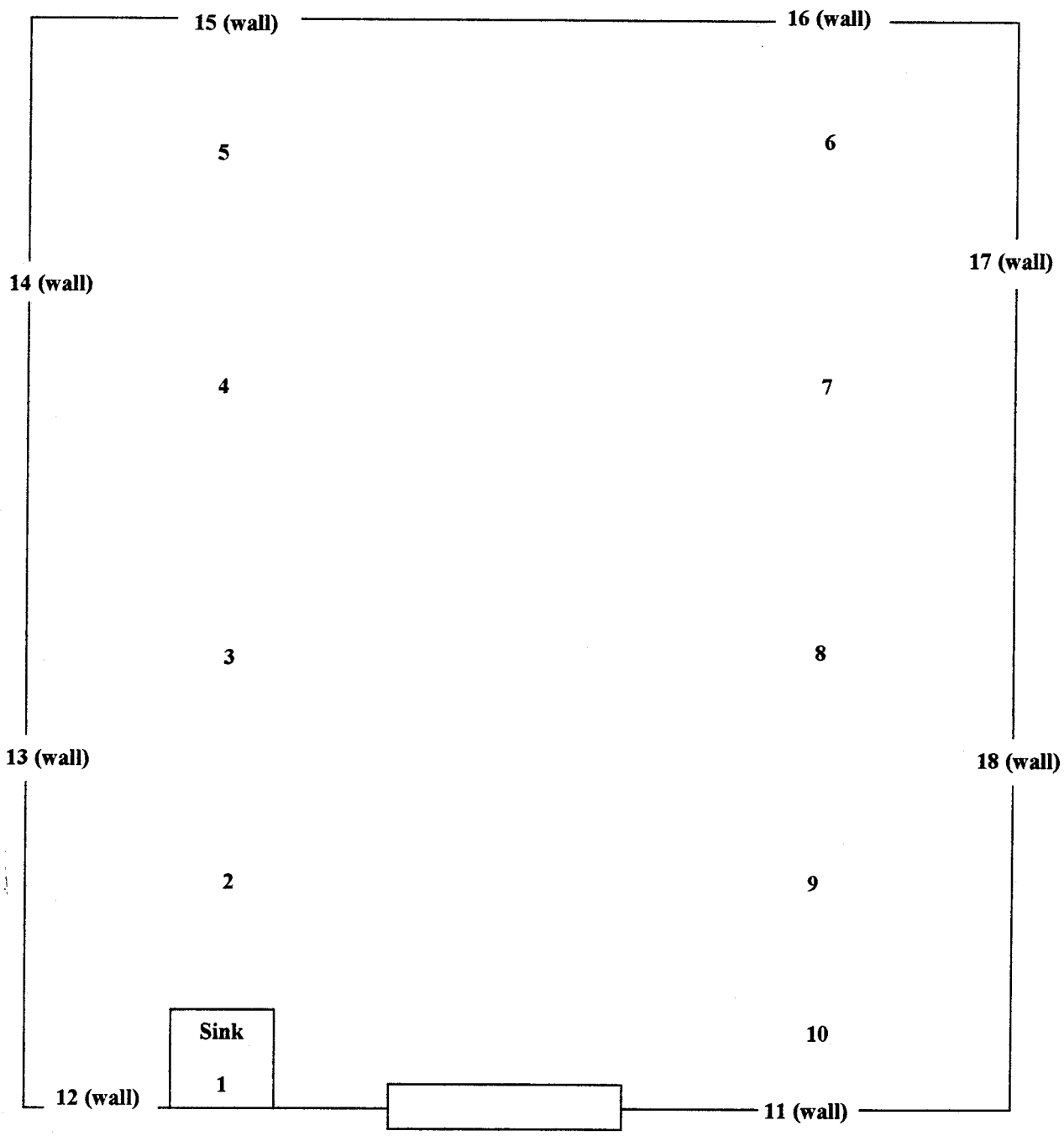
Room 117 (Category 3)



Measurement Results for Room 117

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	157	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	147	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	148	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	159	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	143	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	131	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	145	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	192	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	195	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	168	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	192	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	193	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	192	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	205	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	223	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	170	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	203	< MDA

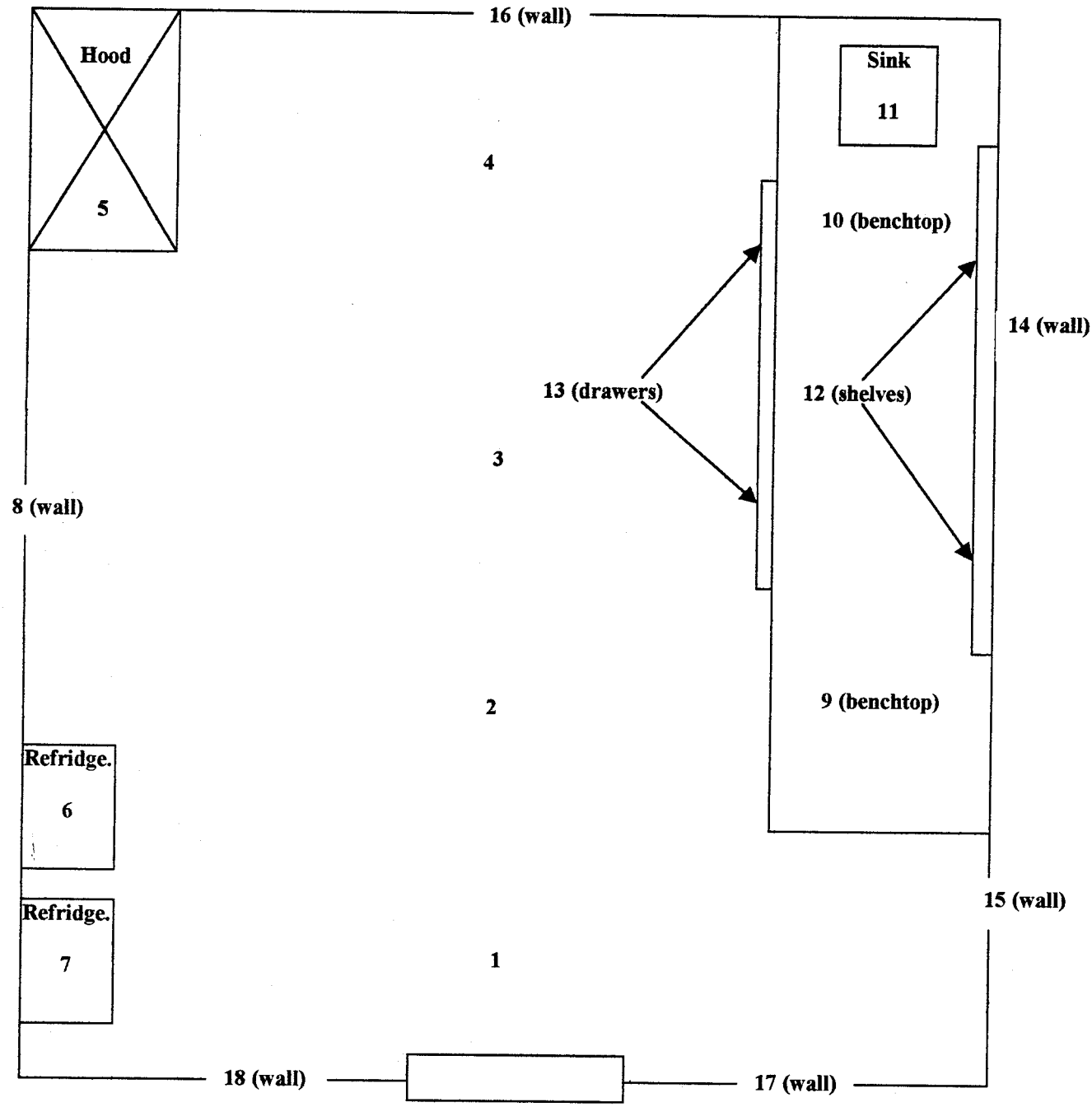
Room 118 (Category 3)



Measurement Results for Room 118

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	181	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	219	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	214	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	163	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	193	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	191	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	153	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	206	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	233	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	207	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	224	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	217	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	229	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	232	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA

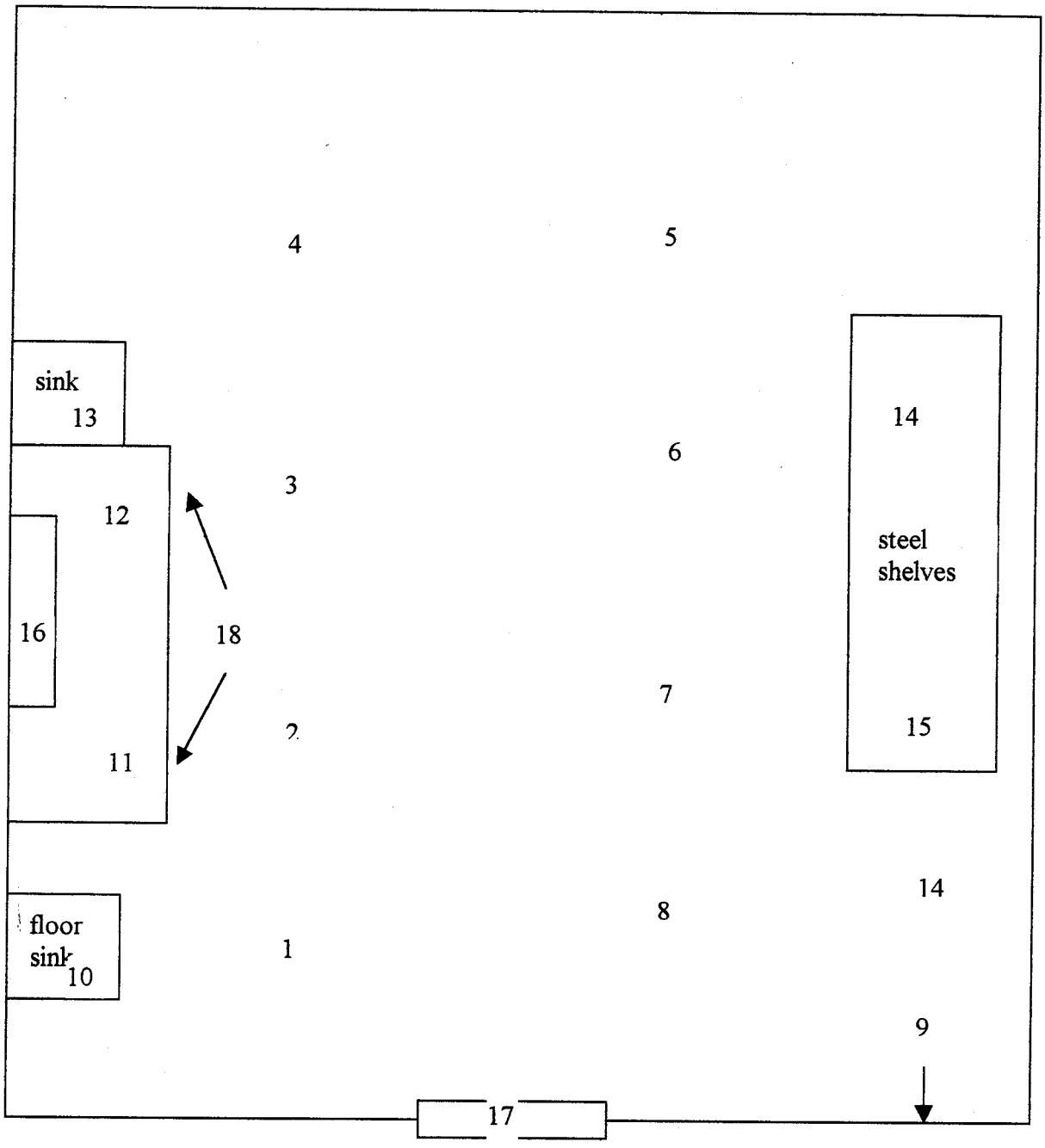
Room 120 (Category 3)



Measurement Results for Room 120

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	169	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	187	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	186	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	192	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	183	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	202	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	189	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	176	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	178	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	165	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	190	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	198	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	169	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	227	< MDA

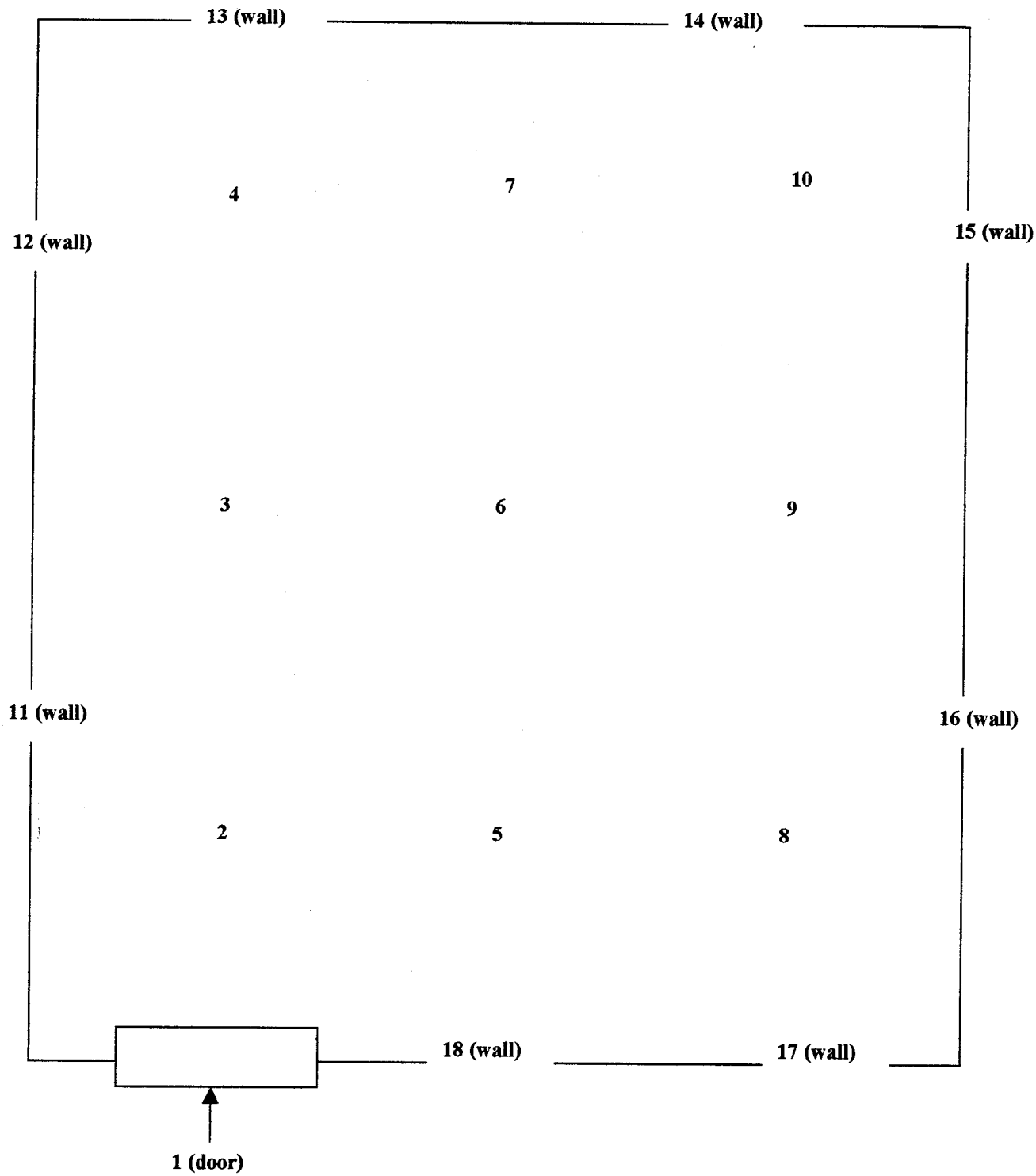
Room 204 (Category 3)



Measurement Results for Room 204

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	214	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	198	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	160	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	187	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	179	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	148	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	160	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	175	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	171	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	184	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	150	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	155	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	140	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	161	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	152	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	149	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	165	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	176	< MDA

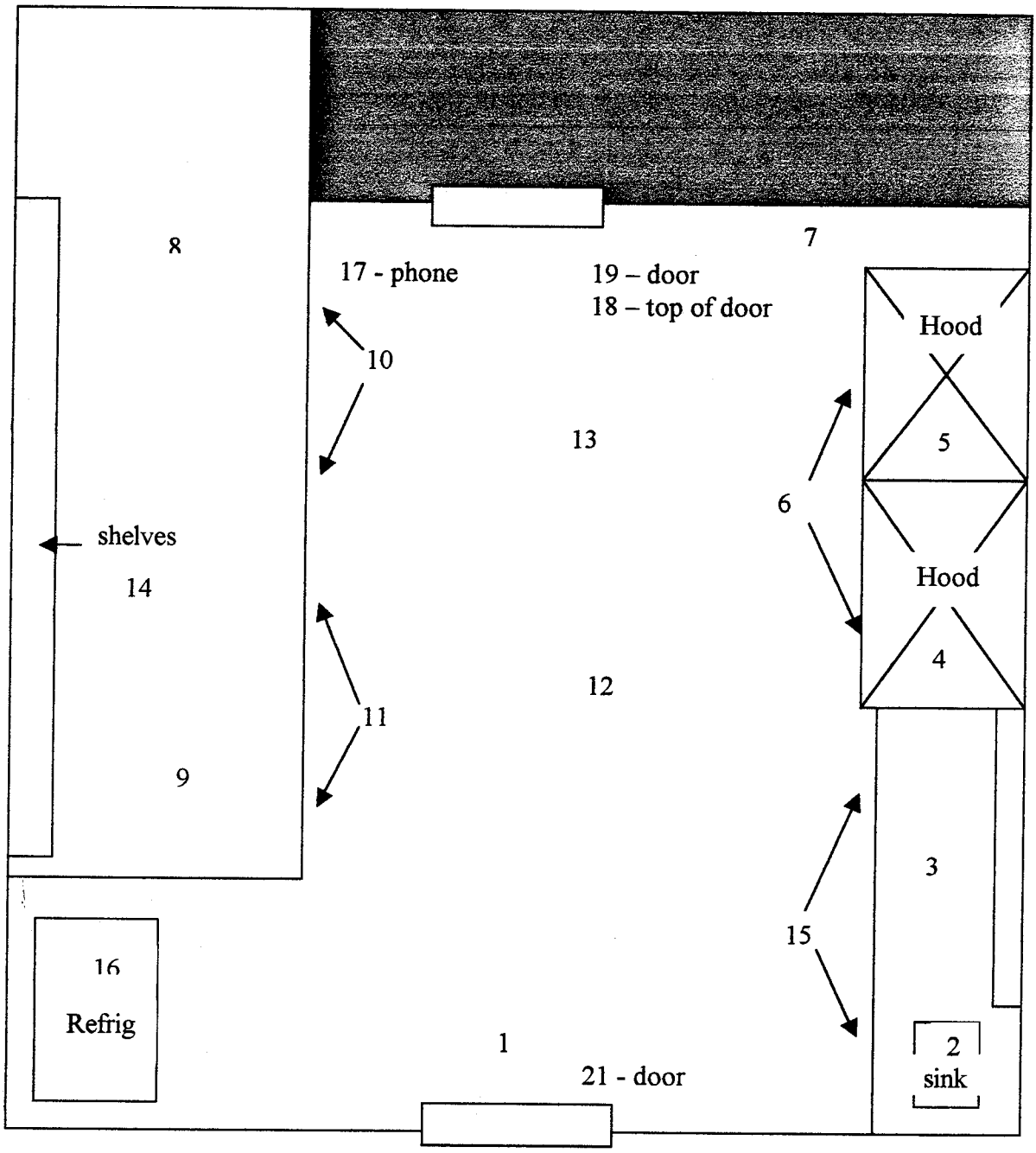
Room 421 (Category 3) – Cold Room



Measurement Results for Room 421

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	188	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	196	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	212	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	197	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	165	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	180	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	173	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	169	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	173	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	198	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	197	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	199	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	189	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	173	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	171	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	160	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	174	< MDA

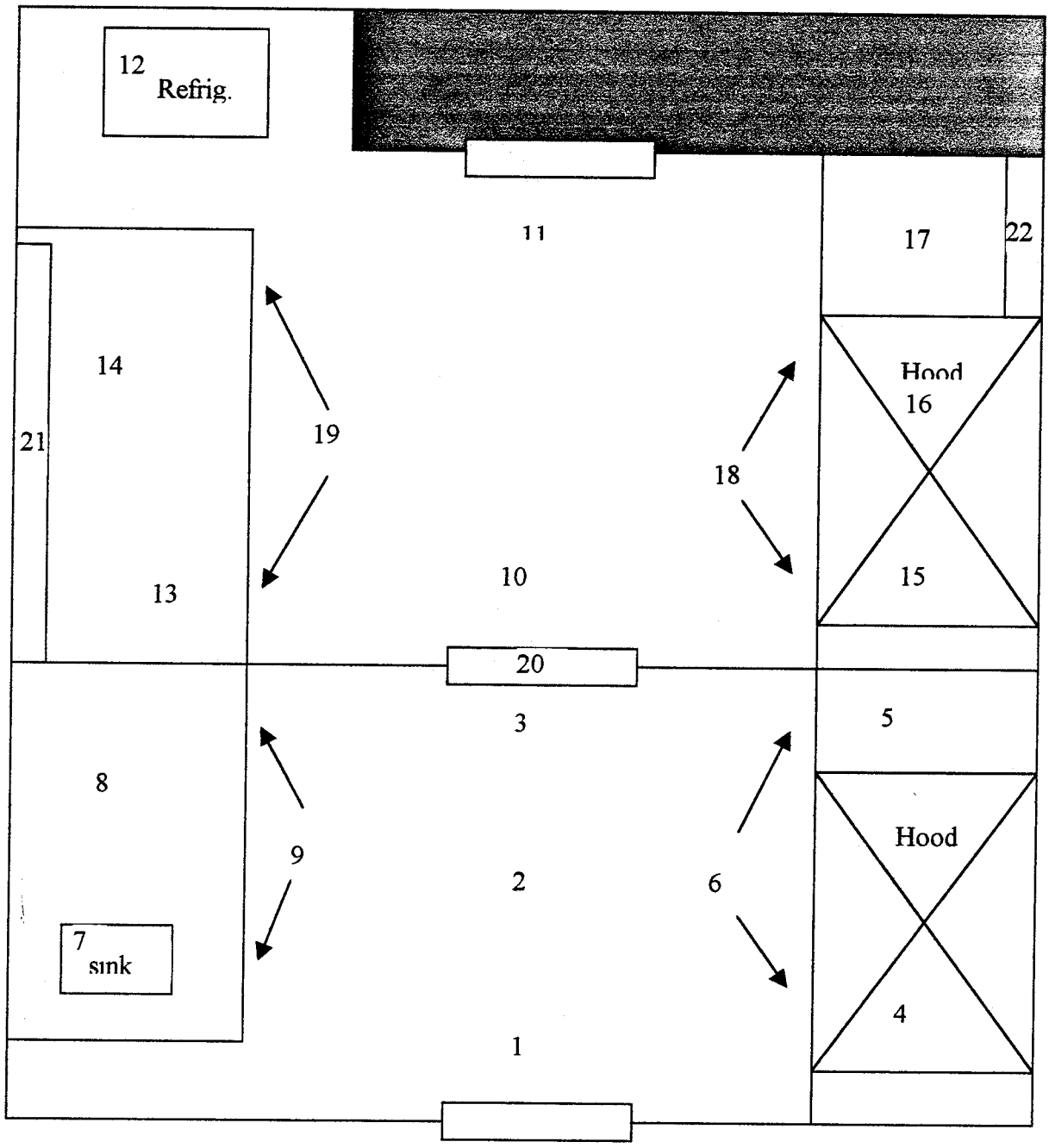
Room 434 (Category 3)



Measurement Results for Room 434

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	159	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	163	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	135	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	161	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	179	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	257	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	238	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	251	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	222	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	219	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	215	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	255	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	220	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	186	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	210	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	205	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	202	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	166	< MDA
19	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	222	< MDA
20	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	179	< MDA
21	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	187	< MDA

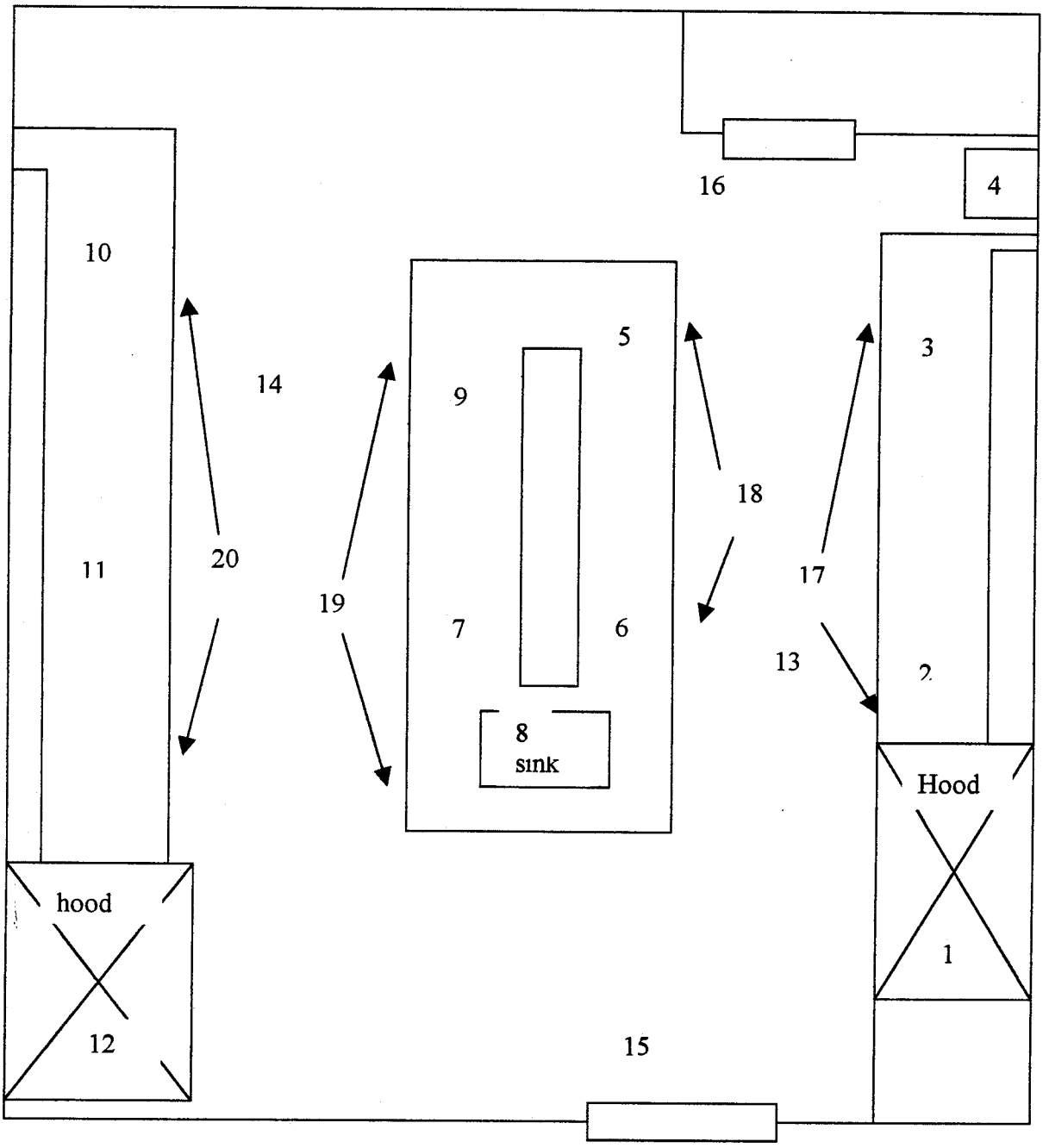
Room 438/440 (Category 3)



Measurement Results for Room 438/440

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	175	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	185	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	179	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	183	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	169	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	142	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	153	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	167	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	158	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	168	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	140	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	157	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	208	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	166	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	157	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	166	< MDA
19	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	176	< MDA
20	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	162	< MDA
21	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	151	< MDA
22	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	191	< MDA

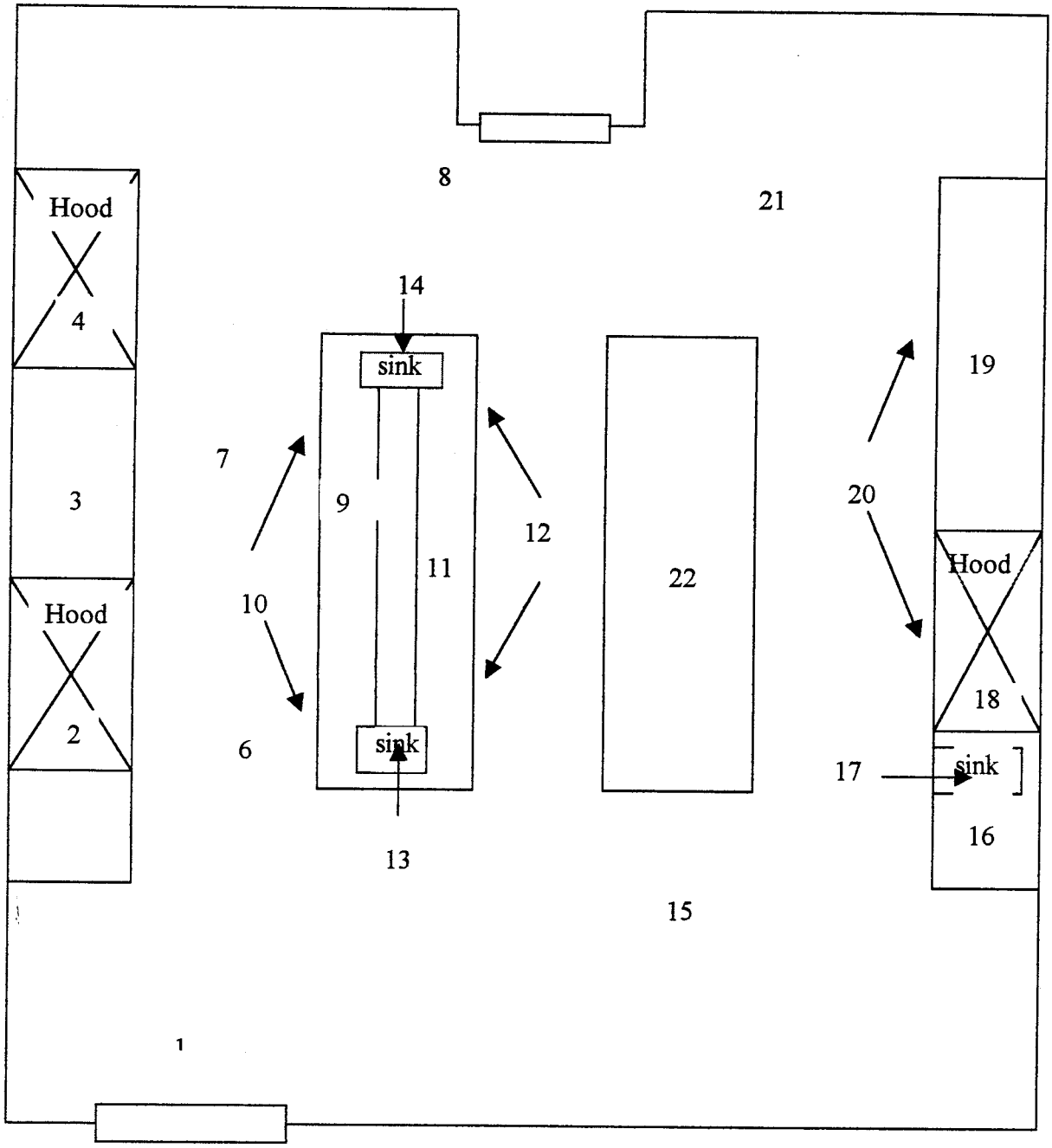
Room 446 (Category 3)



