TELEDYNE ISOTOPES

# FINAL SITE SURVEY

# FOR

# CIBA-GEIGY CORPORATION

# SUMMIT, NEW JERSEY

# SEPTEMBER 1993

# BUILDING V, FIRST FLOOR

Joel Antkowiak
Robert S. Bell, Jr.

Survey Date: August 30 through September 3, 1993
Report Date: October 15, 1993

Teledyne Isotopes
50 Van Buren Avenue
Westwood, New Jersey 07675

TELEDYNE ISOTOPES

50 VAN BUREN AVENUE

PO BOX 1235

WESTWOOD NJ 07675-1235

(201) 664-7070

October 15, 1993

Mr. George Stone
Radiation Safety Officer
CIBA GEIGY CORP.
556 Morris Avenue
Summit, NJ 07901

Dear Mr. Stone:

On August 30 through September 3, 1993, Robert S. Bell, Jr. & Joel Antkowiak of Teledyne Isotopes performed a final site survey in Buildings J, V & Z at your facility located at the Summit, New Jersey. This document discusses the results of the survey of Building V only.

The survey consisted of radiation monitoring for both direct and removable radioactive contamination. Direct radiation surveys were conducted with Eberline Instruments PAC-4G gas proportional survey meter (serial number 4399; calibrated 7/7/93) designed to reveal the presence of beta radiation. Removable radioactive contamination surveys consisted of smear samples taken by wiping approximately 200 $cm^2$ of surface area with an absorbant material at representative areas of the laboratories. Smears were analyzed by liquid scintillation counting with standard solutions traceable to the National Institute of Standards and Technology.

According to the U.S. Nuclear Regulatory Commission's publication "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source or Special Nuclear Material", acceptable surface contamination levels for beta-gamma emitters are as follows:

| | |
|---|---|
| Removable contamination | 1000 dpm/100$cm^2$ |
| Direct contamination | 5000 dpm/100$cm^2$ average* |
| | 15000 dpm/100$cm^2$ maximum |

*Averaged over not more than 1 square meter.

Following decontamination and survey, no areas were found to exceed these limits. A full report is enclosed.

If you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

TELEDYNE ISOTOPES

Robert S. Bell

RSB:jk
Enc.

Robert S. Bell, Jr. Health Physics Tech.
Radiological Services Department

## PROCEDURES

The goal of the decontamination and final site survey was to show that the designated building was suitable for release for unrestricted use.

An initial characterization survey sufficient to decommission the areas preceded any decontamination. Following decontamination, the affected areas were re-surveyed and if necessary decontaminated again. The room diagrams, showing both overhead and side views follow the results obtained by liquid scintillation counting (LSC). Rooms requiring any decontamination have two sets of LSC data representing the initial and post-decon wipe results. On drawings where drawers and cabinets are indicated, the odd-numbered smear is outside the item and the even-numbered smear is on the inside. A sample was obtained from all sink traps and analyzed by LSC. A Packard "Tri-Carb" Model 1900 liquid scintillation counter was used for the analysis of smears and sink trap samples.

A fixed contamination survey was performed on all horizontal surfaces, the floor, and inside all hoods. The meter used was a logarithmic ratemeter with a gas flow proportional probe. The probe has a thin mylar window and an active surface area of 50 $cm^2$. The floors were surveyed with a floor monitor, which is a 500 $cm^2$ active area probe mounted on a rolling stand which carries the probe at 1/4 inch above the floor. Cleaning of any areas requiring decontamination was performed using a commercial detergent solution containing EDTA. In the event that this solution was not sufficient to clean the affected areas below the applicable limits, the affected area was removed and treated as radioactive waste.

TELEDYNE ISOTOPES

# Summary of Results for Building V

The following areas have detectable removable activity below the applicable limits:

| | |
|---|---|
| Room V9 | Main View |
| Room V32A | Main View, View A Part A & B, View B, View C, View D part A & B, Island A part A & B, Island B part A & B |
| Room V33 | View A, C, D & Hood 1 |
| Room V108 | View C |
| Room V110 | Main View, View C & Hood #1 |
| Room V131 | Main View, Hood #1 |
| Room V133 | View C and Hood #1 |
| Room V135 | View D |
| Room V209 | Island B |

All direct radiation levels which were found were cleaned or removed to background levels.

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: Building V Sinks

| Room #/Sink # | H-3 Activity µCi/liter | C-14 Activity µCi/liter |
|---|---|---|
| V - 107A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 108A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 110A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 131A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 131B | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 133A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 135A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 136A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 209A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 209B | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |
| V - 244A | $<6.0 \times 10^{-3}$ | $<6.0 \times 10^{-3}$ |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: Building V Stacks

| Smear No. | C-14 Activity dpm/sample | C-14 Activity dpm/100 cm² | H-3 Activity dpm/sample | C-14 Activity dpm/100 cm² |
|---|---|---|---|---|
| 1 | <50 | <25 | <50 | <25 |
| 2 | <50 | <25 | <50 | <25 |
| 3 | <50 | <25 | <50 | <25 |
| 4 | <50 | <25 | <50 | <25 |
| 5 | <50 | <25 | <50 | <25 |
| 6 | <50 | <25 | <50 | <25 |
| 7 | <50 | <25 | <50 | <25 |
| 8 | <50 | <25 | <50 | <25 |
| 9 | <50 | <25 | <50 | <25 |
| 10 | <50 | <25 | <50 | <25 |
| 11 | <50 | <25 | <50 | <25 |
| 12 | <50 | <25 | <50 | <25 |
| 13 | <50 | <25 | <50 | <25 |

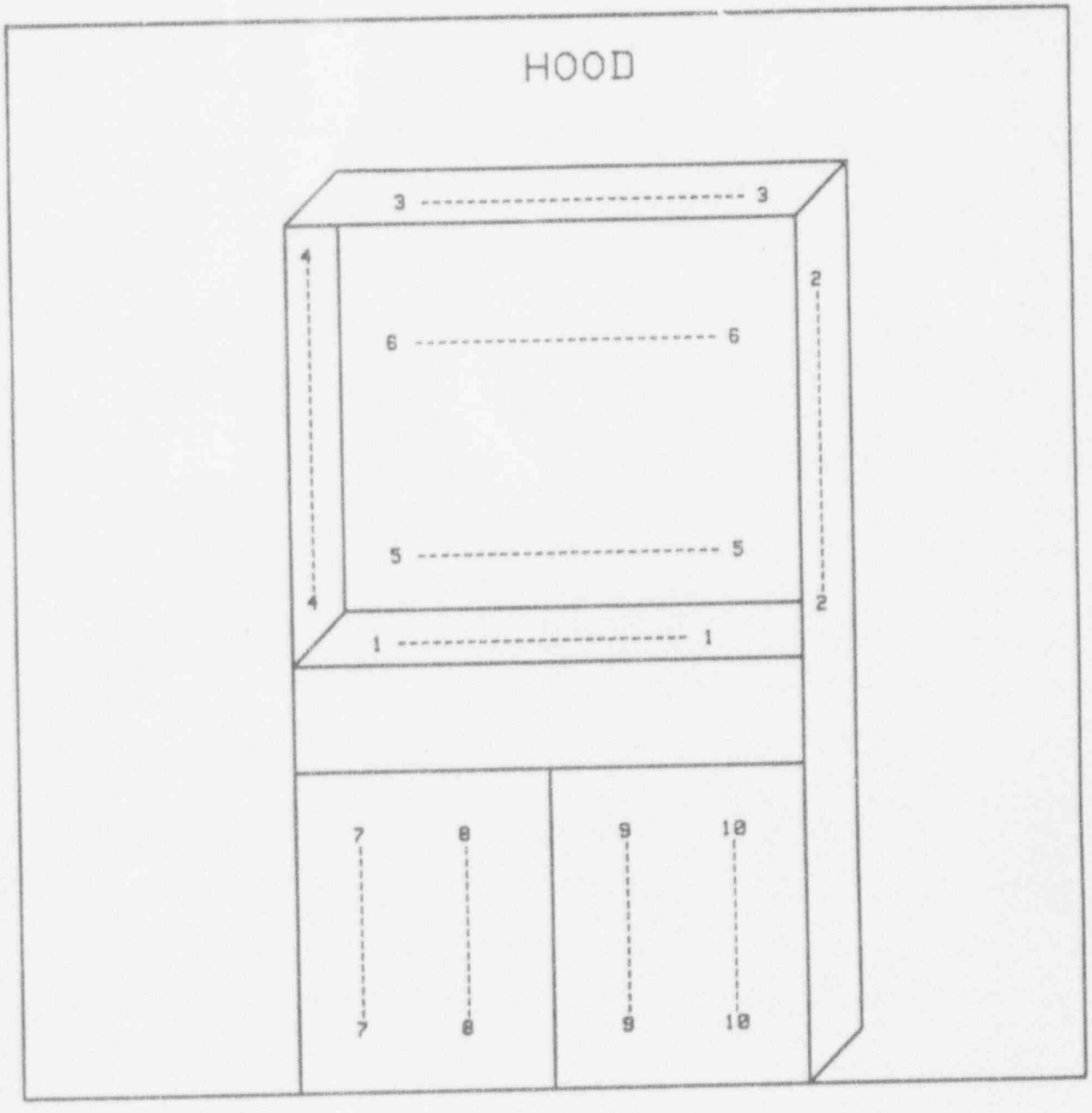
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: _____

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-1 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |

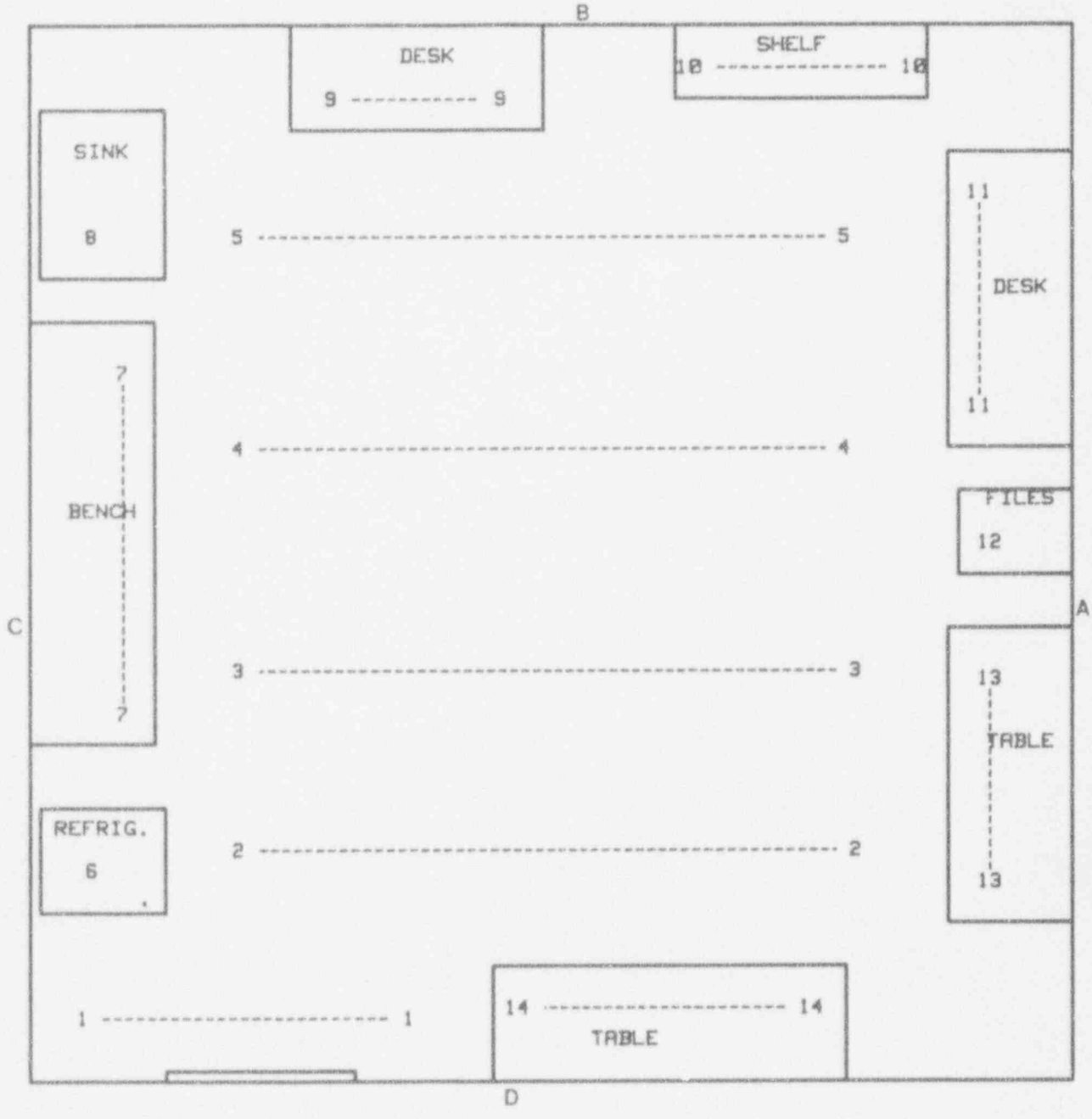
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V1 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-1 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |

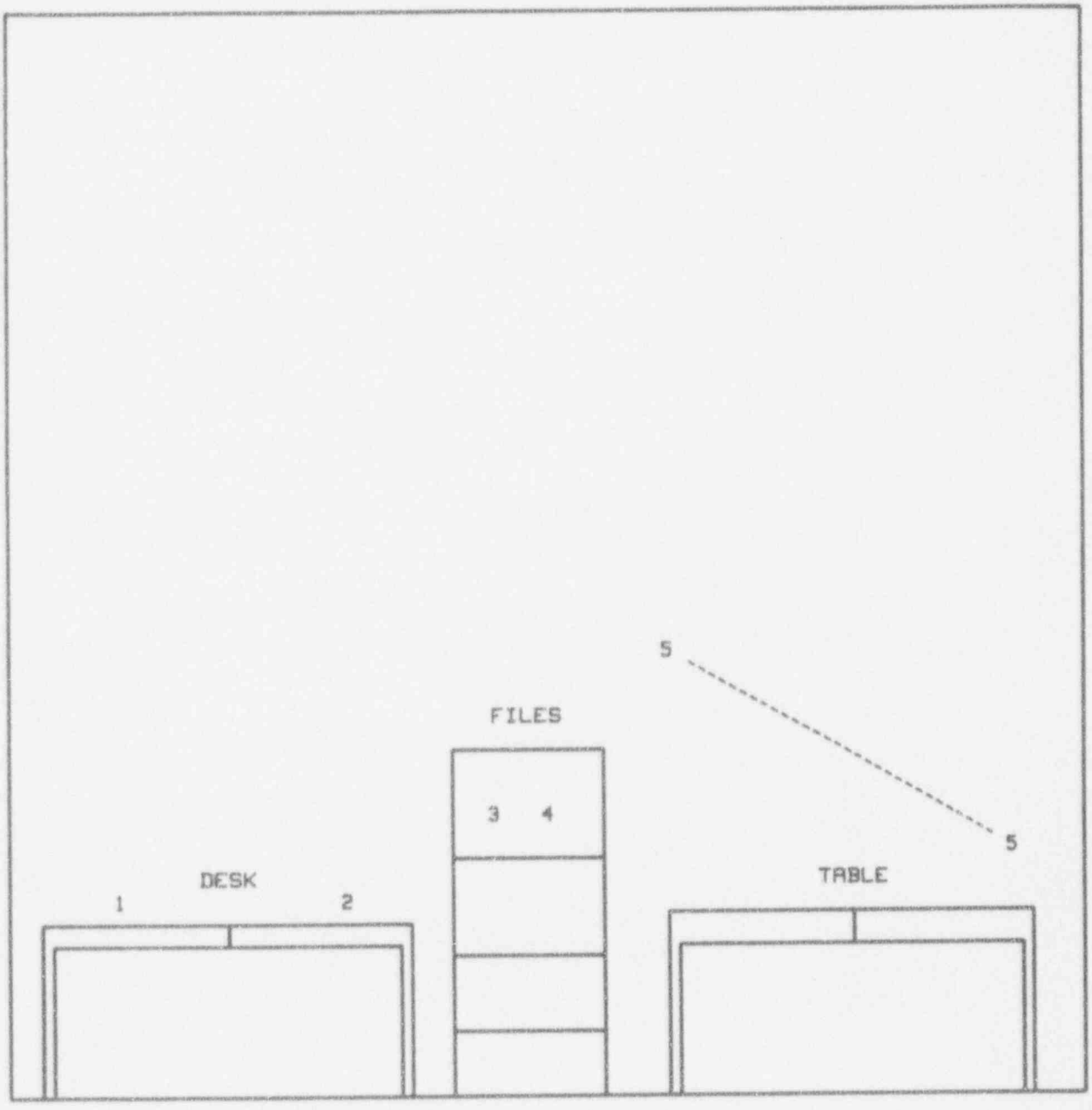
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V1 VIEW-A

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-1 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |

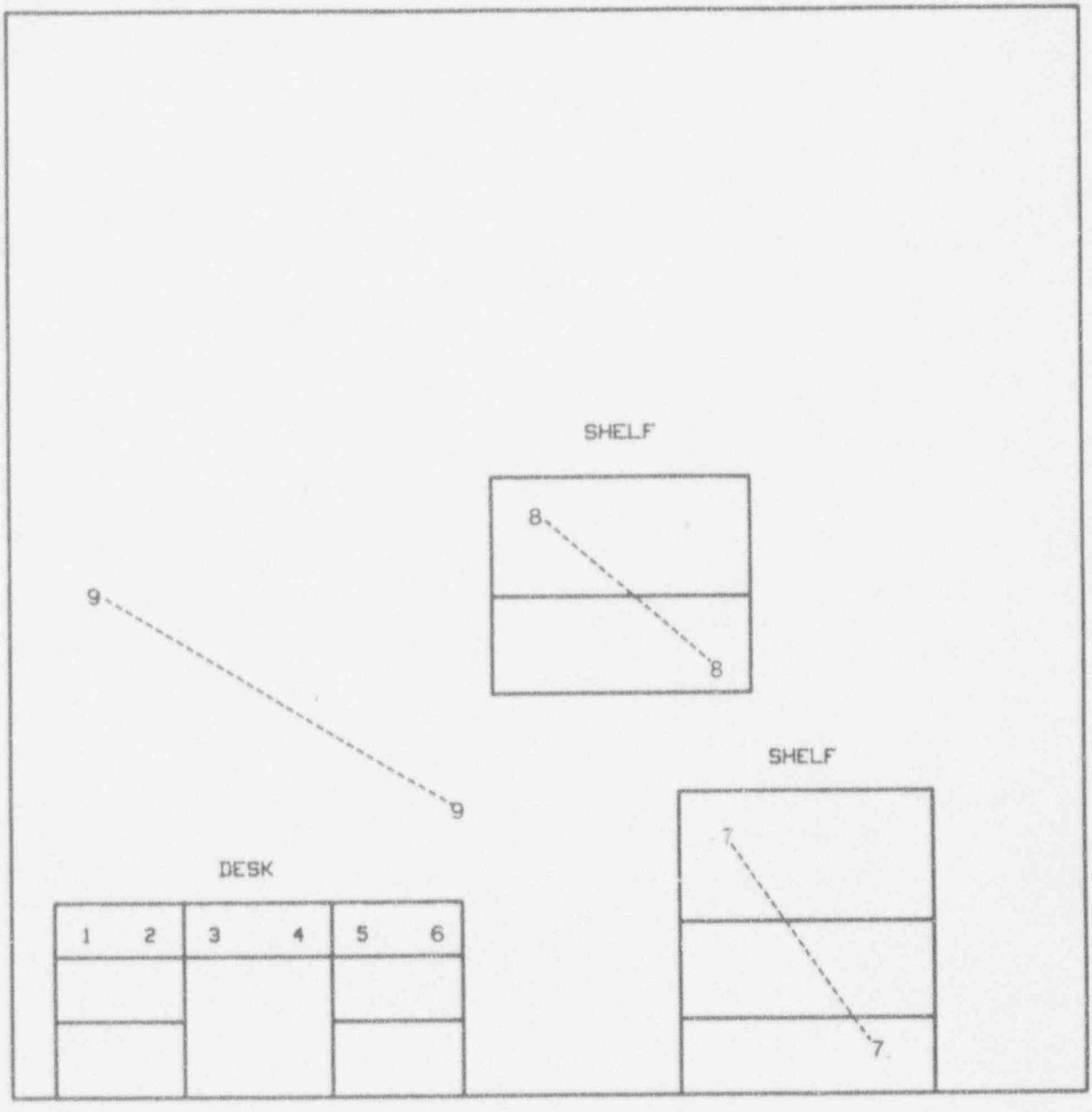
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V1 VIEW-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-1 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |

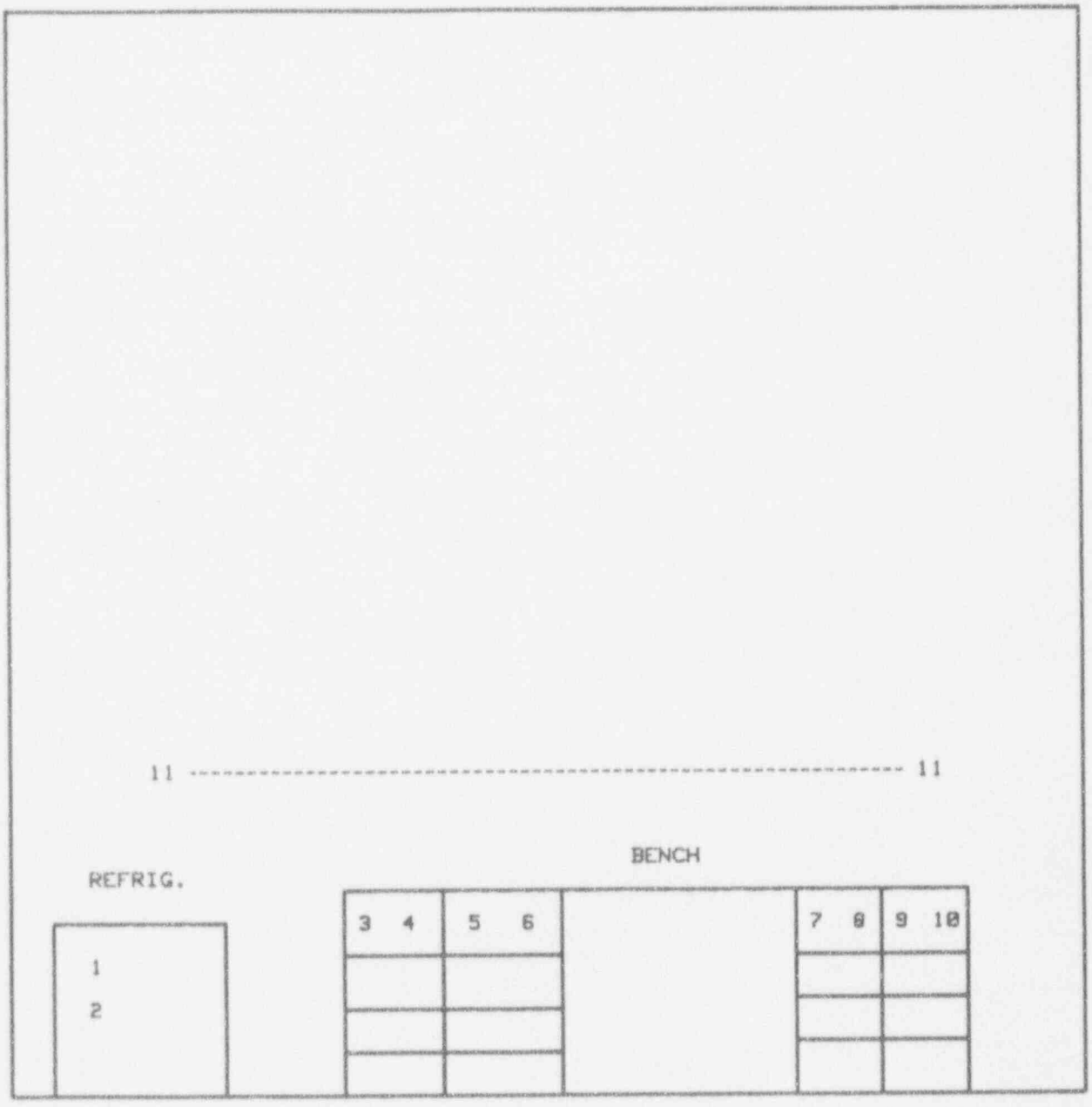
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V1 VIEW-C

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-9 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | 183 ±18 | 92 |
| 7 | 53 ±5 | 27 |
| 8 | <50 | <25 |

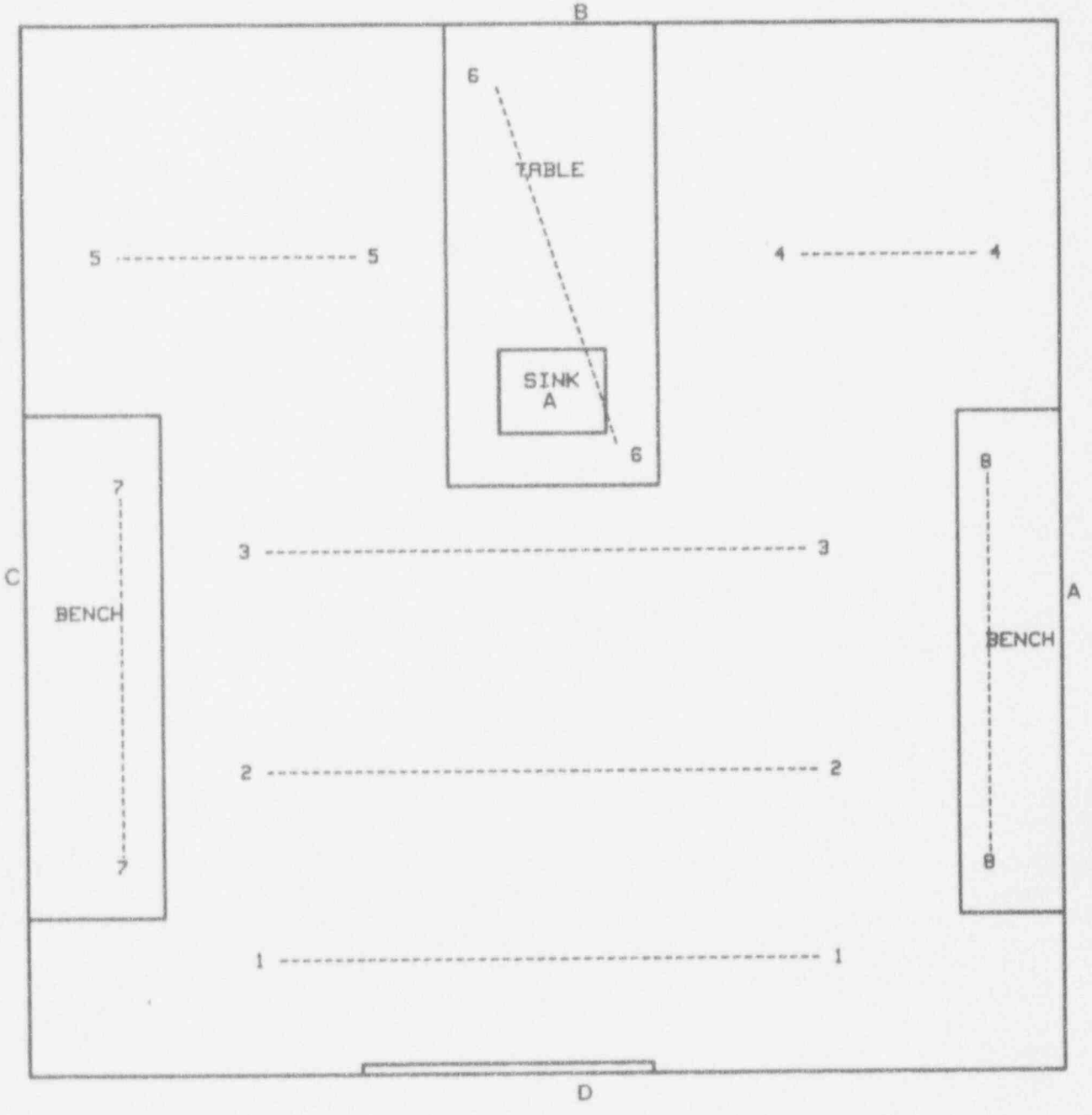
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V9 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-9 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |

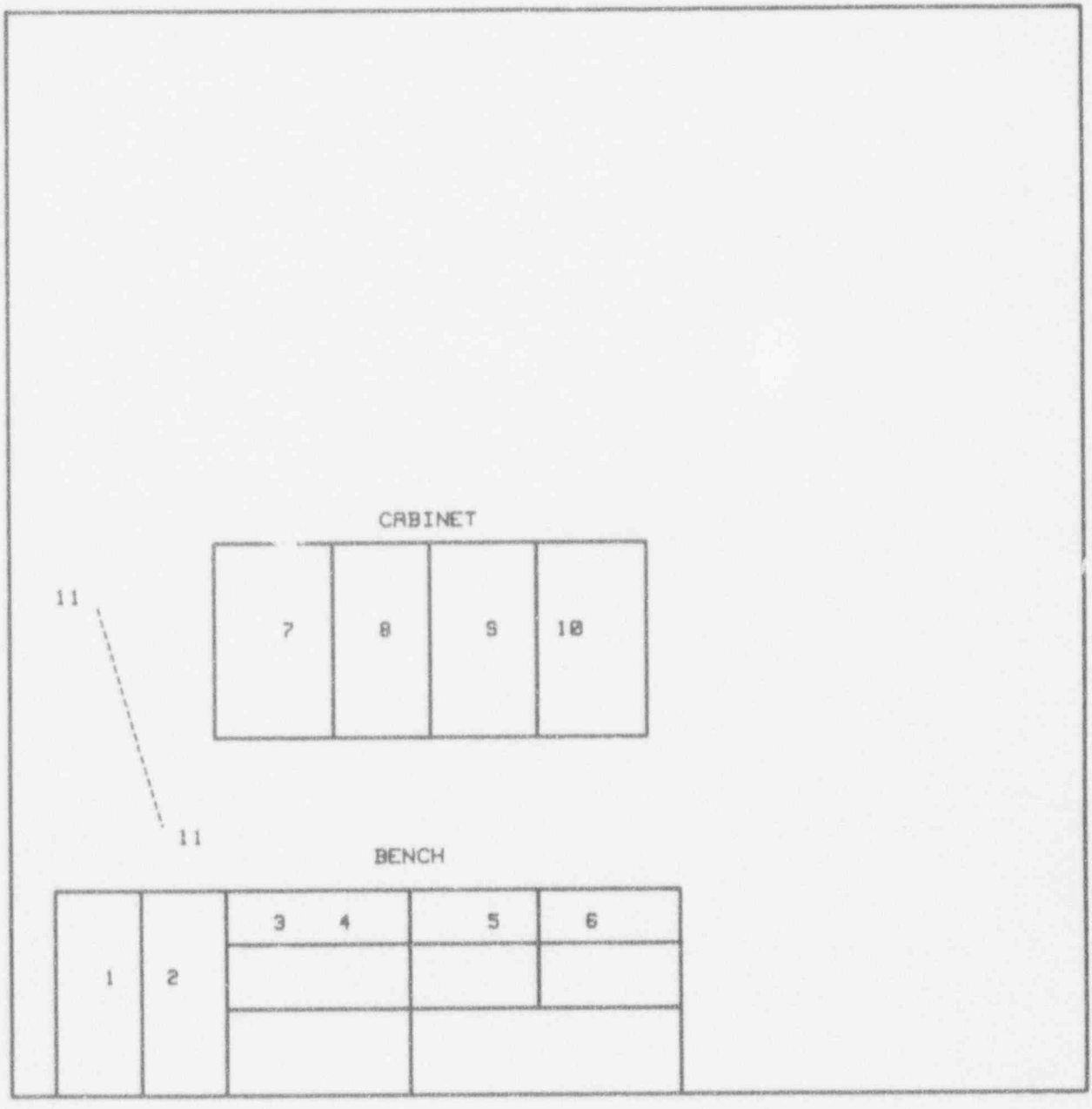
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V9 VIEW-A

PRINCIPLE OCCUPANTS: ____ _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-9 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |

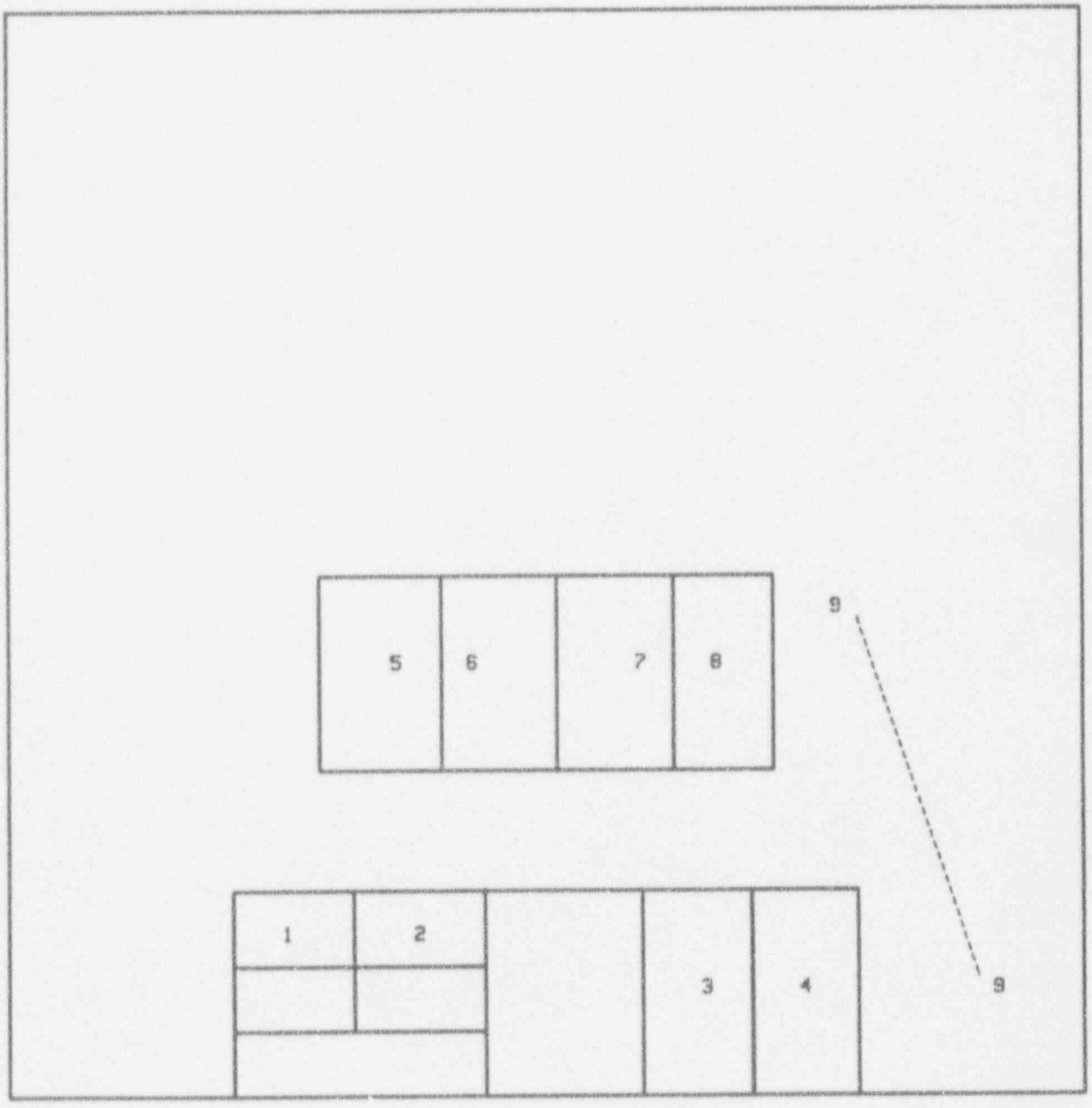
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V9 VIEW-C

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | 800 ±80 | 400 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | 147 ±15 | 74 |
| 24 | <50 | <25 |
| 25 | 141 ±14 | 71 |
| 26 | <50 | <25 |
| 27 | 162 ±16 | 81 |
| 28 | 239 ±24 | 120 |

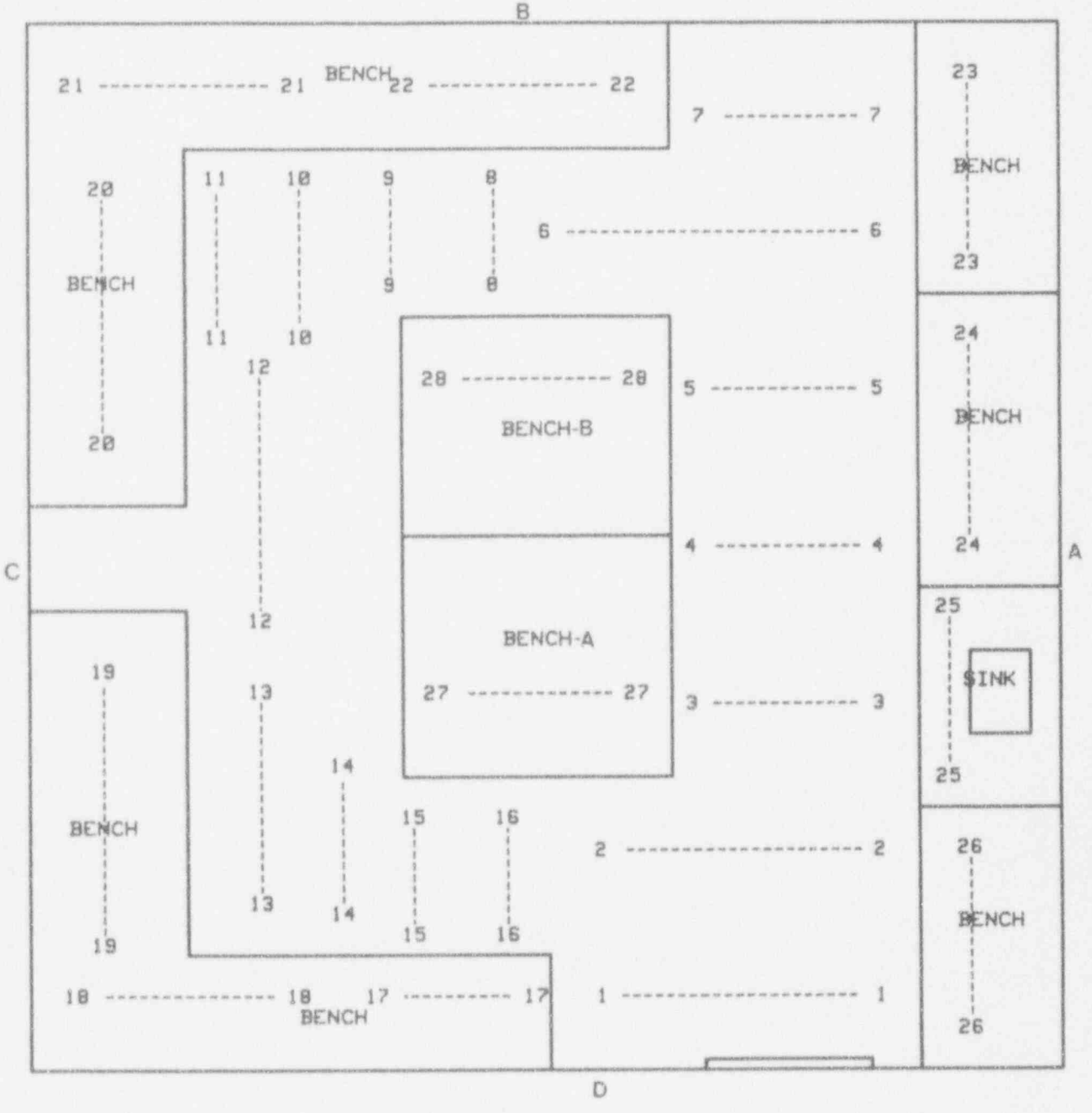
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A View A (Pre-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | 180 ±18 | 90 |
| 3 | <50 | <25 |
| 4 | 204 ±20 | 102 |
| 5 | <50 | <25 |
| 6 | 500 ±50 | 250 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | 106 ±11 | 53 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | 87 ±9 | 44 |
| 16 | 4578 ±458 | 2289 |
| 17 | <50 | <25 |
| 18 | 239 ±24 | 120 |
| 19 | <50 | <25 |
| 20 | 565 ±57 | 283 |
| 21 | <50 | <25 |
| 22 | 2636 ±264 | 1318 |

TELEDYNE ISOTOPES

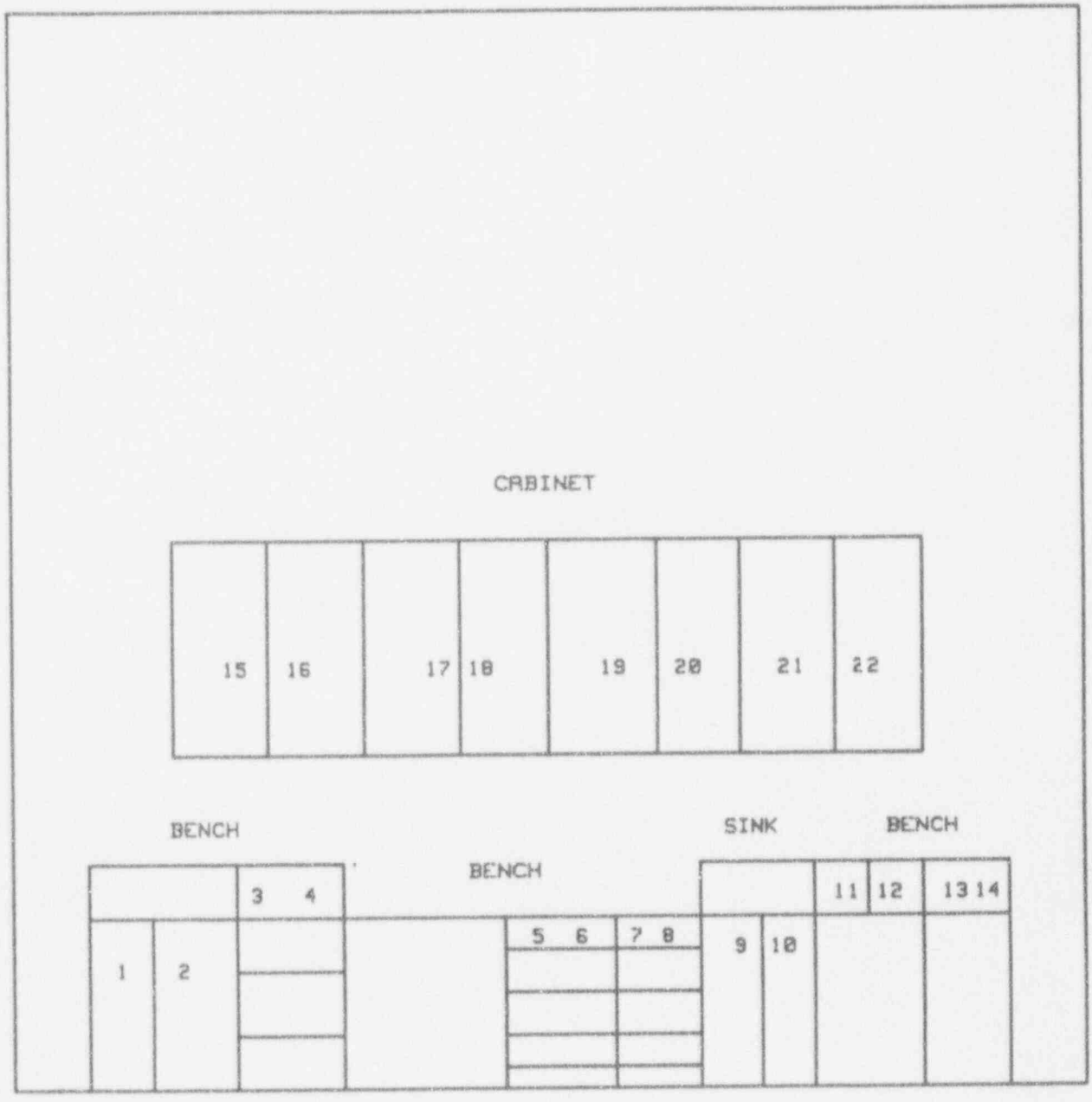
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"INITIAL SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A View A (Post-decon)

Part A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | 91 ±9 | 46 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |
| 25 | <50 | <25 |
| 26 | <50 | <25 |
| 27 | <50 | <25 |
| 28 | 55 ±6 | 28 |
| 29 | <50 | <25 |
| 30 | <50 | <25 |

TELEDYNE ISOTOPES

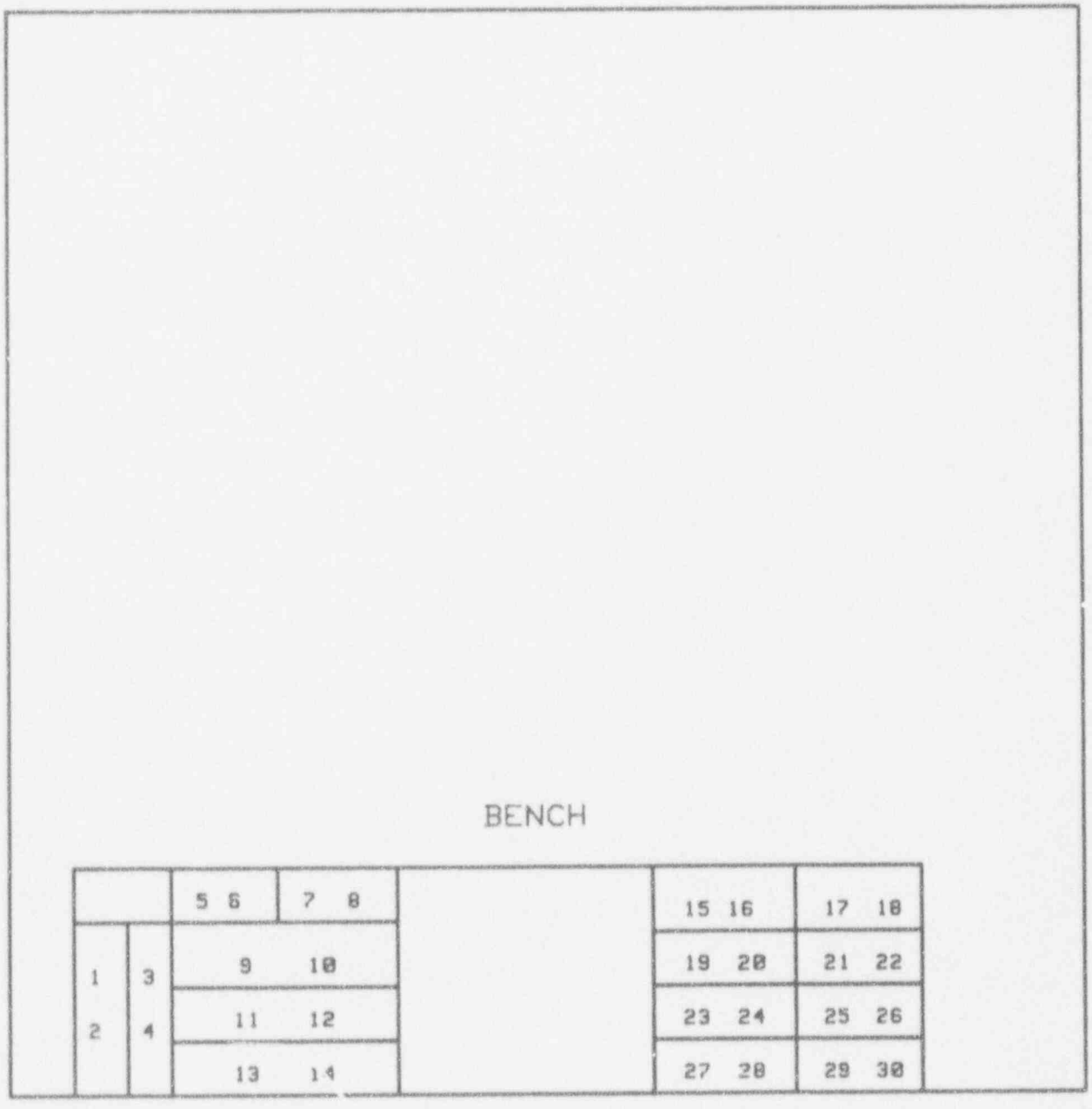
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A VIEW-A/PART-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"POST DECON SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A View A (Post-decon)

**Part B**

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | 86 ±9 | 43 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |
| 25 | <50 | <25 |
| 26 | <50 | <25 |
| 27 | <50 | <25 |
| 28 | <50 | <25 |
| 29 | 126 ±13 | 63 |
| 30 | 286 ±29 | 143 |

TELEDYNE ISOTOPES

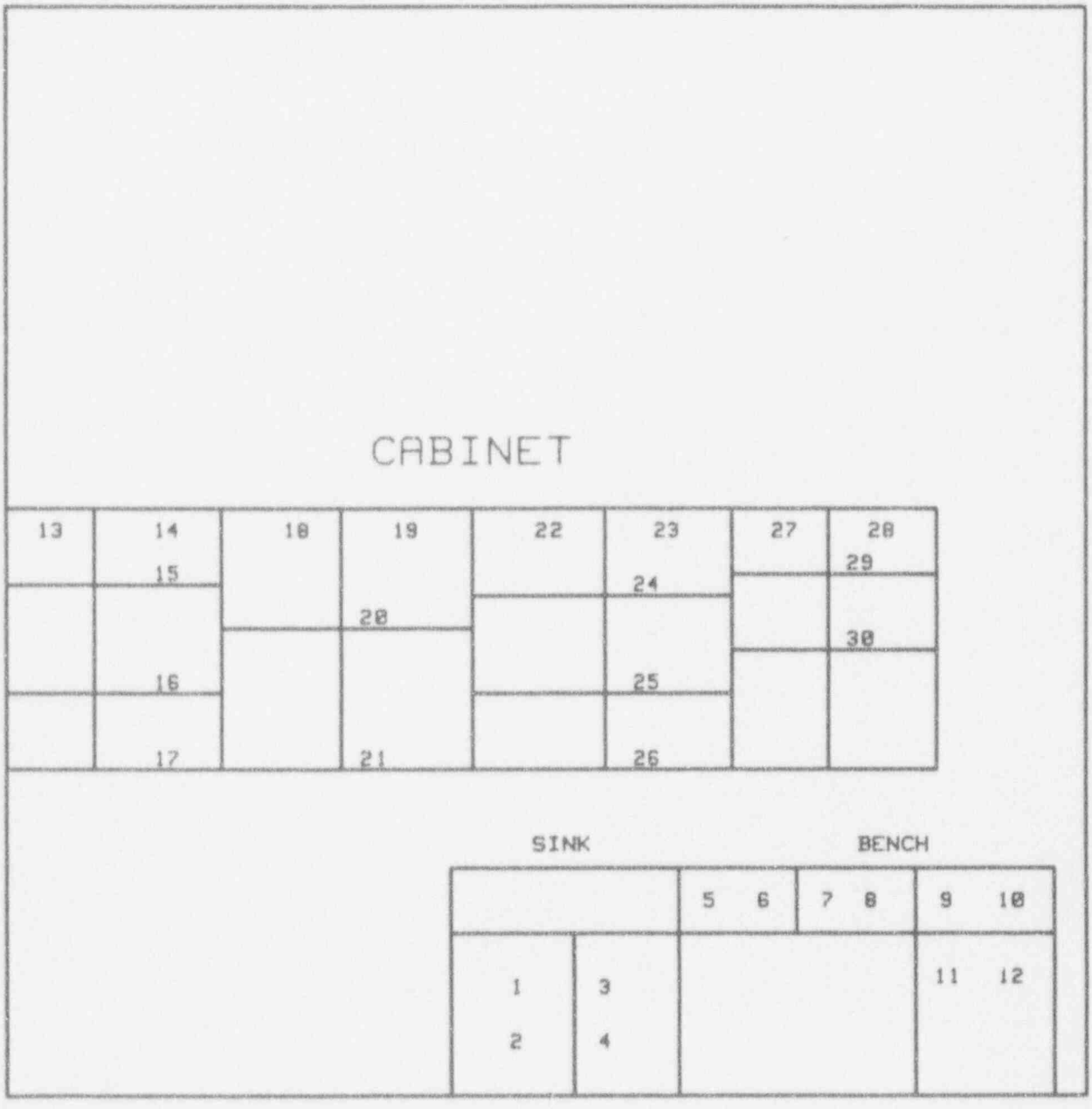
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A VIEW-A/PART-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"POST DECON SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | 70 ±7 | 35 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | 114 ±11 | 57 |

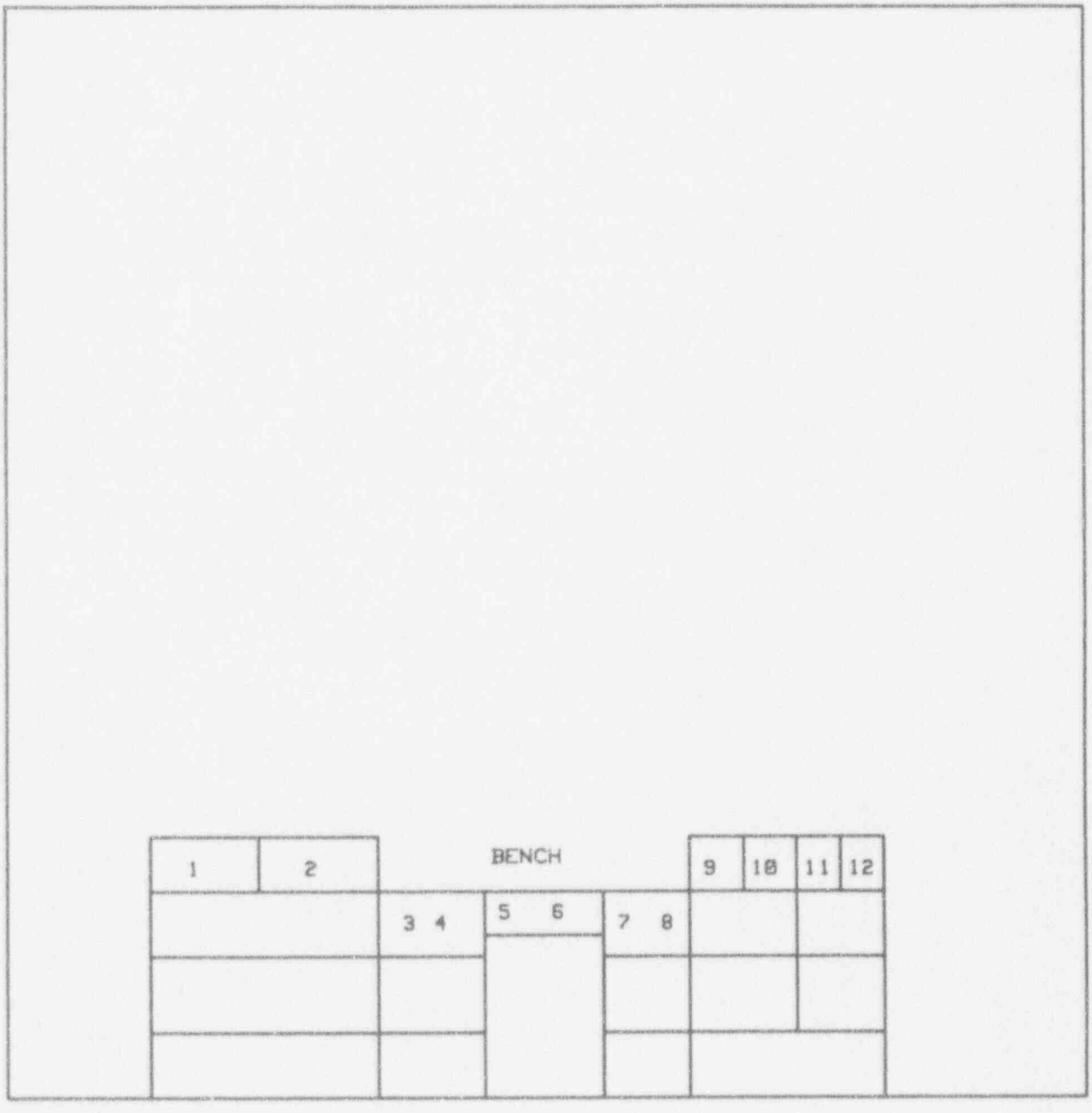
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A VIEW-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | 197 ±20 | 99 |
| 3 | <50 | <25 |
| 4 | 608 ±61 | 304 |
| 5 | <50 | <25 |
| 6 | 426 ±43 | 213 |
| 7 | <50 | <25 |
| 8 | 337 ±34 | 169 |
| 9 | 146 ±15 | 73 |
| 10 | 919 ±92 | 460 |
| 11 | 79 ±8 | 40 |
| 12 | 141 ±14 | 71 |
| 13 | 677 ±68 | 339 |

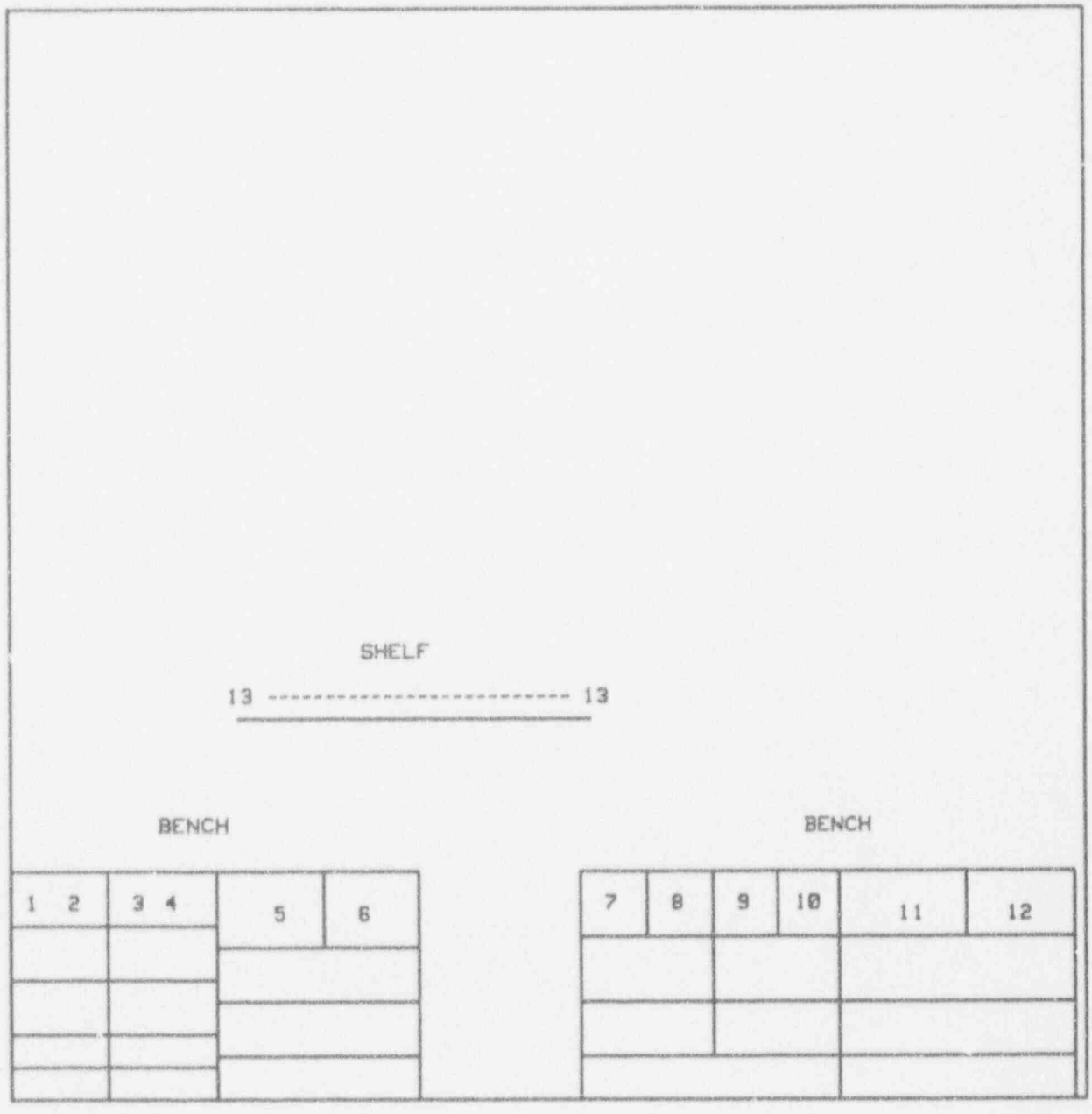
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V32-A VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-32A View D (Pre-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | 266 ±27 | 133 |
| 19 | 380 ±38 | 190 |
| 20 | 4963 ±496 | 2482 |

TELEDYNE ISOTOPES

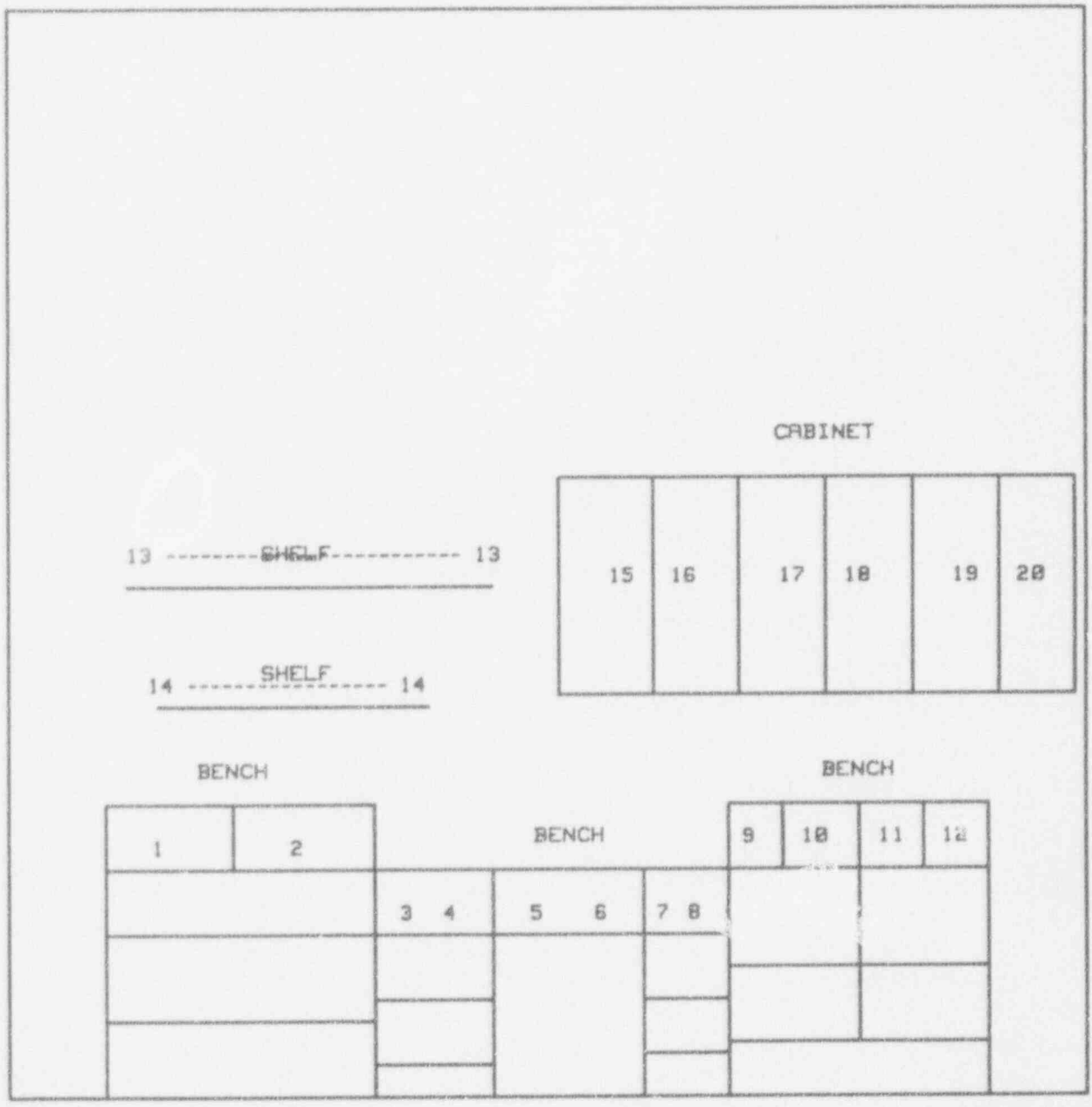
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"INITIAL SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A View D (Post-decon)

Part A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | 145 ±15 | 73 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | 260 ±26 | 130 |
| 11 | 398 ±40 | 199 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |
| 25 | <50 | <25 |
| 26 | <50 | <25 |
| 27 | <50 | <25 |
| 28 | <50 | <25 |
| 29 | <50 | <25 |

TELEDYNE ISOTOPES

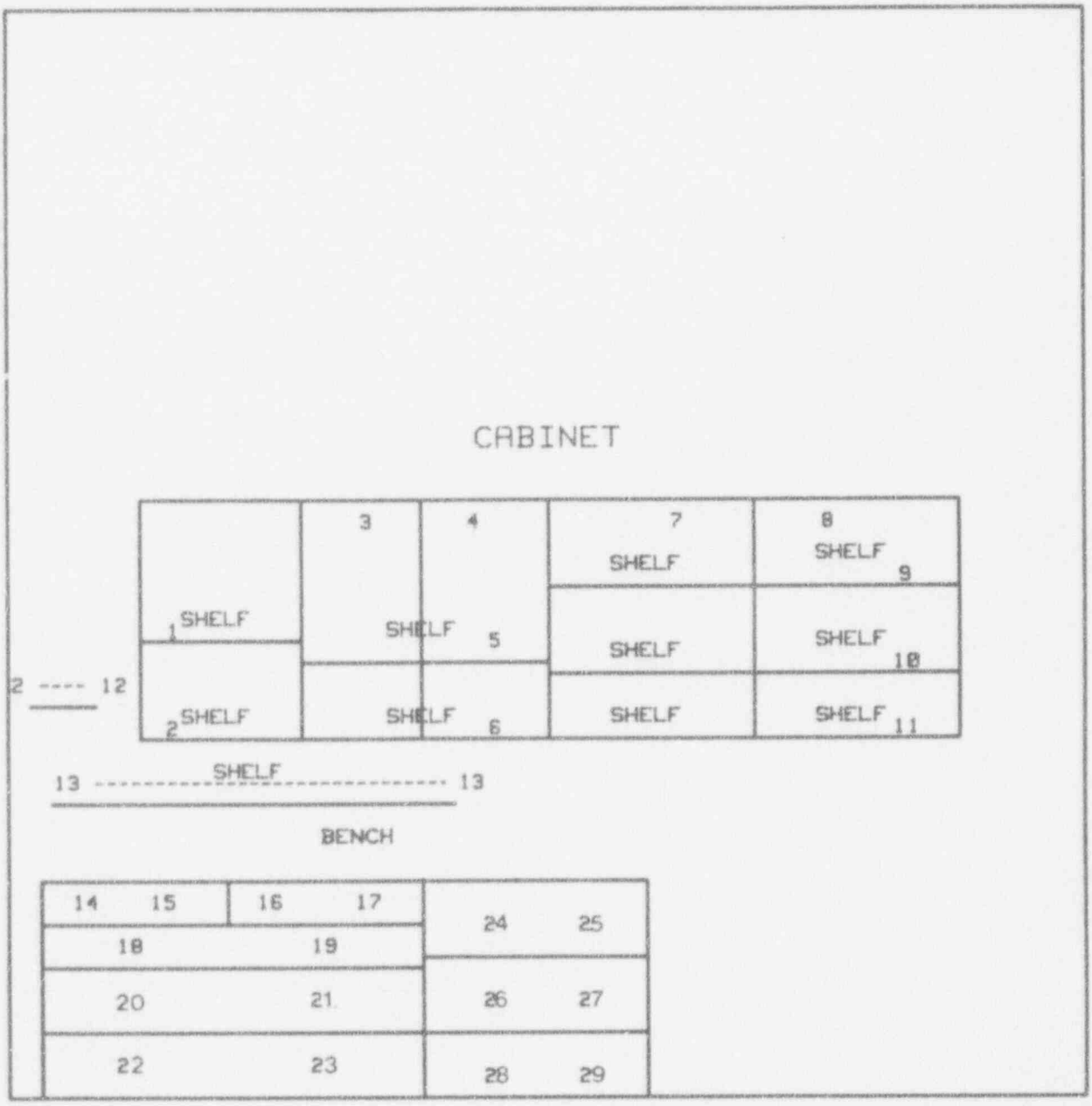
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A VIEW-D/PART-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"POST DECON SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A View D (Post-decon)

Part B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | 109 ±11 | 55 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |

TELEDYNE ISOTOPES

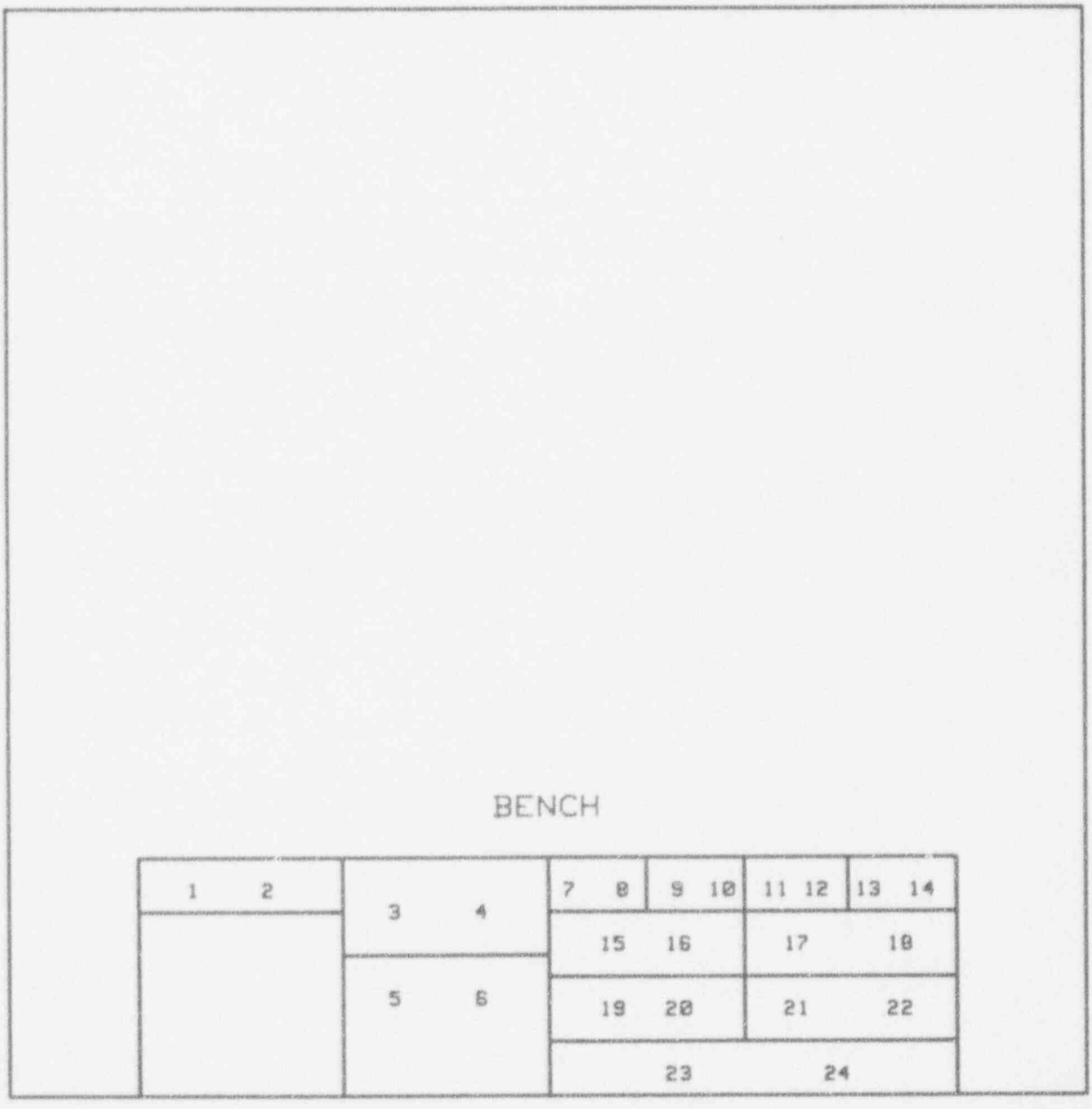
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A VIEW-D/PART-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"POST DECON SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A Island A (Pre-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | 424 ±42 | 212 |
| 7 | <50 | <25 |
| 8 | 267 ±27 | 134 |
| 9 | 137 ±14 | 69 |
| 10 | 190 ±19 | 95 |
| 11 | 1057 ±106 | 529 |
| 12 | 115 ±12 | 58 |

TELEDYNE ISOTOPES

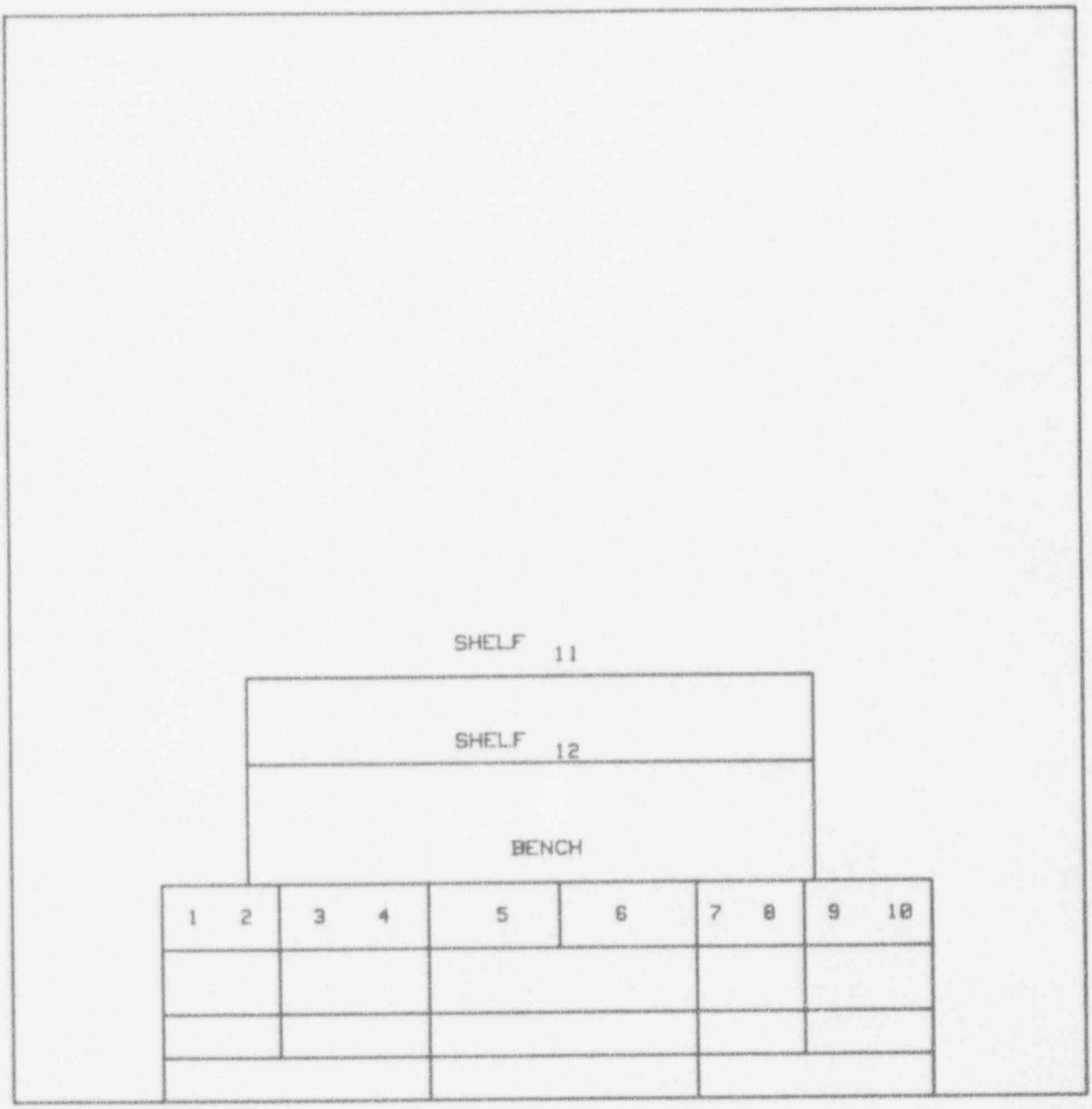
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A ISLAND-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"INITIAL SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A Island A (Post-decon)

Part A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | 330 ±33 | 165 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | 66 ±7 | 33 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |
| 25 | <50 | <25 |
| 26 | <50 | <25 |
| 27 | <50 | <25 |
| 28 | <50 | <25 |
| 29 | 67 ±7 | 34 |

TELEDYNE ISOTOPES

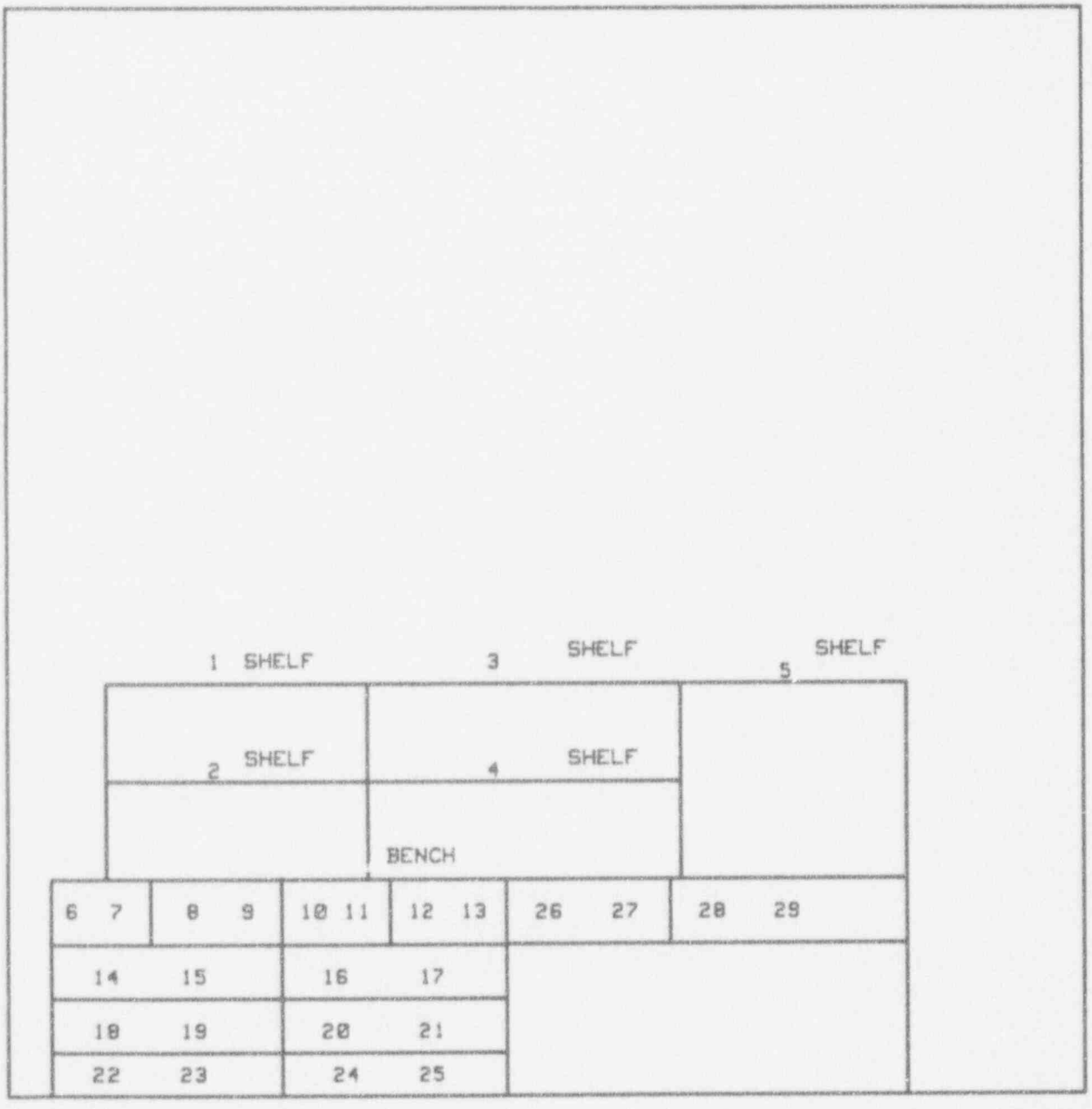
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A ISLAND-A/PART-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"POST DECON SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A Island A (Post-decon)

Part B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | 70 ±7 | 35 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | 346 ±35 | 173 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | 115 ±12 | 58 |
| 24 | 491 ±49 | 246 |

TELEDYNE ISOTOPES

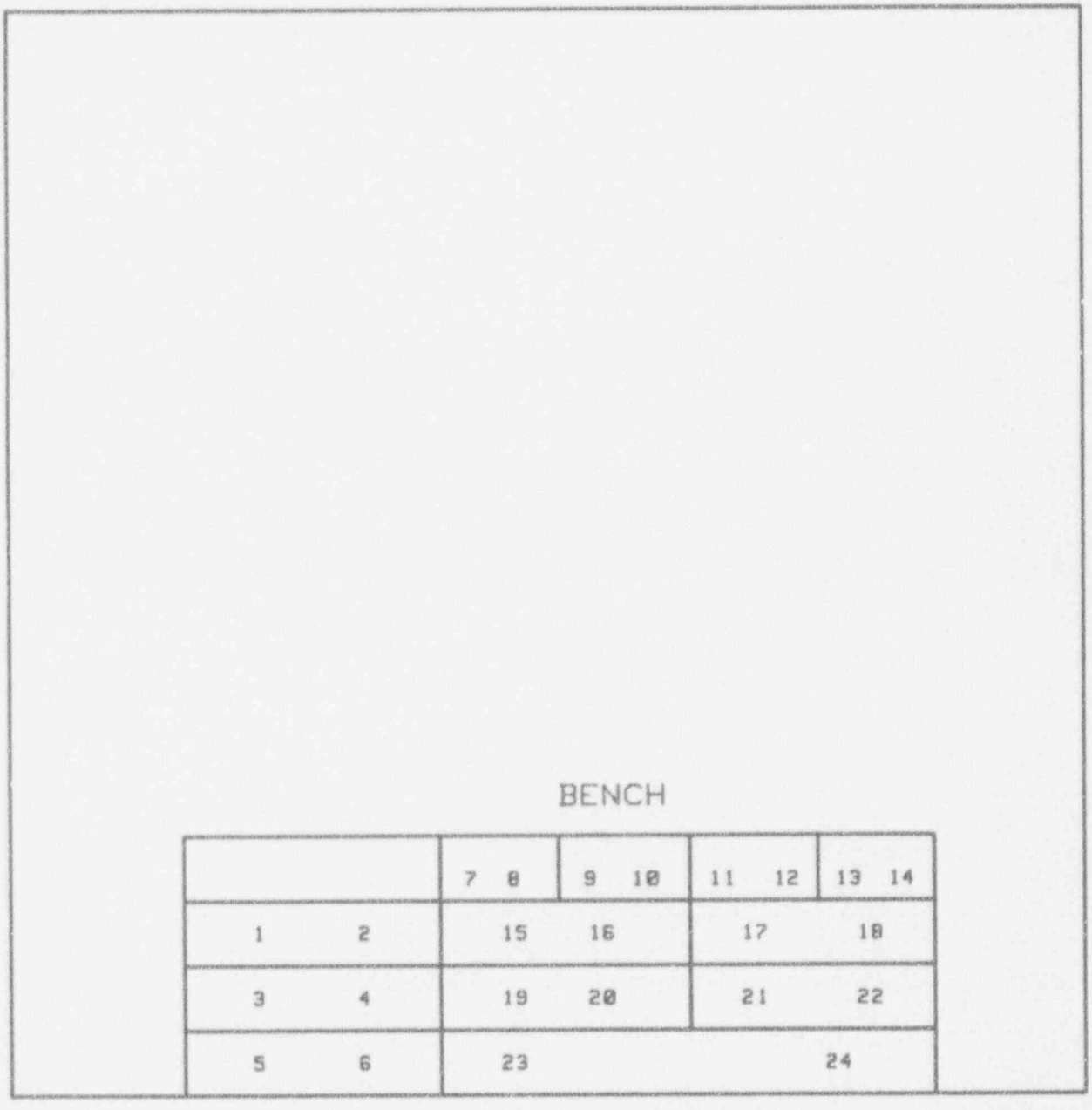
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A ISLAND-A/PART-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"POST DECON SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A Island B (Pre-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | 1005 ±101 | 506 |
| 3 | <50 | <25 |
| 4 | 3179 ±318 | 1590 |
| 5 | <50 | <25 |
| 6 | 305 ±31 | 153 |
| 7 | 561 ±56 | 282 |
| 8 | 3733 ±373 | 1867 |
| 9 | <50 | <25 |
| 10 | 575 ±58 | 288 |

TELEDYNE ISOTOPES

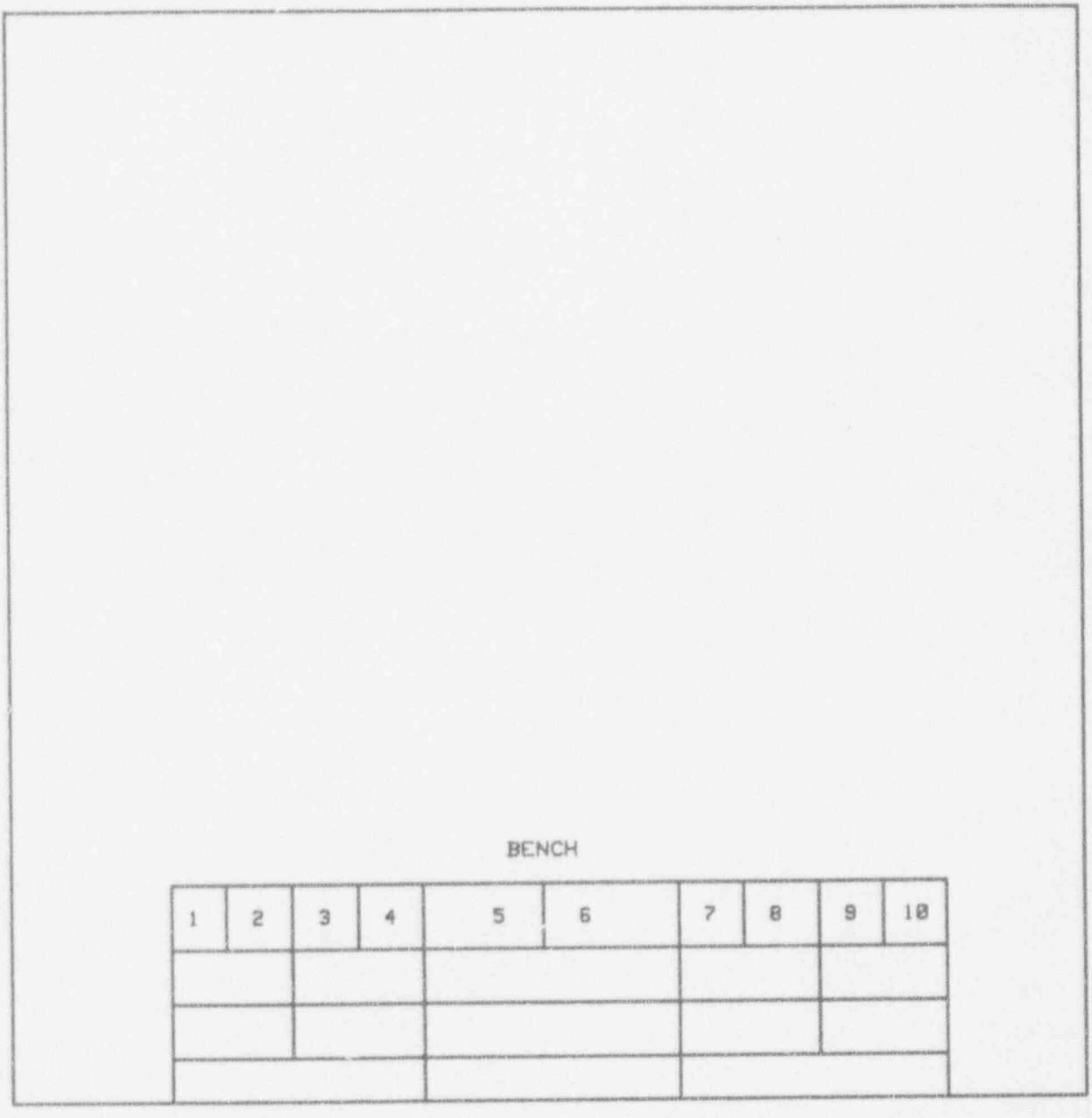
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A ISLAND-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"INITIAL SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A Island B (Post-decon)

Part A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | 86 ±9 | 43 |
| 17 | <50 | <25 |
| 18 | 167 ±17 | 84 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | 218 ±22 | 109 |
| 25 | <50 | <25 |
| 26 | <50 | <25 |
| 27 | <50 | <25 |
| 28 | <50 | <25 |

TELEDYNE ISOTOPES

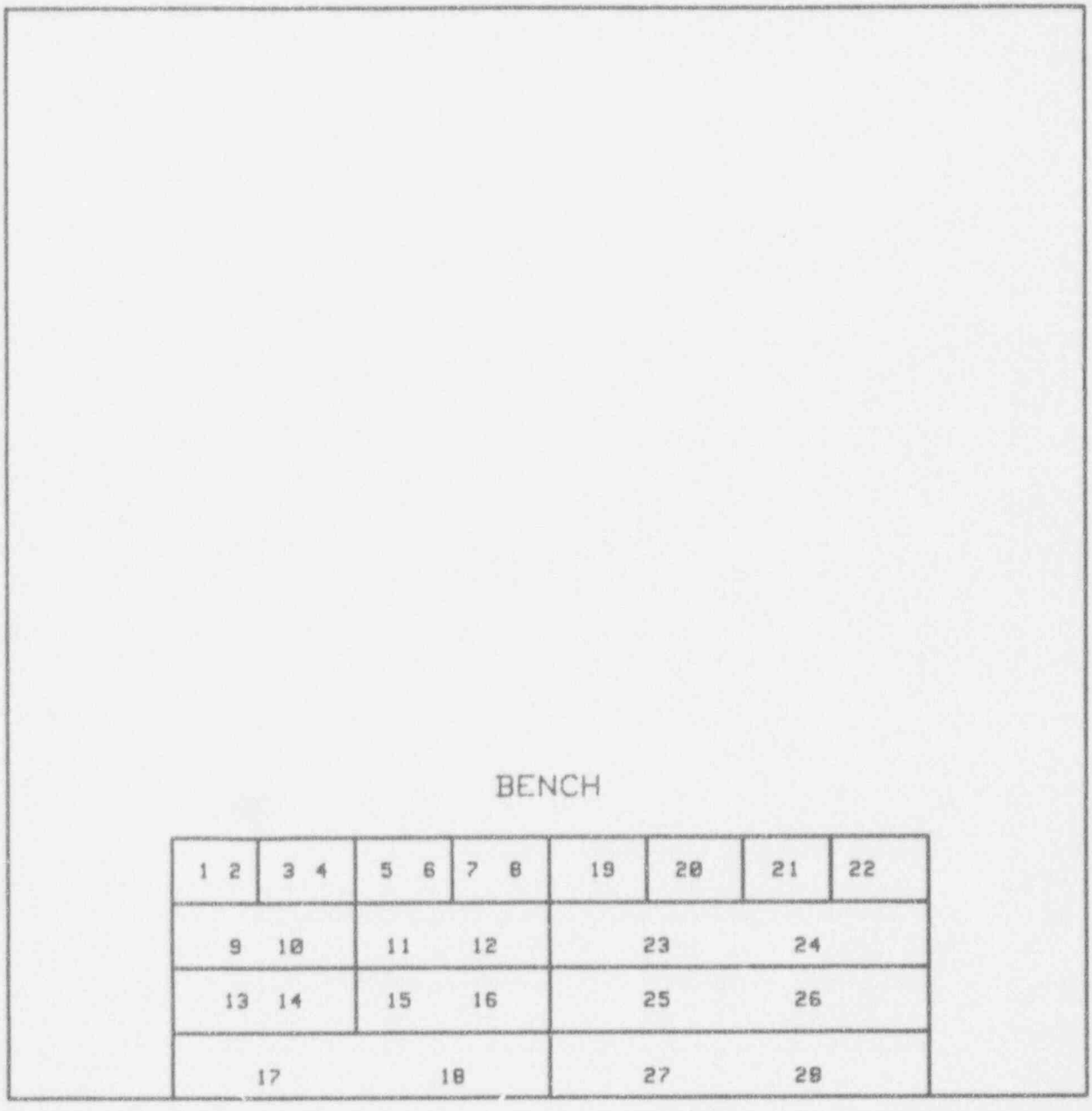
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A ISLAND-B/PART-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"POST DECON SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-32A Island B (Post-decon)

Part B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | 421 ±42 | 211 |
| 3 | <50 | <25 |
| 4 | 100 ±10 | 50 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | 134 ±13 | 67 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | 283 ±28 | 142 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |

TELEDYNE ISOTOPES

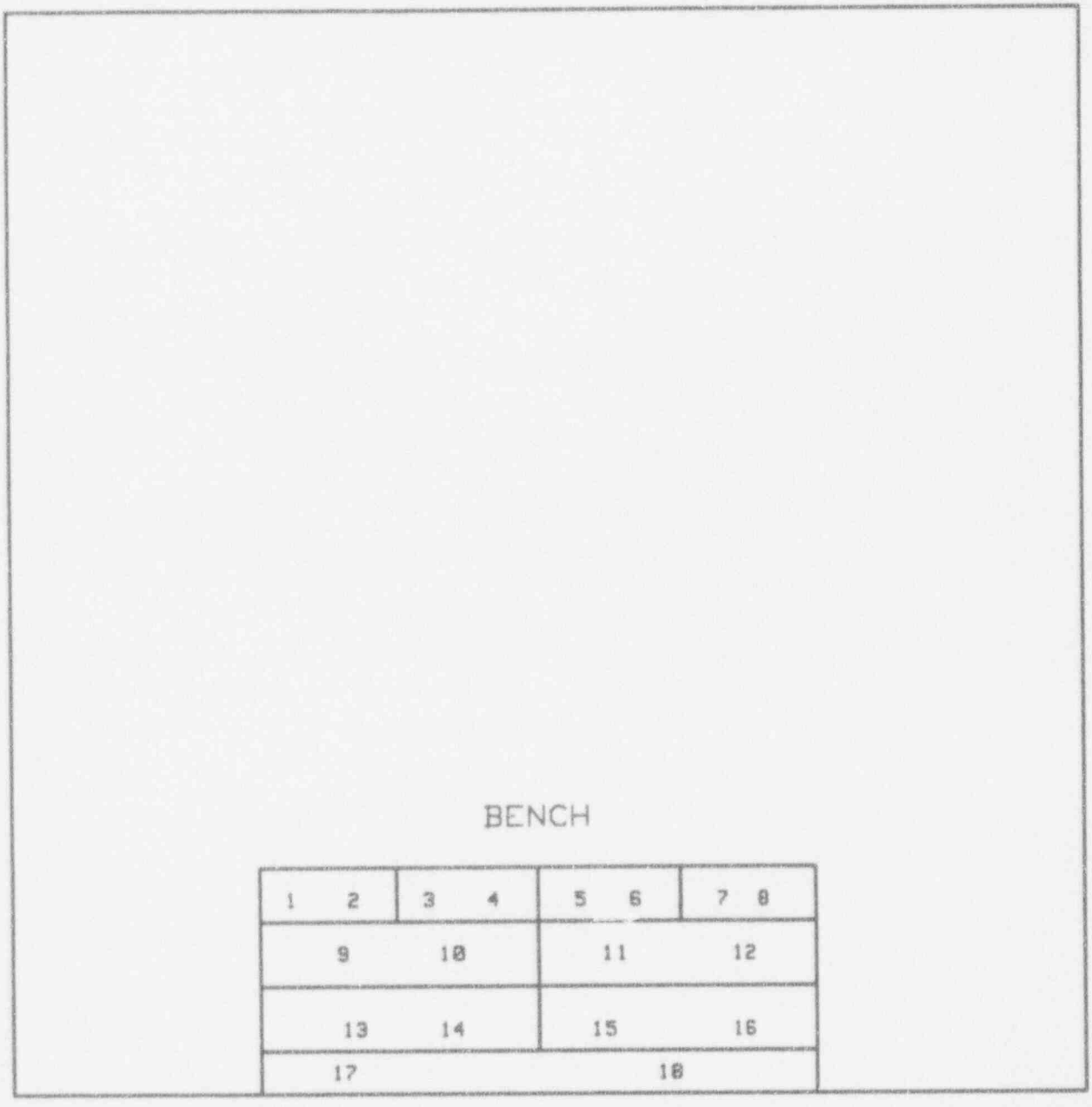
# DIAGRAM OF SURVEYED AREA

LOCATION: V-32-A ISLAND-B/PART-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____

"POST DECON SURVEY"



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-33 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |

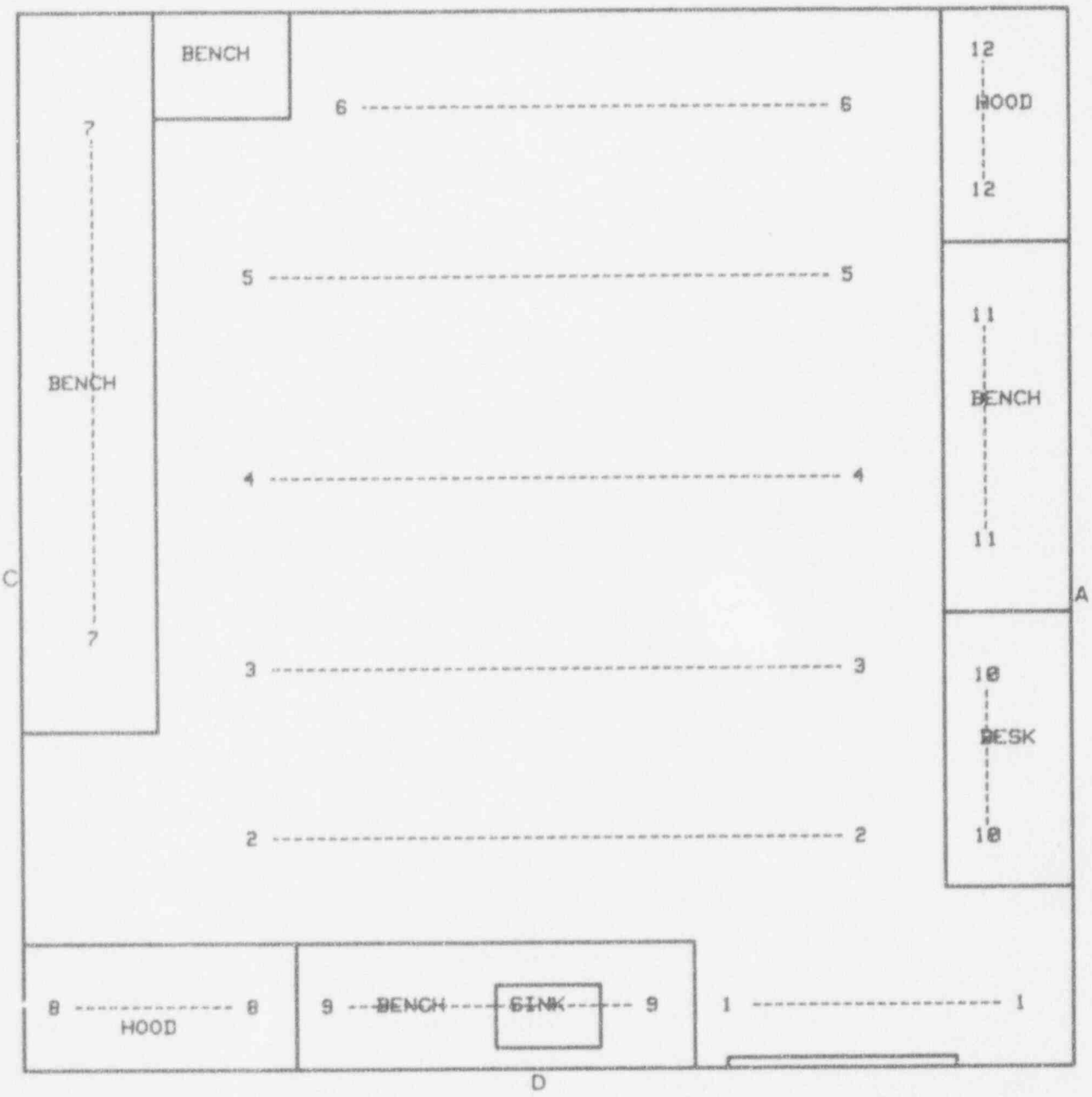
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V33 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-33 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | 458 ±46 | 229 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | 448 ±45 | 224 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |

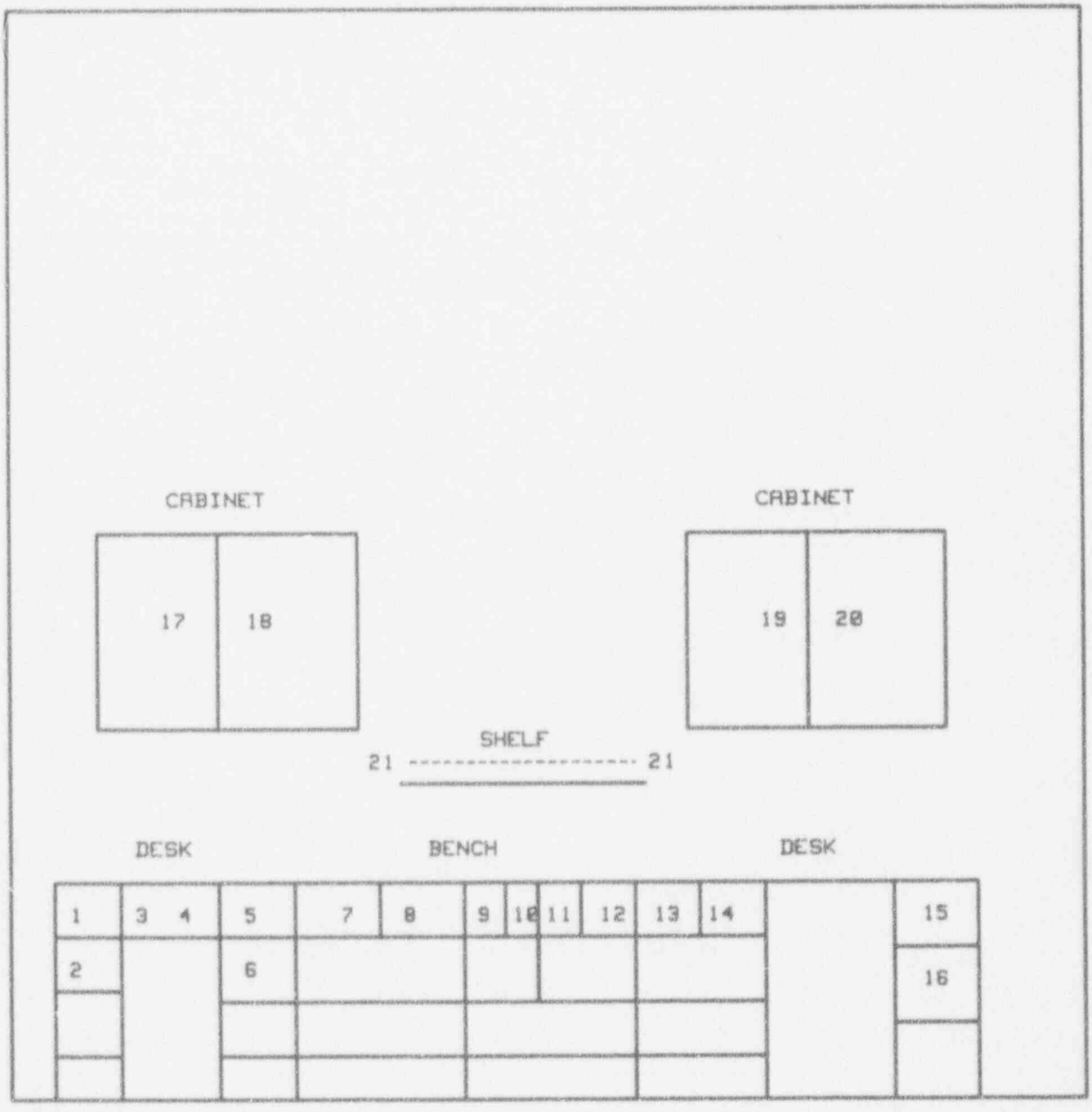
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V33 VIEW-R

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-33 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | 500 ±50 | 250 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | 139 ±14 | 70 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |

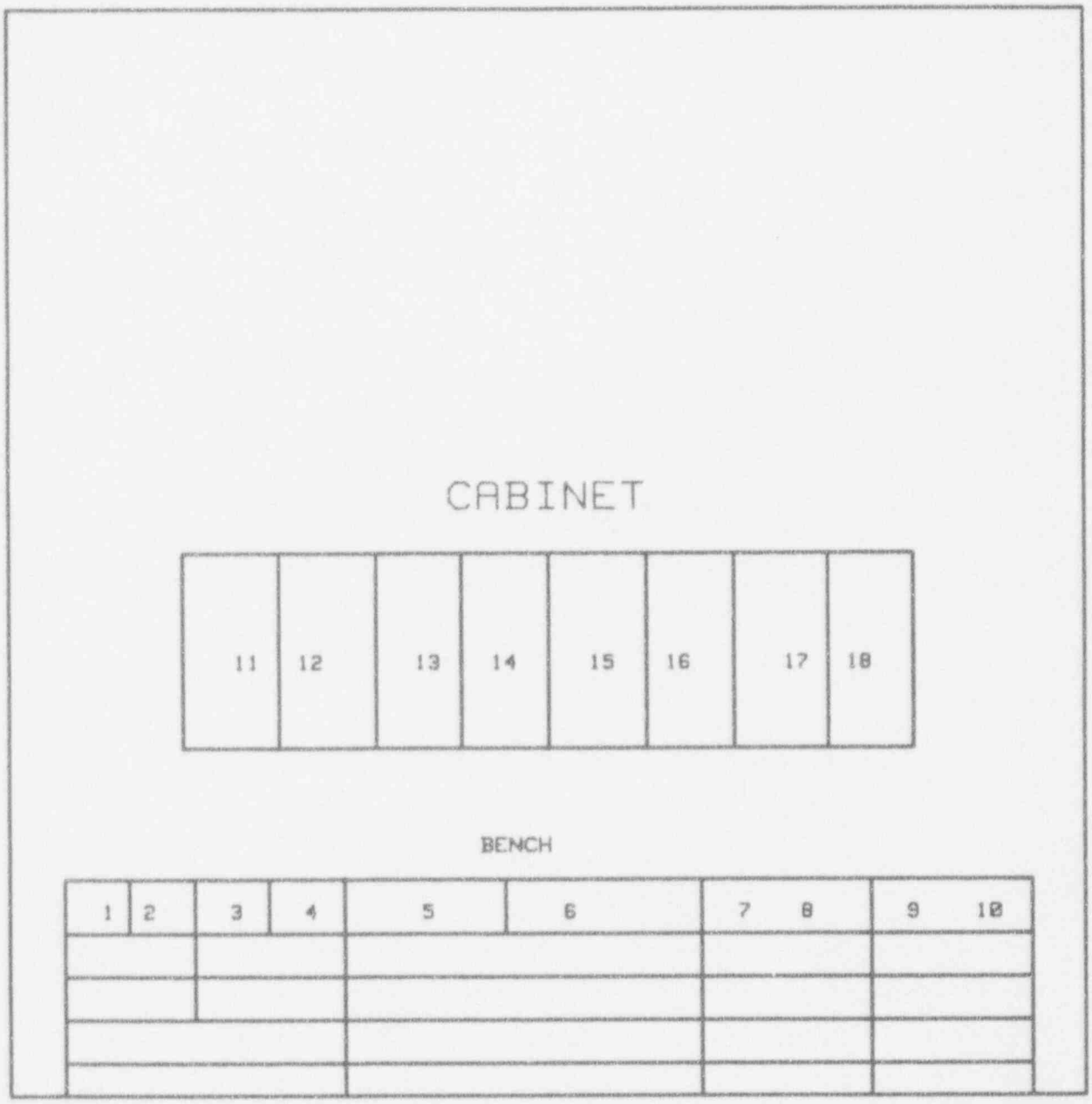
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V33 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-33 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | 607 ±61 | 304 |

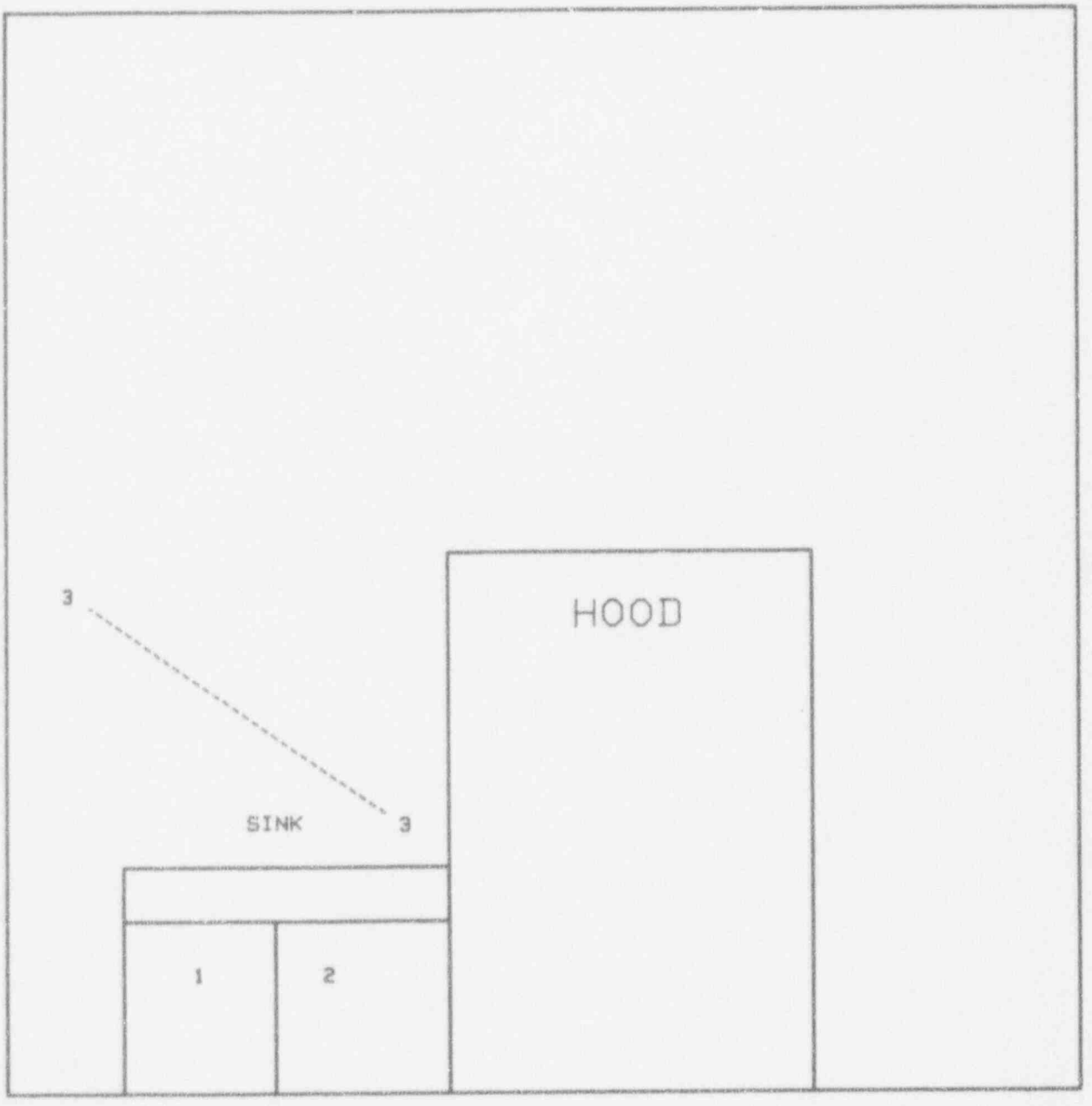
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-V33 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-33 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | 73 ±7 | 37 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | 72 ±7 | 36 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-103 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |

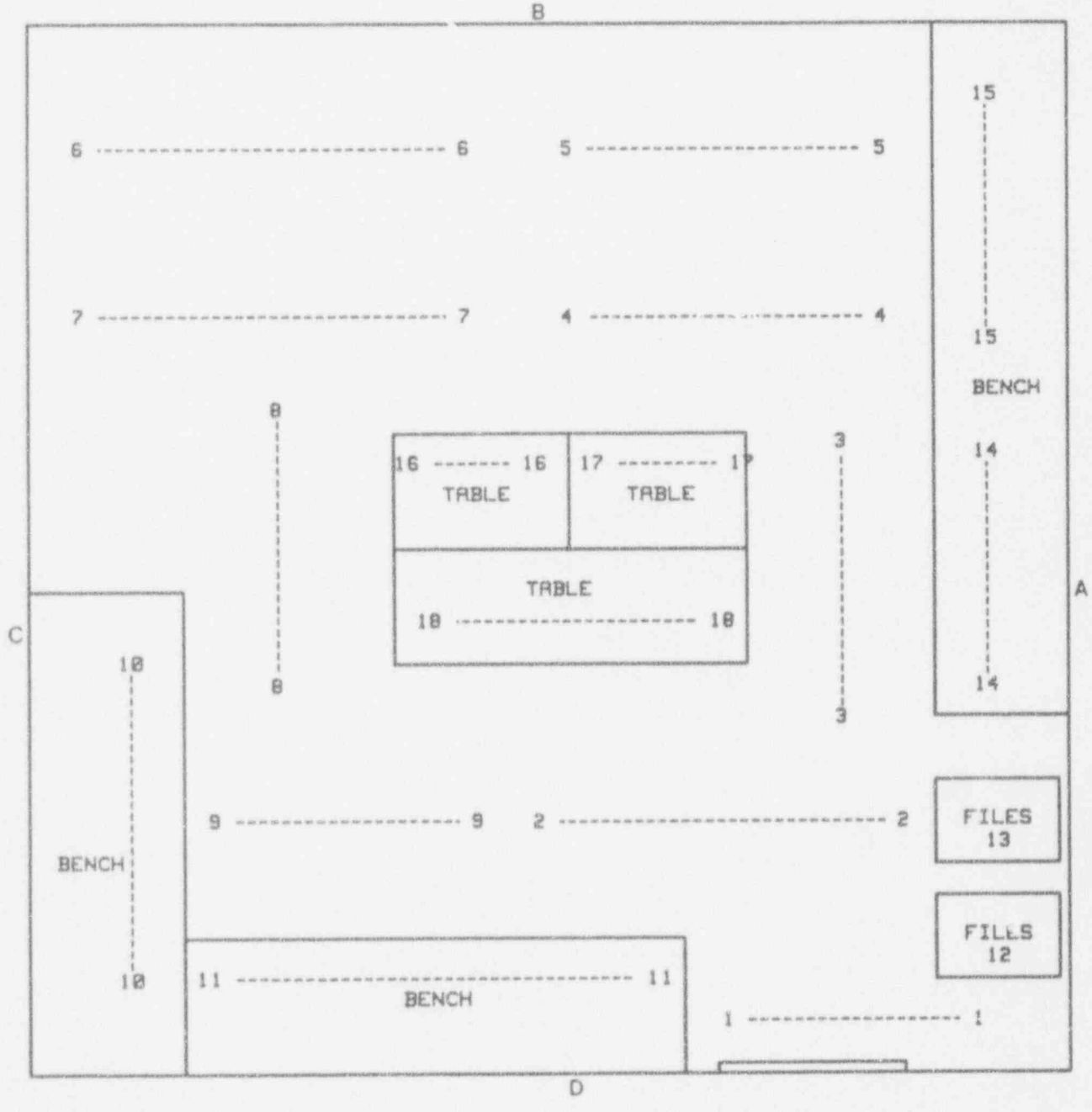
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-103 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-103 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |

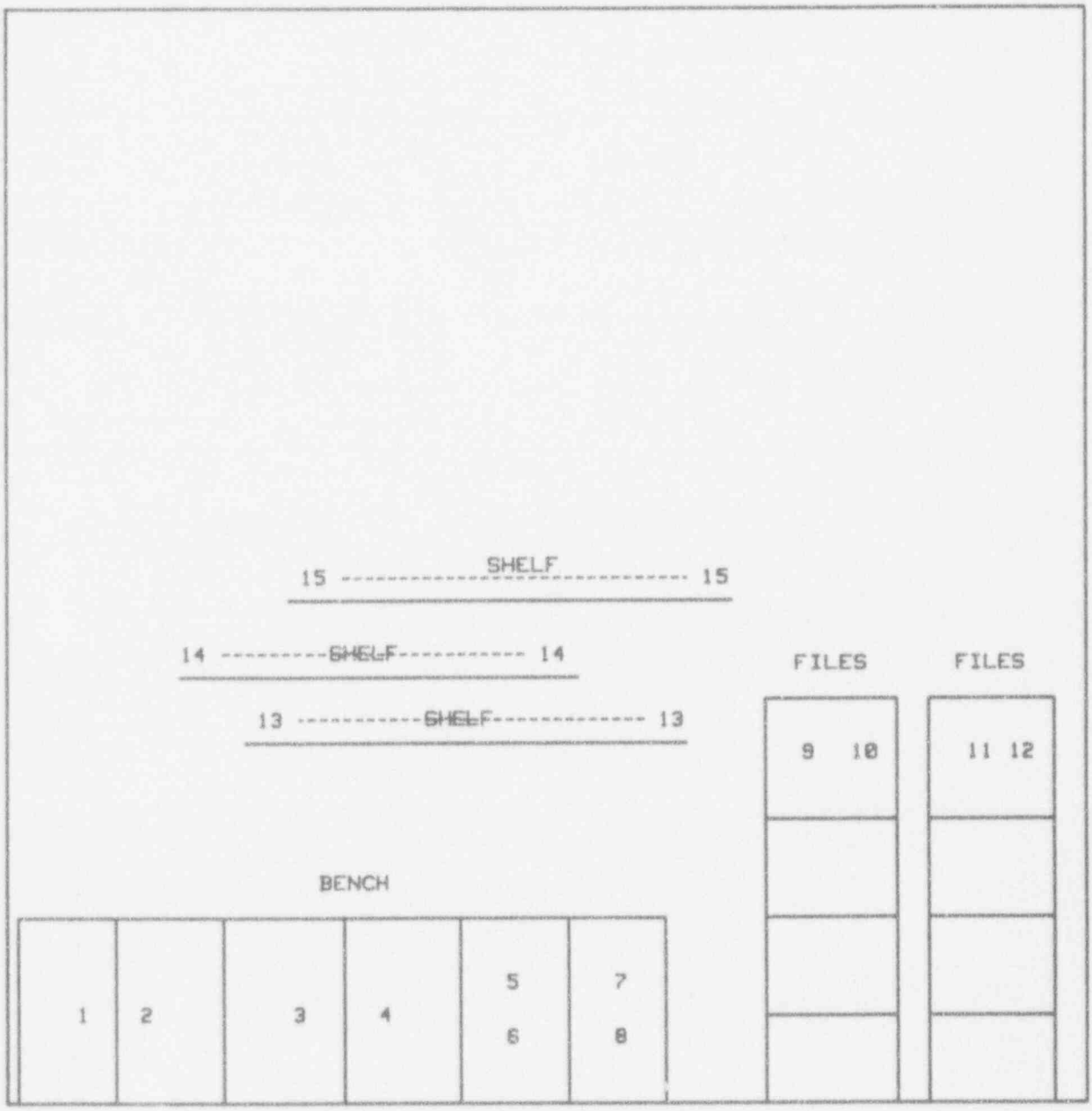
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-103 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-103 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |

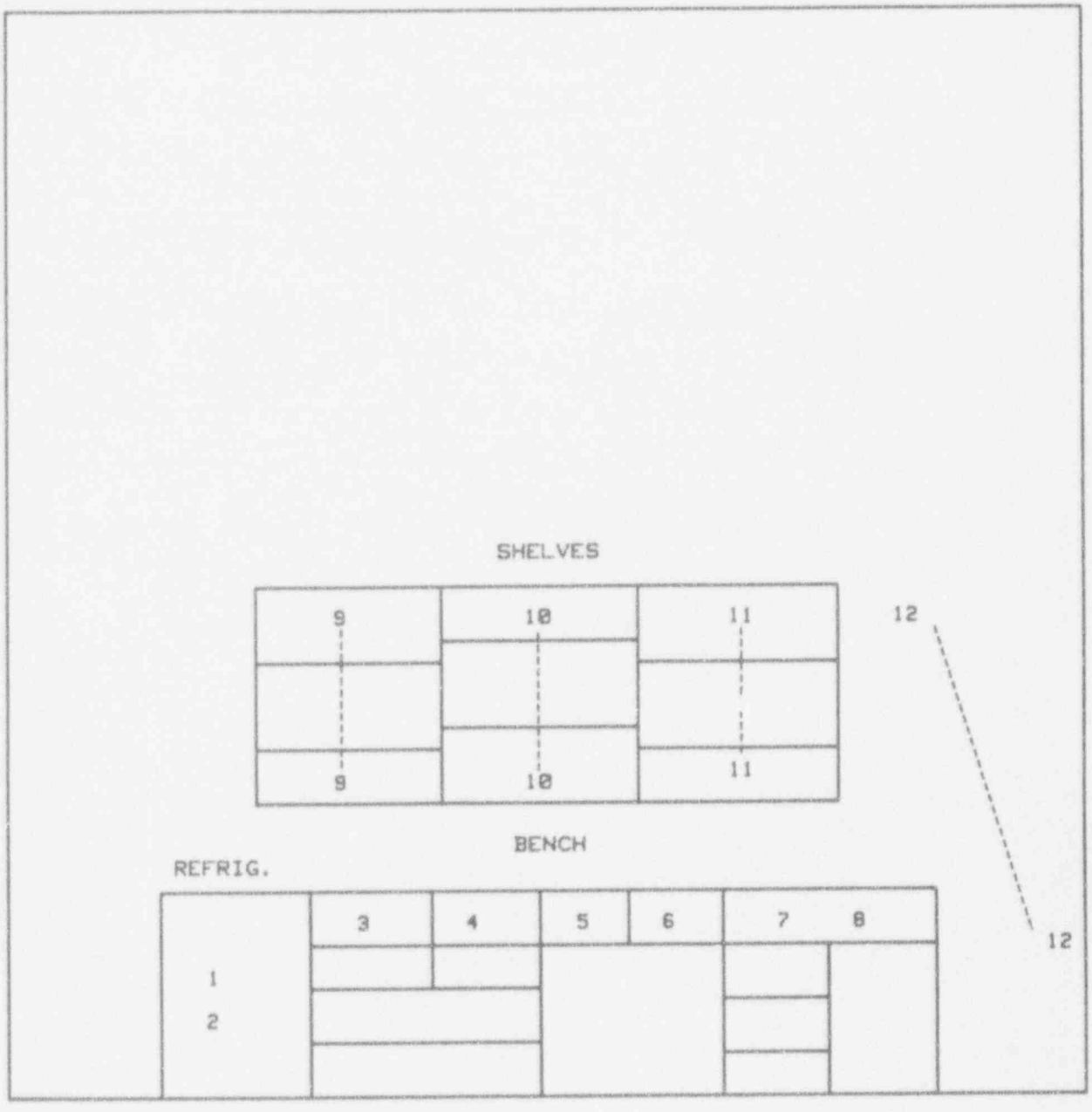
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-103 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-103 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

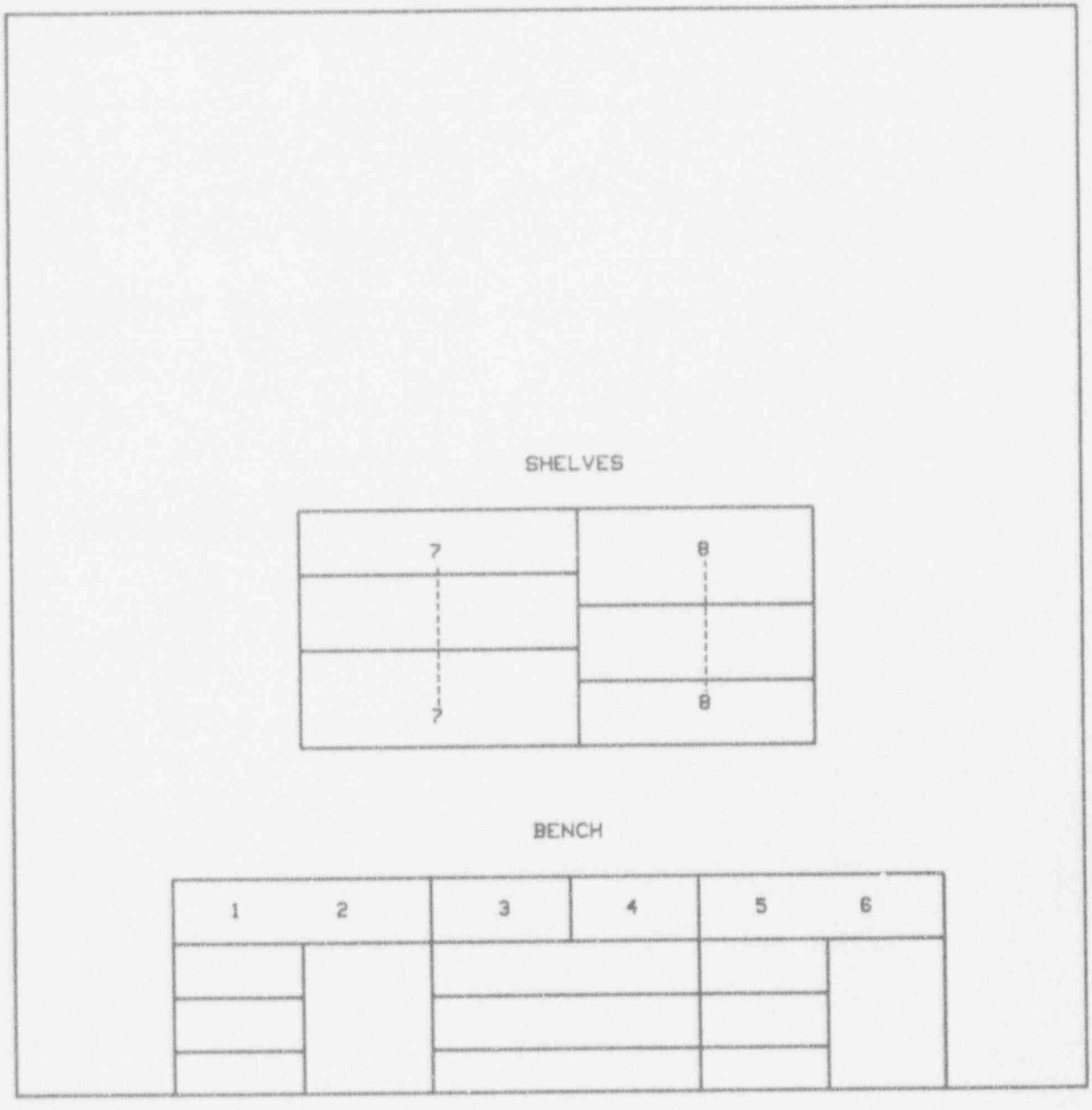
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-103 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-107 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |
| 25 | <50 | <25 |

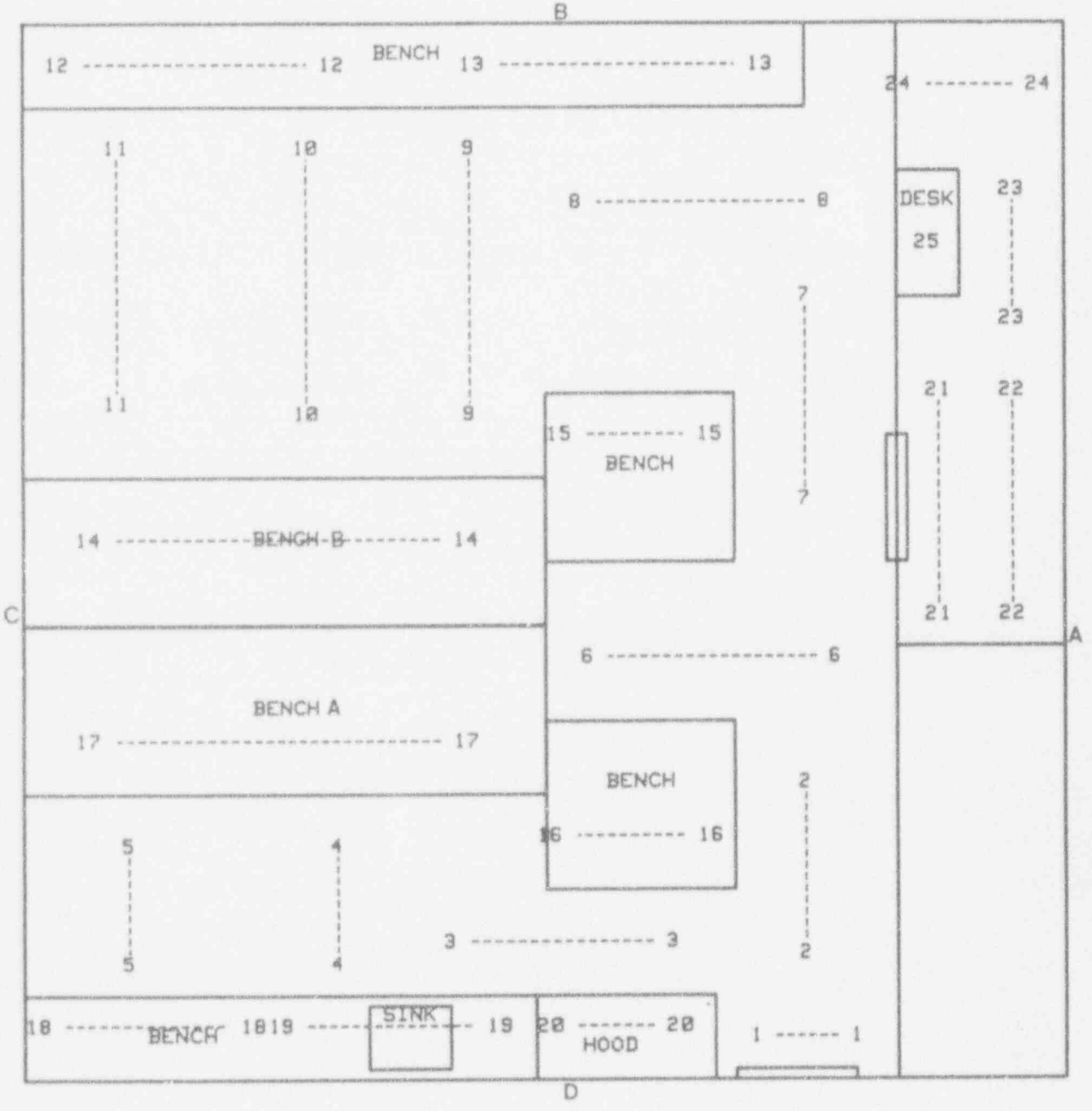
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-107 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-107 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |

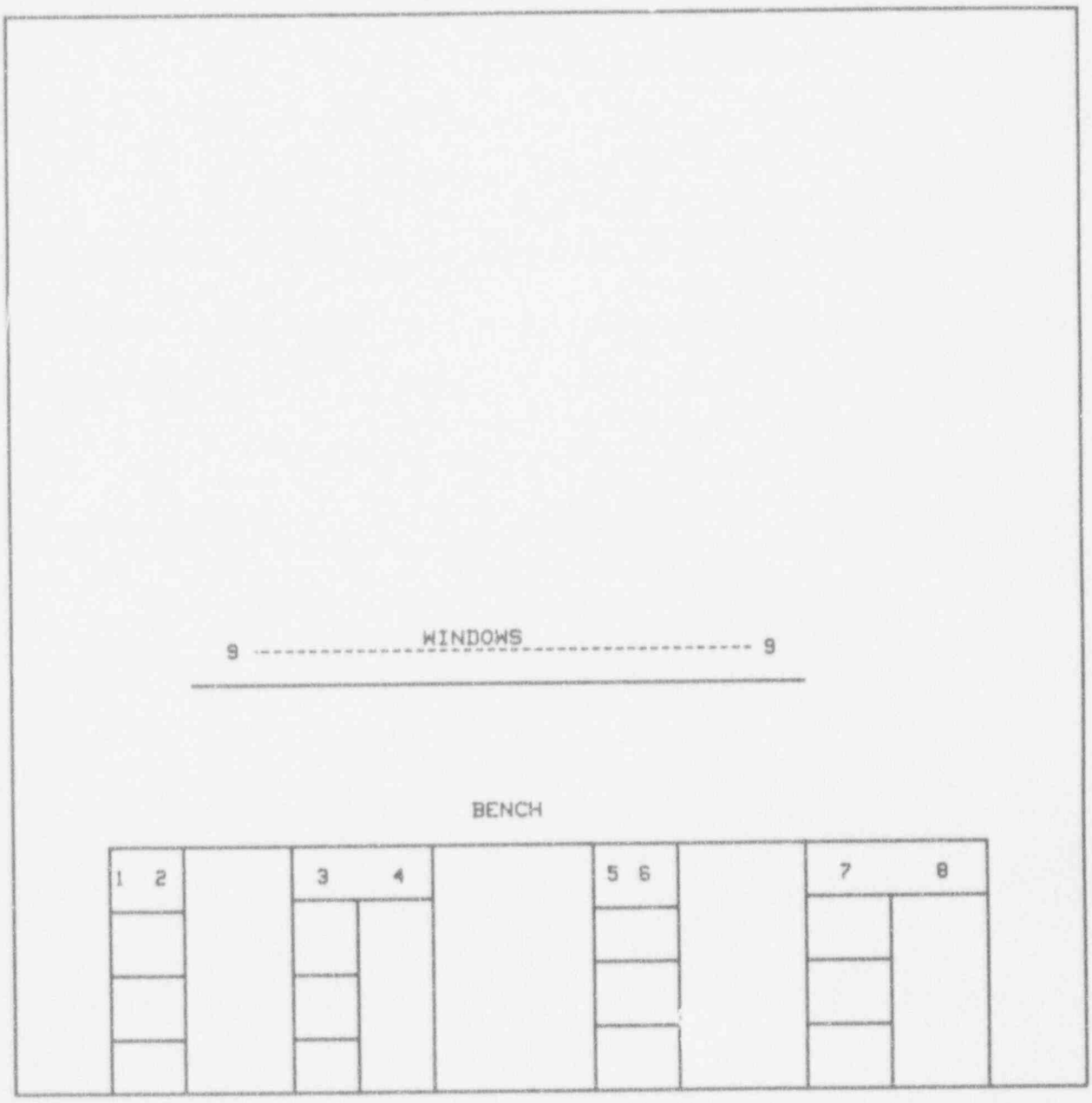
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-107 VIEW-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-107 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

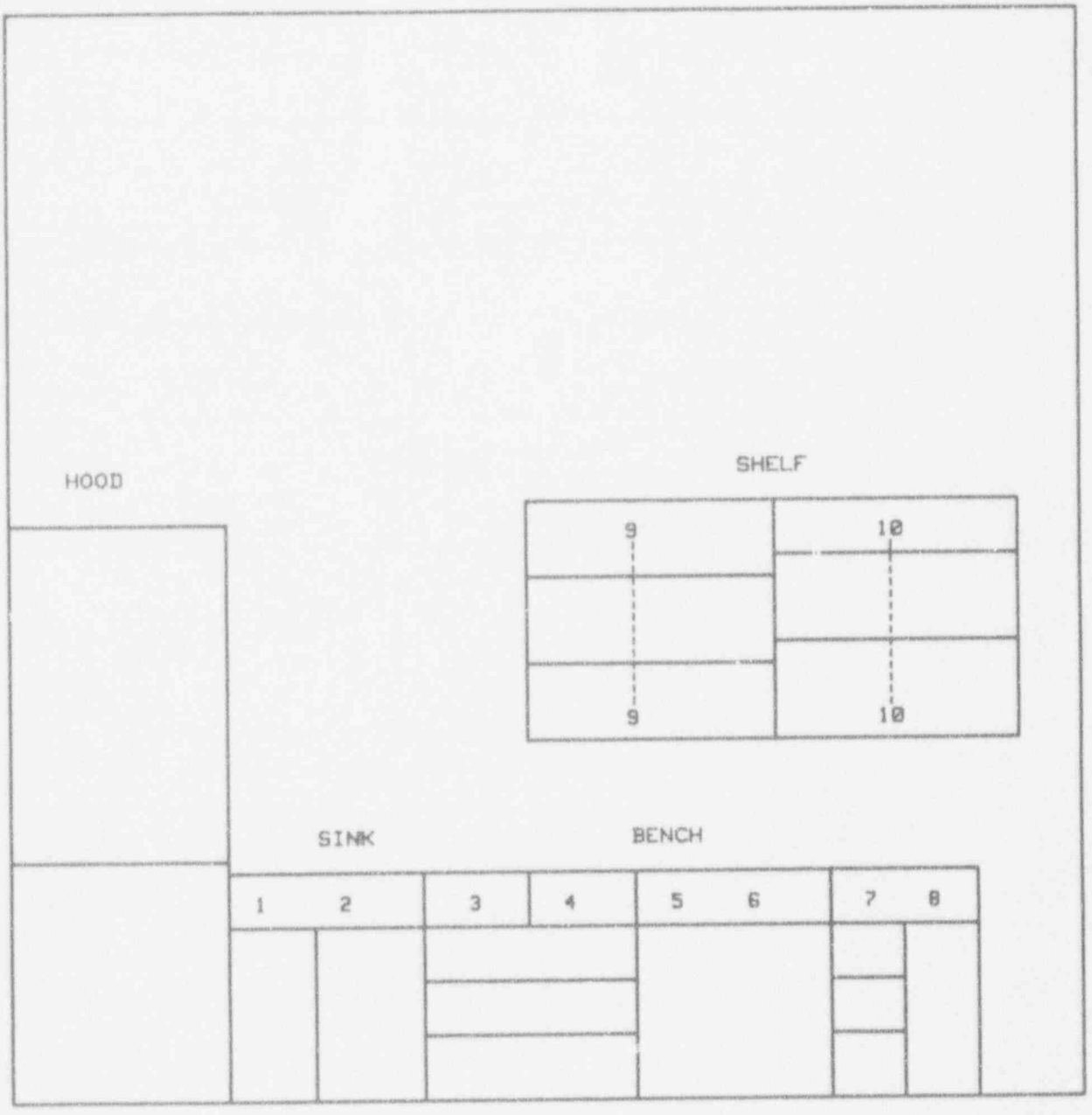
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-107 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-107 Island A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |

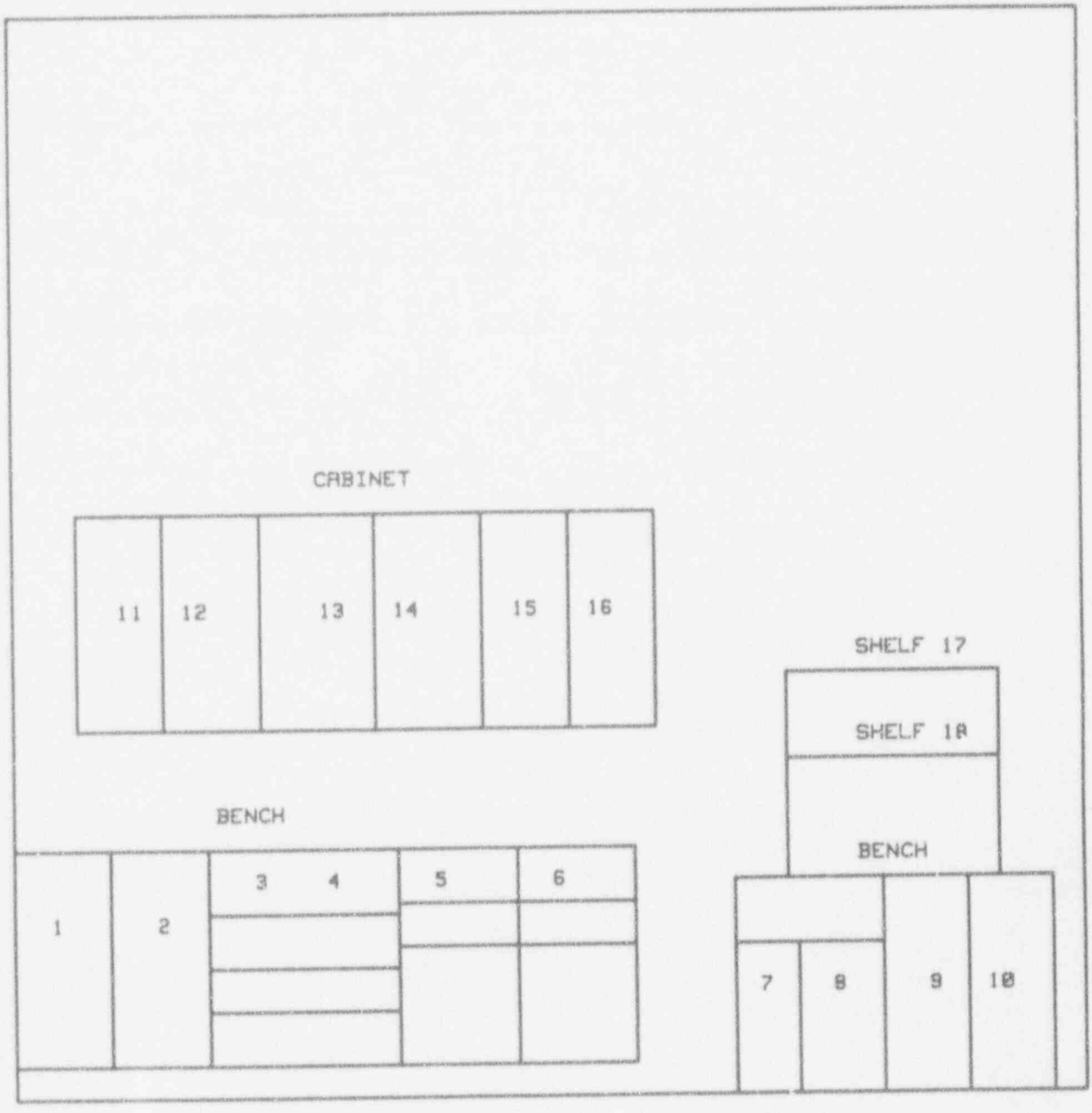
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-107 ISLAND-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-107 Island B (Pre-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | 3093 ±309 | 1547 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |

TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-107 Island B (Post-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |

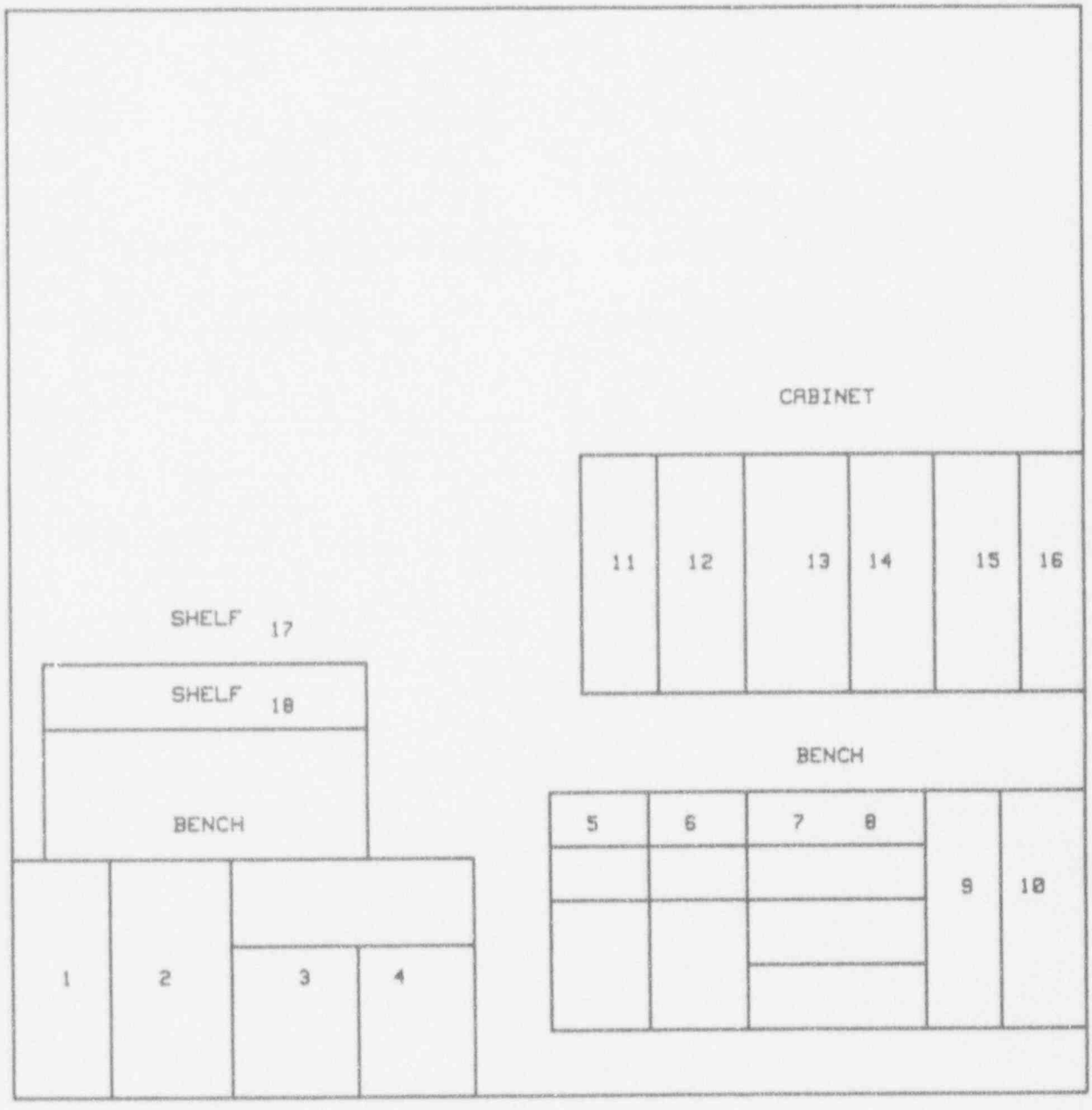
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-107 ISLAND-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-107 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-108 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |

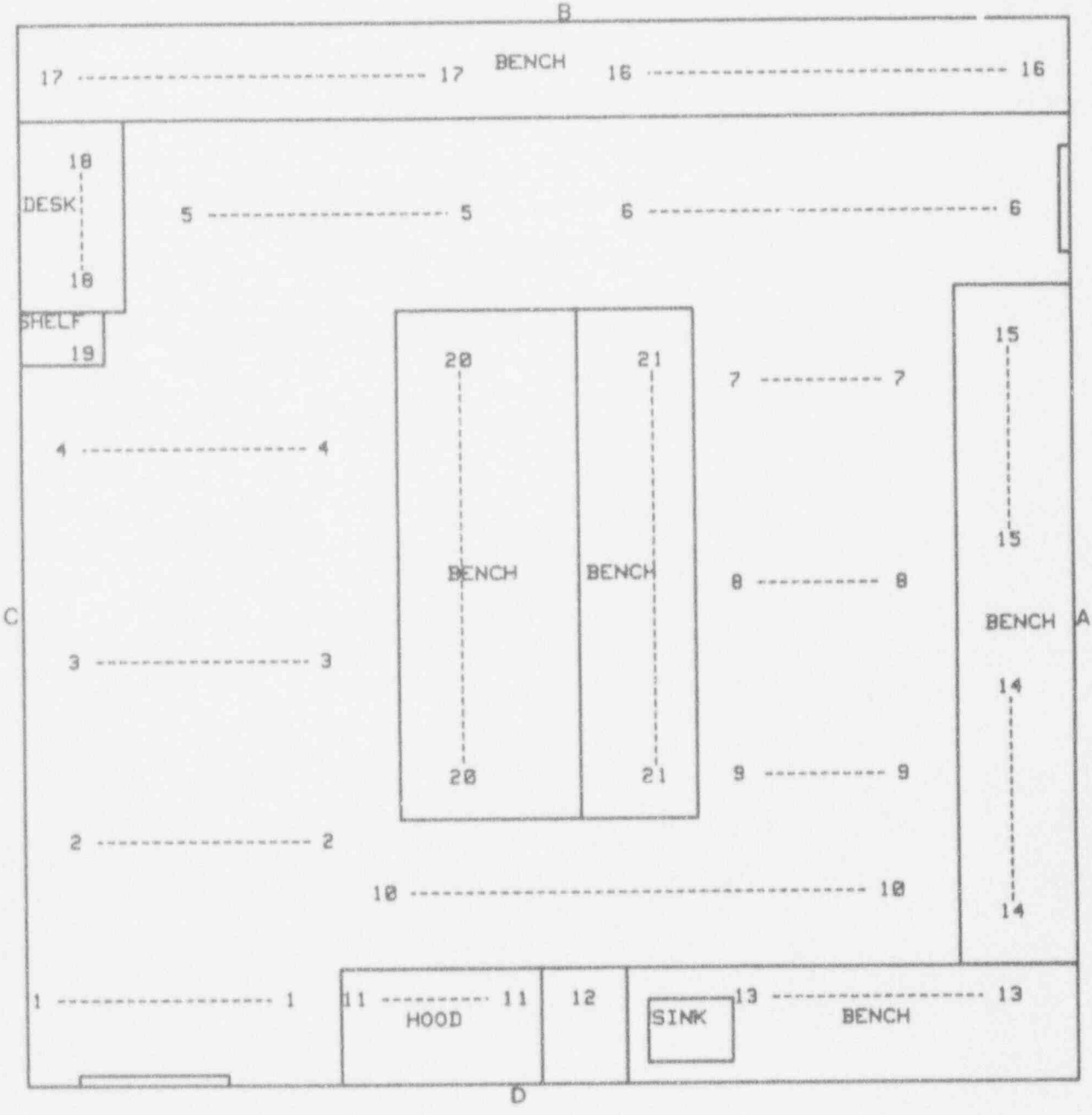
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-108 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-108 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |

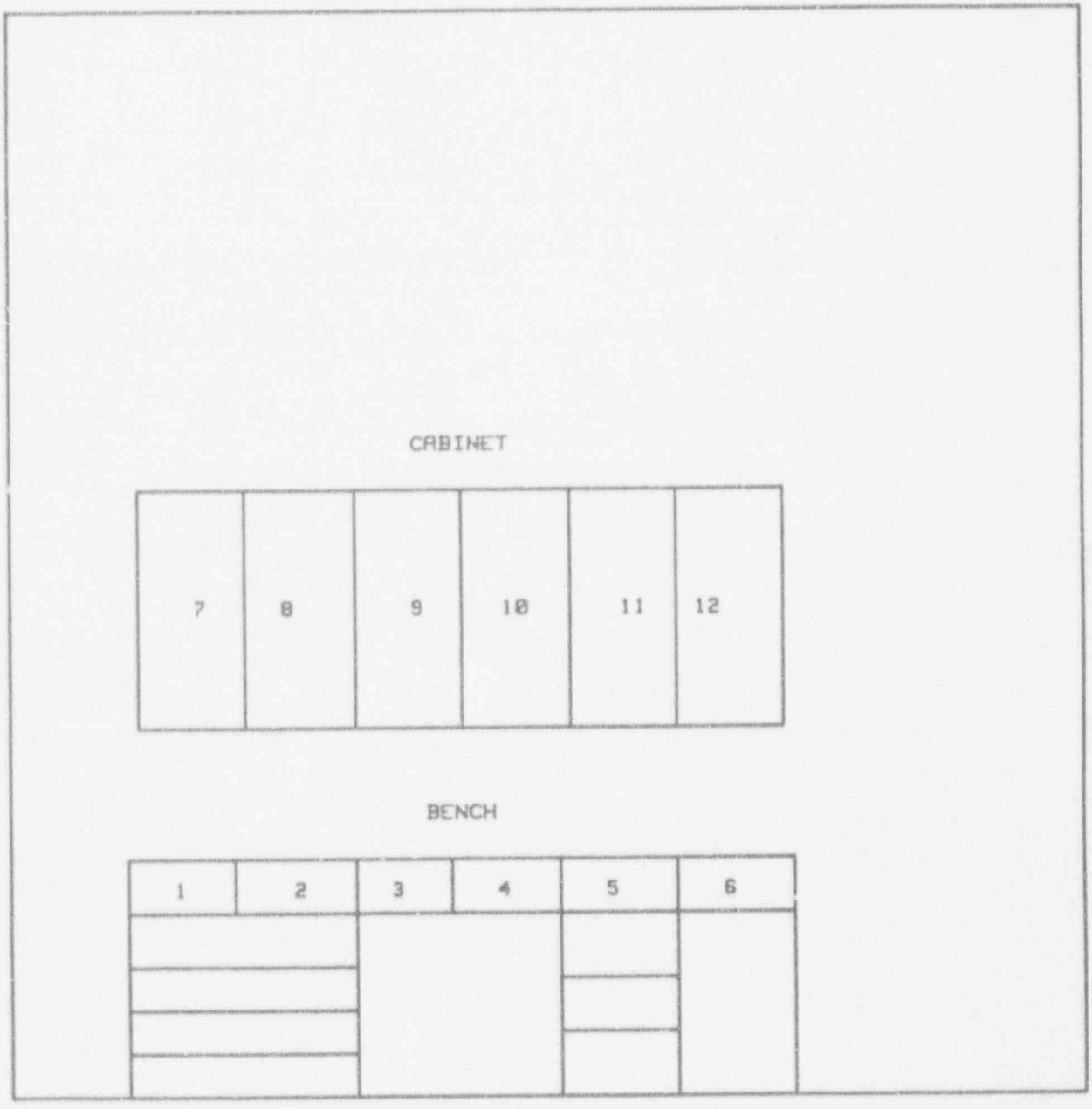
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-108 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-108 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |

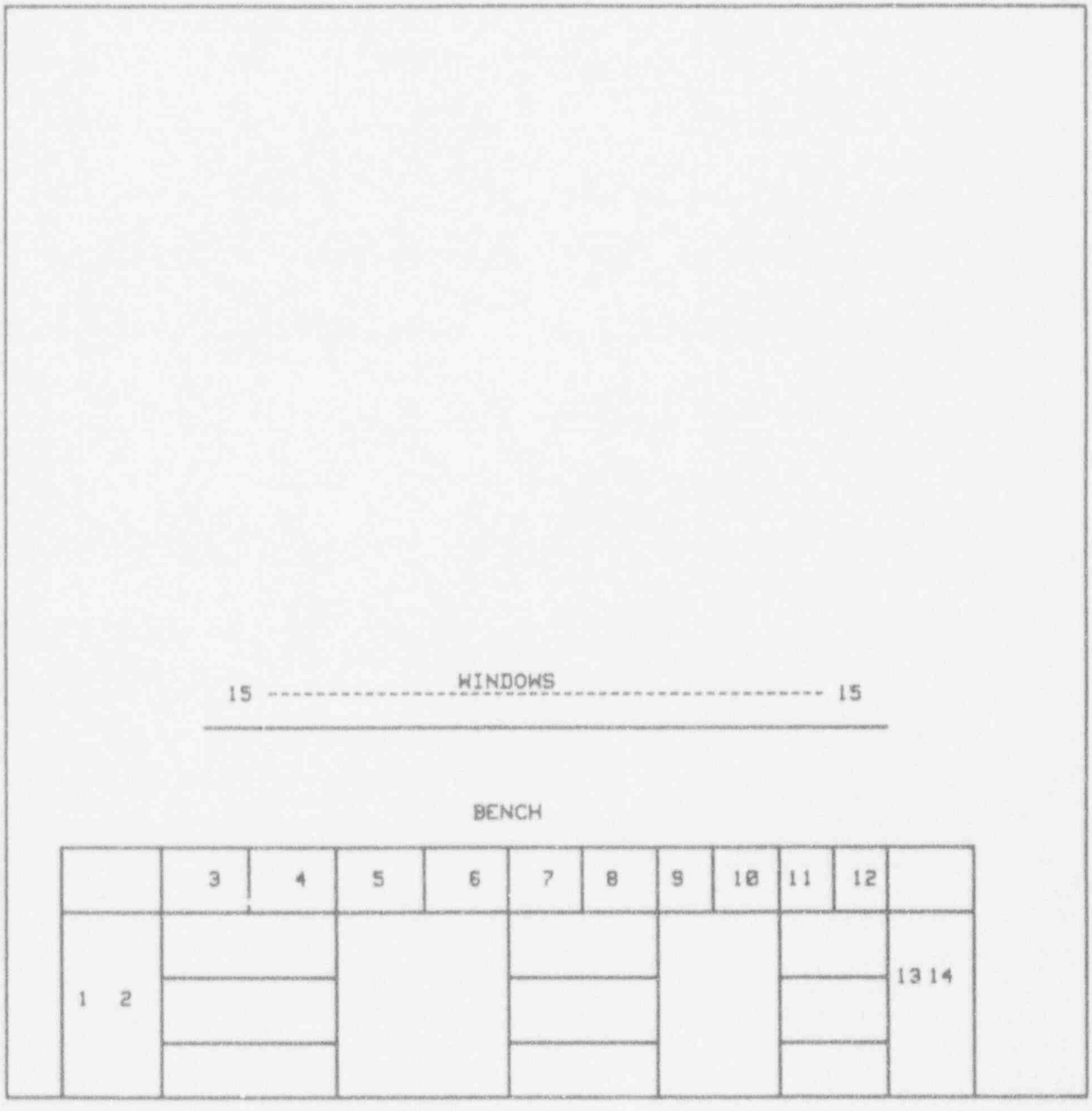
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-108 VIEW-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-108 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | 91 ±9 | 46 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |

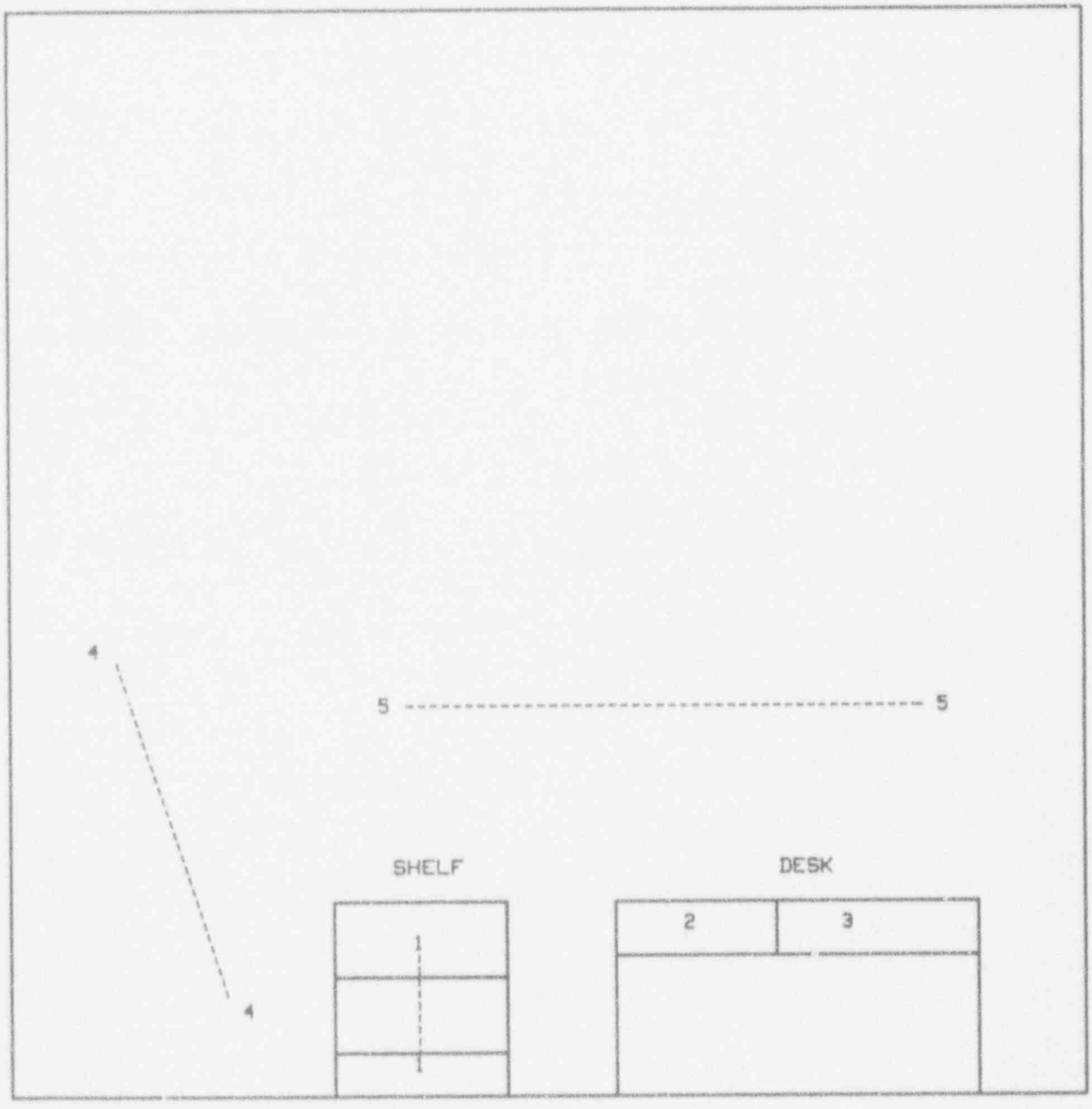
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-108 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-108 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

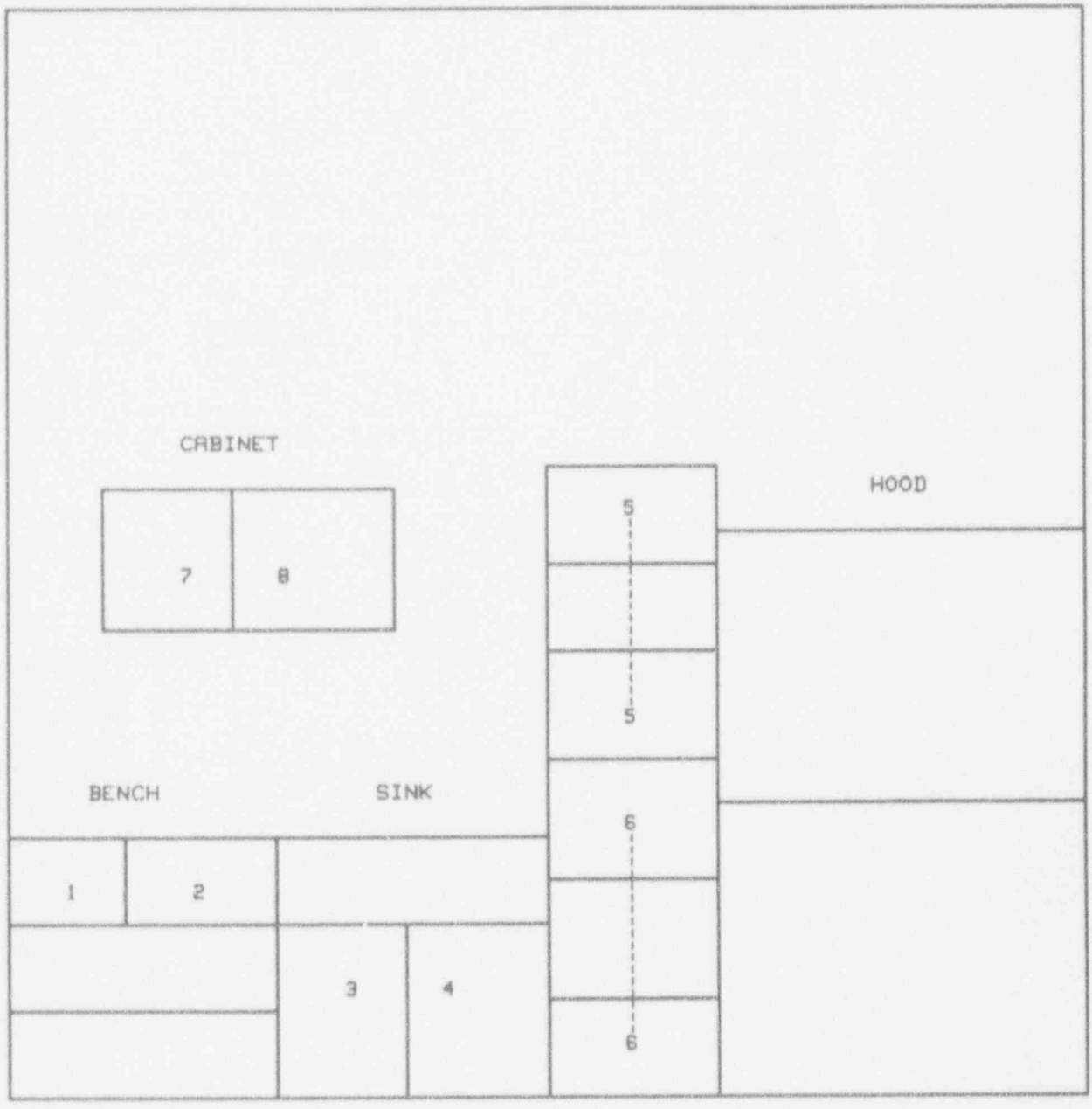
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-108 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-108 Island B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