Measurement Results for Room 446

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	168	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	144	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	152	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	128	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	157	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	147	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	144	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	136	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	133	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	135	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	139	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	144	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	141	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	143	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	134	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	106	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	116	< MDA
19	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	127	< MDA
20	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	113	< MDA

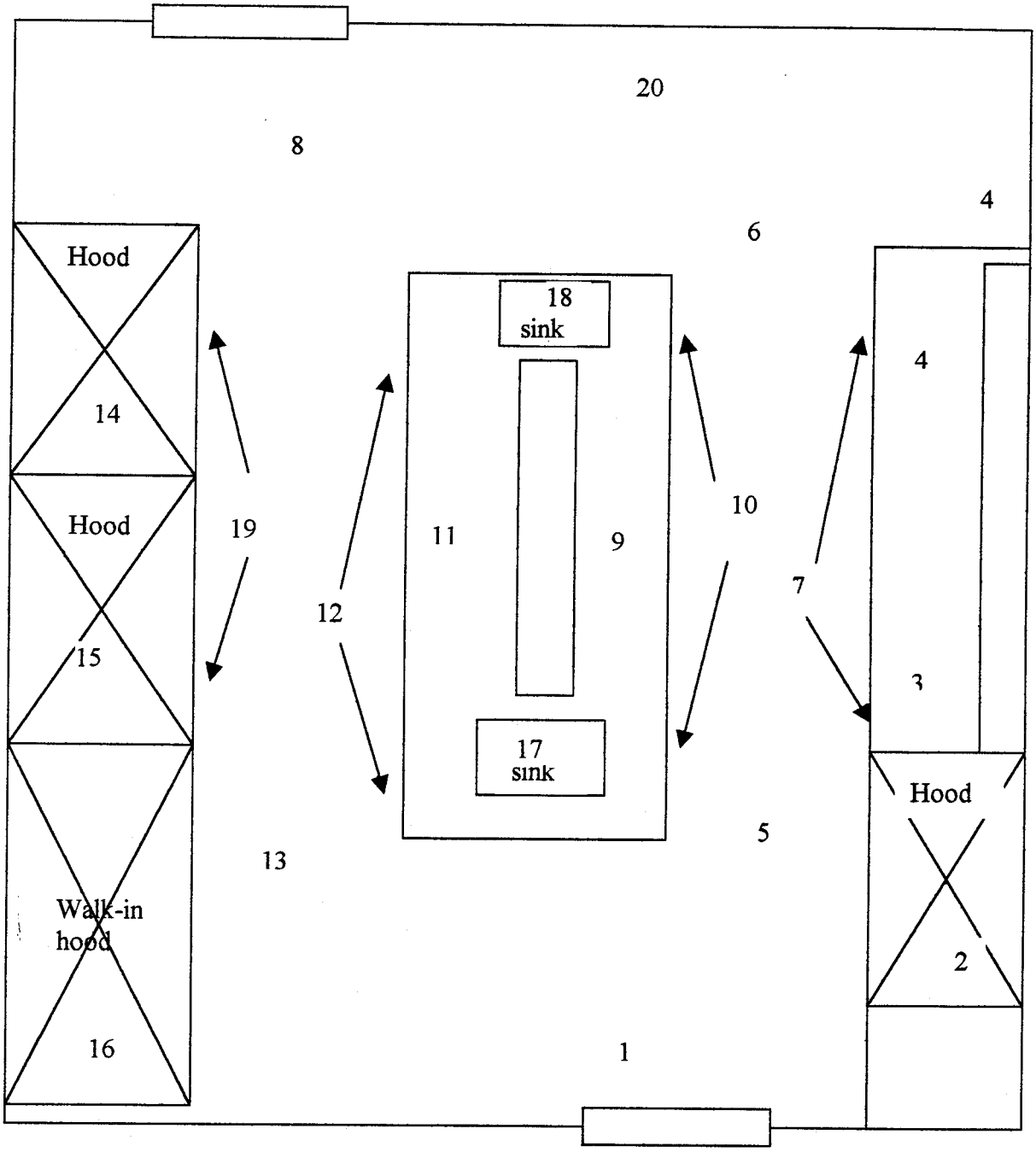
Room 461 (Category 3)



Measurement Results for Room 461

Meas	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
Loc.	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	181	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	221	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	169	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	213	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	171	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	159	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	166	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	150	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	181	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	139	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	168	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	142	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	143	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	137	< MDA
19	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	159	< MDA
20	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	133	< MDA
21	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	148	< MDA
22	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	176	< MDA

Room 463 (Category 3)

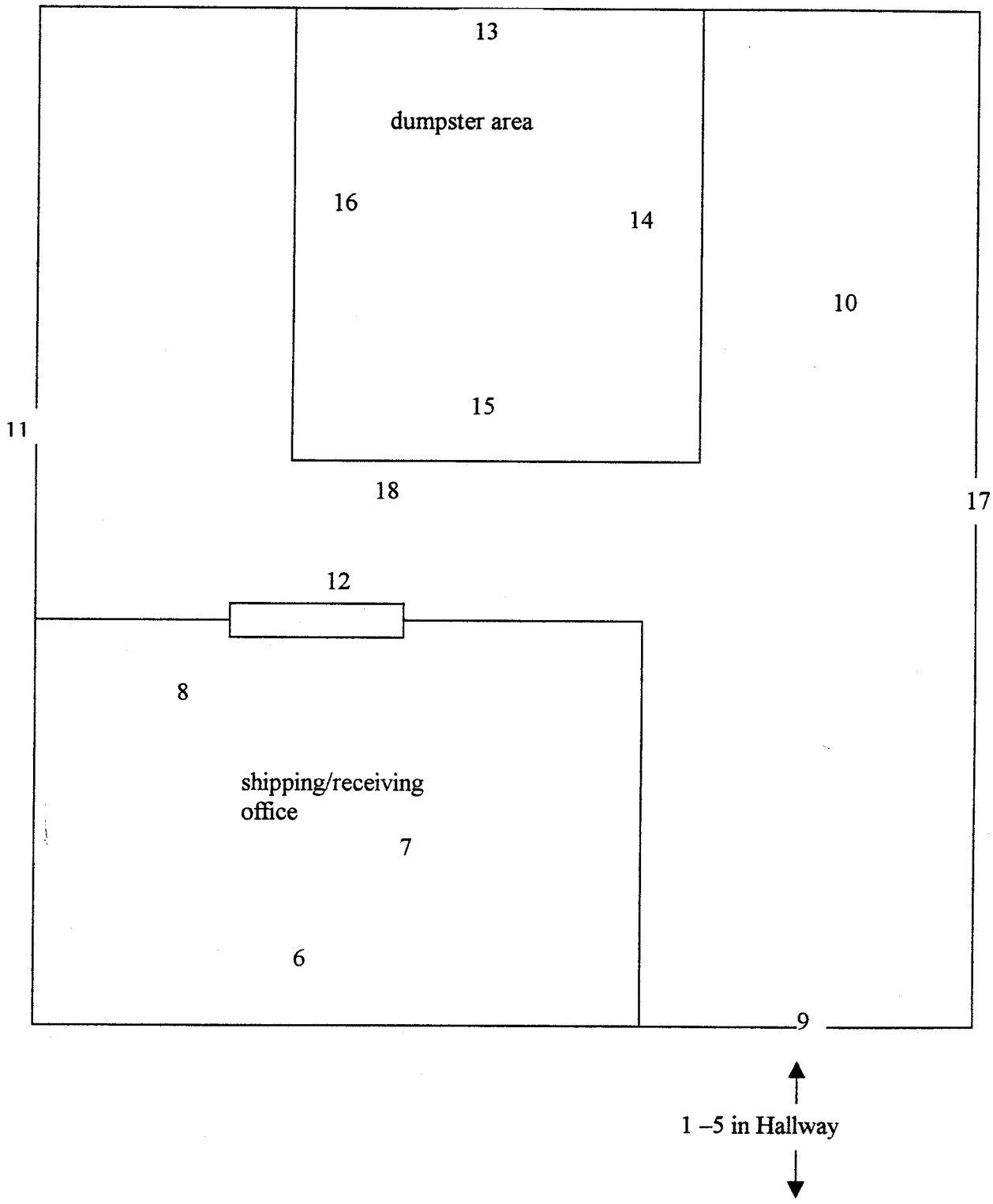


Measurement Results for Room 463

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	239	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	211	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	203	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	221	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	231	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	194	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	208	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	221	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	208	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	199	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	248	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	198	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	200	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	197	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	187	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	175	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	211	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	225	< MDA
19	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	170	< MDA
20	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	184	< MDA

Category 2 Areas

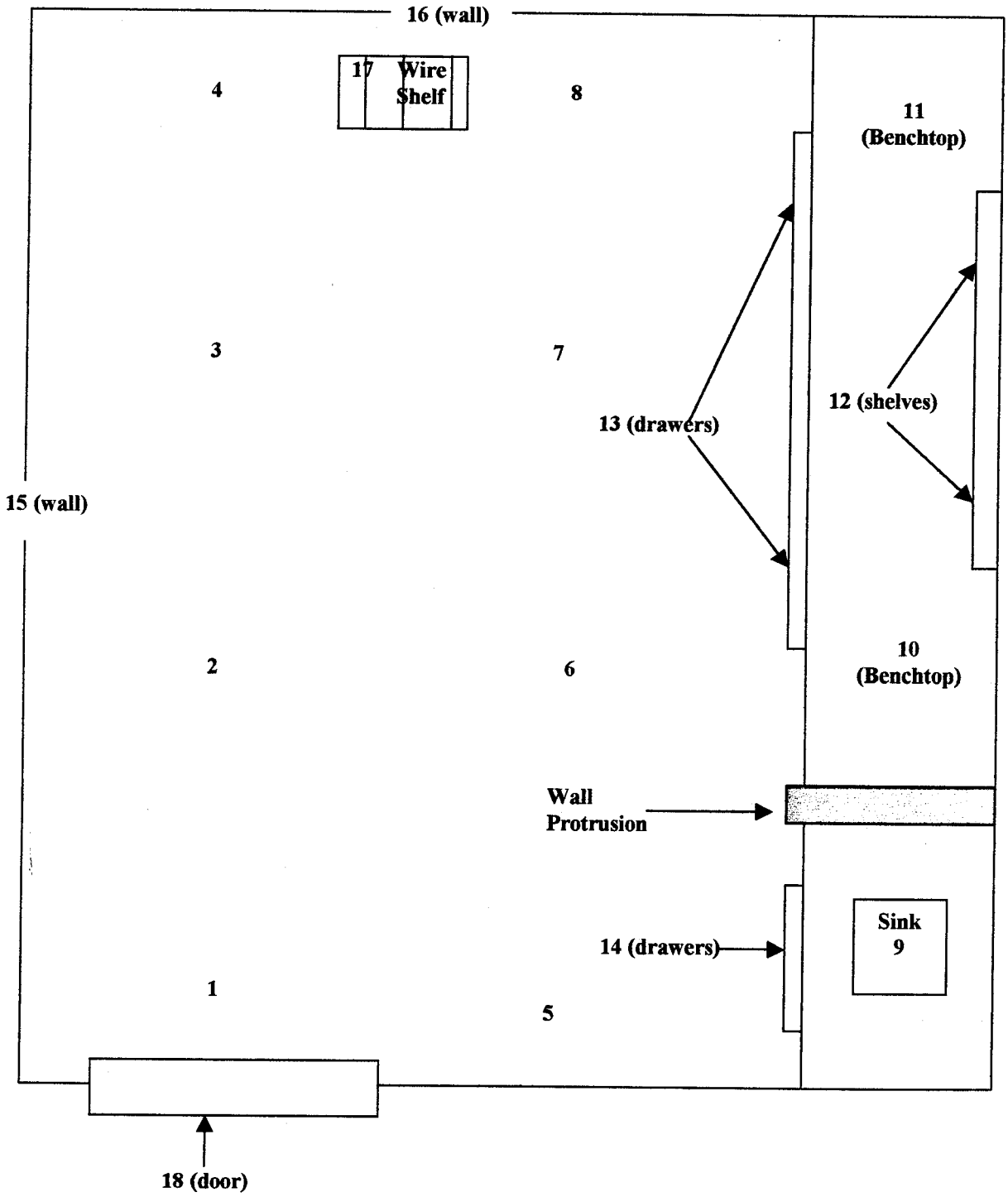
Room 196/197 (Category 2)



Measurement Results for Room 196/197

Meas	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
Loc.	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	185	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	164	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	200	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	205	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	187	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	203	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	207	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	174	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	216	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	206	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	199	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	192	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	194	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	148	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	139	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	162	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	207	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	271	< MDA

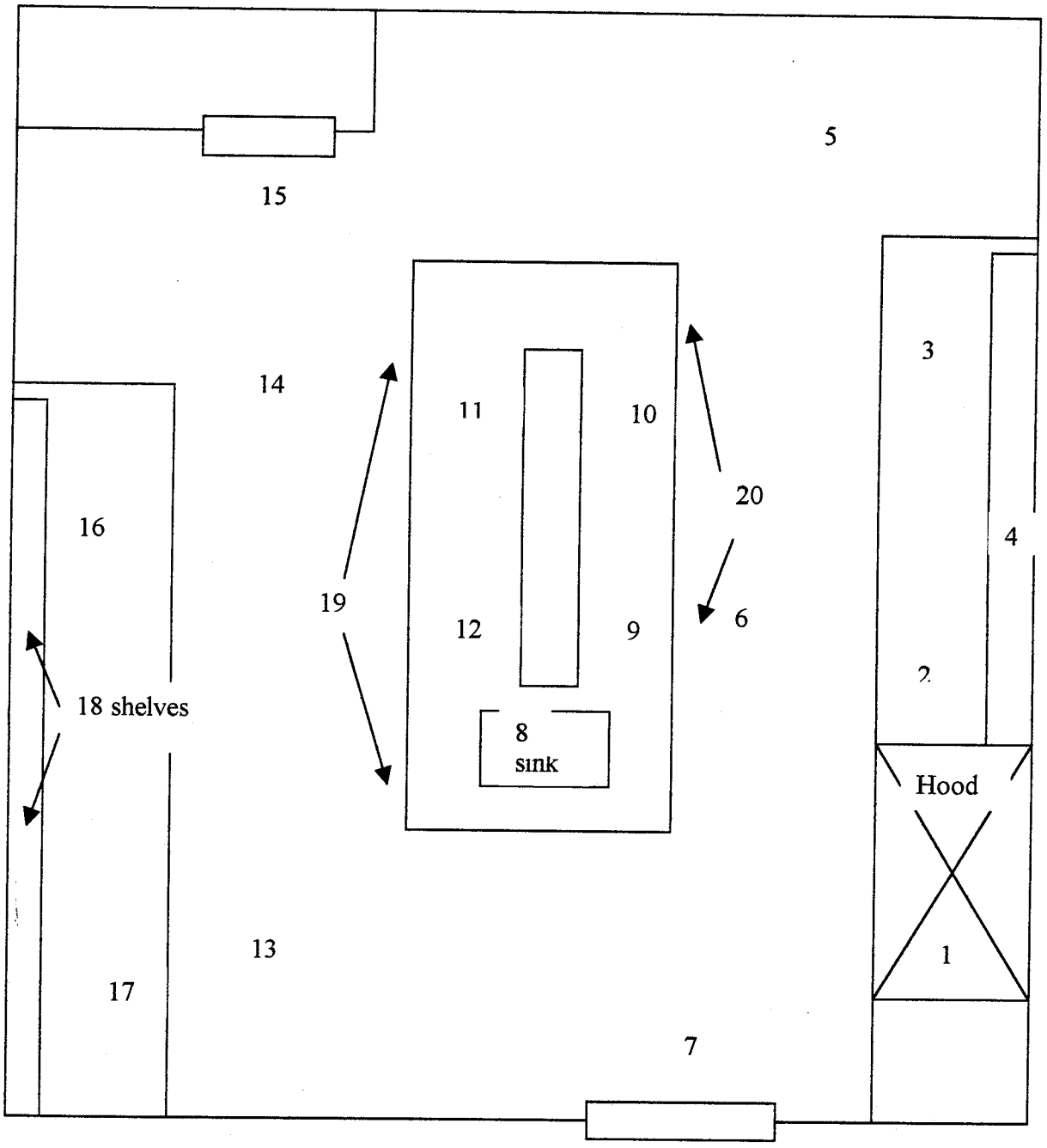
Room 419 (Category 2) –Cold Room



Measurement Results for Room 419

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	169	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	165	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	168	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	160	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	179	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	148	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	138	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	170	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	132	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	136	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	160	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	156	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	135	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	141	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	167	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	144	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	179	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA

Room 444 (Category 2)



Measurement Results for Room 444

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	159	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	141	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	160	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	219	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	243	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	252	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	230	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	213	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	246	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	236	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	227	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	205	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	242	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	231	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	225	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	232	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	217	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	211	< MDA
19	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	213	< MDA
20	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	206	< MDA
21	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	184	< MDA

Hallway A (Category 2)

This is the hallway between rooms 214 and 212, and between 210 and 116.

Measurement Results for Hallway A

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	223	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	207	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	200	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	213	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	202	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	199	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	211	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	153	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	214	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	175	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	216	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	211	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	205	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	201	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	197	< MDA

Hallway B (Category 2)

This is the hallway between the animal rooms, up to and including the hallway outside the receiving lab.

Measurement Results for Hallway B

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	163	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	152	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	183	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	142	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	151	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	169	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	181	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	152	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	143	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	168	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	141	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	168	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	135	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	144	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	135	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	140	< MDA

Hallway C (Category 2)

This is the hallway between rooms 461 and 446.

Measurement Results for Hallway C

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	156	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	127	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	143	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	118	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	206	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	203	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	210	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	185	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	184	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	175	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	172	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	190	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	203	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	202	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	178	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	148	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	150	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	171	< MDA

Category 1 Areas

Entire Building (Category 1)

Meas. #	Location
1	hallway outside w.s. 464A
2	cafeteria 831A
3	room 623
4	hallway outside office 810
5	room 303
6	hallway outside w.s. 232A
7	cage wash 111
8	room 202
9	hallway between 208 & 209
10	room 237
11	room 239
12	hallway outside w.s. 435A
13	mechanical room 400
14	room 405
15	room 420 sink
16	hallway outside w.s. 508
17	hallway outside room 746
18	hallway outside room 740
19	hallway outside w.s. 720

Measurement Results for Entire Building (Category 1 areas)

Meas Loc.	Beta Wipe Analysis			Gamma Wipe Analysis			Fixed Measurements	
	Ch. 1	Ch. 2	Ch. 3	Ch. 1	Ch. 2	Ch. 3	cpm	dpm/100 cm^2
1	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	204	< MDA
2	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	234	< MDA
3	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	213	< MDA
4	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	232	< MDA
5	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	234	< MDA
6	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	173	< MDA
7	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	182	< MDA
8	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	167	< MDA
9	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	181	< MDA
10	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	192	< MDA
11	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	220	< MDA
12	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	237	< MDA
13	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	208	< MDA
14	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	231	< MDA
15	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	202	< MDA
16	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	220	< MDA
17	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	206	< MDA
18	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	220	< MDA
19	< MDA	< MDA	< MDA	< MDA	< MDA	< MDA	212	< MDA

Quality Assurance Methods

The Quality Assurance program for all laboratory and field equipment is based on daily performance, background, and source checks. Field check logs are used to record and verify the source counts, and are included in the Appendix. These charts are generated each month, based on counting the sources for sixty minutes, ten times. Other parameters that are recorded and reviewed for trend analysis are background, and high voltage.

Prior to analyzing samples in the LSC each day, NIST traceable unquenched tritium and carbon-14 standards are counted. The resultant value must be within plus or minus three sigma of the average of ten counts, conducted monthly. The commercially prepared unquenched standards are used for the long term, daily checks because they are extremely stable over time. All laboratory technicians are instructed to notify the lab supervisor prior to running samples if any parameter is out of range.

In the gamma counter, a Cs-137 source serves as the check source, as well as being used by the counter to adjust the gain each day.

Both liquid scintillation counters and gamma counter calibrations involve setting the energy windows (discussed above), determination of background, and establishing the detection efficiency, (for the LSC's, actually a range of efficiencies for the range of quench values).

Liquid Scintillation Counter

Background Determination

Background in each channel is determined by analyzing a set of in house prepared quenched backgrounds. Ten to fifteen clean wipes are placed into vials with cocktail, and varying amounts of quenching agent added. The resultant quench curve is entered into the wipe counting protocol, which then automatically subtracts the correct count rate in each channel, based on the level of quenching of the sample wipe.

Each day prior to use a commercial background is analyzed in each LSC and the results recorded on a QC chart. The average and range of the background are reviewed

against historical data for each LSC to determine if trends are emerging, which would indicate problems. A decreasing background can occur when the photomultiplier tubes degrade, or the high voltage decreases. Increasing background can indicate contamination.

Efficiency Determination

The efficiency for detection of tritium, carbon-14, and phosphorus-32 are determined by analyzing quenched standards, and correcting the raw counts with the resultant quench curves. RSI prepares standards in-house to more closely simulate the wipe sample composition and geometry. Commercially prepared quenched standards are all liquid, not necessarily the same cocktail that we used, and do not account for self absorption of the radioactivity on the filter paper. Our method is to prepare between ten and fifteen quenched standards each of tritium, and carbon-14, by spotting filter papers with several tens of thousands of dpm of NIST traceable solutions. Each filter is placed in a vial with six milliliters of cocktail. Microliter quantities of nitromethane are added in varying amounts to each vial as a quenching agent. The range of quenching covers the range expected for the routine wipes collected. The standards are run with extended count times and strict statistical parameters.

Gamma Counter

Background Determination

Because the background can vary daily, each program is set up to count background for ten minutes prior to analyzing the first sample, then automatically subtracts that value from each energy window. A record of the background counts is maintained to evaluate trends.

Efficiency Determination

NIST traceable sources in a "test tube" geometry are used to determine the detection efficiency. Short lived isotopes (I-131, Gd-153) are analyzed annually. Longer lived NIST traceable sources (I-129 and Co-57) are run with each batch of samples, to ensure stability of the counter.

Measurements		
Initial	Replicate	RPD*
157	148	5.9%
197	206	-4.5%
192	218	-12.7%
151	145	4.1%
188	185	1.6%
193	183	5.3%
159	181	-12.9%
229	228	0.4%
169	177	-4.6%
138	164	-17.2%
192	218	-12.7%

Table2. - Reproducibility of Fixed Location Measurements

*Relative Percent Difference $= \frac{\text{Measurement - Replicate Meas.}}{(\text{Measurement + Replicate Meas.})/ 2} \times 100\%$

Average RPD

INSTRUMENT FIELD CHECK LOG

Meter: Ludlum 2221 **Serial #:** 105913
Detector: Ludlum 239-1F **Serial #:** 148867
Source: Tc-99 **Activity:** Approx. 10 nCi **Serial #:** 5083 Range 4,495 – 8,005

Meas. #	Date	Time	BAT (OK)	HV (Vdc)	Δt (min)	Bkgd. Beta	Source Beta	Net Beta (cpm)	Initials	Comments
1	1/19/99	13:15	✓	1806	1	885	5,464	4,579	SWD	Novarad - Summit 3330, 3332, 3336
2	4/8/99	3:50	✓	1808	1	815	4618	3,803	TD	
3	4/9/99	10:30	✓	1813	1	1113	5154	4041	TD	
4	7/21/99	11:20	✓	1816	1	787	4758	3971	TM	Not Used
5	"	12:15	✓	1816	1	986	5102	4116	TM	"
6	7/22/99	11:00	✓	1819	1	951	5123	4172	JB	
7	10/18/99	8:50	✓	1815	1	727	7744	7,017	SWD	Mycomed Wayne PA
8	10/19/99	10:30	✓	1816	1	723	6,018	5,295	SWD	Mycomed Wayne, PA
9	10/19/99	1500	✓	1850	1	698	5,802	5,104	SWD	Mycomed Wayne PA
10	10/26/99	1510	✓	1850	1	796	5,811	5,015	SWD	Mycomed Wayne, PA

INSTRUMENT FIELD CHECK LOG

Meter: Ludlum-12 Serial #: 153037
Detector: 43-68 Serial #: 114376
Source: Tc-99 Serial #: 5081 Acceptable range: 3,147 - 3,741 net cpm

Meas. #	Date	Time	BAT (OK)	HV (Vdc)	Δ T (Min)	Bkgd. (Beta)	Source (Beta)	Net Beta (CPM)	Initials	Comments
1	10/18	9:55	✓	1800	1	182	3549	3367	TM	Nycomed, Wayne PA
2	10/18	16:20	✓	1800	1	224	3780	3556	DP	Nycomed, Wayne, PA
3	10/18	1:40	✓	1800	1	242	~~3560~~ 3980	3738	DP	Nycomed, Wayne, PA
4	10/19	3:15	✓	1800	1	229	3890	3661	TM	Nycomed Wayne, PA
5	10/19	8:45	✓	1800	1	177	3862	3685	SWD	Nycomed, PA
6	10/19/99	10:25	✓	1800	1	173	3762	3589	DP	Nycomed, PA
7	10/19	2:20	✓	1800	1	220	3703	3483	DP	
8	10/20	9:05	✓	1800	1	206	3712	3506	TM	Nycomed, Wayne PA
9	10/20	10:45	✓	1800	1	231	3905	3674	TM	Nycomed Wayne, PA
10	10/20	2:00	✓	1800	1	221	3933	3712	TM	Nycomed, Wayne, PA
11	10/21	9:05	✓	1800	1	~~200~~	3769	3481	DP	Nycomed Wayne, PA
12	10/26	10:05	✓	1800	1	225	3885	3660	DP	Nycomed Wayne, PA
13	10/26	11:45	✓	1800	1	212	3622	3410	DP	Nycomed Wayne, PA
14	10/26	1:45	✓	1800	1	237	3900	3633	DP	Nycomed, Wayne PA
15	10/27	9:05	✓	1800	1	221	3794	3573	TM	Nycomed Wayne, PA
16	10/27	1:48	✓	1800	1	237	3786	3549	DP	Nycomed, Wayne, PA
17	11/1-99	3:10	✓	1800	1	203	3712	5509	BR	BRACCO

Wipe Results
By Liquid Scintillation Analysis

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Nycomed

Loaded By _____ Count Date _____

Sample Type: Wipes X Liquids _____ Solids _____

Rack #	Position	Description
47R	1-9	Room 440
47R	10-18	Room 438
39Y	1-18	Room 118
32R	1-18	Room 421
34G	1-18	Hallway between rooms 212+214
		wipes every squares
61Y	1-18	Animal Room Hallways
7Y	1-5	Hallway between Rooms 199 + 114
7Y	6-8	Room 197 (office)
7Y	9-17	Room 195 (loading dock)
59G	1	Filter Housing Top Right
	2	" " Bottom Right
	3	" " Bottom Left
	4	" " Top Left
	5	" " Wood Platform
	6	Room 461 North East Hood Vac. Connection
	7	Room 461 ~~North~~ S.E. Hood Vac. Connection
	8	Room 461 West Hood Vac. Connection
	9	Room 463 N.E. Hood Vac. Connection
	10	Room 463 E. Hood Vac. Connection

2 of 4 Unit A

3

Unit C

Unit B

Comments _____

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Nycomed

Loaded By_____ Count Date_____

Sample Type: Wipes X Liquids_____ Solids_____

Rack #	Position	Description
596	11	Room 463 S.E Hood Vac. Connection
	12	Room 463 W. Hood Vac. Connection (Facing South)
	13	Room 463 W. Hood Vac. Connection (Facing North)
	14	Room 446 S.E. Hood Vac. Connection
	15	Room 446 S.W. Hood Vac. Connection (Facing South)
	16	Room 446 S.W. Hood Vac. Connection (Facing North)
	17	Room 434 NE Hood Vac. Connection
	18	Room 434 SE Hood Vac. Connection
29R	1	Room 438/440 SE Hood Vac. Connection
	2	Room 438/440 NE Hood Vac. Connection
	3	Room 120 Vac. Connection

Comments _____

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Nycomed

Loaded By TM/DP Count Date 10/21/94

Sample Type: Wipes X Liquids ____ Solids ____

Rack #	Position	Description
41R, ~~54G~~	1 - 18	Room 446
54G	1, 2	"
54G	3 - 18	Room 463
58Y	~~1, 2~~ 1-4	"
58Y	5-18	Room ~~444~~ 434
196	1-7	"
196	8-9	~~Hood~~ Lead @ Wipe # 4 (in hood)
196	10-11	Lead @ wipe #5 (in hood)
196	12-18	Room 444
226	1 - 14	"
229	15-18	Room 461
59W	1 - 18	"
Unit D 20R	1-18	Hallway between 461 & 446 → every 9 squares/hallway cut in half
55Y	1-18	Room 421 (Cold Room)
396	1-18	Room 108A
376	1-18	Room 108
416	1-18	Room 104
26	1-18	Room 100
48R	1-18	Room 117
51R	1-18	Room 120

Comments ____

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Mycomed

Loaded By _____ Count Date _____

Sample Type: Wipes X Liquids _____ Solids _____

Rack #	Position	Description
55y	1-9	~~440~~ Room 440
55y	~~1-9~~ 10-18	Room 438

Comments _____

RADIATION SCIENCE, INC.

Code Hot Rooms 4,5,1

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282 Animals 2+4, 3

Facility Nycomed, Wayne PA Sink Swabs

Loaded By _____ Count Date _____

Sample Type: Wipes ✓ Liquids ____ Solids ____

Rack #	Position	Description
576	1	446 - Bench Sink - Big
	2	446 - Hood Sink
	3	446 - Bench Cup Sink
	4	444 - Bench Sink - Big
	5	444 - Hood Sink
	6	444 - Bench Cup Sink
	7	440 - Bench Sink (SS)
	8	461 - Hood Sink
	9	461 - Hood Snk
	10	461 Hood Sink
	11	461 Cor. Bench Sink - South
	12	461 Cor. Bench Sink - North
	13	461 Wall Bench Sink
	14	463 Hood Snk
	15	463 Hood Snk
	16	463 Bench Snk Large N
	17	463 Bench Cup Snk
↓	18	463 Bench Snk Large S
17W	1	463 Walk In hood
	2	434 Bench Sink

576 + 7R

17W (1-12)

6W (1-6)

Comments _____

_____

_____

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Nycomed, Wayne PA - Sink Swabs

Loaded By_____ Count Date _____

Sample Type: Wipes_____ Liquids_____ Solids_____

17W (1-12)

6W (1-6)

Rack #	Position	Description
17W	3	434 - Hood Sink South
	4	434 - Hood Sink North
	5	100 - NE floor drain
	6	100 SE floor drain
	7	100 W floor drain
	8	104 Bench Sink (S.S.)
	9	Cage Wash Inside Washer - 4" of H_2O
	10	Cage Wash Sink
	11	Cage Wash Floor Drain
	12	118 - Sink
	13	118 Floor Drain
	14	117 - Bench Sink (S.S.)
	15	117 - Autopsy Table E
	16	117 - Autopsy Table W
	17	117 - Hood Sink
	18	120 - Sink (S.S.)

Comments 104 - could not fit swap past strainer in sink, Sample obtained by disconnecting trap

Floor Drains req'd taping two swabs together due to length of pipe

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Nycomed Wayne PA - Hoods

Loaded By _____ Count Date _____

Sample Type: Wipes X Liquids ____ Solids ____

Rack #	Position	Description
16 W	1	461 - SE Hood - BB
	2	461 SE Hood - DO
	3	461 NE Hood - BB
	4	461 NE Hood - DO
	5	461 W Hood - BB
	6	461 W Hood - DO
	7	446 Hood - BB
	8	446 Hood - DO
	9	441 Hood BB
	10	441 Hood DO
	11	463 SE Hood BB
	12	463 SE Hood DO
	13	463 NE Hood BB
	14	463 NE Hood DO
	15	463 Walk-In Hood BB
	16	463 Walk-In Hood DO - Right
	17	463 W Cabinet BB
	18	~~463~~ 463 Walk In Hood DO Left

Comments - BB - behind baffle

DO - Duct opening

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Nycomed Wayne PA Hoods

Loaded By _____ Count Date _____

Sample Type: Wipes 8 Liquids _____ Solids _____

Rack #	Position	Description
2W	1	440 Hood BB
	2	440 Hood DO
	3	438 Hood BB
	4	438 Hood DO
	5	434 Hood S BB
	6	434 Hood S DO
	7	434 Hood N BB
	8	434 Hood N DO
	9	117 Hood BB
	10	117 Hood DO
	11	120 Hood BB
	12	120 Hood DO

Comments BB- behind baffle

DO - duct openings

USER: 6 ID:SURVEY WIPES PRESET TIME: 0.50 THU 21 OCT 1999 14:39
SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR:N RS232:N
H#: 1 AQC:Y QCF:N RCM:N
CHANNEL 1-LL: 1 UL: 370 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 2-LL:370 UL: 670 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 3-LL:670 UL:1000 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0

DUAL LABEL DPM SET UP ON 23 FEB 1999 05:11

UNKNOWN ID:NITROMETHANE QUENCH UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:Q 1.00000 ISO2:Q 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM
UNKNOWN HALF LIFE CORRECTION:N
INDIVIDUAL UNKNOWN NORM FACTORS:N BACKGROUND QUENCH CURVES:Y
STANDARD ID:NITROMETHANE QUENCH QUENCH LIMITS LOW:49.00 HIGH:358.2
HALF LIFE(DAYS) ISO1:N ISO2:N
STANDARD DPM ISO1: 38289.00 ISO2: 44911.00

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
29- 1 50.0	12.00	1.556026	81.65	6.00	-0.01701	115.5	8.00	
29- 2 47.0	58.00	111.8273	37.14	36.00	12.82238	47.14	16.00	
29- 3 44.0	8.00	0.000000	100.0	6.00	0.000000	115.5	2.00	
47- 1 85.0	36.00	75.47221	47.14	24.00	4.643549	57.74	8.00	
47- 2 93.0	36.00	79.55230	47.14	24.00	4.751645	57.74	30.00	
47- 3 76.0	22.00	31.25612	60.30	22.00	4.069423	60.30	10.00	
47- 4 71.0	18.00	21.66919	66.67	8.00	-0.27035	100.0	8.00	
47- 5 61.0	24.00	35.37516	57.74	16.00	0.785409	70.71	16.00	
47- 6 68.0	18.00	16.82281	66.67	24.00	5.562215	57.74	26.00	
47- 7 80.0	10.00	-1.44464	89.44	18.00	2.098074	66.67	26.00	
47- 8 82.0	6.00	-2.24946	115.5	20.00	3.292828	63.25	6.00	
47- 9 53.0	12.00	1.955699	81.65	8.00	-0.02180	100.0	8.00	
61- 1 81.0	18.00	23.86550	66.67	8.00	-0.32142	100.0	10.00	
61- 2 71.0	16.00	11.81082	70.71	24.00	5.561986	57.74	14.00	
61- 3 71.0	6.00	0.000000	115.5	10.00	0.000000	89.44	4.00	
61- 4 55.0	6.00	0.000000	115.5	4.00	0.000000	141.4	20.00	
61- 5 77.0	12.00	5.372549	81.65	14.00	-0.07001	75.59	4.00	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
61- 6 72.0	12.00	4.621376	81.65	6.00	-0.05805	115.5	18.00	
61- 7 68.0	6.00	-1.64341	115.5	18.00	2.261958	66.67	2.00	
61- 8 66.0	22.00	31.91214	60.30	14.00	-0.38536	75.59	16.00	
61- 9 60.0	16.00	13.93189	70.71	14.00	-0.13571	75.59	12.00	
61-10 66.0	14.00	9.383121	75.59	10.00	-0.11331	89.44	14.00	
61-11 63.0	16.00	14.47834	70.71	14.00	-0.17161	75.59	12.00	
61-12 92.0	68.00	183.1925	34.30	6.00	-2.77398	115.5	14.00	
61-13 67.0	12.00	3.095326	81.65	16.00	1.046521	70.71	10.00	
61-14 71.0	16.00	14.35491	70.71	18.00	2.010446	66.67	8.00	
61-15 70.0	14.00	10.03894	75.59	6.00	-0.12441	115.5	14.00	
61-16 81.0	12.00	5.385492	81.65	16.00	0.805779	70.71	18.00	
61-17 77.0	20.00	28.82122	63.25	14.00	-0.37557	75.59	14.00	
61-18 95.0	52.00	135.5731	39.22	14.00	-2.14055	75.59	6.00	
57- 1 68.0	16.00	13.73651	70.71	18.00	2.073850	66.67	18.00	
57- 2 47.0	12.00	-6.14497	81.65	28.00	9.089617	53.45	32.00	
57- 3 66.0	10.00	-2.56001	89.44	20.00	3.489950	63.25	16.00	
57- 4 83.0	8.00	-3.06740	100.0	22.00	4.507205	60.30	18.00	
57- 5 62.0	8.00	0.000000	100.0	4.00	0.000000	141.4	22.00	
57- 6 48.0	56.00	113.1304	37.80	24.00	5.260405	57.74	20.00	
57- 7 108.0	18.00	22.94195	66.67	30.00	12.50385	51.64	16.00	
57- 8 48.0	14.00	3.395615	75.59	20.00	3.955244	63.25	16.00	
57- 9 59.0	8.00	-0.95056	100.0	16.00	1.252691	70.71	20.00	
57-10 55.0	16.00	13.09575	70.71	4.00	-0.14781	141.4	12.00	
57-11 77.0	14.00	11.23472	75.59	10.00	-0.14640	89.44	24.00	
57-12 71.0	56.00	128.9889	37.80	18.00	0.580267	66.67	28.00	
7[1 42.0	16.00	13.41203	70.71	16.00	1.021226	70.71	22.00	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
7- 2 47.0	18.00	17.07652	66.67	8.00	-0.18293	100.0	28.00	
7- 3 61.0	8.00	-1.81233	100.0	18.00	2.411623	66.67	24.00	
7- 4 59.0	6.00	-0.03390	115.5	14.00	0.044674	75.59	18.00	
7- 5 80.0	28.00	51.02860	53.45	20.00	2.586142	63.25	22.00	
7- 6 72.0	6.00	0.000000	115.5	14.00	0.000000	75.59	20.00	
16- 1 65.0	8.00	0.000000	100.0	8.00	0.000000	100.0	18.00	
16- 2 72.0	6.00	0.000000	115.5	8.00	0.000000	100.0	18.00	
16- 3 69.0	12.00	4.182266	81.65	10.00	-0.05149	89.44	6.00	
16- 4 78.0	6.00	-2.29748	115.5	20.00	3.309149	63.25	6.00	
16- 5 82.0	14.00	12.13412	75.59	4.00	-0.16488	141.4	14.00	
16- 6 69.0	14.00	9.873280	75.59	12.00	-0.12155	81.65	14.00	
16- 7 63.0	10.00	-0.87048	89.44	16.00	1.169613	70.71	8.00	
16- 8 98.0	8.00	0.000000	100.0	14.00	0.000000	75.59	12.00	
16- 9 65.0	62.00	143.9393	35.92	12.00	-1.72730	81.65	10.00	
16-10 88.0	8.00	0.000000	100.0	10.00	0.000000	89.44	34.00	
16-11 53.0	16.00	12.75980	70.71	6.00	-0.14222	115.5	18.00	
16-12 85.0	8.00	0.000000	100.0	4.00	0.000000	141.4	10.00	
16-13 55.0	16.00	12.05702	70.71	16.00	1.195047	70.71	12.00	
16-14 72.0	4.00	-0.71978	141.4	16.00	1.009484	70.71	14.00	
16-15 49.0	34.00	60.13055	48.51	0.00	-0.65301	*****	4.00	
16-16 55.0	8.00	0.000000	100.0	10.00	0.000000	89.44	10.00	
16-17 47.0	46.00	88.08749	41.70	20.00	3.083633	63.25	6.00	
16-18 49.0	10.00	0.000000	89.44	8.00	0.000000	100.0	10.00	
2- 1 98.0	14.00	15.37509	75.59	14.00	-0.25465	75.59	14.00	
2- 2 67.0	10.00	0.000000	89.44	14.00	0.000000	75.59	18.00	
2- 3 74.0	26.00	40.60716	55.47	26.00	6.325065	55.47	18.00	

armed
counted
after

POS	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR
AVG H#								ERR
2- 4	26.00	28.52131	55.47	46.00	18.53846	41.70	20.00	
64.0								
2- 5	12.00	4.037646	81.65	14.00	-0.04938	75.59	8.00	
68.0								
2- 6	12.00	6.472574	81.65	12.00	-0.08961	81.65	18.00	
84.0								
2- 7	18.00	21.25530	66.67	10.00	-0.26167	89.44	10.00	
69.0								
2- 8	8.00	0.000000	100.0	8.00	0.000000	100.0	16.00	
81.0								
2- 9	16.00	12.59310	70.71	10.00	-0.13947	89.44	18.00	
52.0								
2-10	14.00	10.95986	75.59	16.00	0.757172	70.71	16.00	
79.0								
2-11	4.00	-0.22659	141.4	14.00	0.282291	75.59	10.00	
47.0								
2-12	16.00	13.60655	70.71	8.00	-0.15643	100.0	12.00	
58.0								
59- 1	18.00	16.84993	66.67	14.00	0.099361	75.59	26.00	
47.0								
59- 2	4.00	-0.24510	141.4	14.00	0.303995	75.59	6.00	
46.0								
59- 3	6.00	-2.08024	115.5	18.00	2.651489	66.67	12.00	
52.0								
59- 4	20.00	22.38164	63.25	12.00	-0.23976	81.65	10.00	
47.0								
59- 5	16.00	10.99489	70.71	20.00	3.509350	63.25	16.00	
59.0								
59- 6	12.00	0.934577	81.65	14.00	0.269852	75.59	10.00	
47.0								
59- 7	4.00	-1.29195	141.4	16.00	1.595393	70.71	16.00	
45.0								
59- 8	10.00	-3.01013	89.44	20.00	3.854765	63.25	18.00	
53.0								
59- 9	12.00	2.090035	81.65	6.00	-0.02344	115.5	6.00	
54.0								
59-10	8.00	-1.13474	100.0	16.00	1.439640	70.71	8.00	
51.0								
59-11	20.00	25.41705	63.25	4.00	-0.29942	141.4	6.00	
62.0								
59-12	14.00	6.028961	75.59	4.00	-0.06320	141.4	10.00	
44.0								
59-13	12.00	1.030586	81.65	10.00	-0.01096	89.44	28.00	
46.0								
59-14	4.00	0.000000	141.4	10.00	0.000000	89.44	10.00	
49.0								
59-15	10.00	-0.22659	89.44	14.00	0.282291	75.59	16.00	
47.0								
59-16	20.00	20.70313	63.25	16.00	1.363104	70.71	14.00	
45.0								
59-17	16.00	13.09575	70.71	12.00	-0.14781	81.65	10.00	
55.0								

POS AVG	H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
59-18	51.0	28.00	44.64278	53.45	6.00	-0.49126	115.5	18.00	
17- 1	48.0	14.00	6.613258	75.59	12.00	-0.07133	81.65	20.00	
17- 2	102.0	8.00	-2.47134	100.0	20.00	3.783238	63.25	16.00	
17- 3	51.0	30.00	45.94232	51.64	22.00	4.612878	60.30	38.00	
17- 4	86.0	12.00	5.405858	81.65	18.00	1.973132	66.67	20.00	
17- 5	55.0	8.00	0.000000	100.0	6.00	0.000000	115.5	14.00	
17- 6	95.0	2.00	-4.04658	200.0	24.00	6.153113	57.74	24.00	
17- 7	68.0	20.00	25.07879	63.25	18.00	1.935126	66.67	18.00	
17- 8	72.0	18.00	18.62680	66.67	22.00	4.286282	60.30	28.00	
17- 9	54.0	12.00	-1.83471	81.65	22.00	5.026348	60.30	34.00	
17-10	100.0	10.00	-0.59691	89.44	22.00	5.074090	60.30	22.00	
17-11	51.0	16.00	11.29248	70.71	16.00	1.302888	70.71	16.00	
17-12	53.0	12.00	0.869909	81.65	16.00	1.368661	70.71	18.00	
6- 1	49.0	20.00	22.77176	63.25	12.00	-0.24730	81.65	18.00	
6- 2	45.0	8.00	-7.45970	100.0	28.00	9.211806	53.45	22.00	
6- 3	53.0	10.00	-4.93447	89.44	24.00	6.319071	57.74	14.00	
6- 4	49.0	10.00	0.000000	89.44	12.00	0.000000	81.65	20.00	
6- 5	66.0	14.00	8.567359	75.59	16.00	0.998786	70.71	18.00	
6- 6	45.0	18.00	11.31765	66.67	24.00	6.496408	57.74	16.00	
32- 1	52.0	10.00	0.000000	89.44	12.00	0.000000	81.65	10.00	
32- 2	73.0	12.00	4.769588	81.65	14.00	-0.06034	75.59	8.00	
32- 3	62.0	16.00	14.30177	70.71	8.00	-0.16848	100.0	14.00	
32- 4	90.0	10.00	1.269398	89.44	12.00	-0.01875	81.65	8.00	
32- 5	83.0	22.00	36.35047	60.30	8.00	-0.49848	100.0	10.00	
32- 6	74.0	8.00	-1.52901	100.0	18.00	2.164083	66.67	14.00	
32- 7	92.0	12.00	7.818276	81.65	6.00	-0.11839	115.5	8.00	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ER ERR
32- 8 86.0	18.00	22.00523	66.67	22.00	4.184983	60.30	6.00	
32- 9 83.0	16.00	18.32708	70.71	10.00	-0.25132	89.44	8.00	
32-10 80.0	36.00	77.03078	47.14	10.00	-1.02854	89.44	14.00	
32-11 48.0	16.00	11.93425	70.71	8.00	-0.12873	100.0	10.00	
32-12 47.0	10.00	-2.24932	89.44	18.00	2.802224	66.67	16.00	
32-13 49.0	16.00	12.09782	70.71	8.00	-0.13138	100.0	20.00	
32-14 51.0	8.00	-4.06972	100.0	22.00	5.163221	60.30	20.00	
32-15 47.0	14.00	6.466288	75.59	8.00	-0.06927	100.0	16.00	
32-16 48.0	6.00	-3.21764	115.5	20.00	4.026578	63.25	18.00	
32-17 49.0	24.00	33.44570	57.74	4.00	-0.36322	141.4	14.00	
32-18 48.0	14.00	3.395615	75.59	20.00	3.955244	63.25	18.00	
2- 1 83.0	6.00	0.000000	115.5	14.00	0.000000	75.59	10.00	
2- 2 66.0	8.00	0.000000	100.0	12.00	0.000000	81.65	26.00	
2- 3 69.0	16.00	15.56429	70.71	14.00	-0.19161	75.59	14.00	
2- 4 71.0	12.00	4.474101	81.65	6.00	-0.05582	115.5	10.00	
2- 5 67.0	14.00	9.545409	75.59	8.00	-0.11600	100.0	16.00	
2- 6 58.0	16.00	13.60655	70.71	10.00	-0.15643	89.44	22.00	
2- 7 55.0	14.00	7.660349	75.59	12.00	-0.08646	81.65	22.00	
2- 8 68.0	12.00	4.037646	81.65	10.00	-0.04938	89.44	12.00	
2- 9 70.0	14.00	10.03894	75.59	6.00	-0.12441	115.5	14.00	
2-10 68.0	18.00	21.05106	66.67	14.00	-0.25747	75.59	26.00	
2-11 51.0	12.00	1.532287	81.65	14.00	0.179864	75.59	20.00	
2-12 54.0	16.00	11.86532	70.71	16.00	1.221454	70.71	10.00	
2-13 61.0	22.00	30.74508	60.30	8.00	-0.35998	100.0	4.00	
2-14 57.0	8.00	0.000000	100.0	8.00	0.000000	100.0	6.00	
2-15 50.0	6.00	0.000000	115.5	10.00	0.000000	89.44	12.00	

POS	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ER
AVG H#								ERR
2-16	12.00	1.556026	81.65	12.00	-0.01701	81.65	22.00	
50.0								
2-17	10.00	0.000000	89.44	10.00	0.000000	89.44	16.00	
54.0								
2-18	16.00	13.60655	70.71	8.00	-0.15643	100.0	16.00	
58.0								
55- 1	16.00	17.90815	70.71	10.00	-0.24118	89.44	20.00	
81.0								
55- 2	14.00	13.47325	75.59	10.00	-0.19663	89.44	22.00	
89.0								
55- 3	14.00	12.31929	75.59	8.00	-0.16894	100.0	18.00	
83.0								
55- 4	4.00	0.000000	141.4	10.00	0.000000	89.44	22.00	
79.0								
55- 5	10.00	0.000000	89.44	14.00	0.000000	75.59	20.00	
77.0								
55- 6	10.00	-0.65304	89.44	16.00	0.936592	70.71	6.00	
77.0								
55- 7	28.00	54.37386	53.45	12.00	-0.74564	81.65	10.00	
83.0								
55- 8	4.00	0.000000	141.4	10.00	0.000000	89.44	10.00	
89.0								
55- 9	12.00	7.994614	81.65	10.00	-0.12268	89.44	12.00	
93.0								
55-10	14.00	11.58945	75.59	10.00	-0.15346	89.44	18.00	
79.0								
55-11	4.00	-2.71516	141.4	20.00	3.612999	63.25	18.00	
61.0								
55-12	10.00	1.128371	89.44	14.00	-0.01647	75.59	22.00	
89.0								
55-13	14.00	11.34284	75.59	16.00	0.725547	70.71	16.00	
81.0								
55-14	6.00	0.000000	115.5	12.00	0.000000	81.65	14.00	
56.0								
55-15	18.00	16.11389	66.67	18.00	2.420177	66.67	10.00	
53.0								
55-16	16.00	13.60655	70.71	10.00	-0.15643	89.44	8.00	
58.0								
55-17	6.00	0.000000	115.5	8.00	0.000000	100.0	20.00	
53.0								
37- 1	6.00	0.000000	115.5	2.00	0.000000	200.0	18.00	
58.0								
37- 2	12.00	1.234846	81.65	18.00	2.375946	66.67	26.00	
61.0								
37- 3	16.00	15.37992	70.71	10.00	-0.18811	89.44	6.00	
68.0								
37- 4	8.00	0.000000	100.0	12.00	0.000000	81.65	0.00	
53.0								
37- 5	8.00	0.000000	100.0	6.00	0.000000	115.5	12.00	
59.0								
37- 6	4.00	-1.92487	141.4	18.00	2.512349	66.67	10.00	
57.0								

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	EF ERF
37- 7 51.0	10.00	0.000000	89.44	10.00	0.000000	89.44	8.00	
37- 8 49.0	4.00	-0.19074	141.4	14.00	0.239772	75.59	10.00	
37- 9 51.0	6.00	-2.11307	115.5	18.00	2.680834	66.67	10.00	
37-10 65.0	14.00	9.221884	75.59	8.00	-0.11066	100.0	18.00	
37-11 55.0	10.00	0.000000	89.44	8.00	0.000000	100.0	14.00	
37-12 49.0	6.00	-1.18551	115.5	16.00	1.490285	70.71	16.00	
37-13 50.0	16.00	12.08875	70.71	14.00	0.084905	75.59	24.00	
37-14 63.0	10.00	0.000000	89.44	8.00	0.000000	100.0	4.00	
37-15 48.0	10.00	0.000000	89.44	12.00	0.000000	81.65	12.00	
37-16 46.0	6.00	0.000000	115.5	10.00	0.000000	89.44	6.00	
37-17 49.0	16.00	10.91232	70.71	16.00	1.358904	70.71	8.00	
37-18 49.0	8.00	0.000000	100.0	6.00	0.000000	115.5	8.00	
7- 1 91.0	6.00	0.000000	115.5	6.00	0.000000	115.5	10.00	
7- 2 95.0	16.00	21.07550	70.71	14.00	-0.33276	75.59	8.00	
7- 3 89.0	14.00	13.47325	75.59	14.00	-0.19663	75.59	6.00	
7- 4 95.0	8.00	-2.27698	100.0	20.00	3.462303	63.25	22.00	
7- 5 100.0	8.00	0.000000	100.0	12.00	0.000000	81.65	20.00	
7- 6 70.0	4.00	0.000000	141.4	14.00	0.000000	75.59	16.00	
7- 7 96.0	20.00	30.92697	63.25	22.00	4.311680	60.30	20.00	
7- 8 89.0	12.00	6.761393	81.65	16.00	0.702112	70.71	14.00	
7- 9 97.0	12.00	6.406363	81.65	20.00	3.389146	63.25	10.00	
7-10 84.0	8.00	0.000000	100.0	6.00	0.000000	115.5	16.00	
7-11 118.0	10.00	5.861547	89.44	10.00	-0.12561	89.44	22.00	
7-12 104.0	16.00	22.99728	70.71	16.00	0.321441	70.71	24.00	
7-13 96.0	12.00	8.032537	81.65	16.00	0.630467	70.71	10.00	
7-14 101.0	4.00	-1.46315	141.4	18.00	2.239363	66.67	14.00	

POS	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	EF
AVG H#								ERF
7-15	6.00	0.000000	115.5	2.00	0.000000	200.0	12.00	
104.0								
7-16	8.00	0.000000	100.0	8.00	0.000000	100.0	10.00	
102.0								
7-17	6.00	0.000000	115.5	8.00	0.000000	100.0	10.00	
120.0								
7-18	16.00	21.44125	70.71	18.00	1.860509	66.67	10.00	
102.0								

USER: 6 ID:SURVEY WIPES PRESET TIME: 0.50 FRI 22 OCT 1999 09:52
SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR:N RS232:N
H#: 1 AQC:Y QCF:N RCM:N
CHANNEL 1-LL: 1 UL: 370 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 2-LL:370 UL: 670 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 3-LL:670 UL:1000 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0

DUAL LABEL DPM SET UP ON 23 FEB 1999 05:11

UNKNOWN ID:NITROMETHANE QUENCH UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:Q 1.00000 ISO2:Q 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM
UNKNOWN HALF LIFE CORRECTION:N
INDIVIDUAL UNKNOWN NORM FACTORS:N BACKGROUND QUENCH CURVES:Y
STANDARD ID:NITROMETHANE QUENCH QUENCH LIMITS LOW:49.00 HIGH:358.2
HALF LIFE(DAYS) ISO1:N ISO2:N
STANDARD DPM ISO1: 38289.00 ISO2: 44911.00

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
34- 1 86.0	18.00	22.00523	66.67	22.00	4.184983	60.30	16.00	
34- 2 81.0	8.00	-0.60797	100.0	16.00	0.886498	70.71	10.00	
34- 3 89.0	8.00	-4.75024	100.0	26.00	7.121236	55.47	10.00	
34- 4 94.0	14.00	14.50065	75.59	14.00	-0.22564	75.59	22.00	
34- 5 93.0	14.00	14.28973	75.59	12.00	-0.21929	81.65	12.00	
34- 6 95.0	10.00	1.992567	89.44	12.00	-0.03146	81.65	12.00	
34- 7 83.0	500.00	1454.271	12.65	58.00	6.176455	37.14	26.00	
34- 8 90.0	20.00	32.27967	63.25	12.00	-0.47669	81.65	24.00	
34- 9 93.0	12.00	6.611594	81.65	18.00	1.971958	66.67	14.00	
34-10 89.0	8.00	0.000000	100.0	8.00	0.000000	100.0	4.00	
34-11 103.0	14.00	16.54643	75.59	14.00	-0.30214	75.59	6.00	
34-12 102.0	12.00	9.685199	81.65	14.00	-0.17306	75.59	4.00	
34-13 100.0	10.00	1.304885	89.44	18.00	2.164770	66.67	34.00	
34-14 96.0	20.00	31.82235	63.25	20.00	2.947916	63.25	12.00	
34-15 101.0	18.00	29.22614	66.67	10.00	-0.51162	89.44	20.00	
34-16 85.0	16.00	16.52721	70.71	20.00	3.036185	63.25	12.00	
34-17 94.0	10.00	1.845360	89.44	14.00	-0.02872	75.59	14.00	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
34-18 121.0	2.00	-1.69433	200.0	18.00	2.479740	66.67	12.00	
39- 1 49.0	20.00	22.77176	63.25	10.00	-0.24730	89.44	16.00	
39- 2 56.0	10.00	0.000000	89.44	10.00	0.000000	89.44	16.00	
39- 3 51.0	20.00	23.16574	63.25	12.00	-0.25492	81.65	6.00	
39- 4 55.0	4.00	-1.03873	141.4	16.00	1.342854	70.71	12.00	
39- 5 55.0	10.00	0.000000	89.44	8.00	0.000000	100.0	10.00	
39- 6 51.0	12.00	1.532287	81.65	14.00	0.179864	75.59	18.00	
39- 7 44.0	12.00	0.770936	81.65	12.00	-0.00808	81.65	2.00	
39- 8 44.0	12.00	0.770936	81.65	10.00	-0.00808	89.44	16.00	
39- 9 45.0	12.00	-0.39144	81.65	16.00	1.585883	70.71	14.00	
39-10 42.0	12.00	0.513276	81.65	12.00	-0.00530	81.65	8.00	
39-11 44.0	16.00	11.00373	70.71	14.00	0.229946	75.59	10.00	
39-12 48.0	16.00	10.72272	70.71	16.00	1.387385	70.71	16.00	
39-13 53.0	12.00	1.955699	81.65	10.00	-0.02180	89.44	18.00	
39-14 48.0	12.00	1.292266	81.65	12.00	-0.01394	81.65	6.00	
39-15 68.0	6.00	0.000000	115.5	10.00	0.000000	89.44	14.00	
39-16 49.0	14.00	6.760852	75.59	10.00	-0.07342	89.44	8.00	
39-17 43.0	14.00	5.581450	75.59	14.00	0.309609	75.59	0.00	
39-18 44.0	18.00	16.26176	66.67	14.00	0.174824	75.59	22.00	
51- 1 55.0	12.00	1.186209	81.65	16.00	1.317741	70.71	20.00	
51- 2 50.0	10.00	-0.17339	89.44	14.00	0.218960	75.59	26.00	
51- 3 50.0	12.00	1.382640	81.65	14.00	0.201949	75.59	10.00	
51- 4 52.0	16.00	12.59310	70.71	10.00	-0.13947	89.44	8.00	
51- 5 57.0	14.00	6.041063	75.59	18.00	2.421326	66.67	12.00	
51- 6 49.0	16.00	9.917546	70.71	18.00	2.609416	66.67	26.00	
51- 7 51.0	4.00	0.000000	141.4	12.00	0.000000	81.65	2.00	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
51- 8 45.0	2.00	0.000000	200.0	10.00	0.000000	89.44	8.00	
51- 9 57.0	8.00	0.000000	100.0	12.00	0.000000	81.65	22.00	
51-10 51.0	8.00	0.000000	100.0	10.00	0.000000	89.44	14.00	
51-11 48.0	8.00	0.000000	100.0	10.00	0.000000	89.44	12.00	
51-12 52.0	6.00	0.000000	115.5	8.00	0.000000	100.0	16.00	
51-13 93.0	10.00	1.699493	89.44	6.00	-0.02608	115.5	2.00	
51-14 43.0	2.00	0.000000	200.0	6.00	0.000000	115.5	26.00	
51-15 53.0	8.00	-0.12362	100.0	14.00	0.158306	75.59	18.00	
51-16 50.0	10.00	-3.13295	89.44	20.00	3.956441	63.25	8.00	
51-17 50.0	16.00	12.26214	70.71	12.00	-0.13405	81.65	12.00	
51-18 48.0	22.00	26.68570	60.30	16.00	1.215199	70.71	18.00	
35- 1 46.0	18.00	16.65349	66.67	14.00	0.124241	75.59	12.00	
35- 2 45.0	8.00	0.000000	100.0	8.00	0.000000	100.0	14.00	
35- 3 42.0	12.00	0.513276	81.65	10.00	-0.00530	89.44	18.00	
35- 4 44.0	6.00	0.000000	115.5	10.00	0.000000	89.44	10.00	
35- 5 43.0	14.00	5.884343	75.59	8.00	-0.06123	100.0	24.00	
35- 6 43.0	6.00	-4.48046	115.5	22.00	5.485470	60.30	12.00	
35- 7 47.0	10.00	0.000000	89.44	10.00	0.000000	89.44	6.00	
35- 8 44.0	14.00	6.028961	75.59	10.00	-0.06320	89.44	12.00	
35- 9 44.0	20.00	21.80304	63.25	8.00	-0.22857	100.0	2.00	
35-10 46.0	18.00	15.63382	66.67	16.00	1.388937	70.71	16.00	
35-11 44.0	12.00	0.770936	81.65	10.00	-0.00808	89.44	8.00	
35-12 46.0	10.00	0.000000	89.44	12.00	0.000000	81.65	20.00	
35-13 45.0	16.00	10.15584	70.71	16.00	1.474494	70.71	8.00	
35-14 46.0	16.00	11.60926	70.71	12.00	-0.12349	81.65	10.00	
35-15 47.0	16.00	7.499354	70.71	22.00	5.196057	60.30	14.00	

POS	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR
AVG H#								ERR
35-16	10.00	0.000000	89.44	6.00	0.000000	115.5	30.00	
48.0								
35-17	10.00	0.000000	89.44	8.00	0.000000	100.0	14.00	
45.0								
35-18	4.00	-3.09140	141.4	20.00	3.922027	63.25	10.00	
51.0								
41- 1	14.00	7.812757	75.59	10.00	-0.08873	89.44	16.00	
56.0								
41- 2	18.00	22.73861	66.67	10.00	-0.29403	89.44	16.00	
76.0								
41- 3	10.00	0.000000	89.44	8.00	0.000000	100.0	8.00	
52.0								
41- 4	8.00	0.000000	100.0	8.00	0.000000	100.0	20.00	
52.0								
41- 5	16.00	10.53345	70.71	16.00	1.416158	70.71	12.00	
47.0								
41- 6	8.00	-2.24932	100.0	18.00	2.802224	66.67	20.00	
47.0								
41- 7	14.00	6.613258	75.59	10.00	-0.07133	89.44	16.00	
48.0								
41- 8	16.00	11.36416	70.71	14.00	0.180505	75.59	24.00	
46.0								
41- 9	6.00	-0.19074	115.5	14.00	0.239772	75.59	14.00	
49.0								
41-10	10.00	-2.93160	89.44	20.00	3.789905	63.25	12.00	
55.0								
41-11	10.00	0.000000	89.44	12.00	0.000000	81.65	14.00	
52.0								
41-12	12.00	1.161170	81.65	8.00	-0.01244	100.0	20.00	
47.0								
41-13	2.00	-1.26477	200.0	16.00	1.568691	70.71	8.00	
46.0								
41-14	12.00	1.292266	81.65	8.00	-0.01394	100.0	10.00	
48.0								
41-15	8.00	0.000000	100.0	12.00	0.000000	81.65	30.00	
50.0								
41-16	10.00	0.000000	89.44	10.00	0.000000	89.44	14.00	
47.0								
41-17	12.00	-7.58715	81.65	30.00	10.47170	51.64	10.00	
45.0								
41-18	4.00	0.000000	141.4	6.00	0.000000	115.5	12.00	
89.0								
20- 1	18.00	21.66919	66.67	14.00	-0.27035	75.59	18.00	
71.0								
20- 2	12.00	2.615470	81.65	16.00	1.108631	70.71	14.00	
64.0								
20- 3	0.00	0.000000	*****	10.00	0.000000	89.44	8.00	
77.0								
20- 4	8.00	0.000000	100.0	4.00	0.000000	141.4	14.00	
66.0								
20- 5	10.00	-1.66526	89.44	18.00	2.281105	66.67	16.00	
67.0								

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
20- 6 81.0	12.00	5.993458	81.65	10.00	-0.08072	89.44	14.00	
20- 7 85.0	6.00	0.000000	115.5	12.00	0.000000	81.65	14.00	
20- 8 91.0	8.00	-1.37968	100.0	18.00	2.079675	66.67	10.00	
20- 9 92.0	20.00	32.87174	63.25	10.00	-0.49776	89.44	12.00	
20-10 100.0	14.00	15.33752	75.59	16.00	0.485513	70.71	16.00	
20-11 93.0	6.00	0.000000	115.5	14.00	0.000000	75.59	8.00	
20-12 88.0	6.00	0.000000	115.5	12.00	0.000000	81.65	26.00	
20-13 84.0	4.00	0.000000	141.4	12.00	0.000000	81.65	16.00	
20-14 74.0	6.00	0.000000	115.5	10.00	0.000000	89.44	16.00	
20-15 75.0	8.00	-1.51280	100.0	18.00	2.150756	66.67	14.00	
20-16 70.0	14.00	10.03894	75.59	14.00	-0.12441	75.59	18.00	
20-17 63.0	4.00	0.000000	141.4	6.00	0.000000	115.5	22.00	
20-18 57.0	12.00	2.434114	81.65	14.00	0.052942	75.59	16.00	
48- 1 64.0	10.00	0.000000	89.44	10.00	0.000000	89.44	18.00	
48- 2 53.0	8.00	-1.08579	100.0	16.00	1.390459	70.71	14.00	
48- 3 54.0	14.00	5.492425	75.59	18.00	2.510011	66.67	18.00	
48- 4 45.0	18.00	16.72143	66.67	6.00	-0.17659	115.5	12.00	
48- 5 56.0	14.00	4.919310	75.59	20.00	3.669757	63.25	10.00	
48- 6 60.0	6.00	0.000000	115.5	10.00	0.000000	89.44	18.00	
48- 7 56.0	18.00	18.64021	66.67	14.00	-0.11230	75.59	18.00	
48- 8 62.0	18.00	19.85941	66.67	8.00	-0.23395	100.0	18.00	
48- 9 53.0	10.00	-1.08579	89.44	16.00	1.390459	70.71	16.00	
48-10 54.0	16.00	12.92734	70.71	12.00	-0.14500	81.65	12.00	
48-11 59.0	10.00	-2.78387	89.44	20.00	3.668726	63.25	20.00	
48-12 86.0	14.00	12.32483	75.59	16.00	0.652273	70.71	18.00	
48-13 55.0	6.00	-1.98517	115.5	18.00	2.566379	66.67	12.00	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
48-14 64.0	2.00	-1.73542	200.0	18.00	2.343105	66.67	4.00	
48-15 46.0	8.00	-0.24510	100.0	14.00	0.303995	75.59	6.00	
48-16 53.0	6.00	-1.08579	115.5	16.00	1.390459	70.71	12.00	
48-17 66.0	12.00	3.750866	81.65	8.00	-0.04529	100.0	14.00	
48-18 70.0	14.00	10.03894	75.59	4.00	-0.12441	141.4	22.00	
54- 1 94.0	26.00	52.46653	55.47	14.00	-0.81643	75.59	4.00	
54- 2 116.0	16.00	27.25671	70.71	6.00	-0.58199	115.5	16.00	
54- 3 71.0	20.00	25.81831	63.25	18.00	1.867428	66.67	10.00	
54- 4 69.0	154.00	219.8430	22.79	454.00	255.5211	13.27	14.00	
54- 5 63.0	14.00	7.142094	75.59	18.00	2.259724	66.67	16.00	
54- 6 67.0	8.00	0.000000	100.0	12.00	0.000000	81.65	22.00	
54- 7 68.0	8.00	0.000000	100.0	14.00	0.000000	75.59	16.00	
54- 8 70.0	14.00	4.175615	75.59	28.00	8.022550	53.45	8.00	
54- 9 84.0	10.00	0.438775	89.44	14.00	-0.00607	75.59	14.00	
54-10 78.0	14.00	11.41128	75.59	8.00	-0.14988	100.0	6.00	
54-11 81.0	8.00	0.000000	100.0	14.00	0.000000	75.59	12.00	
54-12 75.0	6.00	-0.67833	115.5	16.00	0.964378	70.71	12.00	
54-13 93.0	12.00	7.994614	81.65	8.00	-0.12268	100.0	14.00	
54-14 70.0	8.00	0.000000	100.0	14.00	0.000000	75.59	14.00	
54-15 74.0	14.00	8.347679	75.59	20.00	3.212704	63.25	10.00	
54-16 73.0	8.00	-5.74885	100.0	28.00	8.099794	53.45	4.00	
54-17 74.0	38.00	56.95719	45.88	70.00	31.95484	33.81	16.00	
54-18 91.0	18.00	25.81416	66.67	16.00	0.400305	70.71	12.00	
41- 1 63.0	12.00	3.326488	81.65	10.00	-0.03943	89.44	24.00	
41- 2 60.0	12.00	2.908544	81.65	10.00	-0.03385	89.44	6.00	
41- 3 61.0	16.00	12.31401	70.71	18.00	2.246225	66.67	10.00	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
41- 4 83.0	4.00	0.000000	141.4	14.00	0.000000	75.59	6.00	
41- 5 52.0	2.00	0.000000	200.0	12.00	0.000000	81.65	18.00	
41- 6 45.0	14.00	6.174149	75.59	12.00	-0.06520	81.65	8.00	
41- 7 57.0	12.00	0.571667	81.65	18.00	2.483822	66.67	22.00	
41- 8 58.0	12.00	2.633238	81.65	6.00	-0.03027	115.5	14.00	
41- 9 57.0	2.00	-0.06242	200.0	14.00	0.081469	75.59	14.00	
41-10 56.0	14.00	7.812757	75.59	8.00	-0.08873	100.0	22.00	
41-11 54.0	16.00	12.92734	70.71	12.00	-0.14500	81.65	24.00	
41-12 64.0	6.00	0.000000	115.5	8.00	0.000000	100.0	18.00	
41-13 61.0	6.00	0.000000	115.5	8.00	0.000000	100.0	22.00	
41-14 71.0	12.00	4.474101	81.65	8.00	-0.05582	100.0	20.00	
41-15 65.0	2.00	0.000000	200.0	2.00	0.000000	200.0	16.00	
41-16 63.0	10.00	0.000000	89.44	8.00	0.000000	100.0	26.00	
41-17 94.0	4.00	-1.38683	141.4	18.00	2.104800	66.67	6.00	
41-18 82.0	24.00	42.04571	57.74	8.00	-0.57132	100.0	14.00	
58- 1 79.0	14.00	8.479094	75.59	22.00	4.345299	60.30	24.00	
58- 2 69.0	22.00	32.63733	60.30	12.00	-0.40179	81.65	10.00	
58- 3 98.0	10.00	-0.81620	89.44	22.00	4.936656	60.30	14.00	
58- 4 96.0	10.00	2.141172	89.44	14.00	-0.03432	75.59	26.00	
58- 5 80.0	10.00	0.000000	89.44	12.00	0.000000	81.65	10.00	
58- 6 60.0	12.00	1.069124	81.65	18.00	2.401989	66.67	20.00	
58- 7 62.0	12.00	3.186485	81.65	4.00	-0.03754	141.4	16.00	
58- 8 73.0	4.00	-1.54605	141.4	18.00	2.178292	66.67	14.00	
58- 9 85.0	10.00	0.574752	89.44	14.00	-0.00804	75.59	10.00	
58-10 68.0	16.00	15.37992	70.71	12.00	-0.18811	81.65	16.00	
58-11 89.0	12.00	7.300812	81.65	8.00	-0.10655	100.0	14.00	

POS	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR
AVG H#								ERR
58-12	2.00	0.000000	200.0	12.00	0.000000	81.65	10.00	
79.0								
58-13	16.00	11.59132	70.71	24.00	5.583405	57.74	22.00	
70.0								
58-14	4.00	0.000000	141.4	2.00	0.000000	200.0	14.00	
73.0								
58-15	16.00	13.26507	70.71	6.00	-0.15065	115.5	14.00	
56.0								
58-16	10.00	1.333875	89.44	16.00	0.747571	70.71	10.00	
94.0								
58-17	8.00	0.000000	100.0	14.00	0.000000	75.59	6.00	
80.0								
58-18	14.00	10.03894	75.59	14.00	-0.12441	75.59	20.00	
70.0								
19- 1	4.00	0.000000	141.4	4.00	0.000000	141.4	22.00	
74.0								
19- 2	6.00	-0.95056	115.5	16.00	1.252691	70.71	8.00	
59.0								
19- 3	12.00	0.238377	81.65	16.00	1.474822	70.71	14.00	
49.0								
19- 4	24.00	34.40446	57.74	22.00	4.196231	60.30	8.00	
67.0								
19- 5	10.00	0.000000	89.44	8.00	0.000000	100.0	22.00	
47.0								
19- 6	8.00	0.000000	100.0	14.00	0.000000	75.59	16.00	
104.0								
19- 7	6.00	-2.18028	115.5	18.00	2.740797	66.67	16.00	
49.0								
19- 8	6.00	-0.76556	115.5	16.00	1.058718	70.71	16.00	
69.0								
19- 9	10.00	-2.36635	89.44	20.00	3.349211	63.25	12.00	
74.0								
19-10	18.00	22.09072	66.67	8.00	-0.27945	100.0	26.00	
73.0								
19-11	12.00	3.556175	81.65	18.00	2.085699	66.67	12.00	
75.0								
19-12	6.00	-1.48293	115.5	18.00	2.126826	66.67	20.00	
77.0								
19-13	12.00	5.068980	81.65	12.00	-0.06506	81.65	18.00	
75.0								
19-14	4.00	0.000000	141.4	6.00	0.000000	115.5	18.00	
56.0								
19-15	2.00	0.000000	200.0	2.00	0.000000	200.0	4.00	
111.0								
19-16	8.00	0.000000	100.0	14.00	0.000000	75.59	10.00	
78.0								
19-17	12.00	2.043487	81.65	20.00	3.337311	63.25	24.00	
71.0								
19-18	12.00	2.570241	81.65	22.00	4.423539	60.30	18.00	
79.0								
22- 1	16.00	16.44385	70.71	16.00	0.713805	70.71	8.00	
77.0								

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
22- 2 60.0	18.00	17.63433	66.67	18.00	2.209213	66.67	10.00	
22- 3 97.0	18.00	28.01196	66.67	10.00	-0.45627	89.44	14.00	
22- 4 70.0	14.00	10.03894	75.59	14.00	-0.12441	75.59	6.00	
22- 5 71.0	10.00	0.000000	89.44	6.00	0.000000	115.5	10.00	
22- 6 80.0	0.00	-2.27073	*****	20.00	3.297812	63.25	8.00	
22- 7 71.0	12.00	4.474101	81.65	14.00	-0.05582	75.59	14.00	
22- 8 73.0	6.00	0.000000	115.5	4.00	0.000000	141.4	14.00	
22- 9 59.0	12.00	0.903357	81.65	18.00	2.428662	66.67	14.00	
22-10 60.0	12.00	-3.47910	81.65	28.00	8.424948	53.45	12.00	
22-11 135.0	8.00	1.136381	100.0	8.00	-0.02580	100.0	16.00	
22-12 134.0	10.00	4.606174	89.44	22.00	6.170263	60.30	24.00	
22-13 89.0	6.00	-2.22375	115.5	20.00	3.333691	63.25	8.00	
22-14 102.0	16.00	22.42966	70.71	16.00	0.347396	70.71	12.00	
22-15 66.0	12.00	2.062982	81.65	18.00	2.255728	66.67	10.00	
22-16 55.0	10.00	-4.82446	89.44	24.00	6.236956	57.74	16.00	
22-17 54.0	20.00	23.76464	63.25	4.00	-0.26656	141.4	10.00	
22-18 70.0	8.00	-2.45432	100.0	20.00	3.410217	63.25	10.00	
59- 1 113.0	10.00	3.243767	89.44	18.00	2.440593	66.67	12.00	
59- 2 65.0	14.00	6.632830	75.59	20.00	3.401915	63.25	12.00	
59- 3 68.0	6.00	-6.81309	115.5	30.00	9.377413	51.64	12.00	
59- 4 60.0	12.00	2.908544	81.65	6.00	-0.03385	115.5	4.00	
59- 5 55.0	18.00	18.53116	66.67	10.00	-0.20915	89.44	10.00	
59- 6 60.0	14.00	6.590861	75.59	18.00	2.337730	66.67	14.00	
59- 7 70.0	22.00	30.42941	60.30	20.00	3.002710	63.25	10.00	
59- 8 68.0	14.00	6.342146	75.59	22.00	4.515031	60.30	14.00	
59- 9 62.0	22.00	30.97470	60.30	4.00	-0.36489	141.4	12.00	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
59-10 74.0	18.00	22.30453	66.67	2.00	-0.28418	200.0	10.00	
59-11 56.0	16.00	7.555365	70.71	26.00	7.266059	55.47	6.00	
59-12 68.0	20.00	26.72220	63.25	10.00	-0.32683	89.44	4.00	
59-13 73.0	10.00	0.000000	89.44	14.00	0.000000	75.59	20.00	
59-14 78.0	84.00	217.3965	30.86	14.00	-2.85532	75.59	16.00	
59-15 59.0	12.00	0.903357	81.65	18.00	2.428662	66.67	14.00	
59-16 101.0	16.00	22.15201	70.71	16.00	0.360305	70.71	14.00	
59-17 63.0	14.00	8.902417	75.59	8.00	-0.10552	100.0	8.00	
59-18 68.0	16.00	14.59812	70.71	16.00	0.887941	70.71	12.00	

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log -

Counter: Beckman Model 5000TA Serial #: 7040252

Facility Nycomed

Loaded By T. Mikell Count Date 10/22/99

Sample Type: Wipes X Liquids____ Solids____

Rack #	Position	Description
29R	2	
47R	1, 2	
61 Y	12, 18	
346	7, 13	
55 Y	7	

Comments Recounts

USER: 7 ID:5K RECOUNTS PRESET TIME: 5.00 FRI 22 OCT 1999 17:00
SAMPLE REPEAT: 1 CYCLE REPEAT: 3 SCR:N RS232:N
H#: 1 AQC:Y QCF:N RCM:N
CHANNEL 1-LL: 1 UL: 370 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 2-LL:370 UL: 670 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 3-LL:670 UL:1000 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0

DUAL LABEL DPM SET UP ON 23 FEB 1999 05:11

UNKNOWN ID:NITROMETHANE QUENCH UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:Q 1.00000 ISO2:Q 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM
UNKNOWN HALF LIFE CORRECTION:N
INDIVIDUAL UNKNOWN NORM FACTORS:N BACKGROUND QUENCH CURVES:Y
STANDARD ID:NITROMETHANE QUENCH QUENCH LIMITS LOW:49.00 HIGH:358.2
HALF LIFE(DAYS) ISO1:N ISO2:N
STANDARD DPM ISO1: 38289.00 ISO2: 44911.00

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
29- 2 49.0	15.80	9.383849	22.50	18.00	2.615212	21.08	16.00	
47- 1 99.0	20.60	34.04172	19.71	21.40	3.992329	19.33	15.40	
47- 2 100.0	21.60	36.10397	19.25	24.60	6.313815	18.03	13.60	
61-12 111.0	21.40	44.57791	19.33	13.00	-0.95578	24.81	16.00	
61-18 108.0	19.00	35.01613	20.52	14.60	-0.72885	23.41	14.00	
34- 7 87.0	14.80	15.52595	23.25	12.80	-0.22160	25.00	16.00	
34-13 101.0	13.20	13.43489	24.62	14.60	-0.23518	23.41	15.20	
55- 7 85.0	7.80	0.000000	32.03	13.20	0.000000	24.62	12.40	

CYCLE: 2

29- 2 49.0	18.00	15.65242	21.08	17.20	2.051253	21.57	14.60	
47- 1 100.0	21.40	37.54185	19.33	20.20	3.124794	19.90	14.40	
47- 2 99.0	22.00	37.84600	19.07	23.00	5.058795	18.65	13.60	
61-12 112.0	18.40	32.72661	20.85	18.00	1.827448	21.08	14.80	
61-18 108.0	19.60	37.08009	20.20	11.80	-0.77181	26.04	17.60	
34- 7 88.0	10.20	1.391540	28.01	15.20	0.292603	22.94	16.40	
34-13 102.0	12.60	11.67105	25.20	13.40	-0.20854	24.43	12.60	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
55- 7 86.0	10.80	2.584892	27.22	16.00	0.789831	22.36	11.80	

CYCLE: 3

29- 2 50.0	16.80	13.93402	21.82	14.60	0.435245	23.41	15.20	
47- 1 102.0	23.00	42.53378	18.65	22.20	4.624070	18.98	11.00	
47- 2 99.0	24.60	47.51516	18.03	20.40	3.058613	19.80	17.40	
61-12 111.0	17.40	30.54251	21.44	14.60	-0.65485	23.41	12.80	
61-18 108.0	19.00	35.01613	20.52	14.80	-0.72885	23.25	13.20	
34- 7 87.0	10.80	3.295610	27.22	10.80	-0.04704	27.22	12.40	
34-13 102.0	11.20	7.037404	26.73	14.00	-0.12575	23.90	13.80	
55- 7 85.0	9.00	0.000000	29.81	11.60	0.000000	26.26	11.20	

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log

Counter: Beckman Model 5000TA Serial #: 7040252

Facility Nycomed

Loaded By T. Mikell Count Date 10/25/99

Sample Type: Wipes X Liquids____ Solids____

Rack #	Position	Description
576	6	
16W	9,10,15,17	
17W	3,9	
7R	5	
596	14	

Comments Recounts

RSI

USER: 7 ID:5K RECOUNTS PRESET TIME: 5.00 MON 25 OCT 1999 09:01
SAMPLE REPEAT: 1 CYCLE REPEAT: 3 SCR:N RS232:N
H#: 1 AQC:Y QCF:N RCM:N
CHANNEL 1-LL: 1 UL: 370 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 2-LL:370 UL: 670 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 3-LL:670 UL:1000 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0

DUAL LABEL DPM SET UP ON 23 FEB 1999 05:11

UNKNOWN ID:NITROMETHANE QUENCH UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:Q 1.00000 ISO2:Q 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM
UNKNOWN HALF LIFE CORRECTION:N
INDIVIDUAL UNKNOWN NORM FACTORS:N BACKGROUND QUENCH CURVES:Y
STANDARD ID:NITROMETHANE QUENCH QUENCH LIMITS LOW:49.00 HIGH:358.2
HALF LIFE(DAYS) ISO1:N ISO2:N
STANDARD DPM ISO1: 38289.00 ISO2: 44911.00

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
57- 6 51.0	12.60	1.479908	25.20	17.40	2.272166	21.44	19.80	
57-12 83.0	7.00	-1.66249	33.81	18.60	2.442838	20.74	19.20	
16- 9 63.0	10.60	0.000000	27.47	13.60	0.000000	24.25	14.60	
16-10 93.0	7.00	0.000000	33.81	14.40	0.000000	23.57	15.00	
16-15 50.0	12.40	2.626636	25.40	11.80	-0.02872	26.04	13.20	
16-17 48.0	19.20	18.13295	20.41	18.20	2.676308	20.97	12.60	
17- 3 61.0	10.20	-3.79856	28.01	22.40	5.054647	18.90	19.20	
17- 9 65.0	6.60	-3.29128	34.82	21.60	4.465287	19.25	24.00	
7- 5 91.0	7.00	-3.08542	33.81	22.00	4.650821	19.07	21.80	
59-14 48.0	10.40	0.000000	27.74	11.60	0.000000	26.26	14.20	

CYCLE: 2

57- 6 51.0	13.40	1.573127	24.43	21.60	4.855039	19.25	16.80	
57-12 83.0	7.20	-1.24928	33.33	17.60	1.835672	21.32	22.80	
16- 9 65.0	11.40	1.924691	26.49	13.60	-0.02310	24.25	11.40	
16-10 94.0	9.20	0.000000	29.49	12.00	0.000000	25.82	14.00	
16-15 50.0	12.00	1.556026	25.82	11.80	-0.01701	26.04	16.40	

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
16-17 48.0	17.20	10.10370	21.57	23.60	6.122829	18.41	14.00	
17- 3 62.0	10.20	-0.97936	28.01	16.20	1.309541	22.22	20.20	
17- 9 67.0	7.00	-2.01195	33.81	18.80	2.756009	20.63	20.80	
7- 5 93.0	7.00	-1.98986	33.81	19.40	3.013722	20.31	21.80	
59-14 49.0	12.80	3.558671	25.00	13.00	-0.03865	24.81	15.00	

CYCLE: 3

57- 6 51.0	12.60	3.240895	25.20	13.80	0.038018	24.08	20.00	
57-12 81.0	8.00	-2.50710	31.62	20.60	3.655695	19.71	24.60	
16- 9 65.0	11.20	1.363369	26.73	12.40	-0.01636	25.40	12.20	
16-10 93.0	6.80	0.000000	34.30	14.80	0.000000	23.25	16.40	
16-15 50.0	10.20	0.000000	28.01	11.40	0.000000	26.49	12.60	
16-17 49.0	15.00	3.966321	23.09	24.60	6.765088	18.03	12.20	
17- 3 64.0	10.00	-2.08890	28.28	18.80	2.820353	20.63	22.40	
17- 9 67.0	9.60	-1.92528	28.87	18.60	2.637283	20.74	26.20	
7- 5 93.0	8.00	-2.33662	31.62	20.20	3.538913	19.90	21.80	
59-14 49.0	12.40	2.300539	25.40	14.00	0.212717	23.90	13.20	

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log

Counter: Beckman Model 5000TA Serial #: 7040252

Facility Nycomed

Loaded By T. Mikell Count Date 10/05/06

Sample Type: Wipes 2 Liquids ____ Solids ____

Rack #	Position	Description
546	1, 4, 17	Room 463
416	15	Room 104

Comments Recounts

USER: 7 ID:5K RECOUNTS PRESET TIME: 5.00 TUE 26 OCT 1999 08:46
SAMPLE REPEAT: 1 CYCLE REPEAT: 3 SCR:N RS232:N
H#: 1 AQC:Y QCF:N RCM:N
CHANNEL 1-LL: 1 UL: 370 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 2-LL:370 UL: 670 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
CHANNEL 3-LL:670 UL:1000 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0

DUAL LABEL DPM SET UP ON 23 FEB 1999 05:11

UNKNOWN ID:NITROMETHANE QUENCH UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:Q 1.00000 ISO2:Q 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM
UNKNOWN HALF LIFE CORRECTION:N
INDIVIDUAL UNKNOWN NORM FACTORS:N BACKGROUND QUENCH CURVES:Y
STANDARD ID:NITROMETHANE QUENCH QUENCH LIMITS LOW:49.00 HIGH:358.2
HALF LIFE(DAYS) ISO1:N ISO2:N
STANDARD DPM ISO1: 38289.00 ISO2: 44911.00

POS AVG H#	CPM1	ISO1 DPM	2SIG1	CPM2	ISO2 DPM	2SIG2	CPM3	ERR ERR
54- 1 94.0	17.60	25.89042	21.32	14.80	-0.40288	23.25	14.40	
54- 4 69.0	195.40	329.8502	6.40	472.20	264.8533	4.12	14.20	
54-17 76.0	25.80	27.70808	17.61	57.20	24.83605	11.83	17.40	
41-15 51.0	13.60	5.142868	24.25	15.40	1.001431	22.79	16.20	

CYCLE: 2

54- 1 93.0	17.80	26.25046	21.20	11.80	-0.40283	26.04	12.20	
54- 4 69.0	193.40	325.3586	6.43	469.40	263.2645	4.13	13.20	
54-17 77.0	24.60	24.72141	18.03	56.80	24.66611	11.87	13.60	
41-15 50.0	14.40	7.707655	23.57	14.20	0.256305	23.74	12.60	

CYCLE: 3

54- 1 94.0	16.40	22.09383	22.09	14.00	-0.34380	23.90	13.00	
54- 4 68.0	202.00	347.3754	6.29	467.80	262.3341	4.14	14.20	
54-17 77.0	24.40	24.30117	18.11	56.40	24.43571	11.91	11.80	
41-15 50.0	11.40	0.000000	26.49	11.40	0.000000	26.49	16.20	

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Nycomed

Loaded By DP Count Date 11/1/94

Sample Type: Wipes X Liquids ____ Solids ____

Rack #	Position	Description
586	1-18	Category 1 Wipes
49R	1	Category 1 Wipe # 19
49R	3-15	Room 438
49R	18	Room 463 Hood rewipe

Comments

RSI

USER: 6 ID:SURVEY WIPES PRESET TIME: 0.50 MON 01 NOV 1999 11:05
SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR:N RS232:N
H#: 1 AQC:Y QCF:N RCM:Y
RCM-TIME: 0.10 INT:999.95
CHANNEL 1-LL: 0 UL: 400 2SIGMA: 2.00 BKG SUB: 17.85 BKG 2SIG: 0.00 LSR: 0
CHANNEL 2-LL:400 UL: 670 2SIGMA: 2.00 BKG SUB: 9.97 BKG 2SIG: 0.00 LSR: 0
CHANNEL 3-LL:670 UL:1000 2SIGMA: 2.00 BKG SUB: 12.26 BKG 2SIG: 0.00 LSR: 0

DUAL LABEL DPM, SET UP ON TUE 06 OCT 1998 08:39
UNKNOWN ID:MINI VIALS WIPES UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:Q 1.00000 ISO2:Q 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM
CALCULATE COEFF:N HALF LIFE(DAYS) ISO1:N ISO2:N
QUENCH COEFF ISO1, CH1 A: 3.564798 B:-0.0019643 C:-0.0000121 D:-0.0000000456
ISO1, CH2 A:-0.5698745 B:0.00438414 C:-0.0000013 D:-0.0000000217
ISO2, CH1 A: 3.512746 B:-0.0043614 C:0.00002476 D:-0.0000000707
ISO2, CH2 A: 4.692749 B:-0.0015627 C:0.00001004 D:-0.0000000329
QUENCH LIMITS LOW:37.75 HIGH:348.0

SAM	POS	ISO1 DPM	2SIG1	ISO2 DPM	2SIG2	CPM3	2SIG3	AVG H#	ERR
1	58- 1	-19.2927	*****	-1.79794	*****	1.74	608.2	76.0	108
2	58- 2	27.92198	225.3	-7.97576	*****	1.74	608.2	58.0	109
3	58- 3	-2.53225	*****	-3.84849	*****	9.74	136.2	55.0	108
4	58- 4	-6.05267	*****	0.070203	29815	9.74	136.2	50.0	108
5	58- 5	20.22265	225.3	-0.11018	29815	-2.26	*****	53.0	110
6	58- 6	49.90490	102.1	5.547988	187.6	3.74	302.5	64.0	
7	58- 7	9.364607	588.3	-2.00528	*****	9.74	136.2	68.0	109
8	58- 8	71.83892	113.1	-2.67776	*****	-2.26	*****	127.0	109
9	58- 9	22.18317	225.3	3.859680	262.6	9.74	136.2	109.0	
10	58-10	79.81078	80.76	9.362416	126.1	7.74	163.4	99.0	
11	58-11	23.85258	225.3	-2.12263	*****	3.74	302.5	73.0	109
12	58-12	24.92547	177.0	3.779692	262.6	3.74	302.5	70.0	
13	58-13	20.36382	319.7	-4.12461	*****	-0.26	*****	92.0	109
14	58-14	34.51035	177.0	-8.01543	*****	-2.26	*****	57.0	109
15	58-15	-24.4324	*****	4.147985	262.6	-0.26	*****	70.0	108
16	58-16	16.22135	225.3	5.822317	187.6	-0.26	*****	73.0	110
17	58-17	10.24017	319.7	3.860990	262.6	13.74	105.0	58.0	
18	58-18	30.21514	177.0	-4.06030	*****	7.74	163.4	51.0	109
19	49- 1	16.74175	225.3	3.808055	262.6	-0.26	*****	55.0	110
21	49- 3	53.79191	113.1	-0.40075	29815	9.74	136.2	86.0	
22	49- 4	41.34214	113.1	11.61023	110.3	5.74	209.1	84.0	
23	49- 5	154.1780	43.33	34.03561	53.24	-6.26	*****	56.0	110
24	49- 6	21.65014	177.0	5.725254	187.6	-2.26	*****	56.0	110
25	49- 7	-15.3671	*****	-3.74141	*****	-4.26	*****	48.0	108
26	49- 8	36.41212	113.1	17.64804	83.01	-0.26	*****	89.0	110
27	49- 9	52.61209	113.1	1.593745	482.7	-0.26	*****	89.0	110
28	49-10	57.56202	86.53	7.380407	149.4	3.74	302.5	46.0	
29	49-11	-18.5597	*****	6.026026	187.6	-2.26	*****	60.0	108
30	49-12	-14.2338	*****	-5.73001	*****	7.74	163.4	59.0	108
31	49-13	-22.5258	*****	-3.71153	*****	-0.26	*****	56.0	108
32	49-14	-18.0693	*****	4.128007	262.6	-2.26	*****	79.0	108
33	49-15	5.976697	8000.	-5.87333	*****	3.74	302.5	59.0	109

SAM	POS	ISO1 DPM	2SIG1	ISO2 DPM	2SIG2	CPM3	2SIG3	AVG H#	ERR
36	49-18	1.642545	588.3	5.856355	187.6	-2.26	*****	54.0	110

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Wycomed - Wayne, PA

Loaded By DP Count Date 11/1/99

Sample Type: Wipes X Liquids ____ Solids ____

Recounts

Rack #	Position	Description
586	8	Category 1
586	10	Category 1
49 R.	5	Room 438

Comments ____

RSI

USER: 7 ID:RECOUNTS B PRESET TIME: 5.00 MON 01 NOV 1999 12:51
SAMPLE REPEAT: 1 CYCLE REPEAT: 3 SCR:N RS232:N
H#: 3 AQC:Y QCF:N RCM:N
CHANNEL 1-LL: 0 UL: 400 2SIGMA: 2.00 BKG SUB: 17.85 BKG 2SIG: 0.00 LSR: 0
CHANNEL 2-LL:400 UL: 670 2SIGMA: 2.00 BKG SUB: 9.97 BKG 2SIG: 0.00 LSR: 0
CHANNEL 3-LL:670 UL:1000 2SIGMA: 2.00 BKG SUB: 12.26 BKG 2SIG: 0.00 LSR: 0

DUAL LABEL DPM, SET UP ON SAT 15 FEB 1997 09:53
UNKNOWN ID:LSC B QUENCH CURVES UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:@ 1.00000 ISO2:@ 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM
CALCULATE COEFF:N HALF LIFE(DAYS) ISO1:N ISO2:N
QUENCH COEFF ISO1, CH1 A: 4.166413 B:-0.0040340 C:-0.0000039 D:-0.0000000542
ISO1, CH2 A: 0.4755853 B:-0.0070644 C:0.00005470 D:-0.0000001018
ISO2, CH1 A: 2.900126 B:-0.0007035 C:0.00001067 D:-0.0000000524
ISO2, CH2 A: 4.459743 B:-0.0028616 C:0.00001779 D:-0.0000000428
QUENCH LIMITS LOW:42.00 HIGH:347.3

SAM	POS	ISO1 DPM	2SIG1	ISO2 DPM	2SIG2	CPM3	AVG H#	ERR
1	58- 8	7.996850	138.3	2.905938	140.1	4.14	135.0	
3	58-10	23.05283	45.89	6.100096	71.24	2.74	96.3	
16	49- 5	97.47816	13.05	64.36048	13.69	-0.06	55.3	110

CYCLE: 2

1	58- 8	8.622104	147.6	1.254808	288.0	0.74	139.7	
3	58-10	29.44871	40.32	2.776105	129.6	4.54	98.7	
16	49- 5	102.5452	12.80	59.80277	14.25	1.34	54.3	

CYCLE: 3

1	58- 8	16.06249	75.57	3.029959	129.6	1.74	127.0	
3	58-10	29.41386	40.86	0.626101	354.1	1.74	96.0	
16	49- 5	104.1151	12.85	53.60568	15.17	0.54	54.7	

RADIATION SCIENCE, INC.

Liquid Scintillation Counting Log

Counter: Beckman Model 3801 Serial #: 7015282

Facility Wyeomed Wayne, PA

Loaded By DP Count Date 11/2/99

Sample Type: Wipes X Liquids ____ Solids ____

Rack #	Position	Description
524	1	Waste cage (1)
	2	Waste cage (2)
	3	Waste cage (3)
	4	Inside door (freezer)
	5	Freezer Handle
	6	Inside freezer
	7	ReFridge Handle
	8	Top of Refridge
	9	Back of refridge
	10	Bottom of refridge
	11	left side of refridge
	12	Rt side of Refridge
	13	R438 wipe #5 (rewipe)

Comments ____

RSI

USER: 6 ID:SURVEY WIPES PRESET TIME: 0.50 WED 03 NOV 1999 04:10
SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR:N RS232:N
H#: 1 AQC:Y QCF:N RCM:Y
RCM-TIME: 0.10 INT:999.95
CHANNEL 1-LL: 0 UL: 400 2SIGMA: 2.00 BKG SUB: 17.85 BKG 2SIG: 0.00 LSR: 0
CHANNEL 2-LL:400 UL: 670 2SIGMA: 2.00 BKG SUB: 9.97 BKG 2SIG: 0.00 LSR: 0
CHANNEL 3-LL:670 UL:1000 2SIGMA: 2.00 BKG SUB: 12.26 BKG 2SIG: 0.00 LSR: 0

DUAL LABEL DPM, SET UP ON TUE 06 OCT 1998 08:39
UNKNOWN ID:MINI VIALS WIPES UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:Q 1.00000 ISO2:Q 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM
CALCULATE COEFF:N HALF LIFE(DAYS) ISO1:N ISO2:N
QUENCH COEFF ISO1, CH1 A: 3.564798 B:-0.0019643 C:-0.0000121 D:-0.0000000456
ISO1, CH2 A:-0.5698745 B:0.00438414 C:-0.0000013 D:-0.0000000217
ISO2, CH1 A: 3.512746 B:-0.0043614 C:0.00002476 D:-0.0000000707
ISO2, CH2 A: 4.692749 B:-0.0015627 C:0.00001004 D:-0.0000000329
QUENCH LIMITS LOW:37.75 HIGH:348.0

SAM	POS	ISO1 DPM	2SIG1	ISO2 DPM	2SIG2	CPM3	2SIG3	AVG H#	ERR
1	52- 1	-9.79588	*****	3.992692	262.6	-4.26	*****	55.0	108
2	52- 2	-4.36733	*****	-1.88936	*****	-6.26	*****	56.0	108
3	52- 3	5.877759	8000.	-5.84062	*****	3.74	302.5	52.0	109
4	52- 4	0.496090	8000.	0.025814	29815	7.74	163.4	68.0	
5	52- 5	-29.0997	*****	2.205572	482.7	1.74	608.2	66.0	108
6	52- 6	-43.8956	*****	12.04101	110.3	-2.26	*****	57.0	108
7	52- 7	-38.5757	*****	-1.65077	*****	-2.26	*****	62.0	108
8	52- 8	2.317231	8000.	-1.94201	*****	-2.26	*****	60.0	109
9	52- 9	-22.8274	*****	4.071994	262.6	-6.26	*****	52.0	108
10	52-10	-20.0721	*****	-1.79569	*****	-0.26	*****	84.0	108
11	52-11	-41.7763	*****	2.278970	482.7	5.74	209.1	59.0	108
12	52-12	0.474003	8000.	0.025929	29815	7.74	163.4	57.0	
13	52-13	-27.3926	*****	2.155170	482.7	5.74	209.1	50.0	108
30	**-12	xxxxxxxx	xxxxx	xxxxxxxx	xxxxx	xxxxxxxxxx	xxxxx	xxxxx	101

Wipe Results
By Gamma Counter Analysis

RADIATION SCIENCE, INC.

Gamma Counter Analysis Log

Counter: Packard Model 5530 Serial # 402032

Facility: Nycomed, Wayne PA

Loaded By T. Mikell Date_____

Wipe ID	Description
1-3	Rack 29 R
4-12	Rack 47 R
13-30	Rack 61 Y
31-48	Rack 34G
49-66	Rack 39 G
67-84	Rack 51 R
85-101	Rack 55 Y
~~103-120~~	~~Rack 37G~~
102-119	Rack 37G
120-137	Rack 7 Y
138-155	Rack 32 R
156-173	Rack 2 G
174-185	Rack 17 W
186-191	Rack 6
192-203	Rack 57G
204-209	Rack 7 R
210-227	Rack 16 W
228-239	Rack 2W
240-257	~~59~~ Rack 59G

Comments _____

Gamma Counter Analysis Log

Counter: Packard Model 5530 Serial # 402032

Facility: Nycomed

Loaded By T. Mikell Date 10/22/99

Wipe ID	Description
~~39 V~~	
258 - 275	Rack 39 V
276 - 283	Rack 59 W
284 - 301	Rack 22G
302 - 319	Rack 19G
320 - 337	Rack 58 V
338 - 355	Rack 41 R

Comments

PROGRAM #: 5 10/22/99 15:00

REGION A: LL= 15 UL= 80 BKG= 0 %SIGMA= .00

REGION B: LL= 80 UL= 165 BKG= 0 %SIGMA= .00

REGION C: LL= 165 UL= 2000 BKG= 0 %SIGMA= .00

TIME= 1.00 SCREENING LIMITS= 0 0 K=1.000

P#	S#	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	0	10.00	35	40	151	B	10
5	1	1.00	2	6	11		11
5	2	1.00	20	3	10		12
5	3	1.00	8	0	0		13
5	4	1.00	32	3	2		15
5	5	1.00	39	0	19		16
5	6	1.00	49	0	12		17
5	7	1.00	10	0	0		18
	8	1.00	24	0	0		19
5	9	1.00	4	0	24		21
5	10	1.00	7	4	21		22
5	11	1.00	0	7	0		23
5	12	1.00	0	0	31		24
5	13	1.00	1	0	9		26
5	14	1.00	9	3	18		27
5	15	1.00	1	1	10		28
5	16	1.00	0	0	9		29
5	17	1.00	0	4	0		30
5	18	1.00	4	0	4		32
5	19	1.00	0	1	9		33
	20	1.00	3	3	0		34

5	21	1.00	1	0	0	35
5	22	1.00	3	0	11	37
5	23	1.00	9	8	12	38
5	24	1.00	12	2	23	39
5	25	1.00	0	0	9	40
5	26	1.00	0	3	8	42
5	27	1.00	3	0	0	43
5	28	1.00	1	10	0	44
5	29	1.00	0	0	0	45
5	30	1.00	0	0	0	46
5	31	1.00	8	0	21	48
5	32	1.00	0	3	0	49
5	33	1.00	0	8	0	50
5	34	1.00	6	0	13	51
	35	1.00	0	6	0	52
5	36	1.00	0	0	13	53
5	37	1.00	0	2	3	55
5	38	1.00	0	0	0	56
5	39	1.00	0	14	8	57
5	40	1.00	14	7	0	58
5	41	1.00	3	2	0	60
5	42	1.00	0	0	0	61
5	43	1.00	15	0	0	62
5	44	1.00	0	6	10	63
5	45	1.00	0	0	8	64

P#	S#	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	46	1.00	9	6	4		66
	47	1.00	5	1	15		67
5	48	1.00	0	5	8		68
5	49	1.00	8	0	0		69
5	50	1.00	3	0	0		70
5	51	1.00	0	8	0		72
5	52	1.00	0	0	6		73
5	53	1.00	12	8	5		74
5	54	1.00	4	0	13		75
5	55	1.00	0	3	17		76
5	56	1.00	5	0	25		78
5	57	1.00	5	0	0		79
5	58	1.00	0	0	15		80
	59	1.00	11	0	0		81
5	60	1.00	3	6	0		82
5	61	1.00	0	0	0		84
5	62	1.00	0	0	2		85
5	63	1.00	4	2	6		86
5	64	1.00	0	0	11		87
5	65	1.00	0	0	0		89
5	66	1.00	0	15	0		90
5	67	1.00	0	0	10		91
5	68	1.00	0	4	14		92
5	69	1.00	1	0	6		93
5	70	1.00	8	7	8		95
5	71	1.00	0	0	0		96

5	72	1.00	0	0	24	97
5	73	1.00	2	0	0	98
5	74	1.00	0	4	7	100
5	75	1.00	7	5	0	101
5	76	1.00	0	0	0	102
5	77	1.00	0	0	3	103
5	78	1.00	0	0	4	105
5	79	1.00	7	0	14	106
5	80	1.00	4	0	16	107
5	81	1.00	0	1	9	108
5	82	1.00	0	9	1	110
5	83	1.00	9	0	2	111
5	84	1.00	4	5	0	112
5	85	1.00	3	4	0	113
	86	1.00	0	0	17	114
5	87	1.00	4	3	5	116
5	88	1.00	4	0	6	117
5	89	1.00	6	0	0	118
5	90	1.00	0	8	5	119
5	91	1.00	6	0	11	120
5	92	1.00	18	3	0	122
5	93	1.00	4	0	0	123
5	94	1.00	0	0	12	124
5	95	1.00	1	0	0	125
5	96	1.00	0	0	17	126

P#	S#	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	97	1.00	0	0	4		128
	98	1.00	6	6	0		129
5	99	1.00	8	5	3		130
5	100	1.00	16	0	8		131
5	101	1.00	5	0	0		133
5	102	1.00	13	3	0		134
5	103	1.00	0	0	14		135
5	104	1.00	7	3	0		136
5	105	1.00	0	0	0		137
5	106	1.00	4	3	8		138
5	107	1.00	1	0	11		140
5	108	1.00	5	2	0		141
5	109	1.00	2	0	9		142
	110	1.00	0	1	12		143
5	111	1.00	0	0	21		144
5	112	1.00	9	0	17		146
5	113	1.00	9	0	0		147
5	114	1.00	0	0	0		148
5	115	1.00	7	12	16		149
5	116	1.00	0	11	0		150
5	117	1.00	0	1	8		152
5	118	1.00	1	14	5		153
5	119	1.00	8	0	1		154
5	120	1.00	0	0	0		155
	121	1.00	0	9	13		157
5	122	1.00	0	0	5		158

5	123	1.00	0	3	0	159
5	124	1.00	0	0	0	160
5	125	1.00	0	5	9	162
5	126	1.00	4	14	0	163
5	127	1.00	0	0	0	164
5	128	1.00	1	2	0	165
5	129	1.00	3	7	9	166
5	130	1.00	0	0	14	168
5	131	1.00	7	1	13	169
5	132	1.00	0	4	2	170
5	133	1.00	0	6	10	171
5	134	1.00	14	3	1	173
5	135	1.00	6	13	0	174
5	136	1.00	0	5	11	175
	137	1.00	7	0	33	176
5	138	1.00	0	8	33	177
5	139	1.00	0	5	12	178
5	140	1.00	8	0	6	180
5	141	1.00	2	3	0	181
5	142	1.00	3	3	0	182
5	143	1.00	6	0	2	184
5	144	1.00	0	0	0	185
5	145	1.00	0	0	12	186
5	146	1.00	0	0	0	187
5	147	1.00	0	0	18	188

P#	S#	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	148	1.00	3	0	24		190
	149	1.00	1	0	0		191
5	150	1.00	1	6	2		192
5	151	1.00	0	6	5		193
5	152	1.00	0	7	0		195
5	153	1.00	0	8	0		196
5	154	1.00	0	8	13		197
5	155	1.00	7	4	0		198
5	156	1.00	0	0	25		199
5	157	1.00	2	0	18		201
5	158	1.00	2	8	25		202
5	159	1.00	5	0	21		203
5	160	1.00	3	0	4		204
5	161	1.00	7	0	12		206
5	162	1.00	6	3	0		207
5	163	1.00	0	0	12		208
5	164	1.00	0	5	0		209
5	165	1.00	9	1	0		211
5	166	1.00	2	0	8		212
5	167	1.00	1	4	0		213
5	168	1.00	5	4	6		214
5	169	1.00	2	2	12		216
5	170	1.00	4	0	7		217
5	171	1.00	0	0	0		218
	172	1.00	5	0	2		220
5	173	1.00	0	0	22		221

5	174	1.00	21	4	4	222
5	175	1.00	8	6	17	223
	176	1.00	14	0	13	224
5	177	1.00	2	0	0	225
5	178	1.00	0	8	0	227
5	179	1.00	0	0	4	228
5	180	1.00	1	0	0	229
5	181	1.00	2	0	0	230
5	182	1.00	6	1	0	231
5	183	1.00	1	0	0	233
5	184	1.00	0	0	5	234
5	185	1.00	2	1	1	235
5	186	1.00	6	4	0	236
5	187	1.00	0	11	3	237
	188	1.00	0	0	0	238
5	189	1.00	0	0	0	239
5	190	1.00	0	0	10	241
5	191	1.00	0	0	3	242
5	192	1.00	8	4	0	243
5	193	1.00	4	6	0	244
5	194	1.00	0	13	20	245
5	195	1.00	0	6	8	247
5	196	1.00	0	0	15	248
5	197	1.00	0	1	9	249
5	198	1.00	26	0	27	250

P#	'S#'	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	199	1.00	0	6	11		251
	200	1.00	12	2	19		252
5	201	1.00	0	1	0		254
5	202	1.00	1	2	0		255
5	203	1.00	5	0	0		256
5	204	1.00	5	1	0		257
5	205	1.00	0	13	16		258
5	206	1.00	0	0	0		259
5	207	1.00	3	0	0		261
5	208	1.00	0	0	0		262
5	209	1.00	0	0	3		263
5	210	1.00	1	0	14		264
	211	1.00	5	8	0		266
5	212	1.00	0	5	0		267
5	213	1.00	1	7	0		268
5	214	1.00	0	6	10		269
5	215	1.00	0	0	19		270
5	216	1.00	7	4	4		272
5	217	1.00	7	0	14		273
5	218	1.00	0	3	0		274
5	219	1.00	2	0	1		275
5	220	1.00	0	0	7		277
5	221	1.00	7	0	7		278
5	222	1.00	9	16	0		279
	223	1.00	0	3	7		280
5	224	1.00	8	0	0		282

5 225	1.00	2	2	13	283
5 226	1.00	10	5	18	284
227	1.00	15	0	0	285
5 228	1.00	4	16	18	287
5 229	1.00	0	2	0	288
5 230	1.00	43	0	0	289
5 231	1.00	30	7	5	290
5 232	1.00	1	0	0	292
5 233	1.00	0	0	0	293
5 234	1.00	0	0	0	294
5 235	1.00	0	0	32	295
5 236	1.00	10	7	0	296
5 237	1.00	9	0	12	298
5 238	1.00	0	8	6	299
239	1.00	0	0	17	300
5 240	1.00	0	10	17	301
5 241	1.00	0	2	3	302
5 242	1.00	0	0	0	304
5 243	1.00	8	0	5	305
5 244	1.00	18	7	0	306
5 245	1.00	4	0	13	307
5 246	1.00	9	10	0	308
5 247	1.00	0	0	36	310
5 248	1.00	0	0	14	311
5 249	1.00	0	0	1	312

P#	'S#'	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	250	1.00	7	11	9		313
5	251	1.00	11	7	27		315
5	252	1.00	3	0	2		316
5	253	1.00	0	0	6		317
5	254	1.00	4	3	0		318
5	255	1.00	0	2	13		319
5	256	1.00	3	12	10		321
5	257	1.00	0	7	15		322
5	258	1.00	2	0	0		323
5	259	1.00	0	0	3		324
5	260	1.00	2	0	0		325
5	261	1.00	14	1	6		326
	262	1.00	3	11	0		328
5	263	1.00	2	6	0		329
5	264	1.00	2	4	22		330
5	265	1.00	0	4	18		331
5	266	1.00	2	8	0		332
5	267	1.00	0	1	4		333
5	268	1.00	8	5	5		335
5	269	1.00	0	1	2		336
5	270	1.00	0	0	1		337
5	271	1.00	3	2	6		338
5	272	1.00	0	5	0		340
5	273	1.00	0	0	18		341
	274	1.00	8	13	1		342
5	275	1.00	0	6	0		343

5	276	1.00	0	2	6	344
5	277	1.00	10	0	3	345
	278	1.00	0	6	0	347
5	279	1.00	3	0	0	348
5	280	1.00	6	5	22	349
5	281	1.00	0	2	0	350
5	282	1.00	14	0	0	351
5	283	1.00	11	2	9	353
5	284	1.00	0	0	2	354
5	285	1.00	0	0	20	355
5	286	1.00	0	0	20	356
5	287	1.00	7	0	31	357
5	288	1.00	1	9	29	358
5	289	1.00	2	9	25	360
	290	1.00	6	4	10	361
5	291	1.00	2	0	10	362
5	292	1.00	4	16	9	363
5	293	1.00	7	3	16	364
5	294	1.00	2	0	19	365
5	295	1.00	0	0	8	367
5	296	1.00	1	2	0	368
5	297	1.00	6	8	20	369
5	298	1.00	2	7	32	370
5	299	1.00	0	0	20	371
5	300	1.00	0	1	0	372

P#	S#	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
	301	1.00	6	11	21		374
5	302	1.00	12	13	26		375
5	303	1.00	0	0	20		376
5	304	1.00	3	9	20		377
5	305	1.00	0	1	0		378
5	306	1.00	10	9	0		380
5	307	1.00	0	0	46		381
5	308	1.00	3	0	27		382
5	309	1.00	17	0	20		383
5	310	1.00	0	0	0		384
5	311	1.00	0	0	15		385
5	312	1.00	8	7	17		387
	313	1.00	4	7	9		388
5	314	1.00	1	7	13		389
5	315	1.00	0	3	18		390
5	316	1.00	6	0	27		391
5	317	1.00	0	2	5		392
5	318	1.00	0	2	42		394
5	319	1.00	0	12	5		395
5	320	1.00	8	1	19		396
5	321	1.00	11	1	53		397
5	322	1.00	4	0	28		398
5	323	1.00	13	10	34		400
5	324	1.00	0	4	46		401
	325	1.00	7	9	20		402
5	326	1.00	11	8	63		403

5 327	1.00	8	4	17	404
5 328	1.00	10	1	12	405
329	1.00	11	8	36	407
5 330	1.00	0	9	22	408
5 331	1.00	3	6	31	409
5 332	1.00	0	0	43	410
5 333	1.00	10	19	14	411
5 334	1.00	10	8	32	413
5 335	1.00	13	19	25	414
5 336	1.00	9	6	26	415
5 337	1.00	5	9	21	416
5 338	1.00	11	11	29	417
5 339	1.00	0	27	46	418
5 340	1.00	3	0	69	419
5 341	1.00	0	12	44	421
5 342	1.00	3	12	23	422
5 343	1.00	0	12	49	423
5 344	1.00	5	21	38	424
5 345	1.00	6	13	30	425
5 346	1.00	7	11	45	427
5 347	1.00	3	0	17	428
5 348	1.00	0	2	47	429
5 349	1.00	9	7	35	430
5 350	1.00	6	8	55	431
5 351	1.00	4	16	8	433

P#	S#	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	352	1.00	0	6	41		434
	353	1.00	0	12	58		435
5	354	1.00	15	11	24		436
5	355	1.00	3	1	47		437
5	356	1.00	1	2	42		438
5	357	1.00	0	8	43		439
5	358	1.00	19	15	50		441
5	359	1.00	0	21	27		442
5	360	1.00	4	0	39		443
5	361	1.00	5	6	23		444
5	362	1.00	5	12	27		445
5	363	1.00	5	16	47		447
5	364	1.00	12	14	29		448
	365	1.00	7	21	47		449

RADIATION SCIENCE, INC.

Gamma Counter Analysis Log

Counter: Packard Model 5530 Serial # 402032

Facility: Nycomed Wayne, PA

Loaded By T. Mikell Date _____

Wipe ID	Description
1-18	Rack 54G
19-36	Rack 48 R
37-54	Rack 20 R
55-72	Rack 41 G

Comments _____

PROGRAM #: 5 10/25/99 09:12

REGION A: LL= 15 UL= 80 BKG= 0 %SIGMA= .00

REGION B: LL= 80 UL= 165 BKG= 0 %SIGMA= .00

REGION C: LL= 165 UL= 2000 BKG= 0 %SIGMA= .00

TIME= 1.00 SCREENING LIMITS= 0 0 K=1.000

P#	S#	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	0	10.00	33	38	149	B	10
5	1	1.00	7	13	22		11
5	2	1.00	0	3	0		12
5	3	1.00	0	6	0		13
5	4	1.00	0	0	0		14
5	5	1.00	16	6	1		15
5	6	1.00	0	12	0		17
5	7	1.00	0	1	0		18
	8	1.00	0	0	0		19
5	9	1.00	0	0	7		21
5	10	1.00	0	2	0		22
5	11	1.00	2	11	0		23
5	12	1.00	5	5	6		24
5	13	1.00	2	5	8		25
5	14	1.00	12	0	1		27
5	15	1.00	2	10	0		28
5	16	1.00	2	0	19		29
5	17	1.00	4	8	0		30
5	18	1.00	9	2	0		31
5	19	1.00	5	2	17		32
	20	1.00	15	2	0		34

5	21	1.00	15	0	9	35
5	22	1.00	0	0	26	36
5	23	1.00	13	0	0	38
5	24	1.00	0	0	13	39
5	25	1.00	3	7	16	40
5	26	1.00	0	5	0	41
5	27	1.00	0	10	1	42
5	28	1.00	4	0	0	44
5	29	1.00	2	5	14	45
5	30	1.00	0	3	6	46
5	31	1.00	0	14	24	47
5	32	1.00	4	0	0	49
5	33	1.00	0	1	12	50
5	34	1.00	9	3	0	51
	35	1.00	0	8	11	52
5	36	1.00	3	0	0	53
5	37	1.00	6	0	0	54
5	38	1.00	0	1	19	56
5	39	1.00	18	3	5	57
5	40	1.00	8	0	0	58
5	41	1.00	2	11	2	59
5	42	1.00	8	0	9	60
5	43	1.00	17	0	8	62
5	44	1.00	0	1	0	63
5	45	1.00	0	0	0	64

P#	S#	TIME	CPMA/K	CPMB/K	CPMC/K	FLAGS	MIN
5	46	1.00	0	0	2		65
	47	1.00	7	2	0		66
5	48	1.00	0	6	3		67
5	49	1.00	0	0	0		69
5	50	1.00	3	0	0		70
5	51	1.00	0	4	0		71
5	52	1.00	0	7	17		72
5	53	1.00	2	0	4		73
5	54	1.00	0	1	4		75
5	55	1.00	9	10	3		76
5	56	1.00	3	9	0		77
5	57	1.00	0	1	12		78
5	58	1.00	3	0	0		79
	59	1.00	0	0	20		80
5	60	1.00	0	0	0		81
5	61	1.00	3	0	14		83
5	62	1.00	7	0	0		84
5	63	1.00	1	6	1		85
5	64	1.00	4	0	14		86
5	65	1.00	2	2	0		87
5	66	1.00	0	2	11		89
5	67	1.00	0	9	0		90
5	68	1.00	3	0	8		91
5	69	1.00	1	6	22		92
5	70	1.00	3	0	27		93
5	71	1.00	19	6	3		94

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION
P.O. Box 13087
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. P A R 0 0 0 0 1 5 7 5 0 | Manifest Document No. 0 4 9 0 8

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
NYCOMED AMERSHAM - NYCOMED AMERSHAM IMAGING
466 DEVON PARK DRIVE
WAYNE, PA 19087-8630

4. Generator's Phone (610) 225-4283

A. State Manifest Document Number: 01804908

B. State Generator's ID: 99942

5. Transporter 1 Company Name: KINDRICK TRUCKING COMPANY

6. US EPA ID Number: T N D 9 8 7 7 6 6 0 7 8

C. State Transporter's ID: 41298

D. Transporter's Phone: 423-882-0457

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
NSSI RECOVERY SERVICES, INC.
5709 ETHERIDGE
HOUSTON, TX 77087

10. US EPA ID Number: T X D 9 8 2 5 6 0 2 9 4

G. State Facility's ID: 38669

H. Facility's Phone: 713-641-0391

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
X	a. RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY,N.O.S. 7, UN2912 (SCINTILLATION MEDIA)	0 0 1	D M	X X 2 0 0	P	NOT EPA REGULATED
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above: QUOTATION NO. 10199K01.qot
11.a. Drum No. 9 (Mixture of alkylbenzene and phenylxylyl ethane with scintillators and detergents)

K. Handling Codes for Wastes Listed Above: M-141

15. Special Handling Instructions and Additional Information
EMERGENCY RESPONSE GUIDE CODE FOR WASTE:
11.a. ERG NO. 162
24 HOUR EMERGENCY TELEPHONE NO. 423-806-7991

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: GARY TOBIN | Signature: Gary F. Tobin | Month Day Year: 10 21 99

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: RONNIE STOCKTON | Signature: | Date: 10 21 99

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Date:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: | Signature: | Date:

TNRCC-0311 (Rev. 07/01/97)

White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

APPROVED BY OMB: NO. 3150-0164
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 1.17 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agenc waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reductio Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 540 (5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

SHIPPING PAPER

1. EMERGENCY TELEPHONE NUMBER *(Include Area Code)*
423-806-7991

ORGANIZATION
Philotechnics, Ltd.

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?
[X] YES
[ ] NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST ======> 1

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?
[ ] YES
[X] NO
If "Yes," provide Manifest Number ======>

EPA MANIFEST NUMBER
01804908

5. SHIPPER -- NAME AND FACILITY
Philotechnics, Ltd. @ Nycomed Amersham
466 Devon Park Drive
Wayne PA 19087

USER PERMIT NUMBER

SHIPMENT NUMBER
102199B

CONTACT
Gary Tobin

6. CARRIER -- Name and Address
Kindrick Trucking Co., Inc.
2818 Roane State Highway
Harriman TN 37748

CONTACT
Dispatch

SIGNATURE -- *Authorized carrier acknowledging waste receipt*

SHIPPER I.D. NUMBER
102199B

[ ] COLLECTOR
[ ] PROCESSOR
[X] GENERATOR TYPE *(Specify)* I

TELEPHONE NUMBER
(Include Area Code)
610-225-4283

EPA I.D. NUMBER
TND987766078

SHIPPING DATE
10/21/99

TELEPHONE NUMBER
(Include Area Code)
423-882-0457

DATE

7. NRC FORM 540 AND 540A
NRC FORM 541 AND 541A
NRC FORM 542 AND 542A
ADDITIONAL INFORMATION

PAGE 1 OF

No

9. CONSIGNEE - Name and Facility Address
NSSI Recovery Services, Inc.
5709 Etheridge
Houston TX 77087

SIGNATURE - Authorized consignee acknowledgin

10. CE

This is to certify that the herein-named materials are pr in proper condition for transportation according to the a certifies that the materials are classified, packaged, ma disposal as described in accordance with the applicab regulations.

AUTHORIZED SIGNATURE
Mark E Meyer

T

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Mixture of alkylbenzene and phenylxylyl ethane with scintillators and detergents)	NA	NA	Liquid/Labpack - Scintillation Fluid	C-14			5.8090E+00

FOR CONSIGNEE USE ONLY

CLEAR REGULATORY COMMISSION
RADIOACTIVE
FEST
APER

ode)

TAL NUMBER OF CKAGES IDENTIFIED THIS MANIFEST ======> 1

NIFEST NUMBER
04908

5. SHIPPER -- NAME AND FACILITY
Philotechnics, Ltd. @ Nycomed Amersham
466 Devon Park Drive
Wayne PA 19087

USER PERMIT NUMBER

SHIPMENT NUMBER 102199B

CONTACT
Gary Tobin

SHIPPER I.D. NUMBER 102199B

COLLECTOR

PROCESSOR

X GENERATOR TYPE (Specify) I

TELEPHONE NUMBER (Include Area Code)
610-225-4283

6. CARRIER -- Name and Address
Kindrick Trucking Co., Inc.
2818 Roane State Highway
Harriman TN 37748

EPA I.D. NUMBER
TND987766078

SHIPPING DATE
10/21/99

CONTACT
Dispatch

TELEPHONE NUMBER (Include Area Code)
423-882-0457

SIGNATURE -- *Authorized carrier acknowledging waste receipt*

DATE

7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S)
NRC FORM 541 AND 541A 1 PAGE(S)
NRC FORM 542 AND 542A 1 PAGE(S)
ADDITIONAL INFORMATION None PAGE(S)

8. MANIFEST NUMBER
(Use this number on all continuation pages)
102199B

9. CONSIGNEE - Name and Facility Address
NSSI Recovery Services, Inc.
5709 Etheridge
Houston TX 77087

CONTACT
Robert D. Gallagher

TELEPHONE NUMBER (Include Area Code)
713-641-0391

SIGNATURE - Authorized consignee acknowledging waste receipt

DATE

10. CERTIFICATION

This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the applicablerequirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE Mark E Dreyer

TITLE SR BROKER

DATE 10-21-99

PTION nber,	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Mixture of tergents}	NA	NA	Liquid/Labpack - Scintillation Fluid	C-14			5.8090E+00	LSA-II	200. LBS; 12.3 FT3	9

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION
P.O. Box 13087
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. P A R 0 0 0 0 1 5 7 5 0 | Manifest Document No. 0 4 9 0 7 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
NYCOMED AMERSHAM - NYCOMED AMERSHAM IMAGING
466 DEVON PARK DRIVE
WAYNE, PA 19087-8630
4. Generator's Phone (610) 225-4283

A. State Manifest Document Number: 01804907
B. State Generator's ID: 99942

5. Transporter 1 Company Name: KINDRICK TRUCKING COMPANY
6. US EPA ID Number: T N D 9 8 7 7 6 6 0 7 8
C. State Transporter's ID: 41298
D. Transporter's Phone: 423-382-0457

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
NSSI RECOVERY SERVICES, INC.
5709 ETHERIDGE
HOUSTON, TX 77087
10. US EPA ID Number: T X D 9 8 2 5 6 0 2 9 4
G. State Facility's ID: 38669
H. Facility's Phone: 713-641-0391

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
X	a. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001) (FLAMMABLE LIQUIDS, N.O.S.)	007	DM	XX910	P	D001 OUTS 001H
X	b. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001, D002) (FLAMMABLE LIQUIDS, CORROSIVE, N.O.S.)	003	DM	XX150	P	D001 D002 OUTS 001H
X	c. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001, F003) (FLAMMABLE LIQUIDS, N.O.S.)	002	DM	XX260	P	D001 F003 OUTS 001H
X	d. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001, F003) (FLAMMABLE LIQUIDS, N.O.S.)	002	DM	XX155	P	D001 F003 OUTS 001H

J. Additional Descriptions for Materials Listed Above QUOTATION NO. 10199K01.qot
11.a. Drum Nos. 1,2,3,4,5,6 & 11 (Acetonitrile/Water)
11.b. Drum Nos. 13,14 & 15 (Potassium hydroxide/Ethanol)
11.c. Drum Nos. 7 & 8 (Methanol/Water)
11.d. Drum Nos. 12 & 16 (Acetonitrile/Formalin)

K. Handling Codes for Wastes Listed Above: M-141

15. Special Handling Instructions and Additional Information
EMERGENCY RESPONSE GUIDE CODES FOR WASTE:
11.a., b., c., & d. ERG NO. 162
24 HR. EMERGENCY TELEPHONE NO. 423-806-7991

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
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Printed/Typed Name	Signature	Month	Day	Year
Gary Tobin	Gary F. Tobin	10	21	99

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date: Month	Day	Year
RONNIE STOCKTON	Ronnie Stockton	10	21	99

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date: Month	Day	Year
		.	.	.

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date: Month	Day	Year
	127544	.	.	.

TNRCC-0311 (Rev. 07/95) OFFICIAL RECORD COPY White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

ML 10

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION
P.O. Box 13087
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. P A R 0 0 0 0 1 5 7 5 0 | Manifest Document No. 0 4 9 0 8

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
NYCOMED AMERSHAM - NYCOMED AMERSHAM IMAGING
466 DEVON PARK DRIVE
WAYNE, PA 19087-8630

4. Generator's Phone (610) 225-4283

A. State Manifest Document Number: 01804908

B. State Generator's ID: 99942

5. Transporter 1 Company Name: KINDRICK TRUCKING COMPANY

6. US EPA ID Number: T N D 9 8 7 7 6 6 0 7 8

C. State Transporter's ID: 41298

D. Transporter's Phone: 423-882-0457

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
NSSI RECOVERY SERVICES, INC.
5709 ETHERIDGE
HOUSTON, TX 77087

10. US EPA ID Number: T X D 9 8 2 5 6 0 2 9 4

G. State Facility's ID: 38669

H. Facility's Phone: 713-661-0391

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
X	a. RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY,N.O.S. 7, UN2912 (SCINTILLATION MEDIA)	0 0 1	D M	2 0 0	P	NOT EPA REGULATED
	b.					
	c.					
	d.					

J. Additional Descriptions for Materials Listed Above: QUOTATION NO. 10199K01.qot
11.a. Drum No. 9 (Mixture of alkylbenzene and phenylxylyl ethane with scintillators and detergents)

K. Handling Codes for Wastes Listed Above: M-141

15. Special Handling Instructions and Additional Information
EMERGENCY RESPONSE GUIDE CODE FOR WASTE:
11.a. ERG NO. 162
24 HOUR EMERGENCY TELEPHONE NO. 423-806-7991

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GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
GARY TOBIN	Gary F. Tobin	1 0	2 1	9 9

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
RONNIE STOCKTON		1 0	2 1	9 9

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Printed/Typed Name	Signature	Month	Day	Year

FACILITY

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TNRCC-0311 (Rev. 07/01/97)

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UNIFORM HAZARDOUS WASTE MANIFEST

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C. State Transporter's ID: 41298

D. Transporter's Phone: 423-882-0457

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
NSSI RECOVERY SERVICES, INC.
5709 ETHERIDGE
HOUSTON, TX 77087

10. US EPA ID Number: T X D 9 8 2 5 6 0 2 9 4

G. State Facility's ID: 38669

H. Facility's Phone: 713-641-0391

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
X	a. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001) (FLAMMABLE LIQUIDS, N.O.S.)	0 0 7	D M	X X 9 1 0	P	D001 OUTS 001H
X	b. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001, D002) (FLAMMABLE LIQUIDS, CORROSIVE, N.O.S.)	0 0 3	D M	X X 1 5 0	P	D001 D002 OUTS 001H
X	c. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001, F003) (FLAMMABLE LIQUIDS, N.O.S.)	0 0 2	D M	X X 2 6 0	P	D001 F003 OUTS 001H
X	d. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001, F003) (FLAMMABLE LIQUIDS, N.O.S.)	0 0 2	D M	X X 1 5 5	P	D001 F003 OUTS 001H

J. Additional Descriptions for Materials Listed Above: QUOTATION NO. 10199K01.qot
11.a. Drum Nos. 1,2,3,4,5,6 & 11 (Acetonitrile/Water)
11.b. Drum Nos. 13,14 & 15 (Potassium hydroxide/Ethanol)
11.c. Drum Nos. 7 & 8 (Methanol/Water)
11.d. Drum Nos. 12 & 16 (Acetonitrile/Formalin)

K. Handling Codes for Wastes Listed Above: M-141

15. Special Handling Instructions and Additional Information
EMERGENCY RESPONSE GUIDE CODES FOR WASTE:
11.a., b., c., & d. ERG NO. 162
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GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Gary Tobin	Gary F. Tobin	1 0	2 1	9 9

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17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
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TNRCC-0311 (Rev. 07/01/97)

White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

NSSI/RECOVERY SERVICES, INC.

5711 ETHERIDGE ST. HOUSTON, TX 77087
TXD982560294 TEL 713-641-0391 FAX 713-641-6153

LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM

GENERATOR: Nycomed Amersham MANIFEST DOCUMENT NO.: 04907

STATE MANIFEST DOCUMENT NO.: 01804907

1. This waste is a [X] non-wastewater [ ] wastewater (40 CFR 268.2)
2. This waste is subject to any California List restrictions which are checked below:
[ ] HOC's [ ] PCB's [ ] Acid [ ] Metals [ ] Cyanides
3. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subdivision, or check NONE if the waste code has no subdivision. Also check which treatment standards apply.

ITEM	US EPA HAZARDOUS WASTE CODE(S)	SUBDIVISION ENTER THE SUBDIVISION DESCRIPTION IF NOT APPLICABLE SIMPLY CHECK NONE DESCRIPTION NONE	CONCENTRATION IN MG/KG UNLESS NOTED AS MG/L TCLP OR TREATMENT TECHNOLOGY	MGMT MTHD
1	D001	IGNITABLE HIGH TOC >10%	RORGS, CMBST, POLYM	A
2	D002	CORROSIVE pH >12.5	DEACT and meet 268.48 standard	A
3	F003	(Methanol) NONE	0.75	A

MANAGEMENT METHODS (MGMT MTHD)

A. **RESTRICTED WASTE REQUIRES TREATMENT**
THIS WASTE MUST BE TREATED TO THE APPLICABLE TREATMENT STANDARDS SET FORTH IN 40 CFR PART 268 SUBPART D, 268.32, OR RCRA SECTION 3004(D).

B **NON RCRA (APPENDIX IV OR V) LAB PACKS**
"I CERTIFY UNDER PENALTY OF LAW THAT I PERSONALLY HAVE EXAMINED AND AM FAMILIAR WITH THE WASTE AND THAT THE LAB PACK DOES NOT CONTAIN ANY WASTES IDENTIFIED AT 268.42 (c)(2) . I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING A FALSE CERTIFICATION, INCLUDING THE POSSIBILITY OF A FINE AND IMPRISONMENT." (268.7(a)(8))

C. **RESTRICTED WASTES FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY (AND THE WASTE HAS BEEN TREATED BY THAT TECHNOLOGY)**
"I CERTIFY UNDER PENALTY OF LAW THAT THE WASTE HAS BEEN TREATED IN ACCORDANCE WITH THE REQUIREMENTS OF 40 CFR 268.42. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING A FALSE CERTIFICATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT." (268.7(b)(5)(ii))

D. **RESTRICTED WASTE SUBJECT TO A VARIANCE**
THIS WASTE IS SUBJECT TO A NATIONAL CAPACITY VARIANCE, A TREATABILITY VARIANCE, OR A CASE-BY-CASE EXTENSION.

E. **WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS**
THIS WASTE IS A NEWLY IDENTIFIED WASTE THAT IS NOT CURRENTLY SUBJECT TO ANY 40 CFR PART 268 RESTRICTIONS.

I CERTIFY UNDER PENALTY OF LAW THAT I PERSONALLY HAVE EXAMINED AND AM FAMILIAR WITH THE WASTE THROUGH THE ANALYSIS AND TESTING OR THROUGH KNOWLEDGE OF THE WASTE TO SUPPORT THIS CERTIFICATION AS REQUIRED BY THE TREATMENT STANDARDS SPECIFIED IN 40 CFR 268 SUBPART D AND ALL APPLICABLE PROHIBITIONS SET FORTH IN 40 CFR 268.32 OR RCRA 3004 (d). I BELIEVE THAT THE INFORMATION I SUBMITTED IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING A FALSE CERTIFICATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT. (268.7(a)(2)(ii))

SIGNATURE Gary F. Tobin TITLE HSE Tech DATE 10/21/99

NSSI/RECOVERY SERVICES, INC.

5711 ETHERIDGE ST. HOUSTON, TX 77087
TXD982560294 TEL 713-641-0391 FAX 713-641-6153

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3. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subdivision, or check NONE if the waste code has no subdivision. Also check which treatment standards apply.

ITEM	US EPA HAZARDOUS WASTE CODE(S)	SUBDIVISION ENTER THE SUBDIVISION DESCRIPTION IF NOT APPLICABLE SIMPLY CHECK NONE / DESCRIPTION NONE	CONCENTRATION IN MG/KG UNLESS NOTED AS MG/L TCLP OR TREATMENT TECHNOLOGY	MGMT MTHD
1	D001	IGNITABLE HIGH TOC >10%	RORGS, CMBST, POLYM	A
2	D002	CORROSIVE pH >12.5	DEACT and meet 268.48 standard	A
3	F003	(Methanol) NONE	NA	A

MANAGEMENT METHODS (MGMT MTHD)

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SIGNATURE Gary F. Tobin TITLE HSE Tech DATE 10/21/99

F039/UNDERLYING HAZARDOUS CONSTITUENT FORM (UTS)[7]

Generator Name: Nycomed Amersham Manifest Doc. No.: 0 4 9 0 7

NSSI Profile No.: State Manifest No.: 01804907

If D001-D043 requires treatment to 268.48 standards, then each underlying hazardous constituent present in the waste at the point of generation, and at a level above the UTS constituent specific treatment standard, must be listed. Write the letter (A, B, or C which corresponds to the letter on the Land Disposal Notification Form beside each constituent present, to properly describe how the constituent(s) must be managed under 40 CFR 268.7. If contaminated soil requires treatment to the 268.49 standards, then each UHC in the waste at the point of generation, and at a level above 10 x the UTS must be listed.

CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW (mg/l)	NWW (mg/Kg)	CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW (mg/l)	NWW (mg/Kg)
A2213		0.042[2]	1.4[2]	n-Butanol (n-butyl alcohol)		5.6	2.6
Acenaphthylene		0.059	3.4	Butyl benzyl phthalate		0.017	28
Acenaphthene		0.059	3.4	Butylate		0.042[2]	1.4[2]
Acetone		0.28	160	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)		0.066	2.5
Acetonitrile	A	5.6	1.8[2]	Carbon disulfide		3.8	4.8[1,2]
Acetophenone		0.010	9.7	Carbaryl		0.006[2]	0.14[2]
2-Acetylaminofluorene		0.059	140	Carbendazim		0.056[2]	1.4[2]
Acrolein		0.29	NA	Carbofuran		0.006[2]	0.14[2]
Acrylamide		19[2]	23[2]	Carbofuran phenol		0.056[2]	1.4[2]
Acrylonitrile		0.24	84	Carbon tetrachloride		0.057	6.0
Aldicarb Sulfone		0.056[2]	0.28[2]	Carbosulfan		0.028[2]	1.4[2]
Aldrin		0.021	0.066	Chlordane (alpha & gamma)		0.0033	0.26
4-Aminobiphenyl		0.13	NA	p-Chloroaniline		0.46	16
Aniline		0.81	14	Chlorobenzene		0.057	6.0
Anthracene		0.059	3.4	Chlorobenzilate		0.10	NA
Aramite		0.36	NA	2-chloro-1,3-butadiene		0.057	0.28[2]
alpha-BHC		0.00014	0.066	Chlorodibromomethane		0.057	15
beta-BHC		0.00014	0.066	Chloroethane		0.27	6.0
delta-BHC		0.023	0.066	bis-(2-Chloroethoxy) methane		0.036	7.2
gamma-BHC (Lindane)		0.0017	0.066	bis (2-Chloroethyl) ether		0.033	6.0
Barban		0.056[2]	1.4[2]	Chloroform		0.046	6.0
Bendiocarb		0.056[2]	1.4[2]	bis-(2-Chloroisopropyl)ether		0.055	7.2
Bendiocarb phenol		0.056[2]	1.4[2]	p-Chloro-m-cresol		0.018	14
Benomyl		0.056[2]	1.4[2]	2-Chloroethyl Vinyl ether		0.062[2]	NA[2]
Benzene		0.14	10	Chloromethane (methyl chloride)		0.19	30
Benzo (a) anthracene		0.059	3.4	2-Chloronaphthalene		0.055	5.6
Benzal chloride		0.055[2]	6.0[2]	2-Chlorophenol		0.044	5.7
Benzo (b) fluoranthene[4]		0.11	6.8	3-Chloropropylene		0.036	30
Benzo (k) fluoranthene[4]		0.11	6.8	Chrysene		0.059	3.4
Benzo (g,h,i) perylene		0.0055	1.8	o-Cresol		0.11	5.6
Benzo (a) pyrene		0.061	3.4	Cresol (m- and p- isomers)		0.77	5.6
Bromodichloromethane		0.35	15	m-Cumenyl methylcarbamate		0.056[2]	1.4[2]
Bromoform (Tribromomethane)		0.63	15	Cycloate		0.042[2]	1.4[2]
Bromomethane (methyl bromide)		0.11	15	Cyclohexanone		0.36	0.75[1,2]
4-Bromophenyl phenyl ether		0.055	15	1,2-Dibromo-3-Chloropropane		0.11	15

CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW	NWW	CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW	NWW
1,2-Dibromoethane (Ethylene dibromide)		0.028	15	Diphenyl amine[4]		0.92	13[3]
Dibromomethane		0.11	15	Diphenylnitrosoamine[4]		0.92	13[2]
2,4-Dichlorophenoxyacetic acid (2,4-D)		0.72	10	1,2-Diphenyl hydrazine		0.087	NA
o,p-DDD		0.023	0.087	Disulfoton		0.017	6.2
p,p-DDD		0.023	0.087	Dithiocarbamates (total)		0.028[2]	28[2]
o,p-DDE		0.031	0.087	Endosulfan I		0.023	0.066
p,p-DDE		0.031	0.087	Endosulfan II		0.029	0.13
o,p-DDT		0.0039	0.087	Endosulfan sulfate		0.029	0.13
p,p-DDT		0.0039	0.087	Endrin		0.0028	0.13
Dibenzo (a,h) anthracene		0.055	8.2	Endrin aldehyde		0.025	0.13
Dibenzo (a,e) pyrene		0.061	NA	EPTC		0.042[2]	1.4[2]
m-Dichlorobenzene		0.036	6.0	Ethyl acetate		0.34	33
o-Dichlorobenzene		0.088	6.0	Ethyl benzene		0.057	10
p-Dichlorobenzene		0.090	6.0	Ethyl cyanide (Propanenitrile)		0.24	360
Dichlorodifluoromethane		0.23	7.2	Ethyl ether		0.12	160
1,1-Dichloroethane		0.059	6.0	bis-(2-Ethylhexyl) phthalate		0.28	28
1,2-Dichloroethane		0.21	6.0	Ethyl methacrylate		0.14	160
1,1-Dichloroethylene		0.025	6.0	Ethylene oxide		0.12	N/A
trans-1,2-Dichloroethylene		0.054	30	Famphur		0.017	15
2,4-Dichlorophenol		0.044	14	Fluoranthene		0.068	3.4
2,6-Dichlorophenol		0.044	14	Fluorene		0.059	3.4
1,2-Dichloropropane		0.85	18	Formetanate hydrochloride		0.056[2]	1.4[2]
cis-1,3-Dichloropropylene		0.036	18	Formparanate		0.056[2]	1.4[2]
trans-1,3-Dichloropropylene		0.036	18	Heptachlor		0.0012	0.066
Dieldrin		0.017	0.13	Heptachlor epoxide		0.016	0.066
Diethyl phthalate		0.20	28	Hexachlorobenzene		0.055	10
Diethyleneglycol, dicarbamate		0.056[2]	1.4[2]	Hexachlorobutadiene		0.055	5.6
p-Dimethylaminoazobenzene		0.13[2]	NA	Hexachlorocyclopentadiene		0.057	2.4
2,4-Dimethyl phenol		0.036	14	Hexachlorodibenzo-furans		0.000063	0.001
Dimethyl phthalate		0.047	28	Hexachlorodibenzo-p-dioxins		0.000063	0.001
Dimetilan		0.056[2]	1.4[2]	Hexachloroethane		0.055	30
Di-n-butyl phthalate		0.057	28	Hexachloropropylene		0.035	30
1,4-Dinitrobenzene		0.32	2.3	Indeno (1,2,3-c,d) pyrene		0.0055	3.4
4,6-Dinitro-o-cresol		0.28	160	Iodomethane		0.19	65
2,4-Dinitrophenol		0.12	160	3-Iodo-2-propynyl-n-butyl carbamate		0.056[2]	1.4[2]
2,4-Dinitrotoluene		0.32	140	Isobutanol (Isobutyl Alcohol)		5.6	170
2,6-Dinitrotoluene		0.55	28	Isodrin		0.021	0.066
Di-n-octyl phthalate		0.017	28	Isolan		0.056[2]	1.4[2]
Di-n-propynitrosoamine		0.40	14	Isosafrole		0.081	2.6
1,4-Dioxane		12	170	Kepone		0.0011	0.13

CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW	NWW	CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW	NWW
Methylacrylonitrile		0.24	84	PCBs (Total) all isomers or aroclors		0.10	10
Methanol	A	5.6	0.75[1,2]	Pentachlorophenol		0.089	7.4
Methapyrilene		0.081	1.5	Phenacetin		0.081	16
Methiocarb		0.056[2]	1.4[2]	Phenathrene		0.059	5.6
Methomyl		0.028[2]	0.14[2]	Phenol		0.039	6.2
Methoxychlor		0.25	0.18	o-Phenylenediamine		0.056[2]	5.6[2]
3-Methylcholanthrene		0.0055	15	Phorate		0.021	4.6
4,4-Methylene-bis-(2-chloroaniline)		0.50	30	Phthalic acid		0.055[2]	28[2]
Methylene chloride		0.089	30	Phthalic anhydride		0.055	28[2]
Methyl ethyl ketone		0.28	36	Physostigmine		0.056[2]	1.4[2]
Methyl isobutyl ketone		0.14	33	Physostigmine salicylate		0.056[2]	1.4[2]
Methyl methacrylate		0.14	160	Promecarb		0.056[2]	1.4[2]
Methyl methanesulfonate		0.018	NA	Pronamide		0.093	1.5
Methyl parathion		0.014	4.6	Propham		0.056[2]	1.4[2]
Metolcarb		0.056[2]	1.4[2]	Propoxur		0.056[2]	1.4[2]
Mexacarbate		0.056[2]	1.4[2]	Prosulfocarb		0.042[2]	1.4[2]
Molinate		0.042[2]	1.4[2]	Pyrene		0.067	8.2
Naphthalene		0.059	5.6	Pyridine		0.014	16
2-Naphthylamine		0.52	NA	Safrole		0.081	22
o-Nitroaniline		0.27[2]	14[2]	Silvex (2,4,5-TP)		0.72	7.9
p-Nitroaniline		0.028	28	2,4,5-T		0.72	7.9
Nitrobenzene		0.068	14	1,2,4,5-Tetrachlorobenzene		0.055	14
5-Nitro-o-toluidine		0.32	28	Tetrachlorodibenzo-furans		0.000063	0.001
o-Nitrophenol		0.028[2]	13[2]	Tetrachlorodibenzo-p-dioxins		0.000063	0.001
p-Nitrophenol		0.12	29	1,1,1,2 Tetrachloroethane		0.057	6.0
N-Nitrosodiethylamine		0.40	28	1,1,2,2- Tetrachloroethane		0.057	6.0
N-Nitrosodimethylamine		0.40	2.3[2]	Tetrachloroethylene		0.056	6.0
N-Nitroso-di-n-butylamine		0.40	17	2,3,4,6-Tetrachlorophenol		0.030	7.4
N-Nitrosomethylethylamine		0.40	2.3	Thiodicarb		0.019[2]	1.4[2]
N-Nitrosomorpholine		0.40	2.3	Thiophanate-methyl		0.056[2]	1.4[2]
N-Nitrosopiperidine		0.013	35	Tirpate		0.056[2]	0.28[2]
N-Nitrosopyrolidine		0.013	35	Toluene		0.080	10
Oxamyl		0.056[2]	0.28[2]	Toxaphene		0.0095	2.6
Parathion		0.014	4.6	Triallate		0.042[2]	1.4[2]
Pebulate		0.042[2]	1.4[2]	2,4,6-Tribromophenol		0.035	7.4
Pentachlorobenzene		0.055	10	1,2,4-Trichlorobenzene		0.055	19
Pentachloroethane		0.055[2]	6.0[2]	1,1,1-Trichloroethane		0.054	6.0
Pentachlorodibenzo-furans		0.000035	0.001	1,1,2-Trichloroethane		0.054	6.0
Pentachlorodibenzo-p-dioxins		0.000063	0.001	Trichloroethylene		0.054	6.0
Pentachloronitrobenzene		0.055	4.8	Trichloromonofluoromethane		0.020	30

	HOW MUST THIS CONSTITUENT BE MANAGED?	WW	NWW	CONSTITUENT	HOW MUST THIS CONSTITUENT BE MANAGED?	WW	NWW
2,4,5-Trichlorophenol		0.18	7.4	Thallium		1.4	0.078[1,2]
2,4,6-Trichlorophenol		0.035	7.4	Thallium		1.4	0.20[5]
1,2,3-Trichloropropane		0.85	30	Vanadium		4.3[3]	NA[3]
1,1,2-Trichloro-1,2,2-trifluoroethane		0.057	30	Zinc		2.61	NA[3]
Triethylamine		0.081[2]	1.5[2]				
Tris(2,3-dibromopropyl) phosphate		0.11	0.10[2]				
Vermolate		0.042[2]	1.4[2]				
Vinyl chloride		0.27	6.0				
Xylenes (sum of o-,m-, & p-isomers)		0.32	30				
Cyanides (Total)		1.2	590				
Cyanides (Amenable)		0.86	30[2]				
Antimony		1.9	2.1[1]				
Antimony		1.9	1.15[5]				
Arsenic		1.4	5.0[1]				
Barium		1.2	7.6[1]				
Barium		1.2	21[5]				
Beryllium		0.82	0.014[1,2]				
Beryllium		0.82	1.22[5]				
Cadmium		0.69	0.19[1]				
Cadmium		0.69	0.11[5]				
Chromium (Total)		2.77	0.86[1]				
Chromium (Total)		2.77	0.60[5]				
Fluoride		35	NA				
Lead		0.69	0.37[1]				
Lead		0.69	0.75[5]				
Mercury (From retorting)		NA	0.20[1]				
Mercury (Not from retorting)		0.15	0.025[1]				
Nickel		3.98	5.0[1]				
Nickel		3.98	11[5]				
Selenium		0.82	0.16[1]				
Selenium		0.82	5.7[6]				
Silver		0.43	0.30[1]				
Silver		0.43	0.14[5]				
Sulfide		14	NA[3]				

[1]These concentrations are expressed in mg/l and are measured through an analysis of TCLP extract; all others measured through a total waste analysis.
[2]These constituents are only applicable as Underlying Hazardous Constituents. They are not constituents requiring treatment in F039 wastes.
[3]Not an underlying hazardous constituent requiring treatment in D001-D043 wastes.
[4]These compounds are regulated by the sum of their concentration instead of as individual constituents.
[5]These concentrations are effective in unauthorized states or states with no LDR program on August 24, 1998. These concentrations are effective in all other states upon adoption by the state.
[6]Effective August 24, 1998 in unauthorized states with no LDR program, Selenium at 5.7 M2/L is not considered an underlying hazardous constituent in D001-D043 waste as it is above the characteristic level. This becomes effective in authorized states once that state adopts.
[7]If a contaminated soil, and the alternative soil treatment standards are being utilized, the treatment standards for underlying hazardous constituents must be a 90% reduction of the constituent(s) or be less than 10 x the standards listed. Note that if the constituent concentration is less than 10 x UTS at the time of generation, that constituent is not considered an underlying hazardous constituent.

Signature: Gary F. Tobin Title: HSE Tech Date: 10/21/99

ISOTOPES REPORT

For Manifest # 102199H4907

Isotope	Total Activity (MBq)
C-14	1.2506E+00
Gd-153	1.8500E-02
I-125	5.4163E+02
U-nat	4.9284E-02

APPROVED BY OMB: NO. 3150-0165
EXPIRES: 5/31/2001

Estimated burden per response to comply with this information collection request: 26 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 542
(5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

MANIFEST INDEX AND REGIONAL COMPACT TABULATION

List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.

1. WASTE COLLECTOR/PROCESSOR

NAME
Philotechnics, Ltd. @ Nycomed Amersham

IDENTIFICATION NUMBER
102199H4907

SHIPPER USE ONLY

SHIPPING DATE
10/21/99

2. MANIFEST NUMBER
102199H4907

3. PAGE 1 OF 1 PAGE(S)

4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL			
							A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)
NAIPA	Nycomed Amersham 610-225-4283	466 Devon Park Drive Wayne, PA 19087	0.0000	102199H4907 (10/21/1999)	C	PA	4.0000E-03	0.0000E+00	5.4294E+02	2.2438
TOTALS OF ALL PAGES (FORMS 542 AND 542A)							4.0000E-03	0.0000E+00	5.4294E+02	2.2438

NRC FORM 542 (5-1998)

OFFICIAL RECORD COPY ML 10

12754

APPROVED BY OMB: NO. 3150-0164
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 1.17 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 540
(5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

SHIPPING PAPER

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)
423-806-7991

ORGANIZATION
Philotechnics, Ltd.

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?
[X] YES
[ ] NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST ==========> 14

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?
[X] YES
[ ] NO
If "Yes," provide Manifest Number ==========>

EPA MANIFEST NUMBER
01804907

5. SHIPPER -- NAME AND FACILITY
Philotechnics, Ltd. @ Nycomed Amersham
466 Devon Park Drive
Wayne PA 19087

USER PERMIT NUMBER

SHIPMENT NUMBER
102199H4907

CONTACT
Gary Tobin

SHIPPER I.D. NUMBER
102199H4907

[ ] COLLECTOR
[ ] PROCESSOR
[X] GENERATOR TYPE (Specify) I

TELEPHONE NUMBER (Include Area Code)
610-225-4283

6. CARRIER -- Name and Address
Kindrick Trucking Co., Inc.
2818 Roane State Highway
Harriman TN 37748

EPA I.D. NUMBER
TND987766078

SHIPPING DATE
10/21/99

CONTACT
Dispatch

TELEPHONE NUMBER (Include Area Code)
423-882-0457

SIGNATURE -- Authorized carrier acknowledging waste receipt
Kevin Stockton

DATE
10-21-99

7. NRC FORM 540 AND 540A PAGE 1 OF 2 PAGE(S)
NRC FORM 541 AND 541A 4 PAGE(S)
NRC FORM 542 AND 542A 1 PAGE(S)
ADDITIONAL INFORMATION None PAGE(S)

8. MANIFEST NUMBER (Use this number on all continuation pages)
102199H4907

9. CONSIGNEE - Name and Facility Address
NSSI Recovery Services, Inc.
5709 Etheridge
Houston TX 77087

CONTACT
Robert D. Gallagher

TELEPHONE NUMBER (Include Area Code)
713-641-0391

SIGNATURE - Authorized consignee acknowledging waste receipt

DATE

10. CERTIFICATION

This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the applicablerequirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE
Mark E Dreyer

TITLE
SR BROKER

DATE
10-21-99

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Acetonitrile/Water	I-125			1.4642E+02	LSA-II	130. LBS; 7.5 FT3	1
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Acetonitrile/Ethanol	I-125			1.1141E-01	LSA-II	130. LBS; 7.5 FT3	11
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001, D002) (Flammable Liquid, Corrosive, n.o.s.)	NA	NA	Liquid/Labpack - KOH/Ethanol	C-14			1.1100E-01	LSA-II	50. LBS; 1.23 FT3	13
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001, D002) (Flammable Liquid, Corrosive, n.o.s.)	NA	NA	Liquid/Labpack - KOH/Ethanol	I-125			1.8500E+00	LSA-II	50. LBS; 1.23 FT3	14
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001, D002) (Flammable Liquid, Corrosive, n.o.s.)	NA	NA	Liquid/Labpack - KOH/Ethanol	Gd-153			1.8500E-02	LSA-II	50. LBS; 1.23 FT3	15
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001, F003) (Flammable Liquid, n.o.s)	NA	NA	Liquid/Labpack - U-Nat/Formalin	U-nat			4.9284E-02	LSA-I	25. LBS; 0.55 FT3	16
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001, F003) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack-Acetonitrile/Formalin	I-125			7.4411E+01	LSA-II	130. LBS; 7.5 FT3	12
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Acetonitrile/Water	I-125			9.8579E+01	LSA-II	130. LBS; 7.5 FT3	2

FOR CONSIGNEE USE ONLY

APPROVED BY OMB: NO. 3150-0164
EXPIRES: 05/31/2001

NRC FORM 540A
(3-95)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)

8. MANIFEST NUMBER (Use this number on all continuation pages)
102199H4907

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Acetonitrile/Water	I-125			6.4857E+01	LSA-II	130. LBS; 7.5 FT3	3
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Acetonitrile/Water	I-125			1.0493E+02	LSA-II	130. LBS; 7.5 FT3	4
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Acetonitrile/Water	I-125			4.5843E+01	LSA-II	130. LBS; 7.5 FT3	5
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Acetonitrile/Water	I-125			4.6254E+00	LSA-II	130. LBS; 7.5 FT3	6
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001, F003) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Methanol/Water	C-14			4.3660E-01	LSA-II	130. LBS; 7.5 FT3	7
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001, F003) (Flammable Liquid, n.o.s.)	NA	NA	Liquid/Labpack - Methanol/Water	C-14			7.0300E-01	LSA-II	130. LBS; 7.5 FT3	8

NRC FORM 540 (5-1998)

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 5.43 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 541
(5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

1. MANIFEST TOTALS

NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME (m3)	NET WASTE WEIGHT (kg)	SPECIAL NUCLEAR MATERIAL (grams) U-233	U-235	Pu	TOTAL
14	2.2440	669.0486	NP	NP	NP	NP

ACTIVITY (MBq) ALL NUCLIDES	TRITIUM	C-14	Tc-99	I-129	SOURCE (kg)
5.4295E+02	NP	1.2506E+00	NP	NP	4.0000E-03

2. MANIFEST NUMBER
102199H4907

3. PAGE 1 OF 4 PAGE(S)

4. SHIPPER NAME
Philotechnics, Ltd. @ Nycomed A

102199H4907
SHIPPER ID NUMBER

DISPOSAL CONTAINER DESCRIPTION / WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER

5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	PHYSICAL DESCRIPTION 11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16 WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
1/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Acetonitrile/Water/NONE	0.00	I-125 1.4642E+02	AU
												Total 1.4642E+02 MBq	
11/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Acetonitrile/Ethanol/NONE	0.00	I-125 1.1141E-01	AU
												Total 1.1141E-01 MBq	
12/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack-Acetonitrile/Formalin/NONE	0.00	I-125 7.4411E+01	AU
												Total 7.4411E+01 MBq	

NOTE 1: Container Description Codes. For containers/ waste requiring disposal in approved structural overpacks the numerical code must be followed by "-OP."