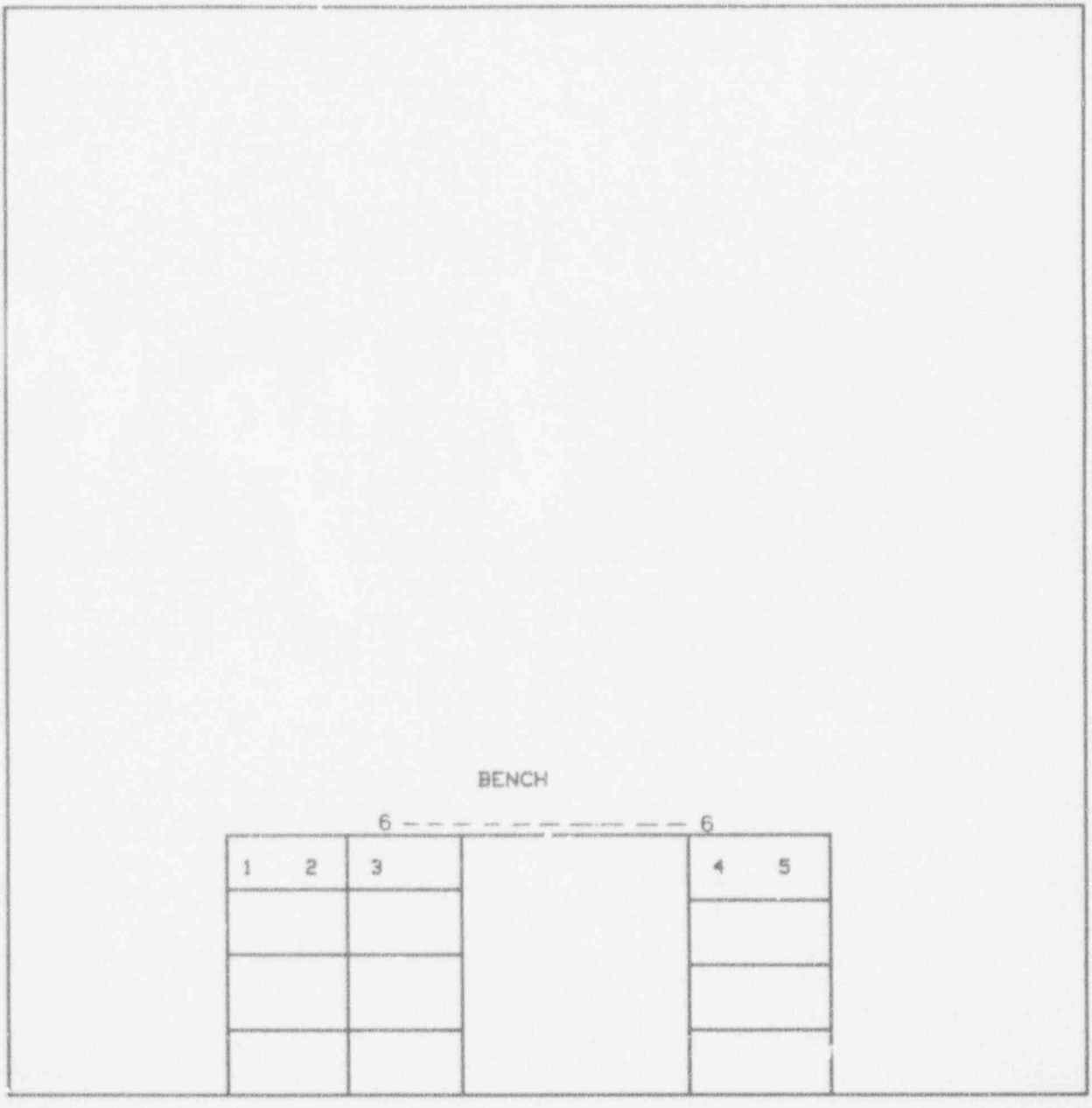
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-108 ISLAND-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-108 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-109 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |

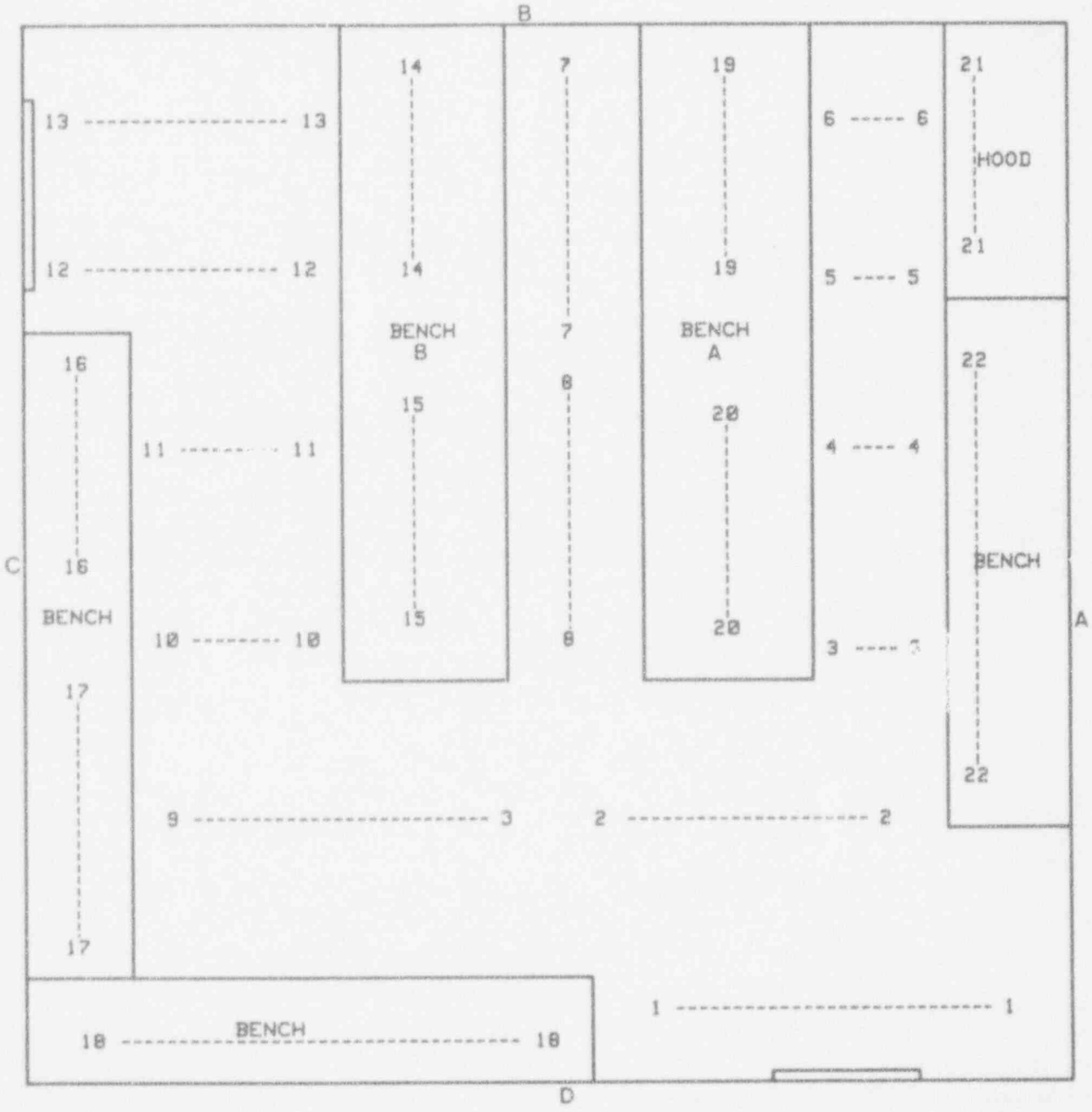
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-109 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-109 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

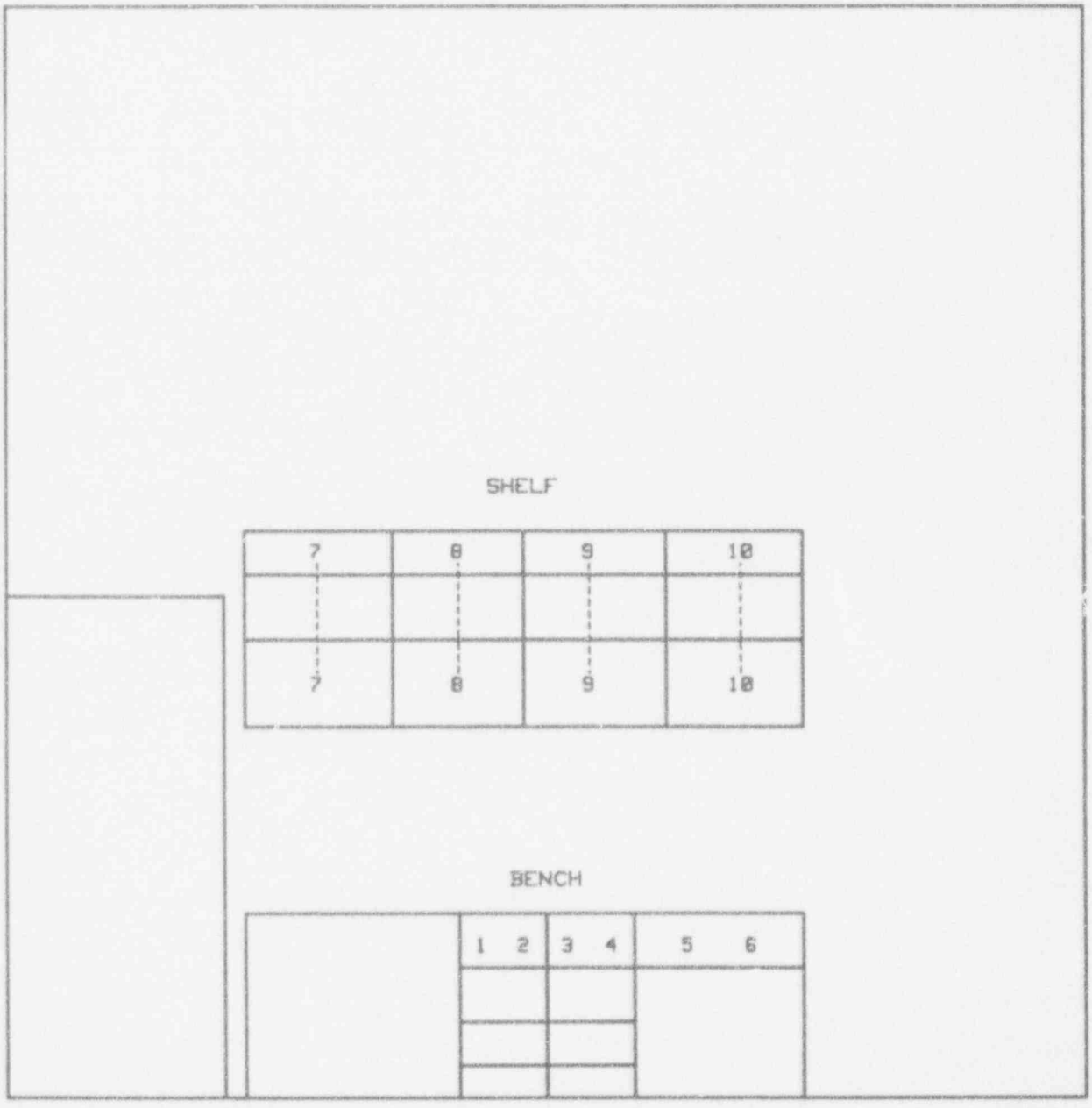
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-109 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-109 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

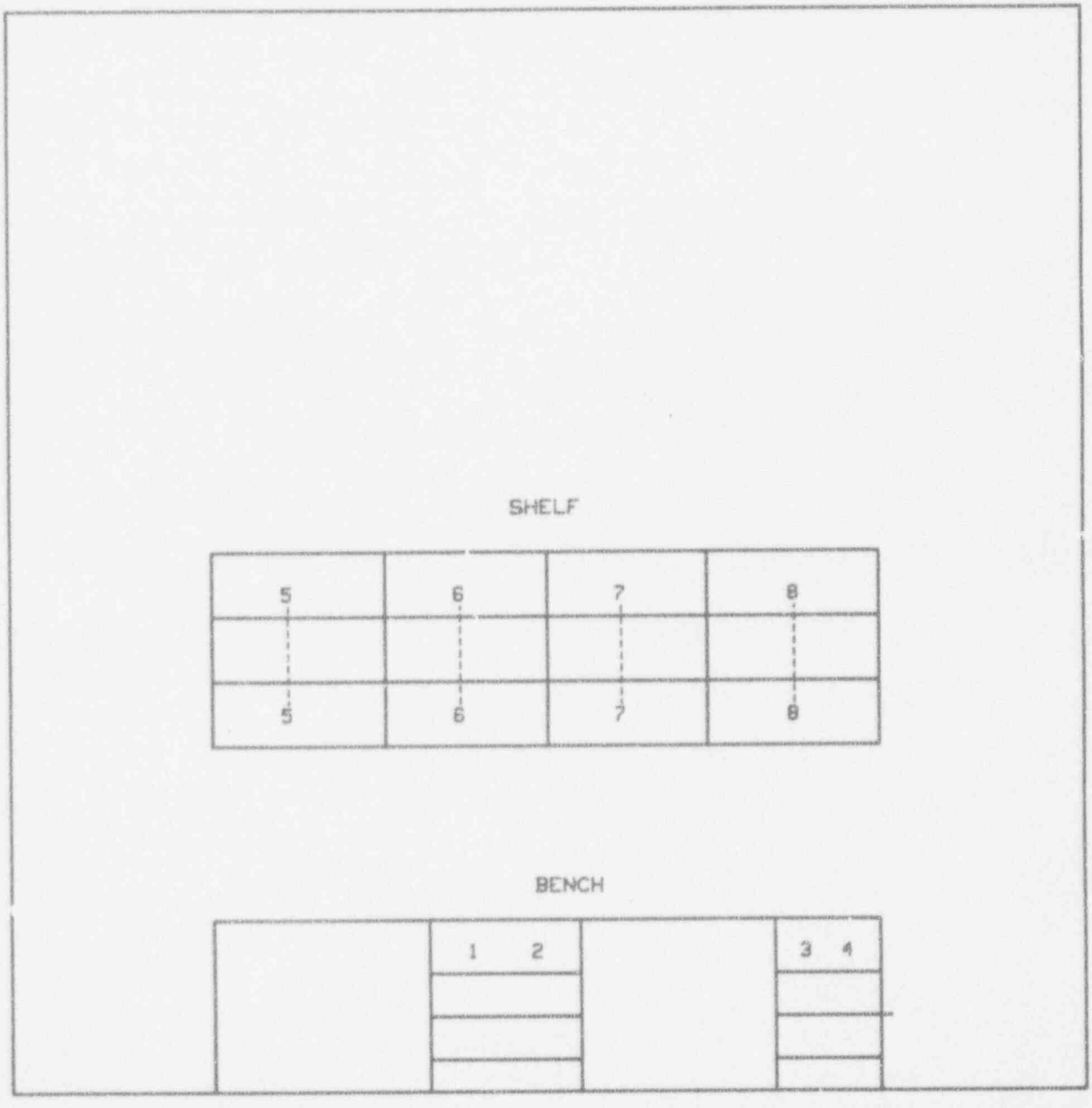
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-109 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-109 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

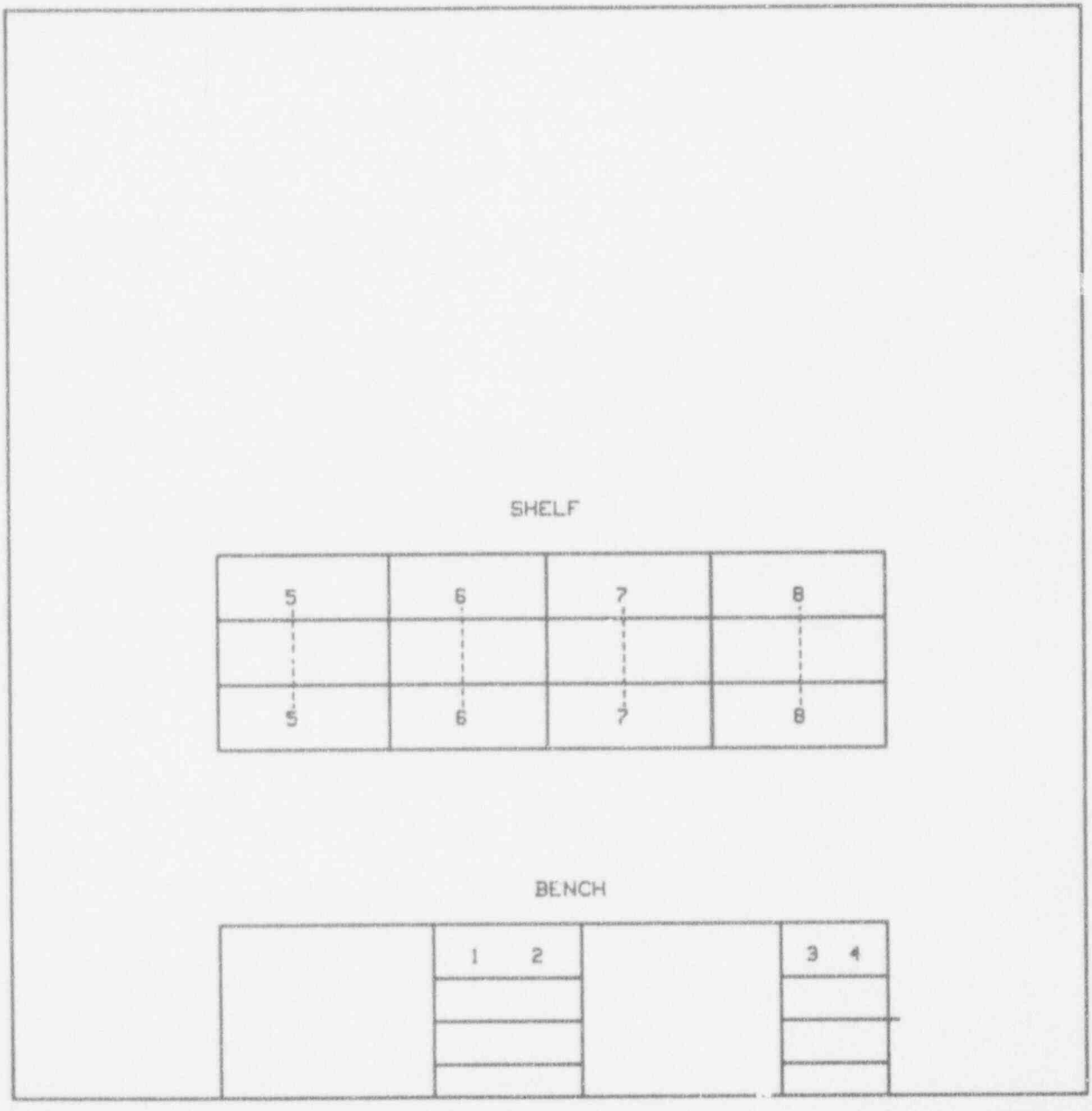
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-109 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-109 Island A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |

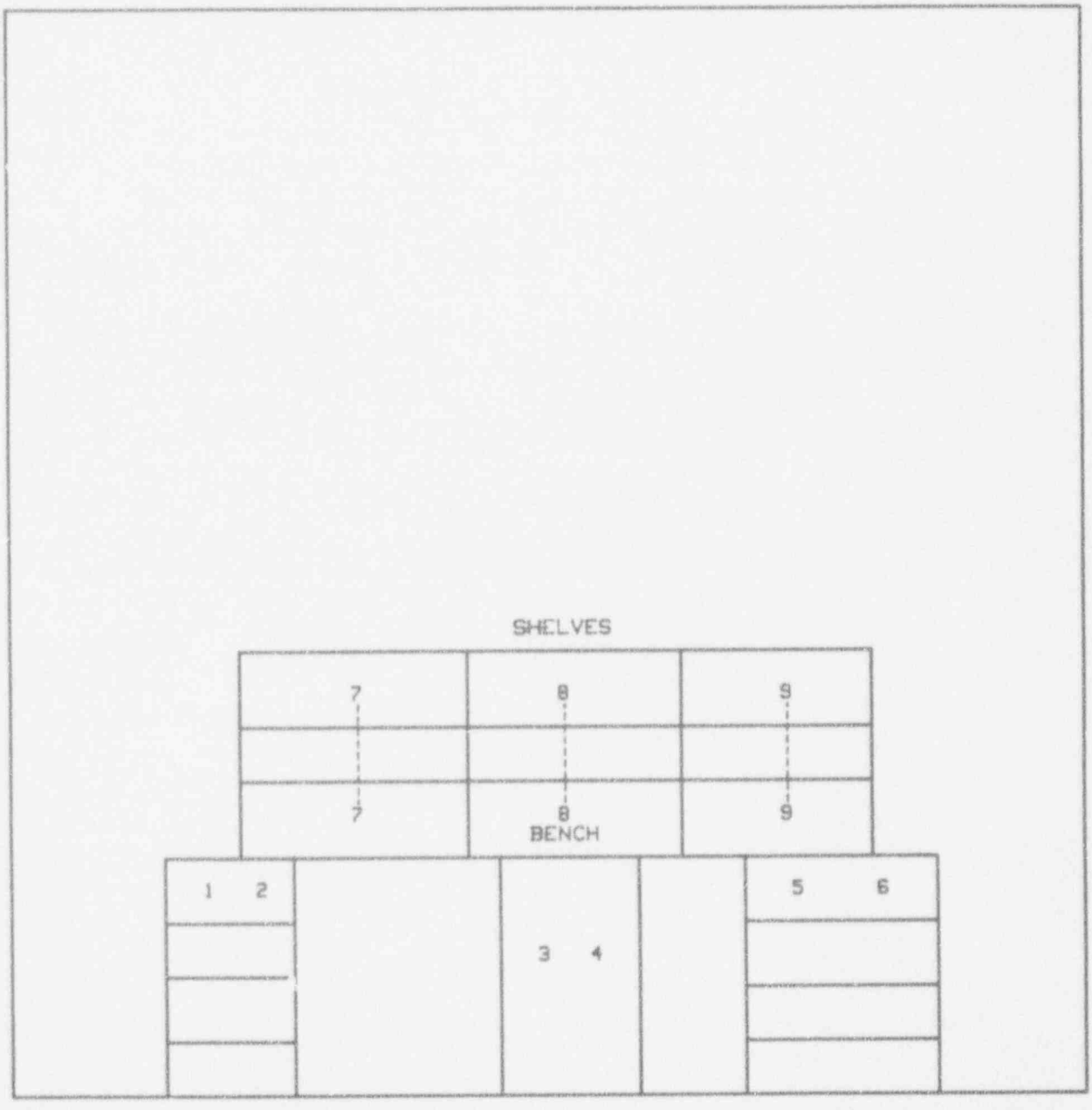
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-109 ISLAND-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-109 Island B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

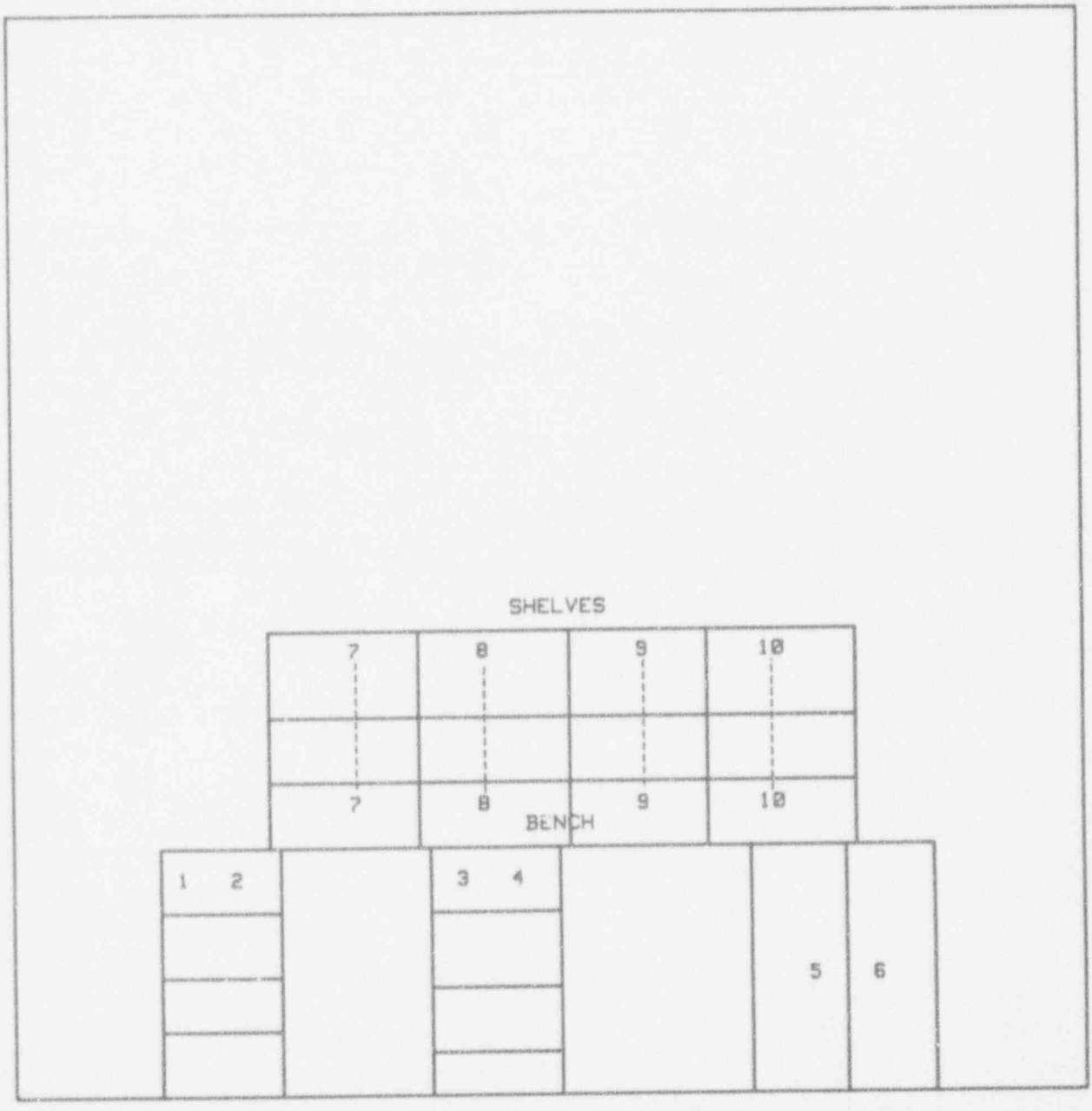
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-109 ISLAND-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-109 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-110 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | 53 ±5 | 27 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |

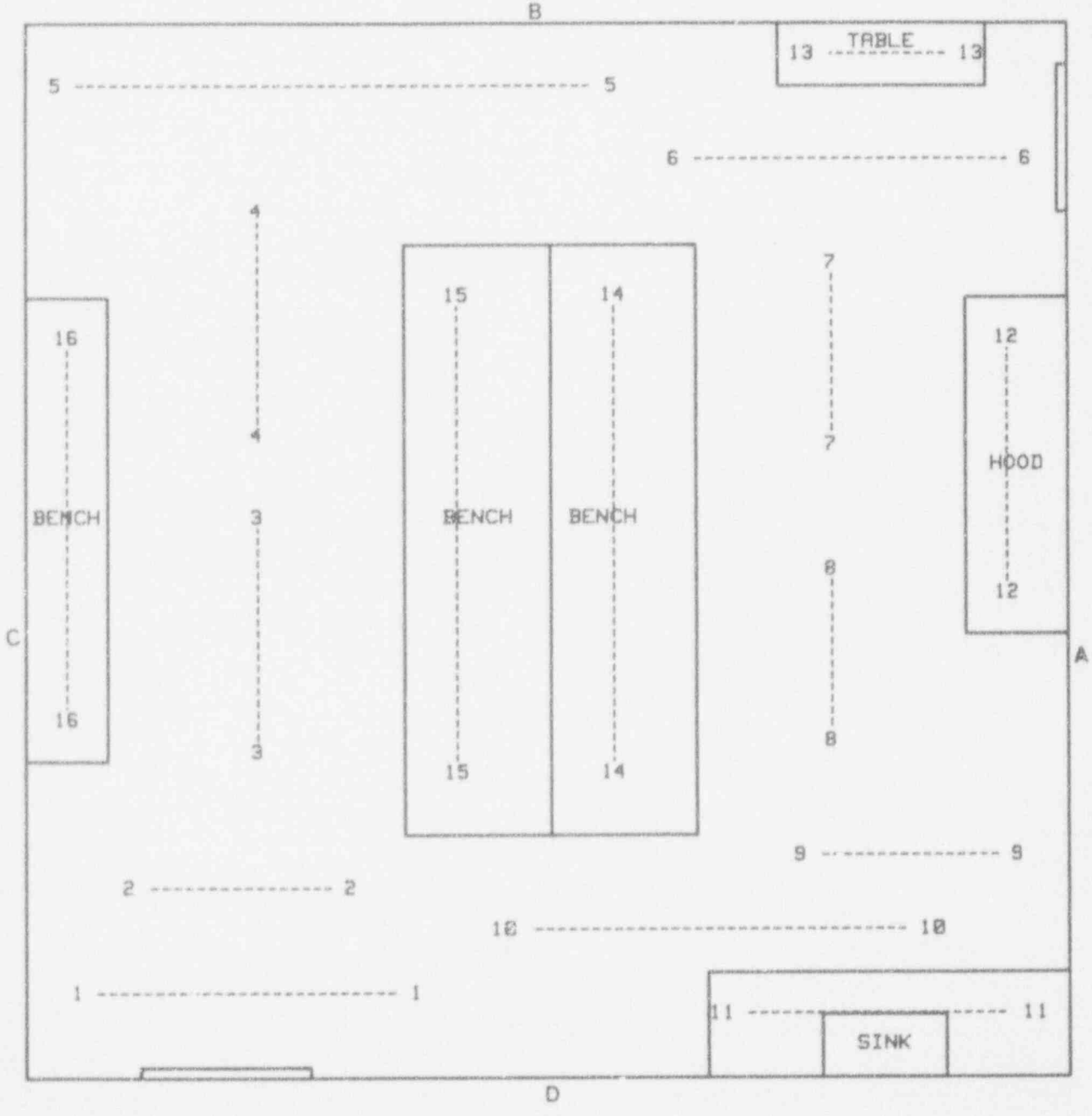
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-110 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-110 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | 80 ±8 | 40 |
| 2 | 88 ±9 | 44 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

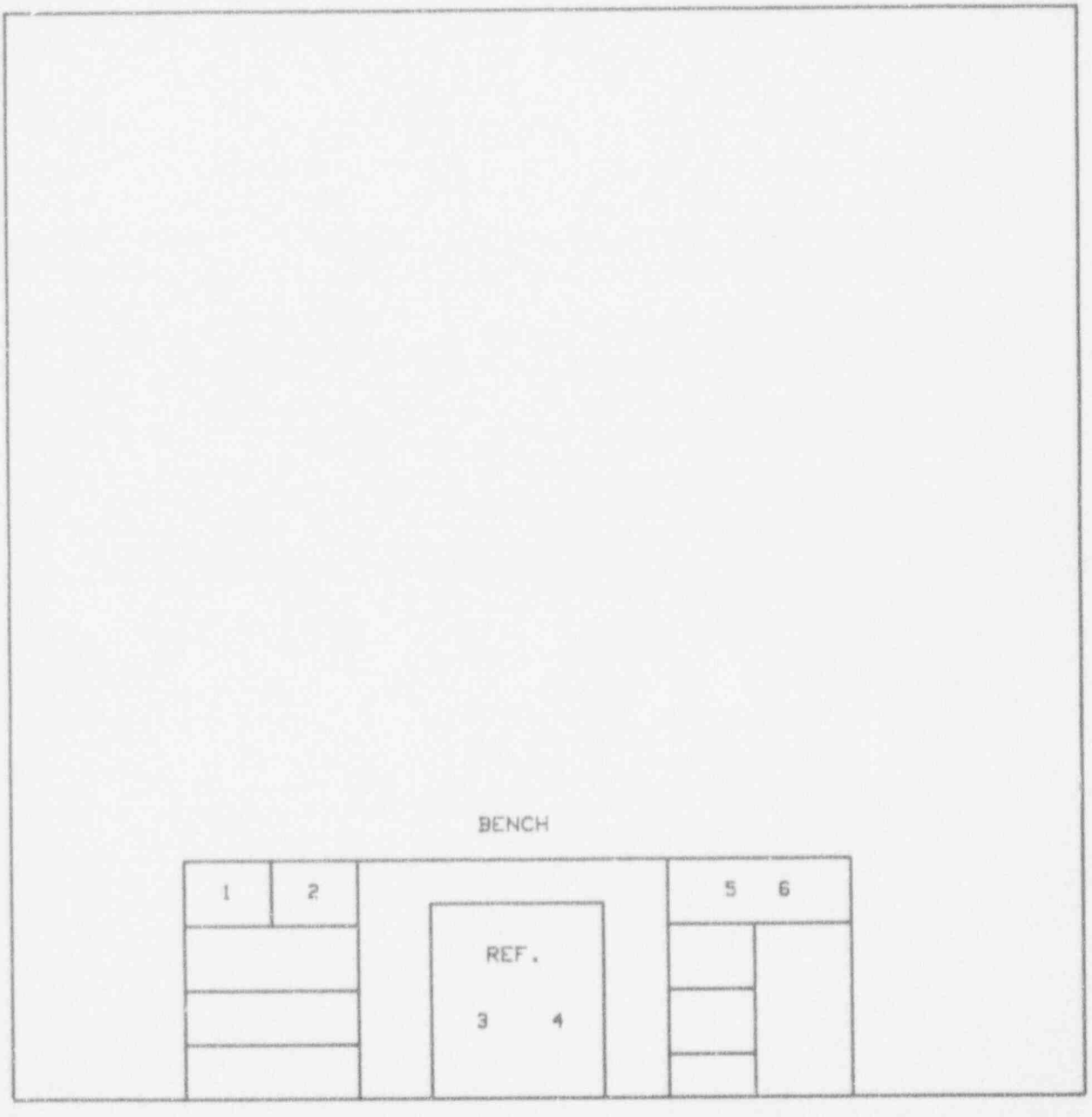
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-110 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-110 Island A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