1. Wooden Box or Crate
2. Metal Box
3. Plastic Drum or Pail
4. Metal Drum or Pail
5. Metal Tank or Liner
6. Concrete Tank or Liner
7. Polyethlene Tank or Liner
8. Fiberglass Tank or Liner
9. Demineralizer
10. Gas Cylinder
11. Bulk, Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
19. Other. Describe in Item 6, or additional page.

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

20. Charcoal
21. Incinerator Asn
22. Soil
23. Gas
24. Oil
25. Aqueous Liquid
26. Filter Media
27 Mechanical Filter
28. EPA or State Hazardous
29. Demolition Rubble
30. Cation Ion-exchange Media
31. Anion Ion-exchange Media
32. Mixed Bed Ion-exchange Media
33. Contaminated Equipment
34. Organic Liquid (except oil)
35. Glassware or Labware
36. Sealed Source/Device
37. Paint or Plating
38. Evaporator Bottoms/Sludges/Concentrates
39. Compactible Trash
40. Noncompactible Trash
41. Animal Carcass
42. Biological Material (except animal carcass)
43. Activated Material
59. Other. Describe in item 11, or additional page

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

Sorption

60. Speedi Dri
61. Celetom
62. Floor Dry/ Superfine
63. Hi Dri
64. Safe T Sorb
65. Safe N Dri
66. Florco
67. Florco X
68. Solid A Sorb
69. Chemsil 30
70. Chemsil 50
71. Chemsil 3030
72. Dicaperl HP200
73. Dicaperl HP500
74. Petroset
75. Petroset II
76. Aquaset
77. Aquaset II

Solidification

89. Other. Describe in item 13, or additional page.
90. Cement
91 Concrete (encapsulation)
92 Bitumen
93 Vinyl Chloride
94. Vinyl Ester Styrene
99. Other. Describe in item 13, or additional page
100. None Required.

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 5.43 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 541A
(5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 102199H4907

3. PAGE 2 OF 4 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
13/NAIPA	4-OP	0.0348	22.6796	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.0348	89-OTHER. 100	Labpack - KOH/Ethanol/NONE	0.00	C-14 1.1100E-01	AU
												Total 1.1100E-01 MBq	
14/NAIPA	4-OP	0.0348	22.6796	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.0348	89-OTHER. 100	Labpack - KOH/Ethanol/NONE	0.00	I-125 1.8500E+00	AU
												Total 1.8500E+00 MBq	
15/NAIPA	4-OP	0.0348	22.6796	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.0348	89-OTHER. 100	Labpack - KOH/Ethanol/NONE	0.00	Gd-153 1.8500E-02	AU
												Total 1.8500E-02 MBq	
16/NAIPA	4-OP	0.0156	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.0156	89-OTHER. 100	Labpack - U-Nat/Formalin/NONE	0.00	U-nat 4.9284E-02 [4.0000E-03 kgs]	AU
												Total 4.9284E-02 MBq	
2/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Acetonitrile/Water/NONE	0.00	I-125 9.8579E+01	AU

NRC FORM 541A
(5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 102199H4907

3. PAGE 3 OF 4 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						
							PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
												Total 9.8579E+01 MBq	
3/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Acetonitrile/Water/NONE	0.00	I-125 6.4857E+01	AU
												Total 6.4857E+01 MBq	
4/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Acetonitrile/Water/NONE	0.00	I-125 1.0493E+02	AU
												Total 1.0493E+02 MBq	
5/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Acetonitrile/Water/NONE	0.00	I-125 4.5843E+01	AU
												Total 4.5843E+01 MBq	
6/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Acetonitrile/Water/NONE	0.00	I-125 4.6254E+00	AU
												Total 4.6254E+00 MBq	

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 5.43 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 541A
(5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER
102199H4907

3. PAGE 4 OF 4 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
7/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Methanol/Water/NONE	0.00	C-14 4.3660E-01	AU
												Total 4.3660E-01 MBq	
8/NAIPA	4-OP	0.2124	58.9670	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.2124	89-OTHER. 100	Labpack - Methanol/Water/NONE	0.00	C-14 7.0300E-01	AU
												Total 7.0300E-01 MBq	

NRC FORM 541A (5-1998)

NSSI/RECOVERY SERVICES, INC.
5711 ETHERIDGE ST. HOUSTON, TX 77087
TXD982560294 TEL 713-641-0391 FAX 713-641-6153

LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM

GENERATOR: Nycomed Amersham MANIFEST DOCUMENT NO.: 04910

STATE MANIFEST DOCUMENT NO.: 01804910

1. This waste is a [X] non-wastewater [ ] wastewater (40 CFR 268.2)
2. This waste is subject to any California List restrictions which are checked below:
[ ] HOC's [ ] PCB's [ ] Acid [ ] Metals [ ] Cyanides
3. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subdivision, or check NONE if the waste code has no subdivision. Also check which treatment standards apply.

ITEM	US EPA HAZARDOUS WASTE CODE(S)	SUBDIVISION ENTER THE SUBDIVISION DESCRIPTION IF NOT APPLICABLE SIMPLY CHECK NONE NONE DESCRIPTION	CONCENTRATION IN MG/KG UNLESS NOTED AS MG/L TCLP OR TREATMENT TECHNOLOGY	MGMT MTHD
1	D001	IGNITABLE HIGH TOC >10%	RORGS, CMBST, POLYM	A
2	D002	CORROSIVE pH >12.5	DEACT and meet 268.48 standard	A
3				

MANAGEMENT METHODS (MGMT MTHD)

A. **RESTRICTED WASTE REQUIRES TREATMENT**
THIS WASTE MUST BE TREATED TO THE APPLICABLE TREATMENT STANDARDS SET FORTH IN 40 CFR PART 268 SUBPART D, 268.32, OR RCRA SECTION 3004(D).

B. **NON RCRA (APPENDIX IV OR V) LAB PACKS**
"I CERTIFY UNDER PENALTY OF LAW THAT I PERSONALLY HAVE EXAMINED AND AM FAMILIAR WITH THE WASTE AND THAT THE LAB PACK DOES NOT CONTAIN ANY WASTES IDENTIFIED AT 268.42 (B)(2) . I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING A FALSE CERTIFICATION, INCLUDING THE POSSIBILITY OF A FINE AND IMPRISONMENT." (268.7(a)(8))

C. **RESTRICTED WASTES FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY (AND THE WASTE HAS BEEN TREATED BY THAT TECHNOLOGY)**
"I CERTIFY UNDER PENALTY OF LAW THAT THE WASTE HAS BEEN TREATED IN ACCORDANCE WITH THE REQUIREMENTS OF 40 CFR 268.42. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING A FALSE CERTIFICATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT." (268.7(b)(5)(ii))

D. **RESTRICTED WASTE SUBJECT TO A VARIANCE**
THIS WASTE IS SUBJECT TO A NATIONAL CAPACITY VARIANCE, A TREATABILITY VARIANCE, OR A CASE-BY-CASE EXTENSION.

E. **WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS**
THIS WASTE IS A NEWLY IDENTIFIED WASTE THAT IS NOT CURRENTLY SUBJECT TO ANY 40 CFR PART 268 RESTRICTIONS.

I CERTIFY UNDER PENALTY OF LAW THAT I PERSONALLY HAVE EXAMINED AND AM FAMILIAR WITH THE WASTE THROUGH THE ANALYSIS AND TESTING OR THROUGH KNOWLEDGE OF THE WASTE TO SUPPORT THIS CERTIFICATION AS REQUIRED BY THE TREATMENT STANDARDS SPECIFIED IN 40 CFR 268 SUBPART D AND ALL APPLICABLE PROHIBITIONS SET FORTH IN 40 CFR 268.32 OR RCRA 3004 (d). I BELIEVE THAT THE INFORMATION I SUBMITTED IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING A FALSE CERTIFICATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT. (268.7(a)(2)(ii))

SIGNATURE Gary F. Tolin TITLE Materials Manager DATE 11/12/99

127544

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
P.O. Box 13087
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. P A R 0 0 0 8 0 1 5 7 5 5	Manifest Document No. 0 4 6 1 0	2. Page 1 of 2	Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
EYCHNER AMERSHAM - NYCOMED AMERSHAM IMAGING
466 DEVON PARK DRIVE
WAYNE, PA 19087-3630

4. Generator's Phone (610) 225-4283

5. Transporter 1 Company Name: ETNEDUCK TRUCKING COMPANY — 6. US EPA ID Number: T N D 9 8 7 7 6 5 0 7 8

7. Transporter 2 Company Name — 8. US EPA ID Number

9. Designated Facility Name and Site Address
NSSI RECOVERY SERVICES, INC.
5709 ETHEL RIDGE
HOUSTON, TX 77087 — 10. US EPA ID Number: T X D 9 8 2 5 6 0 2 9 6

11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
X	a. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001, D002) (FLAMMABLE LIQUIDS, CORROSIVE, N.O.S.)	0 0 1	D M	X X 1 2 5	P
X	b. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D001) (FLAMMABLE LIQUIDS, N.O.S.)	0 0 8	D M	X 2 0 0 0	P
X	c. WASTE, RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S., 7, UN2912 (EPA - D002) (CORROSIVE LIQUIDS, N.O.S.)	0 0 1	D M	X X X 5 0	P
	d.				

GENERATOR

15. Special Handling Instructions and Additional Information
11.b. LIQUID SCINTILLATION VIALS WITH PSEUDOCUMENT
EMERGENCY RESPONSE GUIDE CODES FOR WASTE: 11.a., b., & c. ERG NO. 162
24 HOUR EMERGENCY TELEPHONE NO. 423-806-7991

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
GARY TOPLE	Gary L. Topl	1 1	1 2	9 9

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
DARRELL JERRELL	Darrell Jerrell	1 1	1 2	9 9

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

APPROVED BY OMB: NO. 3150-0164
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 1.17 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 540 (5-1998)

U.S. NUCLEAR REGULATORY COMMISSION
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST
SHIPPING PAPER

1. EMERGENCY TELEPHONE NUMBER (Include Area Code): 423-809-7991
ORGANIZATION: Philotechnics, Ltd.

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? [X] YES [ ] NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST: 10

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? [X] YES [ ] NO
If "Yes," provide Manifest Number: 01804910

5. SHIPPER – NAME AND FACILITY
Nycomed Amersham
466 Devon Park Drive
Wayne PA 19087

USER PERMIT NUMBER
SHIPMENT NUMBER 111299H04910

CONTACT: Gary Tobin

6. CARRIER – Name and Address
Kindrick Trucking Co., Inc.
2618 Rosna State Highway
Harriman TN 37748

CONTACT: Dispatch

SIGNATURE – Authorized carrier acknowledging waste receipt

SHIPPER I.D. NUMBER: 111299H04910
[ ] COLLECTOR
[ ] PROCESSOR
[X] GENERATOR TYPE (Specify): I

TELEPHONE NUMBER (Include Area Code): 610-225-4283

EPA I.D. NUMBER: TN0987788078

SHIPPING DATE: 11/12/99

TELEPHONE NUMBER (Include Area Code): 423-882-0457

DATE: 11-12-99

7. NRC FORM 540 AND 540A — PAGE 1 OF — 2 PAGE(S)
NRC FORM 541 AND 541A — 3 PAGE(S)
NRC FORM 542 AND 542A — 1 PAGE(S)
ADDITIONAL INFORMATION — None PAGE(S)

8. MANIFEST NUMBER (Use this number on all continuation pages): 111299H04910

9. CONSIGNEE – Name and Facility Address
NSSI Recovery Services, Inc.
5709 Ellsedge
Houston TX 77087

CONTACT: Robert D. Gallagher

TELEPHONE NUMBER (Include Area Code): 713-641-0391

SIGNATURE – Authorized consignee acknowledging waste receipt

DATE

10. CERTIFICATION

This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE | TITLE | DATE

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001 Flammable Liquids, N.O.S. Liquid Scintillation Vials)	NA	NA	Liquid/Liquid Scintillation Vials	C-14			7.4000E+01	LSA-II	200. LBS; 7.5 FT3	20276
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001 Flammable Liquids, N.O.S.)	NA	NA	Liquid/Liquid Scintillation Vials	C-14			7.4000E+01	LSA-II	200. LBS; 7.5 FT3	24102
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001, D002 Flammable Liquids, Corrosive, N.O.S.)	NA	NA	Liquid/KOH/Ethanol	Gd-153	I-125		1.8518E+02	LSA-II	125. LBS; 7.5 FT3	21408-2
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D002 Corrosive Liquids, N.O.S.)	NA	NA	Liquid/Uranyl acetate/Acetic Acid	U-nat			3.7000E-01	LSA-I	60. LBS; 1.35 FT3	21431
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001 Flammable Liquids, N.O.S.)	NA	NA	Liquid/Liquid Scintillation Vials	C-14			7.4000E+01	LSA-II	200. LBS; 7.5 FT3	21721
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001 Flammable Liquids, N.O.S.)	NA	NA	Liquid/Liquid Scintillation Vials	C-14			7.4000E+01	LSA-II	200. LBS; 7.5 FT3	21737
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001 Flammable Liquids, N.O.S.)	NA	NA	Liquid/Liquid Scintillation Vials	C-14			7.4000E+01	LSA-II	200. LBS; 7.5 FT3	21941
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001 Flammable Liquids, N.O.S.)	NA	NA	Liquid/Liquid Scintillation Vials	C-14			7.4000E+01	LSA-II	200. LBS; 7.5 FT3	21949

FOR CONSIGNEE USE ONLY

APPROVED BY OMB: NO. 3150-0164
EXPIRES: 08/31/2001

NRC FORM 540A
(3-95)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)

8. MANIFEST NUMBER (Use this number on all continuation pages)
111299H04910

PAGE 2 OF 2 PAGES

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	9. IDENTIFICATION NUMBER OF PACKAGE
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001 Flammable Liquids, N.O.S.)	RA	NA	Liquid/Liquid Scintillation Vials	C-14			7.4000E+01	LSA-II	250. LBS; 7.5 FT3	24180
Waste, Radioactive material, low specific activity, n.o.s., 7, UN2912 (EPA - D001 Flammable Liquids, N.O.S.)	RA	NA	Liquid/Liquid Scintillation Vials	C-14			7.4000E+01	LSA-II	250. LBS; 7.5 FT3	24191

NRC FORM 540 (5-1999)

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 0.43 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 541 (5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

1. MANIFEST TOTALS							
NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME (m3)	NET WASTE WEIGHT (kg)	SPECIAL NUCLEAR MATERIAL (grams) U-233	U-235	Pu	TOTAL	
10	1.9501	991.0994	NP	NP	NP	NP	
ACTIVITY (MBq) ALL NUCLIDES	TRITIUM	C-14	Tc-99	I-129	SOURCE (kg)		
7.7752E+02	NP	5.9200E+02	NP	NP	3.0000E-02		

2. MANIFEST NUMBER 111299H04910

3. PAGE 1 OF 3 PAGE(S)

4. SHIPPER NAME
Nycomed Amersham

111299H04910
SHIPPER ID NUMBER

DISPOSAL CONTAINER DESCRIPTION / WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER

5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION A/S-Class A Stable A/U-Class A Unstable B-Class B C-Class C
20275/NA/PA	-OP	0.2124	113.3981	<5.0000E+00	<3.3400E-06	<3.3400E-05	34,28	0.2124	69-OTHER, 100	Liquid Scintillation Vials/Ioxia	0.00	C-14 7.4000E+01	A/U
												Total 7.4000E+01 MBq	
21605-28/NA/PA	4-OP	0.2124	56.6691	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.0848	69-OTHER, 100	Lalpack - KOH/Ethanol/MOBE	0.00	Gd-153 8.4652E-01 I-125 1.8500E+02	A/U
												Total 1.8515E+02 MBq	
21531/NA/PA	4-OP	0.0385	27.2156	<5.0000E+00	<3.3400E-06	<3.3400E-05	28	0.0385	69-OTHER, 100	Uranyl acetate/Acetic Acid/None	0.00	U-nat 3.7000E-01 [3.0000E-02 kgs]	A/U
												Total 3.7000E-01 MBq	

NOTE 1: Container Description Codes. For containers of waste requiring disposal in approved structural overpacks the numerical code must be followed by "-OP."

1. Wooden Box or Crate
2. Metal Box
3. Plastic Drum or Pail
4. Metal Drum or Pail
5. Metal Tank or Liner
6. Concrete Tank or Liner
7. Polyethlene Tank or Liner
8. Fiberglass Tank or Liner
9. Demineralizer
10. Gas Cylinder
11. Bulk, Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
99. Other. Describe in Item 6, or additional page.

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

20. Charcoal
21. Incinerator Ash
22. Soil
23. Gas
24. Oil
25. Aqueous Liquid
26. Filter Media
27 Mechanical Filter
28. EPA or State Hazardous
29. Demolition Rubble
30. Cation Ion-exchange Media
31. Anion Ion-exchange Media
32. Mixed Bed Ion-exchange Media
33. Contaminated Equipment
34. Organic Liquid (except oil)
35. Glassware or Labware
36. Sealed Source/Device
37. Paint or Plating
38. Evaporator Bottoms/Sludges/Concentrates
39. Compactible Trash
40. Noncompactible Trash
41. Animal Carcass
42. Biological Material (except animal carcass)
43. Activated Metals
98. Other. Describe in Item 11, or additional page

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in Item 13. Code 180=NONE REQUIRED.

Sorption
60. Speedi Dri
61. Calsorb
62. Floor Dry Superfine
63. Hi Dri
64. Safe T Sorb
65. Safe N Dri
66. Fibrex
67. Fibrex X
68. Solid A Sorb
69. Chemsil 30
70. Chemsil 50
71. Chemsil 3000
72. Dicapent HP200
73. Dicapent HP500
74. Petroset
75. Petroset II
76. Aquaset
77. Aquaset II

Solidification
88. Other. Describe in Item 13, or additional page.
90. Cement
91. Concrete (encapsulation)
92. Bitumen
93. Vinyl Chloride
94. Vinyl Ester Styrene
99. Other. Describe in Item 13, or additional page
100. None Required.

NRC FORM 541A (5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 111299H04910

3. PAGE 2 OF 3 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
21721/NAIPA	-OP	0.2124	113.3981	<5.0000E+00	<3.3400E-05	<3.3400E-05	34,28	0.2124	89-OTHER 100	Liquid Scintillation Vials/None	0.00	C-14 7.4000E+01	AU
												Total 7.4000E+01 MBq	
21737/NAIPA	-OP	0.2124	113.3981	<5.0000E+00	<3.3400E-05	<3.3400E-05	34,28	0.2124	89-OTHER 100	Liquid Scintillation Vials/None	0.00	C-14 7.4000E+01	AU
												Total 7.4000E+01 MBq	
21841/NAIPA	-OP	0.2124	113.3981	<5.0000E+00	<3.3400E-05	<3.3400E-05	34,28	0.2124	89-OTHER 100	Liquid Scintillation Vials/None	0.00	C-14 7.4000E+01	AU
												Total 7.4000E+01 MBq	
21845/NAIPA	-OP	0.2124	113.3981	<5.0000E+00	<3.3400E-05	<3.3400E-05	34,28	0.2124	89-OTHER 100	Liquid Scintillation Vials/None	0.00	C-14 7.4000E+01	AU
												Total 7.4000E+01 MBq	
24150/NAIPA	-OP	0.2124	113.3981	<5.0000E+00	<3.3400E-05	<3.3400E-05	34,28	0.2124	89-OTHER 100	Liquid Scintillation Vials/None	0.00	C-14 7.4000E+01	AU

NRC FORM 541A (5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 111299H04910

3. PAGE 3 OF 3 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	15. INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION A-Class A Stable A1-Class A Unstable B-Class B C-Class C
												Total 7.4000E+01 MBq	
24151/NAIPA	-OP	0.2124	113.3981	<5.0000E+00	<3.3400E-06	<3.3400E-05	34,2B	0.2124	89-OTHER, 100	Liquid Scintillation Vials/None	0.00	C-14 7.4000E+01	A1
												Total 7.4000E+01 MBq	
24152/NAIPA	-OP	0.2124	113.3981	<5.0000E+00	<3.3400E-06	<3.3400E-05	34,2B	0.2124	89-OTHER, 100	Liquid Scintillation Vials/None	0.00	C-14 7.4000E+01	A1
												Total 7.4000E+01 MBq	

NRC FORM 541A (5-1998)

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 5/31/2001

Estimated burden per response to comply with this information collection request: 28 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0166), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 542
(5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

MANIFEST INDEX AND REGIONAL COMPACT TABULATION

List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.

1. WASTE COLLECTOR/PROCESSOR

NAME: Nycomed Amersham

IDENTIFICATION NUMBER: 111299H04910

SHIPPING DATE: 11/12/99

SHIPPER USE ONLY

2. MANIFEST NUMBER: 111299H04910

3. PAGE 1 OF 1 PAGE(S)

4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)
NAIPA	Nycomed Amersham 610-225-4283	466 Devon Park Drive Wayne, PA 19087	1.9439	111299H04910 (11/12/1999)	C	PA	3.0000E-02	0.0000E+00	7.7752E+02	1.7724
		TOTALS OF ALL PAGES (FORMS 542 AND 542A)					3.0000E-02	0.0000E+00	7.7752E+02	1.7724

NRC FORM 542 (5-1998)

APPROVED BY OMB: NO. 3150-0164
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 1.17 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 540 (5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

SHIPPING PAPER

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)
423-806-7991

ORGANIZATION
Philotechnics, Ltd.

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?
[X] YES
[ ] NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST ======> 1

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?
If "Yes," provide Manifest Number ======>
[ ] YES
[X] NO

EPA MANIFEST NUMBER

5. SHIPPER -- NAME AND FACILITY
Philotechnics, Ltd. @ Nycomed Amersham
466 Devon Park Drive
Wayne PA 19087

USER PERMIT NUMBER

SHIPMENT NUMBER
102199B

CONTACT
Gary Tobin

6. CARRIER -- Name and Address
Kindrick Trucking Co., Inc.
2818 Roane State Highway
Harriman TN 37748

CONTACT
Dispatch

SIGNATURE -- *Authorized carrier acknowledging waste receipt*
Ron Shelton

SHIPPER I.D. NUMBER
102199B

[ ] COLLECTOR
[ ] PROCESSOR
[X] GENERATOR TYPE *(Specify)* I

TELEPHONE NUMBER (Include Area Code)
610-225-4283

EPA I.D. NUMBER
TND987766078

SHIPPING DATE
10/21/99

TELEPHONE NUMBER (Include Area Code)
423-882-0457

DATE
10-21-99

7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S)
NRC FORM 541 AND 541A 1 PAGE(S)
NRC FORM 542 AND 542A 1 PAGE(S)
ADDITIONAL INFORMATION None PAGE(S)

8. MANIFEST NUMBER (Use this number on all continuation pages)
102199B

9. CONSIGNEE - Name and Facility Address
NSSI Recovery Services, Inc.
5709 Etheridge
Houston TX 77087

CONTACT
Robert D. Gallagher

TELEPHONE NUMBER (Include Area Code)
713-641-0391

SIGNATURE - Authorized consignee acknowledging waste receipt

DATE

10. CERTIFICATION

This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the applicablerequirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE
Mark E Mowrey

TITLE
SR. BROKER

DATE
10-21-99

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Mixture of alkylbenzene and phenylxylyl ethane with scintillators and detergents)	NA	NA	**Liquid/Labpack - Scintillation Fluid**	**C-14**			**5.8090E+00**	**LSA-II**	**200. LBS; 12.3 FT3**	**9**

FOR CONSIGNEE USE ONLY

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 5.43 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 541
(5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

1. MANIFEST TOTALS

NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME (m3)	NET WASTE WEIGHT (kg)	SPECIAL NUCLEAR MATERIAL (grams) U-233	U-235	Pu	TOTAL
1	0.3483	90.7185	NP	NP	NP	NP

ACTIVITY (MBq) ALL NUCLIDES	TRITIUM	C-14	Tc-99	I-129	SOURCE (kg)
5.8090E+00	NP	5.8090E+00	NP	NP	NA

2. MANIFEST NUMBER
102199B

3. PAGE 1 OF 1 PAGE(S)

4. SHIPPER NAME
Philotechnics, Ltd. @ Nycomed A

102199B
SHIPPER ID NUMBER

DISPOSAL CONTAINER DESCRIPTION / **WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER**

5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (µSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	PHYSICAL DESCRIPTION 11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
9/NAIPA	4-OP	0.3483	90.7185	<5.0000E+00	<3.3400E-06	<3.3400E-05	25	0.3483	89-OTHER. 100	Labpack - Scintillation Fluid/NONE	0.00	C-14 5.8090E+00	AU
												Total 5.8090E+00 MBq	

NOTE 1: Container Description Codes. For containers/ waste requiring disposal in approved structural overpacks the numerical code must be followed by "-OP."

1. Wooden Box or Crate
2. Metal Box
3. Plastic Drum or Pail
4. Metal Drum or Pail
5. Metal Tank or Liner
6. Concrete Tank or Liner
7. Polyethlene Tank or Liner
8. Fiberglass Tank or Liner
9. Demineralizer
10. Gas Cylinder
11. Bulk, Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
19. Other. Describe in Item 6, or additional page.

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

20. Charcoal
21. Incinerator Ash
22. Soil
23. Gas
24. Oil
25. Aqueous Liquid
26. Filter Media
27 Mechanical Filter
28. EPA or State Hazardous
29. Demolition Rubble
30. Cation Ion-exchange Media
31. Anion Ion-exchange Media
32. Mixed Bed Ion-exchange Media
33. Contaminated Equipment
34. Organic Liquid (except oil)
35. Glassware or Labware
36. Sealed Source/Device
37. Paint or Plating
38. Evaporator Bottoms/Sludges/Concentrates
39. Compactible Trash
40. Noncompactible Trash
41. Animal Carcass
42. Biological Material (except animal carcass)
43. Activated Material
59. Other. Describe in item 11, or additional page

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

Sorption

60. Speedi Dri
61. Celetom
62. Floor Dry/ Superfine
63. Hi Dri
64. Safe T Sorb
65. Safe N Dri
66. Florco
67. Florco X
68. Solid A Sorb
69. Chemsil 30
70. Chemsil 50
71. Chemsil 3030
72. Dicaperl HP200
73. Dicaperl HP500
74. Petroset
75. Petroset II
76. Aquaset
77. Aquaset II
89. Other. Describe in item 13, or additional page.

Solidification

90. Cement
91. Concrete (encapsulation)
92. Bitumen
93. Vinyl Chloride
94. Vinyl Ester Styrene
99. Other. Describe in item 13, or additional page
100. None Required.

APPROVED BY OMB: NO. 3150-0165
EXPIRES: 5/31/2001

Estimated burden per response to comply with this information collection request: 26 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 542
(5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

MANIFEST INDEX AND REGIONAL COMPACT TABULATION

List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.

1. WASTE COLLECTOR/PROCESSOR

NAME
Philotechnics, Ltd. @ Nycomed Amersham

IDENTIFICATION NUMBER
102199B

SHIPPING DATE
10/21/99

SHIPPER USE ONLY

2. MANIFEST NUMBER
102199B

3. PAGE 1 OF 1 PAGE(S)

4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL			
							A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)
NAIPA	Nycomed Amersham 610-225-4283	466 Devon Park Drive Wayne, PA 19087	0.0000	102199B (10/21/1999)	C	PA	0.0000E+00	0.0000E+00	5.8090E+00	0.3483
		TOTALS OF ALL PAGES (FORMS 542 AND 542A)					0.0000E+00	0.0000E+00	5.8090E+00	0.3483

APPROVED BY OMB: NO. 3150-0164
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 1.17 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 540 (5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

SHIPPING PAPER

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)
423-806-7991

ORGANIZATION
Philotechnics, Ltd.