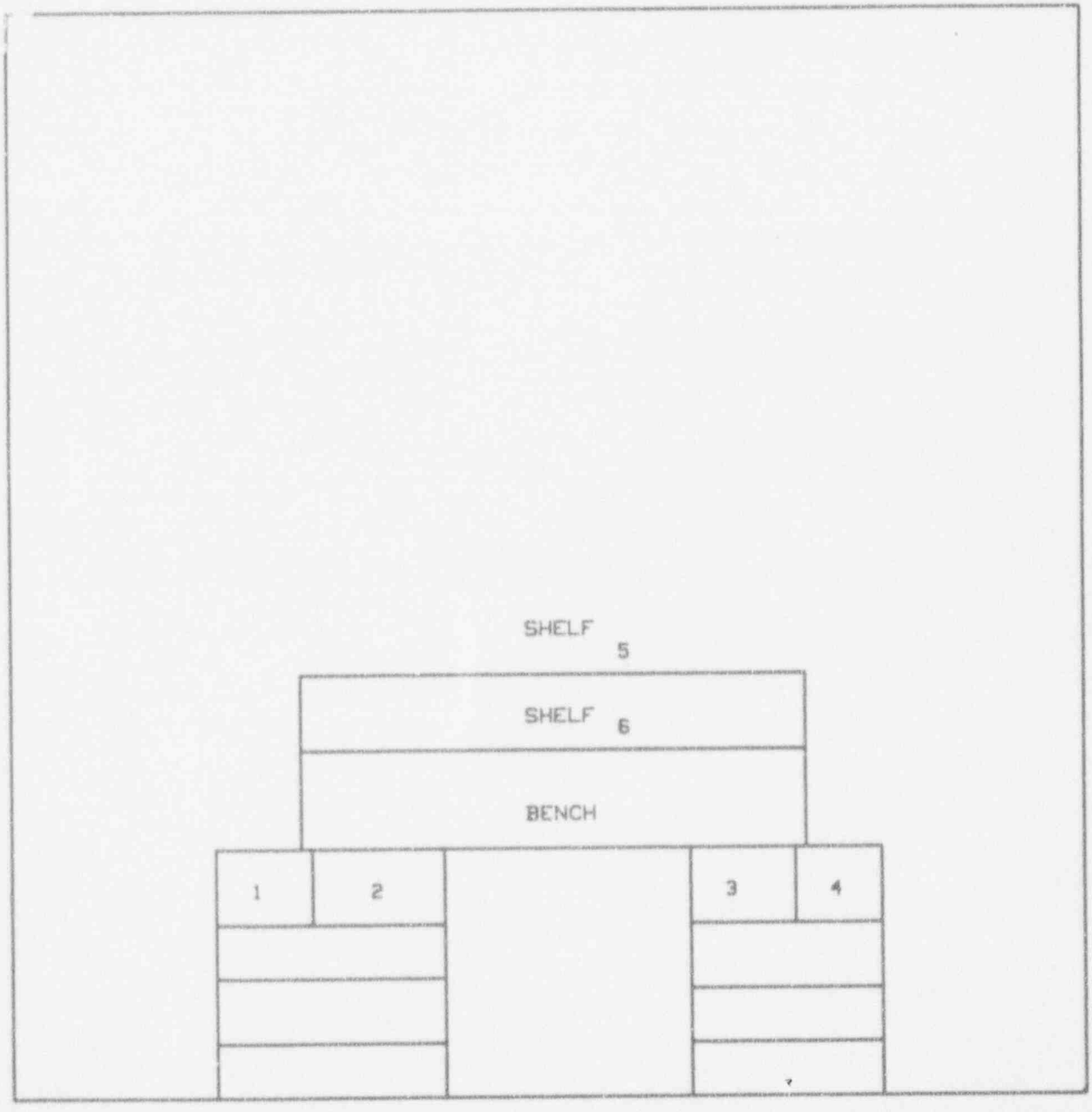
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-110 ISLAND-A

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-110 Island B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |

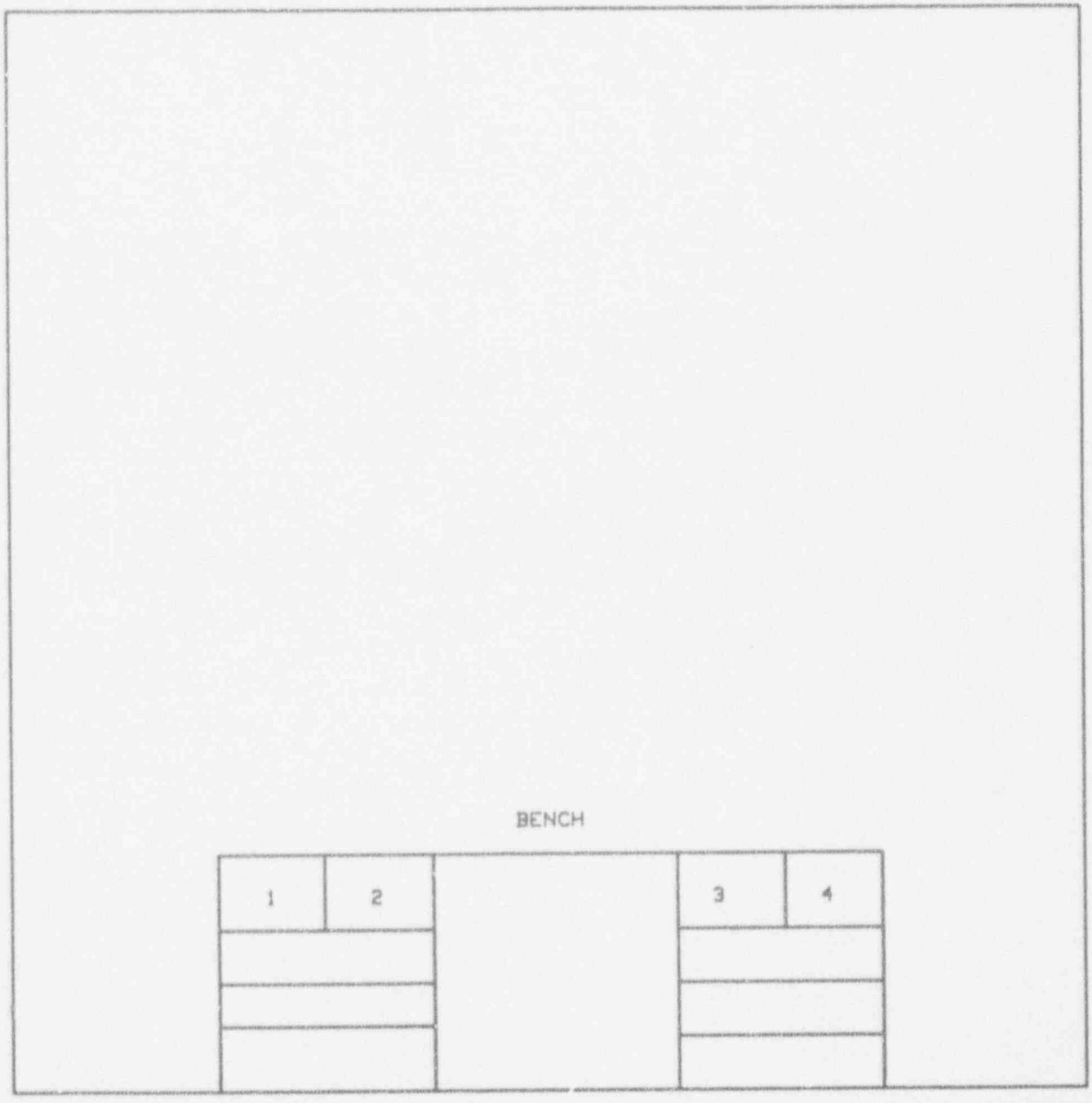
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-110 ISLAND-B

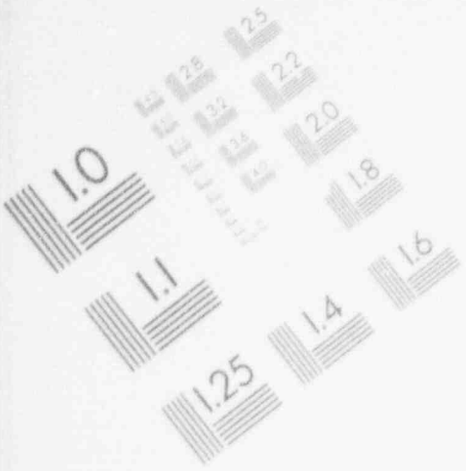
PRINCIPLE OCCUPANTS: _____

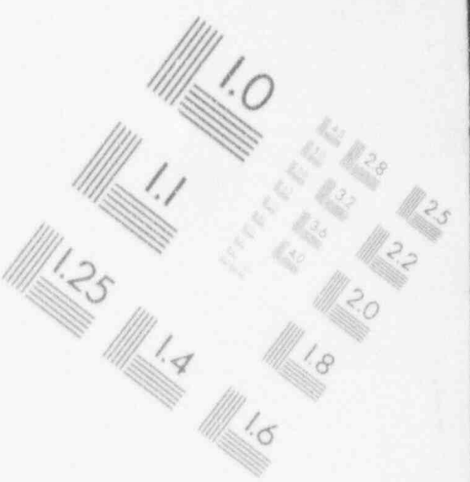
ISOTOPE USAGE: _____



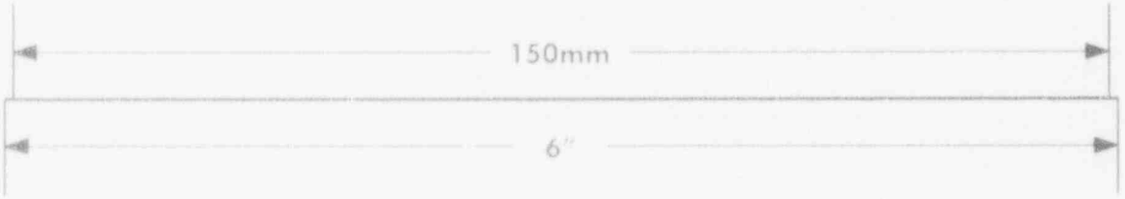
# 1

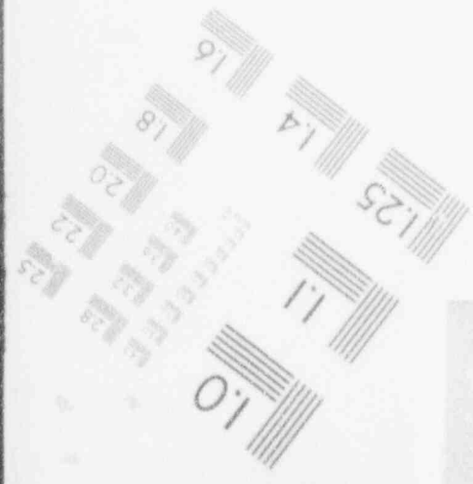
## IMAGE EVALUATION TEST TARGET (MT-3)

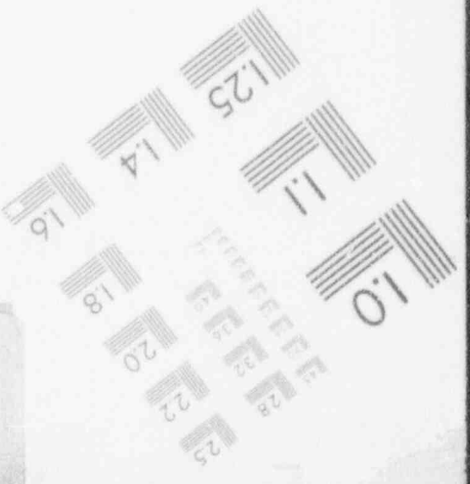




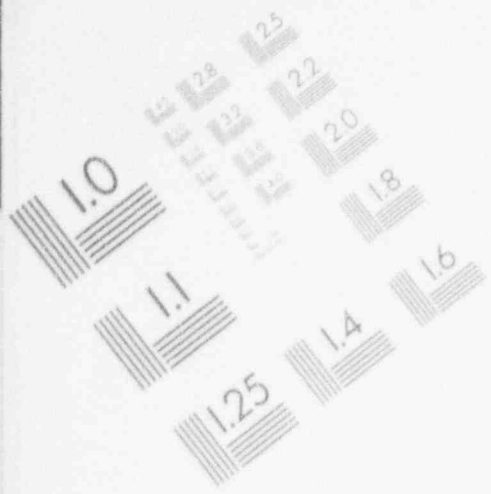


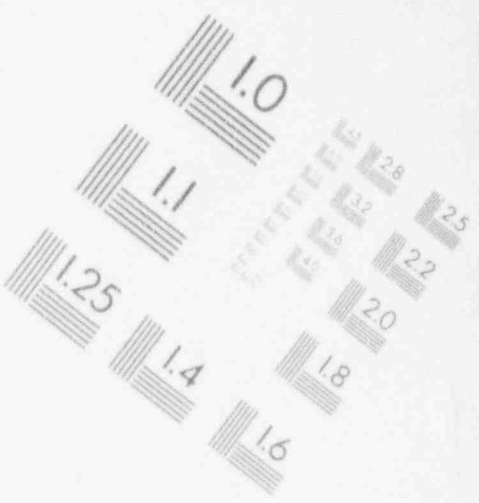



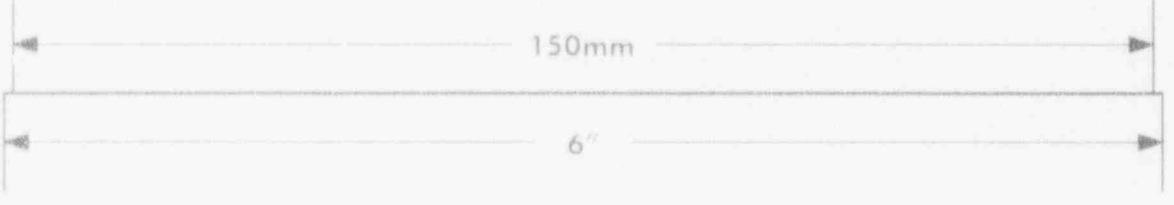
# 1

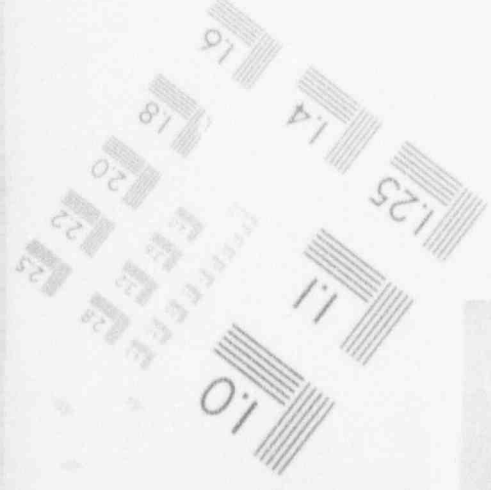
## IMAGE EVALUATION
## TEST TARGET (MT-3)

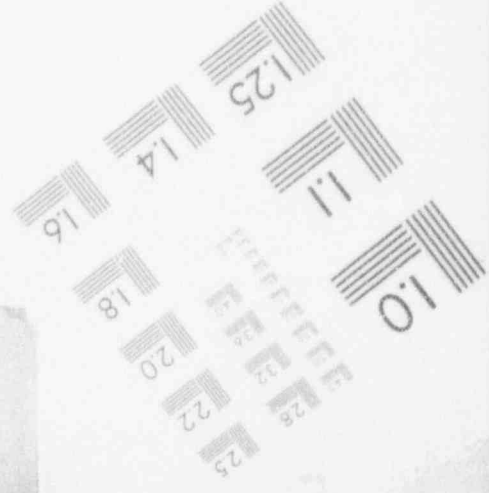


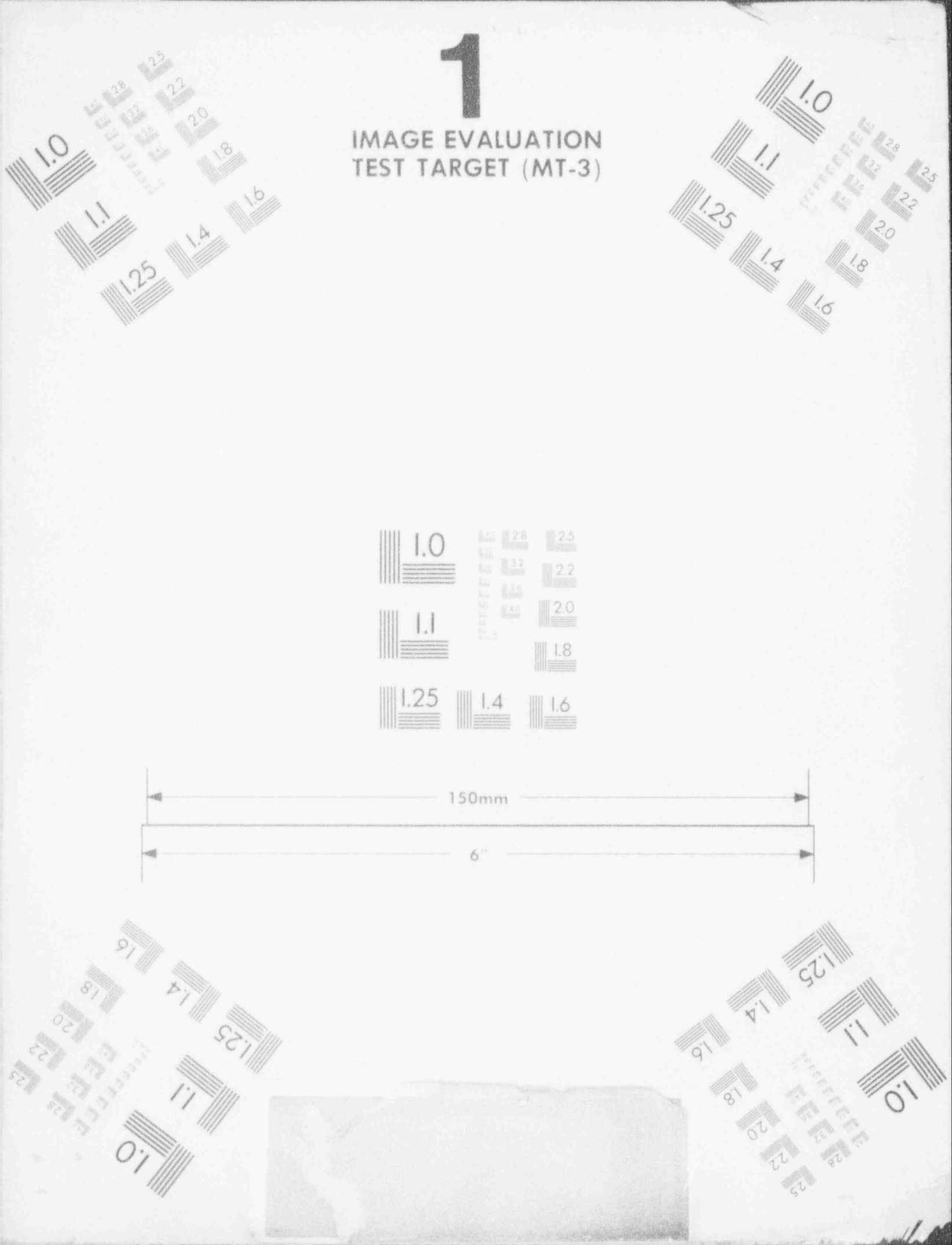



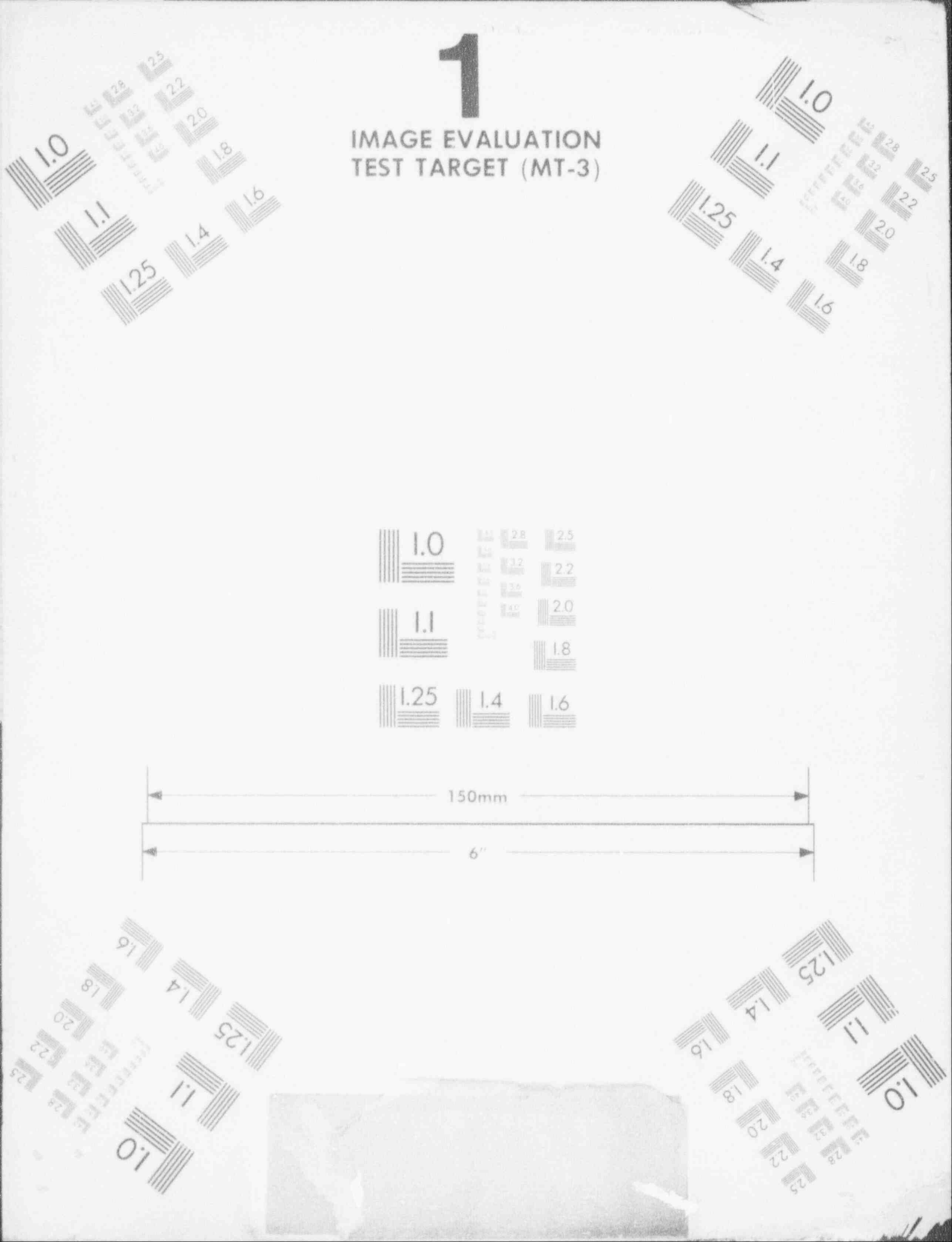





1
IMAGE EVALUATION
TEST TARGET (MT-3)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.5
4.0
4.5
150mm
6"


1
IMAGE EVALUATION
TEST TARGET (MT-3)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
150mm
6"

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

**LOCATION:** V-110 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | 562 ±56 | 281 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-131 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | 56 ±6 | 28 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |

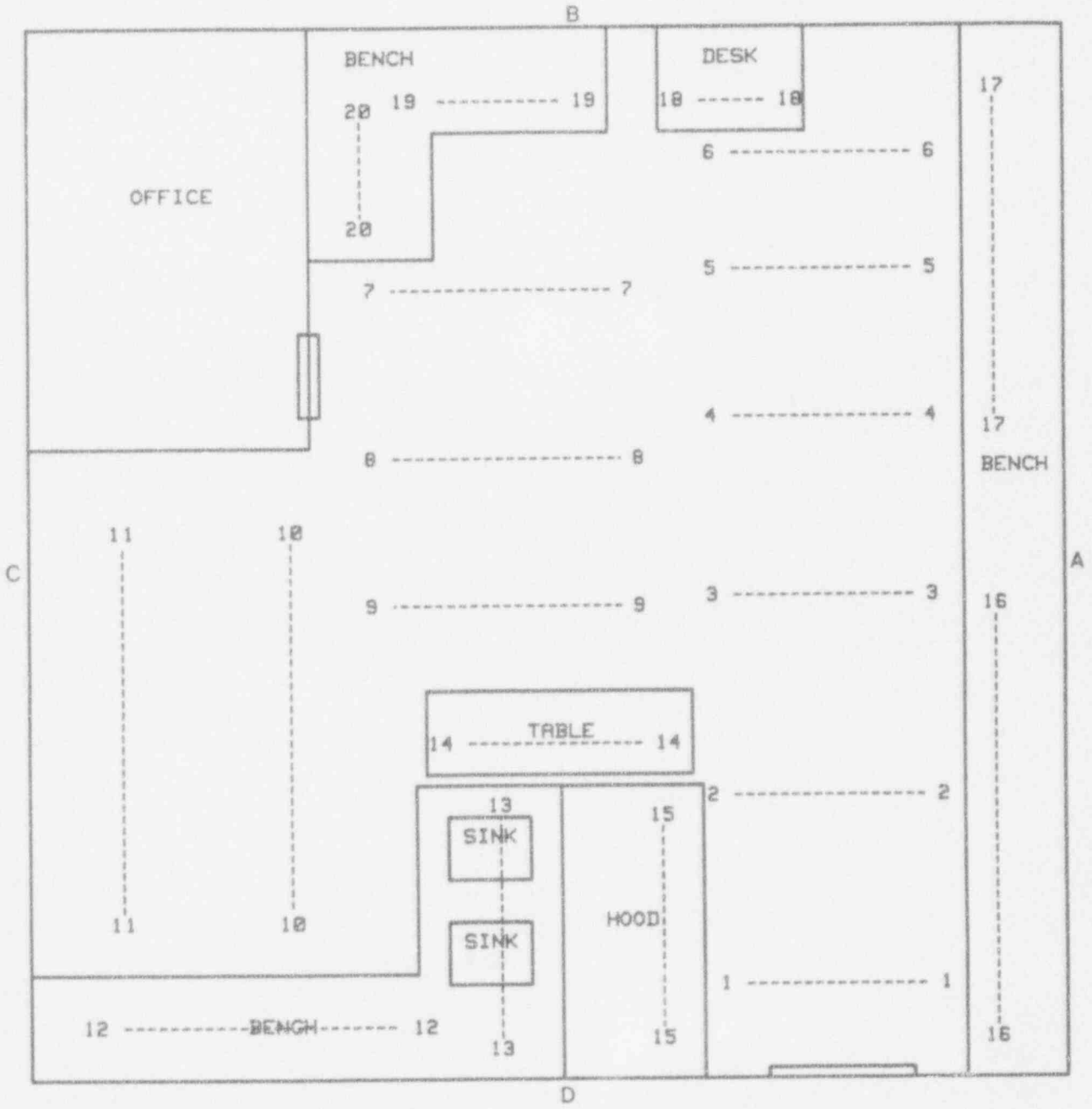
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-131 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-131 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |

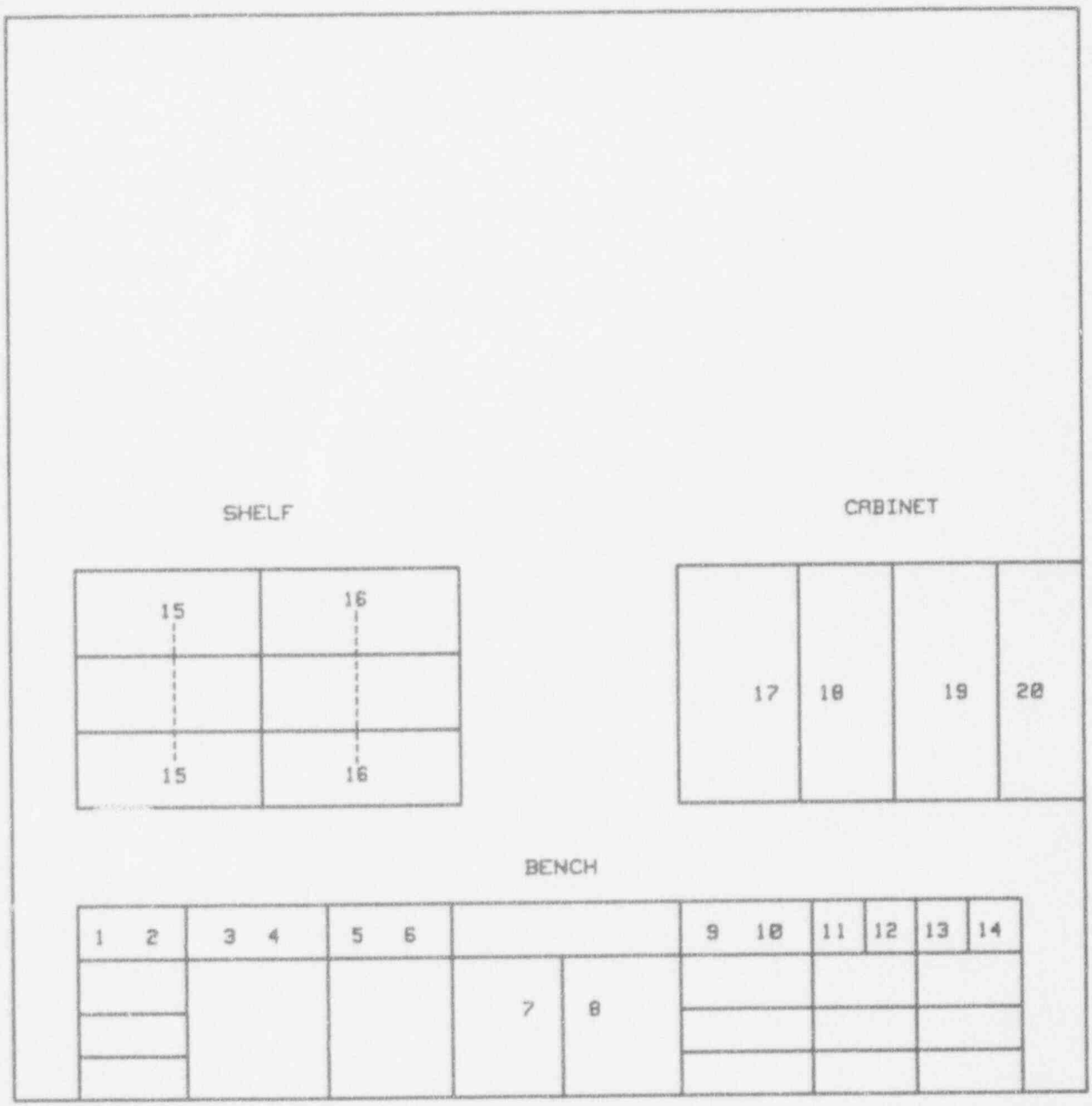
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-131 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-131 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |

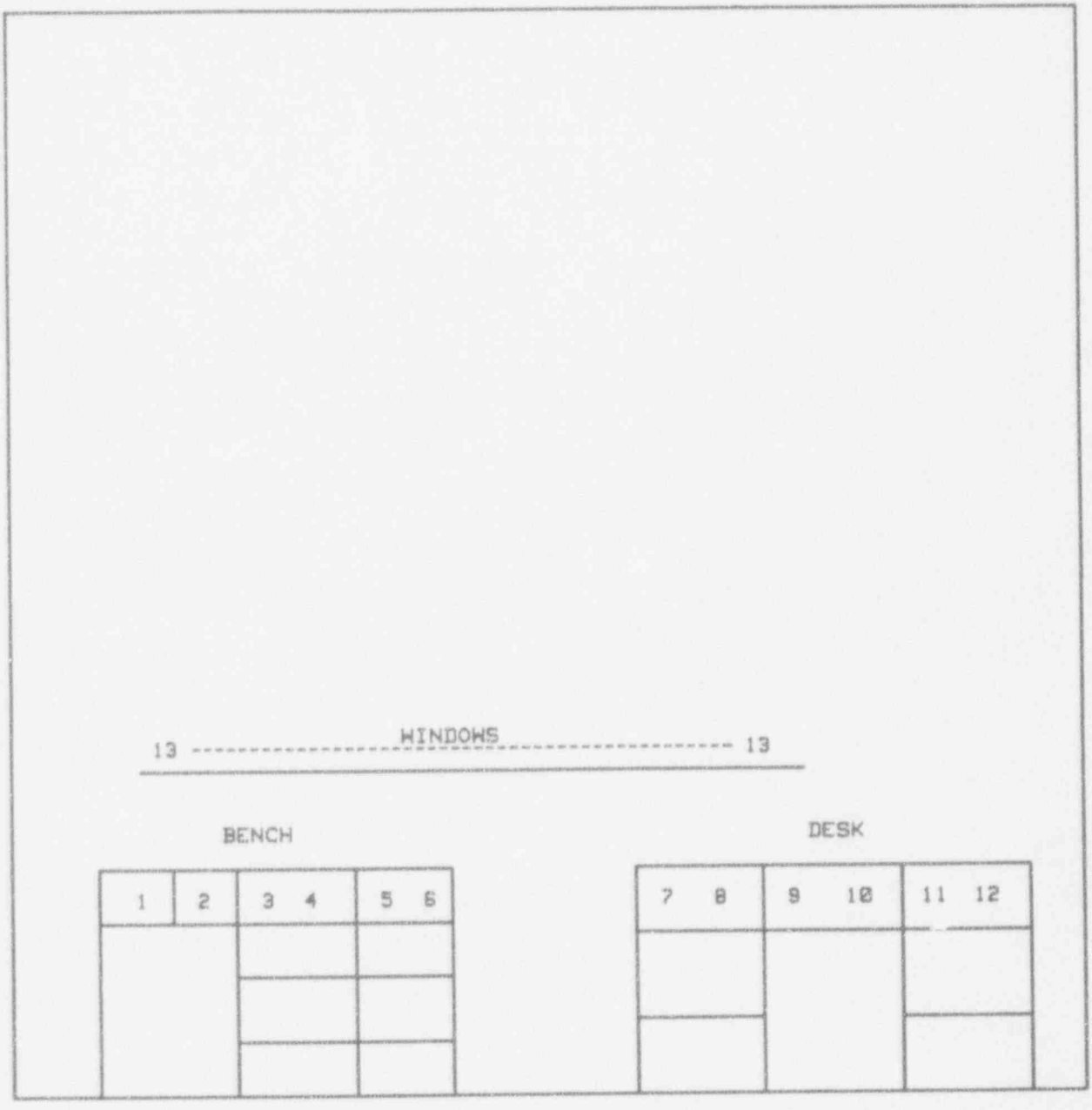
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-131 VIEW-B

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-131 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

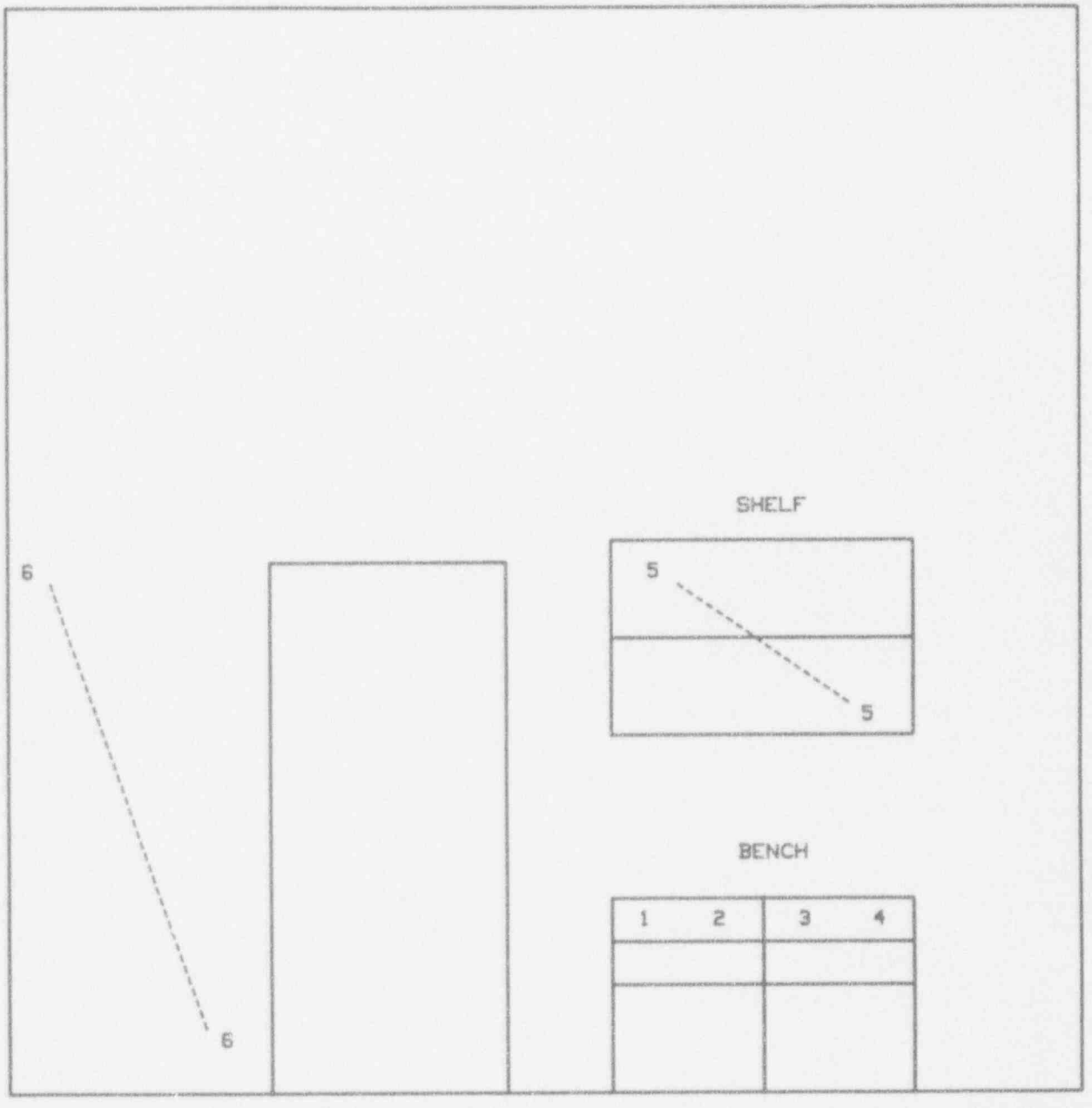
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-131 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-131 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |

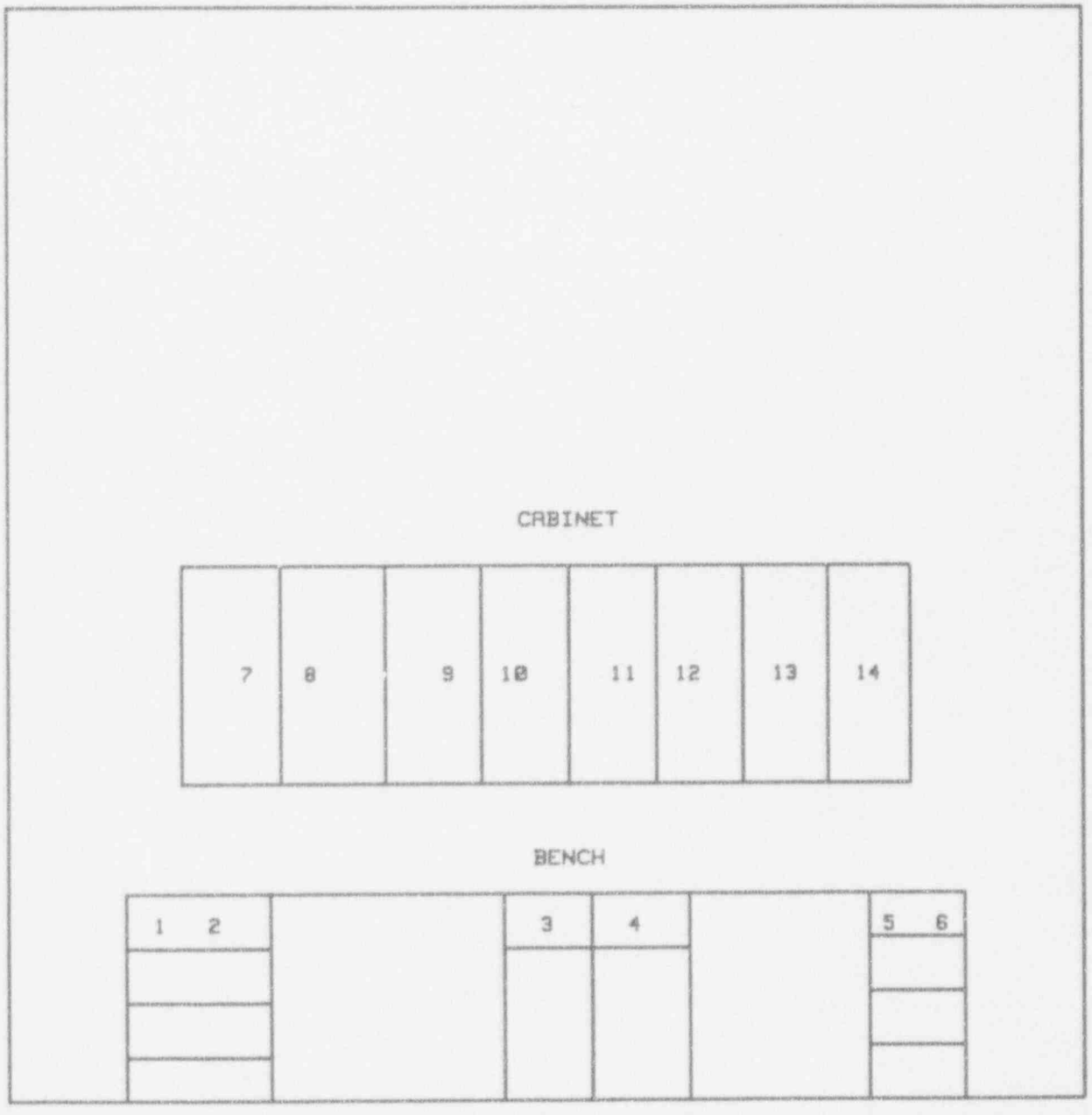
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-131 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-131 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | 202 ±20 | 101 |
| 2 | <50 | <25 |
| 3 | 473 ±47 | 237 |
| 4 | 86 ±9 | 43 |
| 5 | 240 ±24 | 120 |
| 6 | 497 ±50 | 249 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | 109 ±11 | 55 |
| 10 | 79 ±8 | 40 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-133 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |

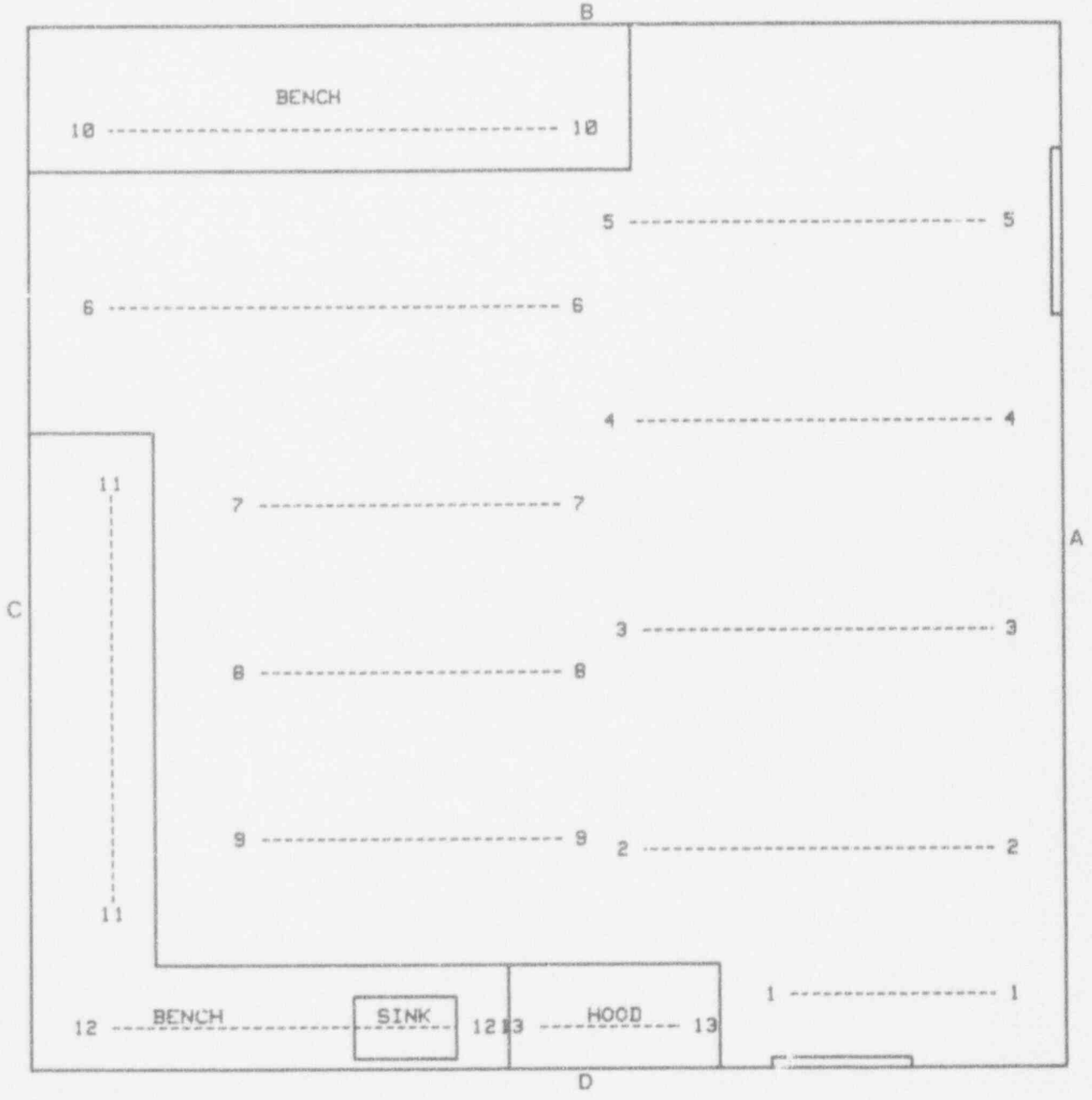
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-133 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-133 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |

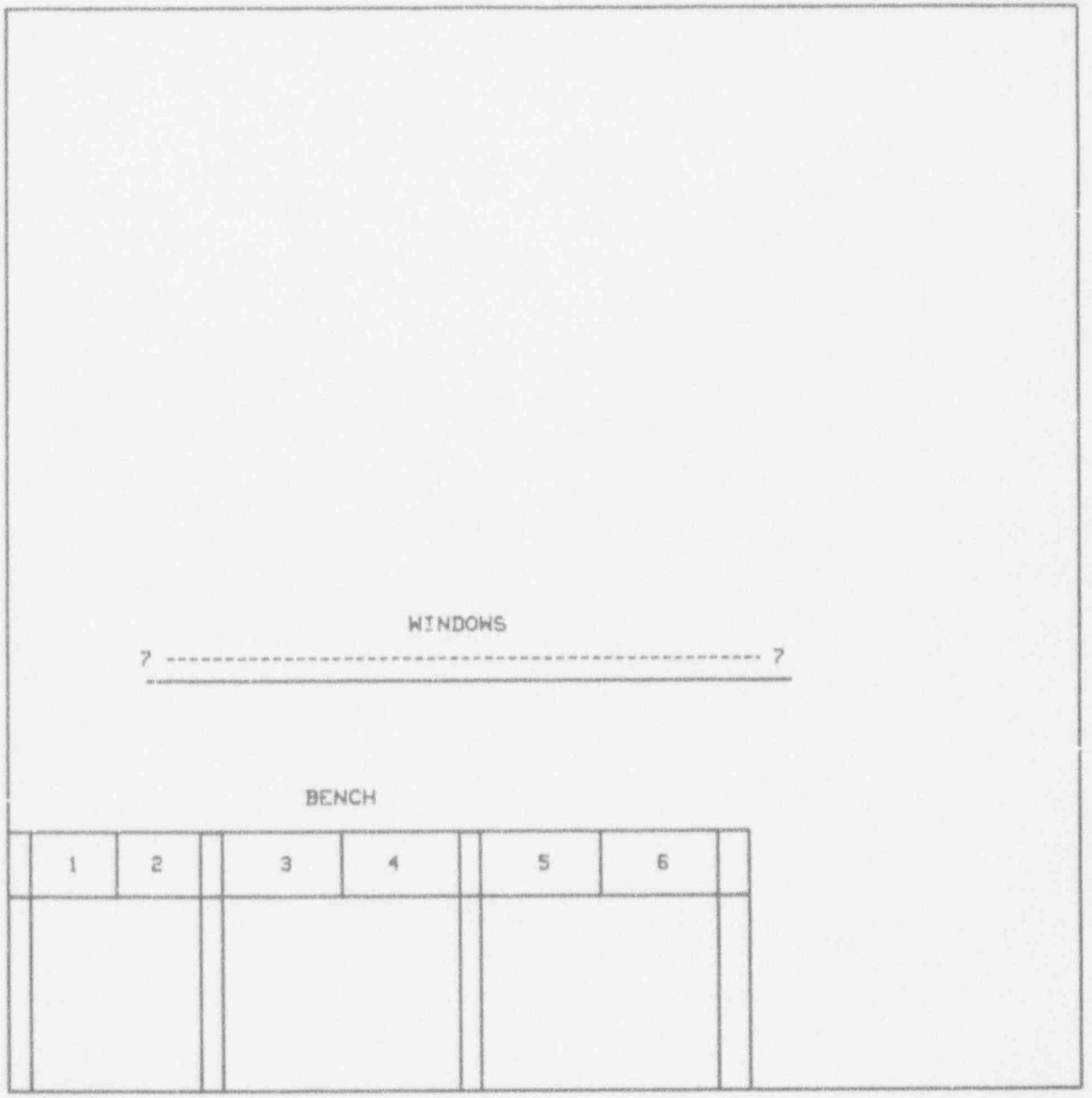
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-133 VIEW-B

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-133 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | 122 ±12 | 61 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

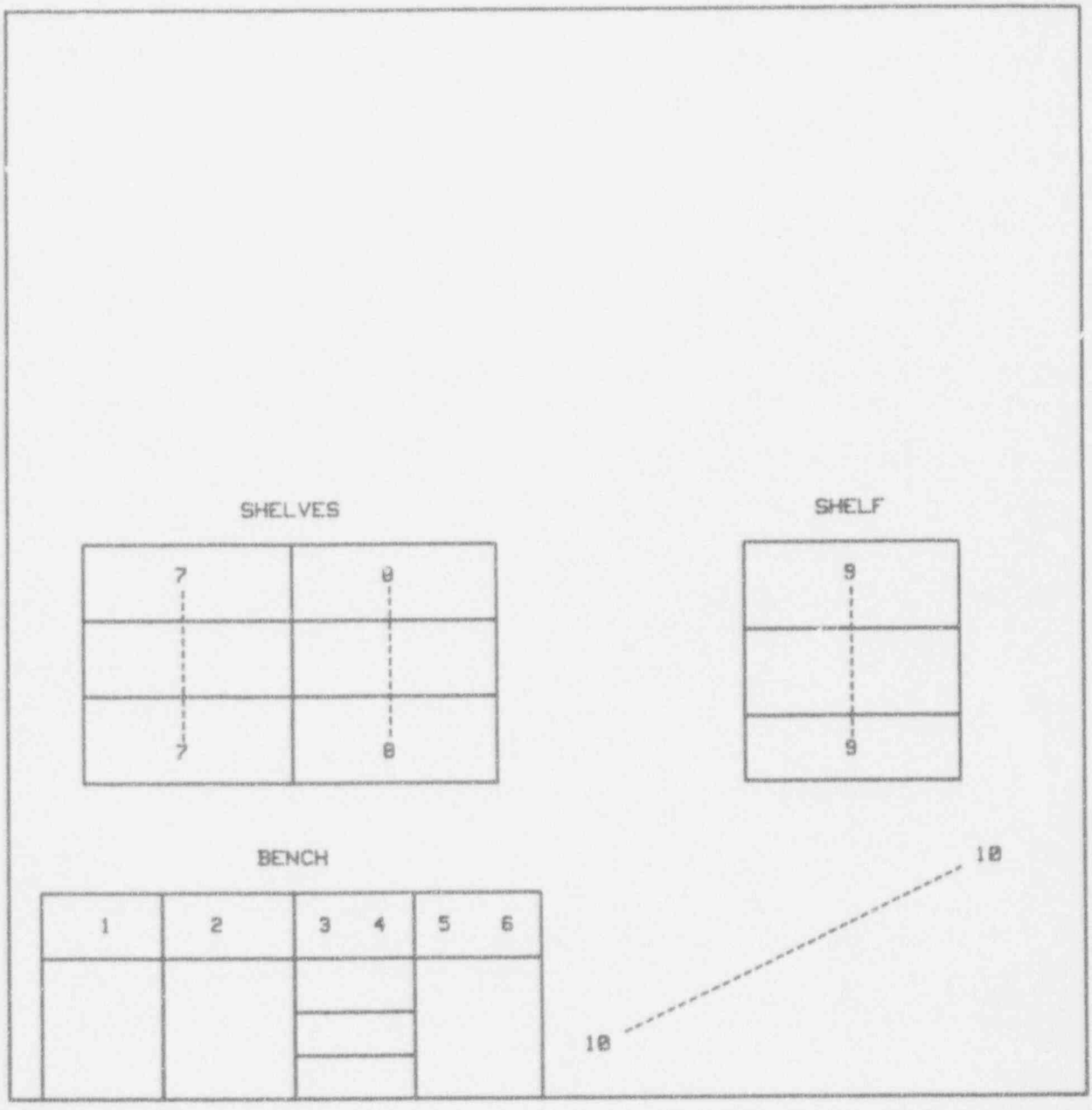
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-133 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-133 View D (Pre-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | 1820 ±182 | 910 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-133 View D (Post-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |

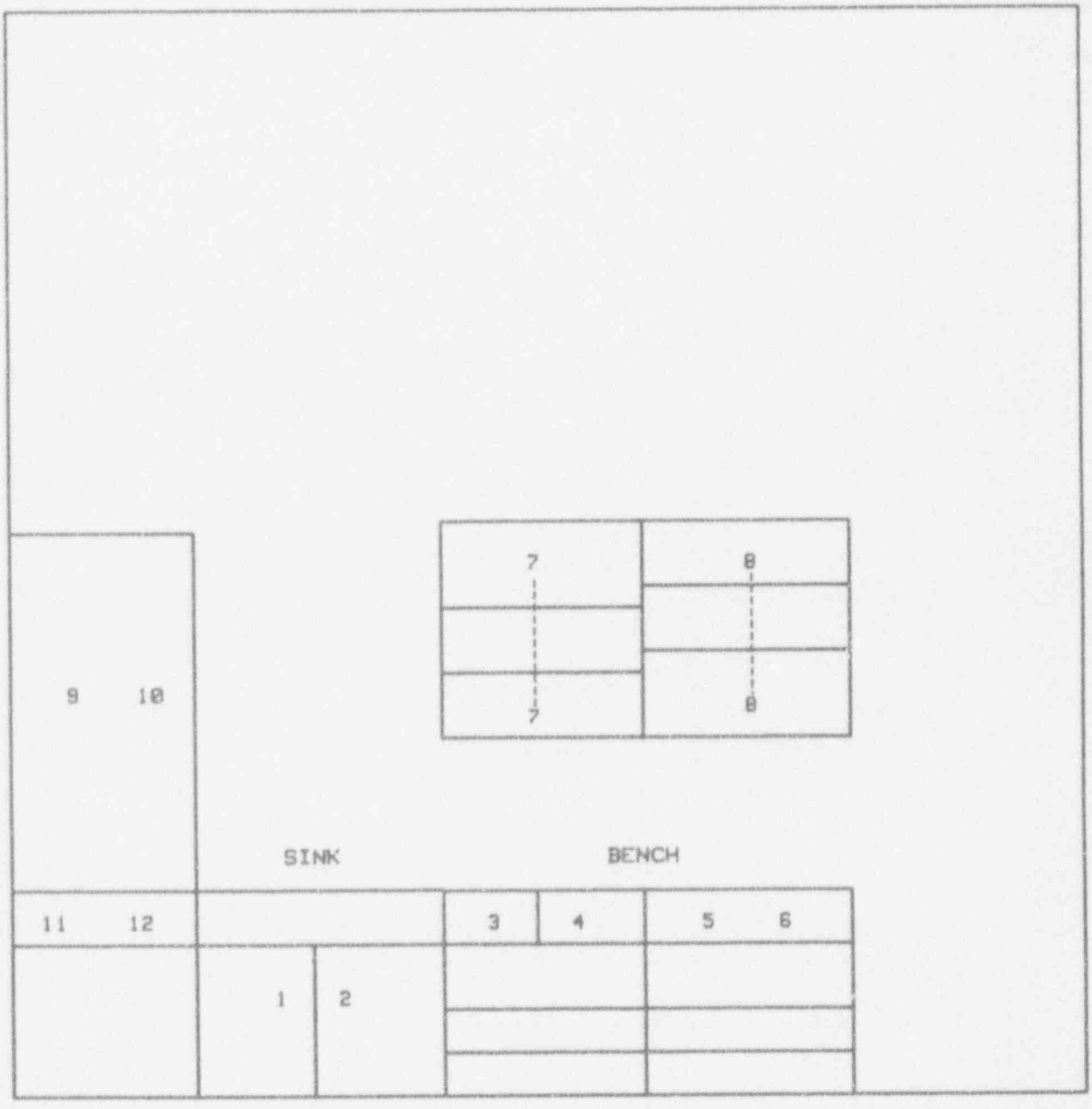
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-133 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-133 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | 65 ±7 | 33 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-135 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |

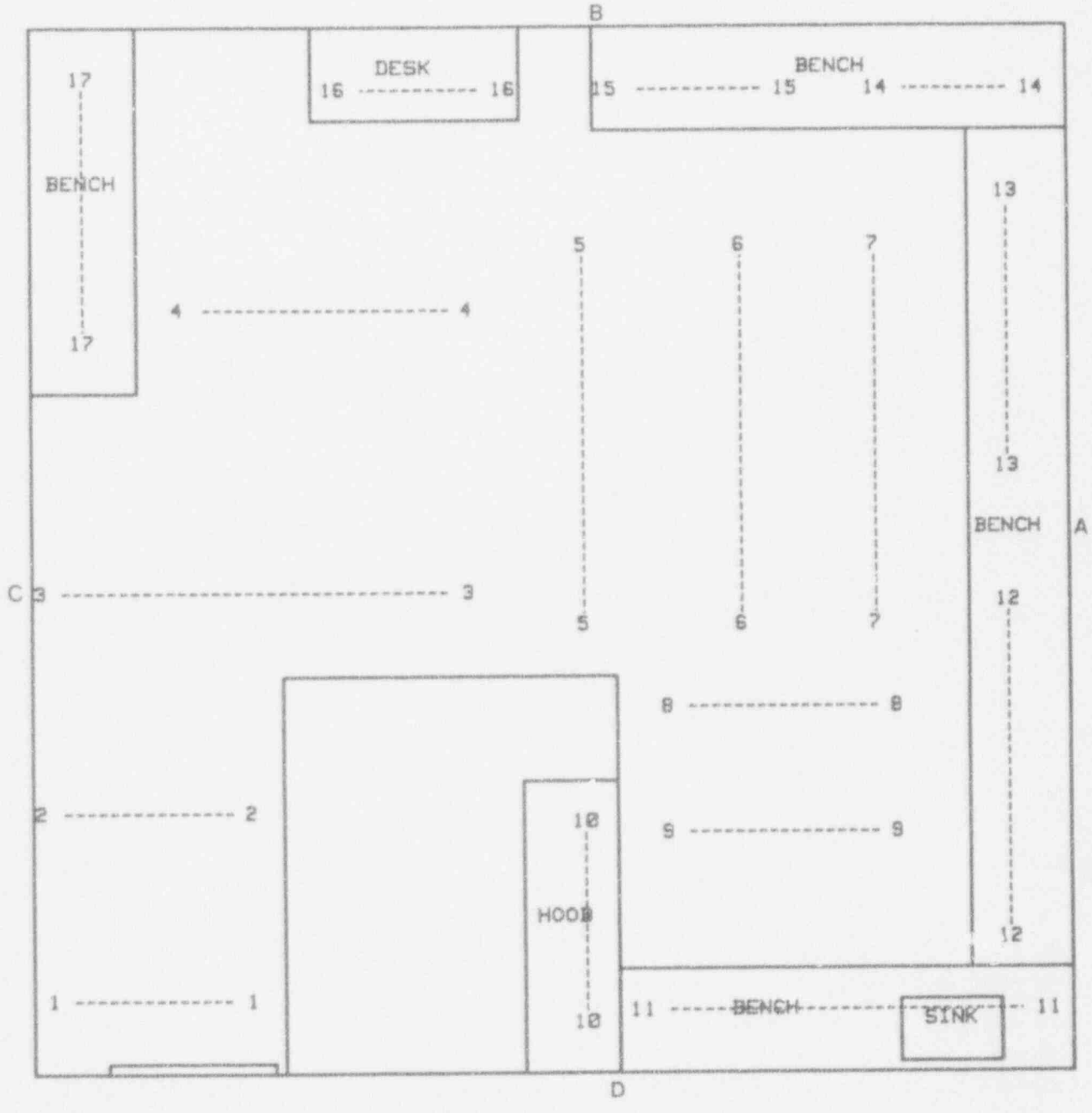
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-135 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-135 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |

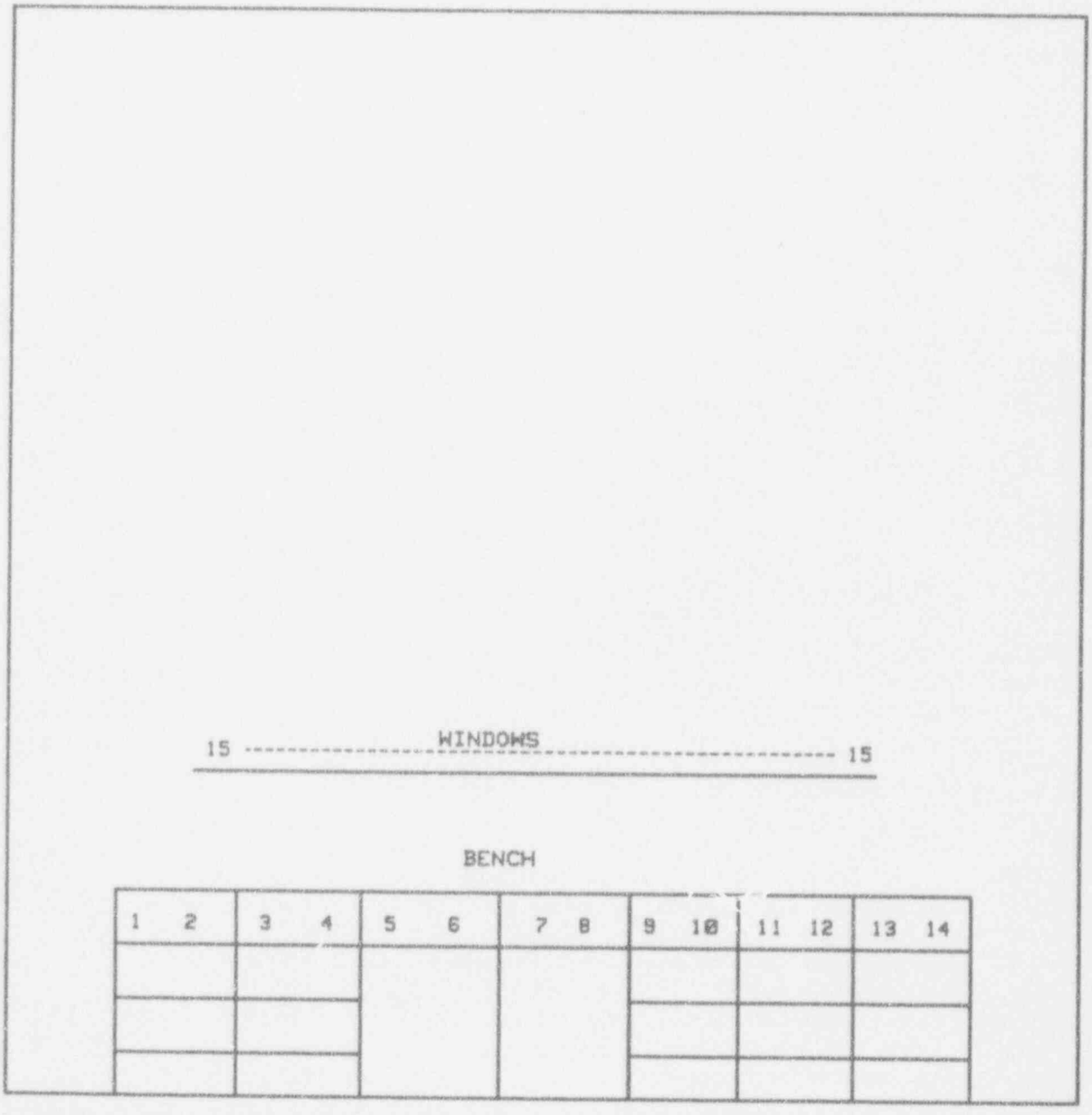
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-135 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-135 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |