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?
[X] YES
[ ] NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST ======> 47

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? [ ] YES [X] NO
If "Yes," provide Manifest Number ======>
EPA MANIFEST NUMBER

5. SHIPPER -- NAME AND FACILITY
Philotechnics, Ltd. @ Nycomed Amersham
466 Devon Park Drive
Wayne PA 19087

USER PERMIT NUMBER
SHIPMENT NUMBER 102199

CONTACT
Gary Tobin

SHIPPER I.D. NUMBER 102199
[ ] COLLECTOR
[ ] PROCESSOR
[X] GENERATOR TYPE (Specify) I

TELEPHONE NUMBER (Include Area Code)
610-225-4283

6. CARRIER -- Name and Address
Kindrick Trucking Co., Inc.
2818 Roane State Highway
Harriman TN 37748

CONTACT
Dispatch

EPA I.D. NUMBER
TND987766078

SHIPPING DATE
10/21/99

TELEPHONE NUMBER (Include Area Code)
423-882-0457

SIGNATURE -- Authorized carrier acknowledging waste receipt
Ronald Stockton

DATE
10-21-99

7. NRC FORM 540 AND 540A PAGE 1 OF 4 PAGE(S)
NRC FORM 541 AND 541A 11 PAGE(S)
NRC FORM 542 AND 542A 1 PAGE(S)
ADDITIONAL INFORMATION None PAGE(S)

8. MANIFEST NUMBER (Use this number on all continuation pages)
102199

9. CONSIGNEE - Name and Facility Address
ATG - Richland
2025 Battelle Blvd.
Richland WA 99352

CONTACT
Bob Denne

TELEPHONE NUMBER (Include Area Code)
509-375-5160

SIGNATURE - Authorized consignee acknowledging waste receipt

DATE

10. CERTIFICATION

This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the applicablerequirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE
Mark E Brown

TITLE
SR. BROKER

DATE
10-21-99

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			2.4235E-01	LSA-II	25. LBS; 0.68 FT3	00112
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			6.9449E-01	LSA-II	25. LBS; 0.68 FT3	00130
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			2.5937E+01	LSA-II	25. LBS; 0.68 FT3	00131
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			3.8517E-01	LSA-II	25. LBS; 0.68 FT3	00173
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.5601E+02	LSA-II	25. LBS; 0.68 FT3	00175
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			5.9940E-01	LSA-II	25. LBS; 0.68 FT3	00176
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			6.2715E+01	LSA-II	25. LBS; 0.68 FT3	00177
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			2.3421E-01	LSA-II	25. LBS; 0.68 FT3	00178

FOR CONSIGNEE USE ONLY

NRC FORM 540A
(3-95)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)

8. MANIFEST NUMBER (Use this number on all continuation pages) 102199

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.0102E+02	LSA-II	25. LBS; 0.68 FT3	00179
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			4.5939E-01	LSA-II	25. LBS; 0.68 FT3	00181
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			2.7617E+01	LSA-II	25. LBS; 0.68 FT3	00182
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			4.8470E-01	LSA-II	25. LBS; 0.68 FT3	00114
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.8870E-01	LSA-II	25. LBS; 0.68 FT3	00183
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			5.2466E-01	LSA-II	25. LBS; 0.68 FT3	00184
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			2.0316E+02	LSA-II	25. LBS; 0.68 FT3	00185
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.8500E-01	LSA-II	25. LBS; 0.68 FT3	00186
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			9.2500E-02	LSA-II	25. LBS; 0.68 FT3	00716
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			9.2500E-02	LSA-II	25. LBS; 0.68 FT3	00717
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			9.2500E-02	LSA-II	25. LBS; 0.68 FT3	00735
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			9.2500E-02	LSA-II	25. LBS; 0.68 FT3	00736
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			9.2500E-02	LSA-II	25. LBS; 0.68 FT3	00738
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			9.2500E-02	LSA-II	25. LBS; 0.68 FT3	00739
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			4.3660E-02	LSA-II	25. LBS; 0.68 FT3	00115
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			3.7000E-02	LSA-II	25. LBS; 0.68 FT3	00740
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			9.2500E-02	LSA-II	25. LBS; 0.68 FT3	00741
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			3.7000E-02	LSA-II	25. LBS; 0.68 FT3	00742
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.8500E-01	LSA-II	100. LBS; 4.8 FT3	21679

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U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)

8. MANIFEST NUMBER (Use this number on all continuation pages)
102199

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			6.4380E+00	LSA-II	100. LBS; 4.8 FT3	23239
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			3.7000E-02	LSA-II	100. LBS; 4.8 FT3	23263
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	C-14			3.7000E-02	LSA-II	100. LBS; 4.8 FT3	23595
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	Gd-153 I-125			1.2425E+01	LSA-II	100. LBS; 4.8 FT3	23612
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	Gd-153 I-125			3.0525E+00	LSA-II	100. LBS; 4.8 FT3	23613
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.2284E-01	LSA-II	25. LBS; 0.68 FT3	24196
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.3801E-01	LSA-II	25. LBS; 0.68 FT3	00116
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			2.1867E-01	LSA-II	25. LBS; 0.68 FT3	24200
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			5.4797E+01	LSA-II	25. LBS; 0.68 FT3	24201
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.5466E+01	LSA-II	25. LBS; 0.68 FT3	24202
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			4.1440E-01	LSA-II	25. LBS; 0.68 FT3	24204
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.2059E+02	LSA-II	25. LBS; 0.68 FT3	24207
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.0249E-01	LSA-II	25. LBS; 0.68 FT3	24208
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			4.5621E+01	LSA-II	25. LBS; 0.68 FT3	24212
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.0360E-01	LSA-II	25. LBS; 0.68 FT3	24271
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.4844E+02	LSA-II	25. LBS; 0.68 FT3	00120
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			7.7145E+00	LSA-II	25. LBS; 0.68 FT3	00121
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			3.7000E-02	LSA-II	25. LBS; 0.68 FT3	00122
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			4.7064E+00	LSA-II	25. LBS; 0.68 FT3	00124

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(3-95)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)

8. MANIFEST NUMBER (Use this number on all continuation pages)
102199

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Radioactive material, low specific activity, n.o.s., 7, UN2912	NA	NA	Solid /PAPER, PLASTIC, GLASS, METAL	I-125			1.8500E-01	LSA-II	25. LBS; 0.68 FT3	00125

NRC FORM 541
(5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

1. MANIFEST TOTALS

NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME (m3)	NET WASTE WEIGHT (kg)	SPECIAL NUCLEAR MATERIAL (grams) U-233	U-235	Pu	TOTAL
47	1.6067	737.0870	NP	NP	NP	NP

ACTIVITY (MBq) ALL NUCLIDES	TRITIUM	C-14	Tc-99	I-129	SOURCE (kg)
1.0021E+03	NP	7.2335E+00	NP	NP	NA

2. MANIFEST NUMBER 102199

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4. SHIPPER NAME Philotechnics, Ltd. @ Nycomed A

102199 SHIPPER ID NUMBER

DISPOSAL CONTAINER DESCRIPTION / WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER

5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	PHYSICAL DESCRIPTION 11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
00112/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 2.4235E-01	AU
												Total 2.4235E-01 MBq	
00114/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 4.8470E-01	AU
												Total 4.8470E-01 MBq	
00115/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 4.3660E-02	AU
												Total 4.3660E-02 MBq	

NOTE 1: Container Description Codes. For containers/ waste requiring disposal in approved structural overpacks the numerical code must be followed by "-OP."

1. Wooden Box or Crate
2. Metal Box
3. Plastic Drum or Pail
4. Metal Drum or Pail
5. Metal Tank or Liner
6. Concrete Tank or Liner
7. Polyethlene Tank or Liner
8. Fiberglass Tank or Liner
9. Demineralizer
10. Gas Cylinder
11. Bulk, Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
19. Other. Describe in Item 6, or additional page.

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

20. Charcoal
21. Incinerator Ash
22. Soil
23. Gas
24. Oil
25. Aqueous Liquid
26. Filter Media
27 Mechanical Filter
28. EPA or State Hazardous
29. Demolition Rubble
30. Cation Ion-exchange Media
31. Anion Ion-exchange Media
32. Mixed Bed Ion-exchange Media
33. Contaminated Equipment
34. Organic Liquid (except oil)
35. Glassware or Labware
36. Sealed Source/Device
37. Paint or Plating
38. Evaporator Bottoms/Sludges/Concentrates
39. Compactible Trash
40. Noncompactible Trash
41. Animal Carcass
42. Biological Material (except animal carcass)
43. Activated Material
59. Other. Describe in item 11, or additional page

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

Sorption

60. Speedi Dri
61. Celetom
62. Floor Dry/ Superfine
63. Hi Dri
64. Safe T Sorb
65. Safe N Dri
66. Florco
67. Florco X
68. Solid A Sorb
69. Chemsil 30
70. Chemsil 50
71. Chemsil 3030
72. Dicaperl HP200
73. Dicaperl HP500
74. Petroset
75. Petroset II
76. Aquaset
77. Aquaset II

Solidification

89. Other. Describe in item 13, or additional page.
90. Cement
91. Concrete (encapsulation)
92. Bitumen
93. Vinyl Chloride
94. Vinyl Ester Styrene
99. Other. Describe in item 13, or additional page
100. None Required.

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 5.43 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 541A
(5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 102199

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DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	10. SURFACE CONTAMINATION MBq/100 cm2 BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
00116/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.3801E-01	AU
												Total 1.3801E-01 MBq	
00120/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.4844E+02	AU
												Total 1.4844E+02 MBq	
00121/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 7.7145E+00	AU
												Total 7.7145E+00 MBq	
00122/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 3.7000E-02	AU
												Total 3.7000E-02 MBq	
00124/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 4.7064E+00	AU

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EXPIRES: 05/31/2001

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(5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 102199

3. PAGE 3 OF 11 PAGE(S)

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION	16.
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
												Total 4.7064E+00 MBq	
00125/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.8500E-01	AU
												Total 1.8500E-01 MBq	
00130/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 6.9449E-01	AU
												Total 6.9449E-01 MBq	
00131/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 2.5937E+01	AU
												Total 2.5937E+01 MBq	
00173/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 3.8517E-01	AU
												Total 3.8517E-01 MBq	

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

NRC FORM 541A
(5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 102199

3. PAGE 4 OF 11 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT
00175/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.5601E+02
												Total 1.5601E+02 MBq
00176/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 5.9940E-01
												Total 5.9940E-01 MBq
00177/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 6.2715E+01
												Total 6.2715E+01 MBq
00178/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 2.3421E-01
												Total 2.3421E-01 MBq
00179/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.0102E+02

16. WASTE CLASSIFICATION
AS-Class A Stable
AU-Class A Unstable
B-Class B
C-Class C

00175/NAIPA	AU
00176/NAIPA	AU
00177/NAIPA	AU
00178/NAIPA	AU
00179/NAIPA	AU

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 5.43 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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(5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT
												Total 1.0102E+02 MBq
00181/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 4.5939E-01
												Total 4.5939E-01 MBq
00182/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 2.7617E+01
												Total 2.7617E+01 MBq
00183/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.8870E-01
												Total 1.8870E-01 MBq
00184/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 5.2466E-01
												Total 5.2466E-01 MBq

16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
AU
AU
AU
AU

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √	(μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
00185/NAIPA	3	0.0193	11.3398	<5.0000E+00		<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 2.0316E+02	AU
													Total 2.0316E+02 MBq	
00186/NAIPA	3	0.0193	11.3398	<5.0000E+00		<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.8500E-01	AU
													Total 1.8500E-01 MBq	
00716/NAIPA	3	0.0193	11.3398	<5.0000E+00		<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 9.2500E-02	AU
													Total 9.2500E-02 MBq	
00717/NAIPA	3	0.0193	11.3398	<5.0000E+00		<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 9.2500E-02	AU
													Total 9.2500E-02 MBq	
00735/NAIPA	3	0.0193	11.3398	<5.0000E+00		<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 9.2500E-02	AU

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UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
												Total 9.2500E-02 MBq	
00736/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 9.2500E-02	AU
												Total 9.2500E-02 MBq	
00738/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 9.2500E-02	AU
												Total 9.2500E-02 MBq	
00739/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 9.2500E-02	AU
												Total 9.2500E-02 MBq	
00740/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 3.7000E-02	AU
												Total 3.7000E-02 MBq	

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EXPIRES: 05/31/2001

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(5-1998)

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
00741/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 9.2500E-02	AU
												Total 9.2500E-02 MBq	
00742/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 3.7000E-02	AU
												Total 3.7000E-02 MBq	
21679/NAIPA	3	0.1359	45.3592	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1359	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.8500E-01	AU
												Total 1.8500E-01 MBq	
23239/NAIPA	3	0.1359	45.3592	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1359	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 6.4380E+00	AU
												Total 6.4380E+00 MBq	
23263/NAIPA	3	0.1359	45.3592	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1359	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 3.7000E-02	AU

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 05/31/2001

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(5-1998)

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
												Total 3.7000E-02 MBq	
23595/NAIPA	3	0.1359	45.3592	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1359	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	C-14 3.7000E-02	AU
												Total 3.7000E-02 MBq	
23612/NAIPA	3	0.1359	45.3592	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1359	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	Gd-153 9.2500E-01 I-125 1.1500E+01	AU
												Total 1.2425E+01 MBq	
23613/NAIPA	3	0.1359	45.3592	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1359	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	Gd-153 9.2500E-01 I-125 2.1275E+00	AU
												Total 3.0525E+00 MBq	
24196/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.2284E-01	AU
												Total 1.2284E-01 MBq	

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
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5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
24200/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 2.1867E-01	AU
												Total 2.1867E-01 MBq	
24201/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 5.4797E+01	AU
												Total 5.4797E+01 MBq	
24202/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.5466E+01	AU
												Total 1.5466E+01 MBq	
24204/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 4.1440E-01	AU
												Total 4.1440E-01 MBq	
24207/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.2059E+02	AU

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP-TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIP-TOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI-CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
												Total 1.2059E+02 MBq	
24208/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.0249E-01	AU
												Total 1.0249E-01 MBq	
24212/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 4.5621E+01	AU
												Total 4.5621E+01 MBq	
24271/NAIPA	3	0.0193	11.3398	<5.0000E+00	<3.3400E-06	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0193	100 100	PAPER, PLASTIC, GLASS, METAL/NONE	0.00	I-125 1.0360E-01	AU
												Total 1.0360E-01 MBq	

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UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

MANIFEST INDEX AND REGIONAL COMPACT TABULATION

List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.

1. WASTE COLLECTOR/PROCESSOR

NAME: Philotechnics, Ltd. @ Nycomed Amersham

IDENTIFICATION NUMBER: 102199

SHIPPER USE ONLY

SHIPPING DATE: 10/21/99

2. MANIFEST NUMBER: 102199

3. PAGE 1 OF 1 PAGE(S)

4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)
NAIPA	Nycomed Amersham 610-225-4283	466 Devon Park Drive Wayne, PA 19087	0.0000	102199 (10/21/1999)	C	PA	0.0000E+00	0.0000E+00	1.0021E+03	1.6050

TOTALS OF ALL PAGES (FORMS 542 AND 542A)

0.0000E+00	0.0000E+00	1.0021E+03	1.6050

APPROVED BY OMB: NO. 3150-0164
EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 1.17 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 540 (5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

SHIPPING PAPER

1. EMERGENCY TELEPHONE NUMBER (Include Area Code): 423-806-7961

ORGANIZATION: Philotechnics, Ltd.

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? [X] YES [ ] NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST ⟹ 23

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? [ ] YES [X] NO
If "Yes," provide Manifest Number ⟹

EPA MANIFEST NUMBER

5. SHIPPER – NAME AND FACILITY
Philotechnics, Ltd. @ Nycomed Amersham
466 Devon Park Drive
Wayne PA 19087

USER PERMIT NUMBER

SHIPMENT NUMBER 111299

CONTACT: Gary Tobie

6. CARRIER – Name and Address
Kindrick Trucking Co., Inc.
2818 Roane State Highway
Harriman TN 37748

CONTACT: Dispatch

SIGNATURE – Authorized carrier acknowledging waste receipt

SHIPPER I.D. NUMBER 111299

[ ] COLLECTOR
[ ] PROCESSOR
[X] GENERATOR TYPE (Specify) I

TELEPHONE NUMBER (Include Area Code) 610-225-4283

EPA I.D. NUMBER TND987766078

SHIPPING DATE 11/12/99

TELEPHONE NUMBER (Include Area Code) 423-882-3447

DATE 11-12-99

7. NRC FORM 540 AND 540A PAGE 1 OF 2 PAGE(S)
NRC FORM 541 AND 541A 6 PAGE(S)
NRC FORM 542 AND 542A 1 PAGE(S)
ADDITIONAL INFORMATION None PAGE(S)

8. MANIFEST NUMBER (Use this number on all continuation pages) 111299

9. CONSIGNEE – Name and Facility Address
ATG – Richland
2025 Battelle Blvd.
Richland WA 99352

CONTACT: Bob Deane

TELEPHONE NUMBER (Include Area Code) 509-375-5160

SIGNATURE – Authorized consignee acknowledging waste receipt

DATE

10. CERTIFICATION

This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE: David E. Meyer

TITLE: SR BROKER

DATE: 11-12-99

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (including proper shipping name, hazard class, UN ID number, and any additional information)	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	C-14			6.2136E+00	LSA-II	136. LBS; 7.5 FT3	09889
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Urine/Feces for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Liquid/Urine/Feces	I-125			8.9782E+00	LSA-II	220. LBS; 7.5 FT3	21815
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Urine/Feces for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Liquid/Urine/Feces	I-125			8.4488E+00	LSA-II	220. LBS; 7.5 FT3	21847
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Urine/Feces for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Liquid/Urine/Feces	I-125			2.2792E+00	LSA-II	220. LBS; 7.5 FT3	21799
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Urine/Feces for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Liquid/Urine/Feces	C-14	I-125		3.8658E+01	LSA-II	220. LBS; 7.5 FT3	24148
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Urine/Feces for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Liquid/Urine/Feces	I-125			4.9817E+00	LSA-II	220. LBS; 7.5 FT3	24288
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Urine/Feces for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Liquid/Urine/Feces	I-125			5.1368E+00	LSA-II	220. LBS; 7.5 FT3	24219
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (DAW for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Paper, Plastic, Glass & Steel	I-125			3.9588E-05	LSA-II	100. LBS; 4.7 FT3	00000

FOR CONSIGNEE USE ONLY

NRC FORM 540A
(3-95)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)

5. MANIFEST NUMBER (Use this number on all continuation pages)
111299
PAGE 2 OF 2 PAGES

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (DAW for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Paper, Plastic, Glass & Metal	I-125			7.3081E-03	LSA-II	100. LBS; 4.7 FT3	09999
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (DAW for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Paper, Plastic, Glass & Metal	I-125			3.9580E-05	LSA-II	200. LBS; 7.5 FT3	23203
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (Lead Shielding for Decon)	NA	NA	Solid /Oxide	I-125			3.7003E+01	LSA-II	200. LBS; 2. FT3	23295
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	C-14			9.2130E+00	LSA-II	80. LBS; 7.5 FT3	90199
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (Plastic (PVC) for Supercompaction and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Paper, Plastic (PVC), Metal	Cs-137 I-129			8.2788E+00	LSA-II	20. LBS; 2.7 FT3	23300
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (HEPA Filters for Supercompaction and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /HEPA Filters	I-125			1.4800E+02	LSA-II	300. LBS; 10.6 FT3	23307
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	C-14			9.2130E+00	LSA-II	80. LBS; 7.5 FT3	23308
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (DAW for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Paper, Plastic, Glass & Metal	I-125			3.9580E-05	LSA-II	60. LBS; 4.7 FT3	23288
Radioactive material, excepted package-limited quantity of material, 7, UN2910 (Urine/Feces for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Liquid/Urine/Feces	C-14 I-125			5.4872E+00	LSA-II	200. LBS; 7.5 FT3	24253
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	C-14			9.2130E+00	LSA-II	90. LBS; 7.5 FT3	90101
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	C-14			9.2130E+00	LSA-II	70. LBS; 7.5 FT3	90102
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	C-14			9.2130E+00	LSA-II	90. LBS; 7.5 FT3	00103
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	C-14			9.2130E+00	LSA-II	160. LBS; 7.5 FT3	00104
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	I-125			1.6830E-01	LSA-I	75. LBS; 7.5 FT3	21688
Radioactive material, low specific activity, n.o.s., 7, UN2912 (Animal Carcasses for Vitrification and Burial at Chem-Nuclear, Barnwell, SC)	NA	NA	Solid /Animal Carcass	I-125			4.4385E+00	LSA-II	70. LBS; 7.5 FT3	21691

NRC FORM 540 (5-1998)

NRC FORM 541 (5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

1. MANIFEST TOTALS						
NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME (m3)	NET WASTE WEIGHT (kg)	SPECIAL NUCLEAR MATERIAL (grams) U-238	U-235	Pu	TOTAL
23	4.4405	1449.2277	NP	NP	NP	NP
ACTIVITY (MBq) ALL NUCLIDES	TRITIUM	C-14	Tc-99	I-129	SOURCE (kg)	
3.3331E+02	NP	1.0392E+02	NP	1.6500E-03	NA	

2. MANIFEST NUMBER 111299

3. PAGE 1 OF 6 PAGE(S)

4. SHIPPER NAME
Philotechnics, Ltd. @ Nycomed A
111299
SHIPPER ID NUMBER

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (mSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION A/S-Class A Stable A/U-Class A Unstable B-Class B C-Class C
0009WAIPA	4-OP	0.2124	58.9970	<5.0000E+00	<3.3400E-06	<3.3400E-06	41	0.2124	100 100	Animal Carcass/None	0.00	C-14 9.2130E+00	A/U
												Total 9.2130E+00 MBq	
0010WAIPA	4-OP	0.2124	38.2874	<5.0000E+00	<3.3400E-06	<3.3400E-06	41	0.2124	100 100	Animal Carcass/None	0.00	C-14 9.2130E+00	A/U
												Total 9.2130E+00 MBq	
0011WAIPA	4-OP	0.2124	40.8233	<5.0000E+00	<3.3400E-06	<3.3400E-06	41	0.2124	100 100	Animal Carcass/None	0.00	C-14 9.2130E+00	A/U
												Total 9.2130E+00 MBq	

NOTE 1: Container Description Codes. For containers/ waste requiring disposal in approved structural overpacks the numerical code must be followed by "-OP."

1. Wooden Box or Crate
2. Metal Box
3. Plastic Drum or Pail
4. Metal Drum or Pail
5. Metal Tank or Liner
6. Concrete Tank or Liner
7. Polyethylene Tank or Liner
8. Fiberglass Tank or Liner
9. Demineralizer
10. Gas Cylinder
11. Bulk, Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
19. Other. Describe in Item 5, or additional page.

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

20. Charcoal
21. Incinerator Ash
22. Soil
23. Gas
24. Oil
25. Aqueous Liquid
26. Filter Media
27 Mechanical Filter
28. EPA or State Hazardous
29. Demolition Rubble
30. Cation Ion-exchange Media
31. Anion Ion-exchange Media
32. Mixed Bed Ion-exchange Media
33. Contaminated Equipment
34. Organic Liquid (except oil)
35. Glassware or Labware
36. Sealed Source/Device
37. Paint or Plating
38. Evaporator Bottoms/Sludges/Concentrates
39. Compactible Trash
40. Noncompactible Trash
41. Animal Carcass
42. Biological Material (except animal carcass)
43. Activated Material
59. Other. Describe in Item 11, or additional page

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

Sorption					Solidification				
60. Speedi Dri	64. Safe T Sorb	68. Chemsil 30	74. Petroset	89. Other. Describe in Item 13, or additional page.	90. Cement	94. Vinyl Ester Styrene			
61. Celatom	65. Safe N Dri	70. Chemsil 50	75. Petroset B		91. Concrete (encapsulation)	98. Other. Describe in Item 13, or additional page			
62. Floor Dry/ Superfine	66. Florco	71. Chemsil 3030	76. Aquaset						
63. NI Dri	67. Florco X	72. Dicapel HP200	77. Aquaset II		92. Bitumen	99. None Required			
	69. Solid A Sorb	73. Dicapel HP800			93. Vinyl Chloride				

NRC FORM 541A (5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 111299

3. PAGE 2 OF 6 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (mSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION All-Class A Stable All-Class A Unstable B-Class B C-Class C
00102/NAIPA	4-OP	0.2124	31.7515	<5.0000E+00	<3.3400E-05	<3.3400E-05	41	0.2124	100 100	Animal Carcass/None	0.00	C-14 9.2130E+00	AU
												Total 9.2130E+00 MBq	
00103/NAIPA	4-OP	0.2124	40.8235	<5.0000E+00	<3.3400E-05	<3.3400E-05	41	0.2124	100 100	Animal Carcass/None	0.00	C-14 9.2130E+00	AU
												Total 9.2130E+00 MBq	
00164/NAIPA	4-OP	0.2124	83.5029	<5.0000E+00	<3.3400E-05	<3.3400E-05	41	0.2124	100 100	Animal Carcass/None	0.00	C-14 9.2130E+00	AU
												Total 9.2130E+00 MBq	
00598/NAIPA	19 FIBER BOXES	0.1331	45.3592	<5.0000E+00	<3.3400E-05	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1331	100 100	Paper, Plastic, Glass & Metal/None	0.00	I-125 3.9590E-05	AU
												Total 3.9590E-05 MBq	
00690/NAIPA	19 FIBER BOXES	0.1331	45.3592	<5.0000E+00	<3.3400E-05	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1331	100 100	Paper, Plastic, Glass & Metal/None	0.00	I-125 1.3081E-03	AU

NRC FORM 541A (5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 111299

3. PAGE 3 OF 6 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						16. WASTE CLASSIFICATION A/S-Class A Stable AU-Class A Unstable B-Class B C-Class C
							PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	
												Total 1.3081E-03 MBq	
21580/NAIPA	4-OP	0.2124	34.0194	<5.0000E+00	<3.3400E-05	<3.3400E-05	41	0.2124	100 100	Animal Carcass/None	0.00	I-125 1.6950E-01	AU
												Total 1.6950E-01 MBq	
21681/NAIPA	4-OP	0.2124	31.7615	<5.0000E+00	<3.3400E-05	<3.3400E-05	41	0.2124	100 100	Animal Carcass/None	0.00	I-125 4.4955E+00	AU
												Total 4.4955E+00 MBq	
21796/NAIPA	4-OP	0.2124	90.7185	<5.0000E+00	<3.3400E-05	<3.3400E-05	25	0.2124	100 100	Urine/Feces/None	0.00	I-125 2.2792E+00	AU
												Total 2.2792E+00 MBq	
21818/NAIPA	4-OP	0.2124	90.7185	<5.0000E+00	<3.3400E-05	<3.3400E-05	25	0.2124	100 100	Urine/Feces/None	0.00	I-125 6.9782E+00	AU
												Total 6.9782E+00 MBq	

NRC FORM 541A (5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 111299

3. PAGE 4 OF 6 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						
							PHYSICAL DESCRIPTION						
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (mSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION A/B-Class A Stable AU-Class A Unstable B-Class B C-Class C
21847/NAIPA	4-OP	0.2124	90.7185	<5.0000E+00	<3.3400E-09	<3.3400E-05	25	0.2124	100 100	Urine/Feces/None	0.00	I-125 6.4558E+00	AU
												Total 6.4558E+00 MBq	
23203/NAIPA	4	0.2124	90.7185	<5.0000E+00	<3.3400E-09	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.2124	100 100	Paper, Plastic, Glass & Metal/None	0.00	I-125 3.9590E-05	AU
												Total 3.9590E-05 MBq	
23205/NAIPA	19 FIBER BOXES	0.0566	90.7185	<5.0000E+00	<3.3400E-09	<3.3400E-05	33	0.0566	100 100	oxide/None	0.00	I-125 3.7000E+01	AU
												Total 3.7000E+01 MBq	
23208/NAIPA	4	0.0765	9.0718	1.5000E+01	<3.3400E-09	<3.3400E-05	59-PAPER, PLASTIC, LATEX, GLASS, METAL	0.0765	100 100	Paper, Plastic (PVC), Metal/None	0.00	Cs-137 8.2788E+00 I-129 1.6500E-03	AU
												Total 8.2788E+00 MBq	
23207/NAIPA	19 FIBER BOXES	0.2973	136.0777	<5.0000E+00	<3.3400E-09	<3.3400E-05	26	0.2973	100 100	HEPA Filters/None	0.00	I-125 1.4800E+02	AU

NRC FORM 541A (5-1998)

NRC FORM 541A
(5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER
111299

3. PAGE 5 OF 6 PAGE(S)

CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION		RADIOLOGICAL DESCRIPTION	
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (√) (µSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(5) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	15. INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
												Total 1.4800E+02 MBq	
23208/NAIPA	4-OP	0.2124	38.2874	<5.0000E+00	<3.3400E-05	<3.3400E-05	41	0.2124	100 100	Animal Carcass/None	0.00	C-14 9.2130E+00	AU
												Total 9.2130E+00 MBq	
23215/NAIPA	1B FIBER BOXES	0.1331	22.6798	<5.0000E+00	<3.3400E-05	<3.3400E-05	29-PAPER, PLASTIC, LATEX, GLASS, METAL	0.1331	100 100	Paper, Plastic, Glass & Metal/None	0.00	I-125 3.9590E-05	AU
												Total 3.9590E-05 MBq	
24146/NAIPA	4-OP	0.2124	90.7185	<5.0000E+00	<3.3400E-05	<3.3400E-05	25	0.2124	100 100	Urine/Feces/None	0.00	C-14 3.9220E+01 I-125 3.6530E-01	AU
												Total 3.9586E+01 MBq	
24209/NAIPA	4-OP	0.2124	90.7185	<5.0000E+00	<3.3400E-05	<3.3400E-05	25	0.2124	100 100	Urine/Feces/None	0.00	I-125 4.9817E+00	AU
												Total 4.9817E+00 MBq	

NRC FORM 541A (5-1998)

NRC FORM 541A (5-1998)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER 111299

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						
							PHYSICAL DESCRIPTION			CHEMICAL DESCRIPTION			
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL √ (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AMD ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFICATION A/S-Class A Stable A/U-Class A Unstable B-Class B C-Class C
2421S/NAIPA	4-OP	0.2124	90.7185	<5.0000E+00	<3.3400E-06	<3.3400E-05	25	0.2124	100 100	Urine/Feces/None	0.00	I-125 5.1359E+00	AU
												Total 5.1359E+00 MBq	
2425M/NAIPA	4-OP	0.2124	90.7185	<5.0000E+00	<3.3400E-06	<3.3400E-05	25	0.2124	99-OTHER 100	Urine/Feces/None	0.00	C-14 2.0720E-01 I-125 5.2503E+00	AU
												Total 5.457SE+00 MBq	

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APPROVED BY OMB: NO. 3150-0166
EXPIRES: 5/31/2001

Estimated burden per response to comply with this information collection request: 20 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0166), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 542
(5-1998)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

MANIFEST INDEX AND REGIONAL COMPACT TABULATION

List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.

1. WASTE COLLECTOR/PROCESSOR

NAME: Philotechnics, Ltd. @ Nycomed Amersham

IDENTIFICATION NUMBER: 111299

SHIPPING DATE: 11/02/99

SHIPPER USE ONLY

2. MANIFEST NUMBER: 111299

3. PAGE 1 OF 1 PAGE(S)

4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE) AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)
NAPA	Nycomed Amersham 610-325-4385	466 Devon Park Drive Wayne, PA 19087	4.4491	111299 (11/12/1999)	C	PA	0.0000E+00	0.0000E+00	9.3331E+02	4.4491
TOTALS OF ALL PAGES (FORMS 542 AND 542A)							0.0000E+00	0.0000E+00	9.3331E+02	4.4491

NRC FORM 542 (5-1998)

BETWEEN:

License Fee Management Branch, ARM
and
Regional Licensing Sections

(FOR LFMS USE)
INFORMATION FROM LTS

Program Code: 03620
Status Code: O
Fee Category: 3M
Exp. Date: 20001031
Fee Comments: _____
Decom Fin Assur Reqd: Y

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED
   Applicant/Licensee: NYCOMED AMERSHAM
   Received Date: 19991202
   Docket No: 3033938
   Control No.: 127544
   License No.: 37-30243-01
   Action Type: Termination

2. FEE ATTACHED
   Amount: _____
   Check No.: _____

3. COMMENTS

Signed Rebecca J. Brown
Date 12/2/99

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered /__/)

1. Fee Category and Amount: _____

2. Correct Fee Paid. Application may be processed for:
   Amendment _____
   Renewal _____
   License _____

3. OTHER _____
   _____

Signed _____
Date _____

This is to acknowledge the receipt of your letter/application dated

11-30-99, and to inform you that the initial processing which includes an administrative review has been performed.

☒ There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Term 30-30243-01

☐ Please provide to this office within 30 days of your receipt of this card

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A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 127544.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader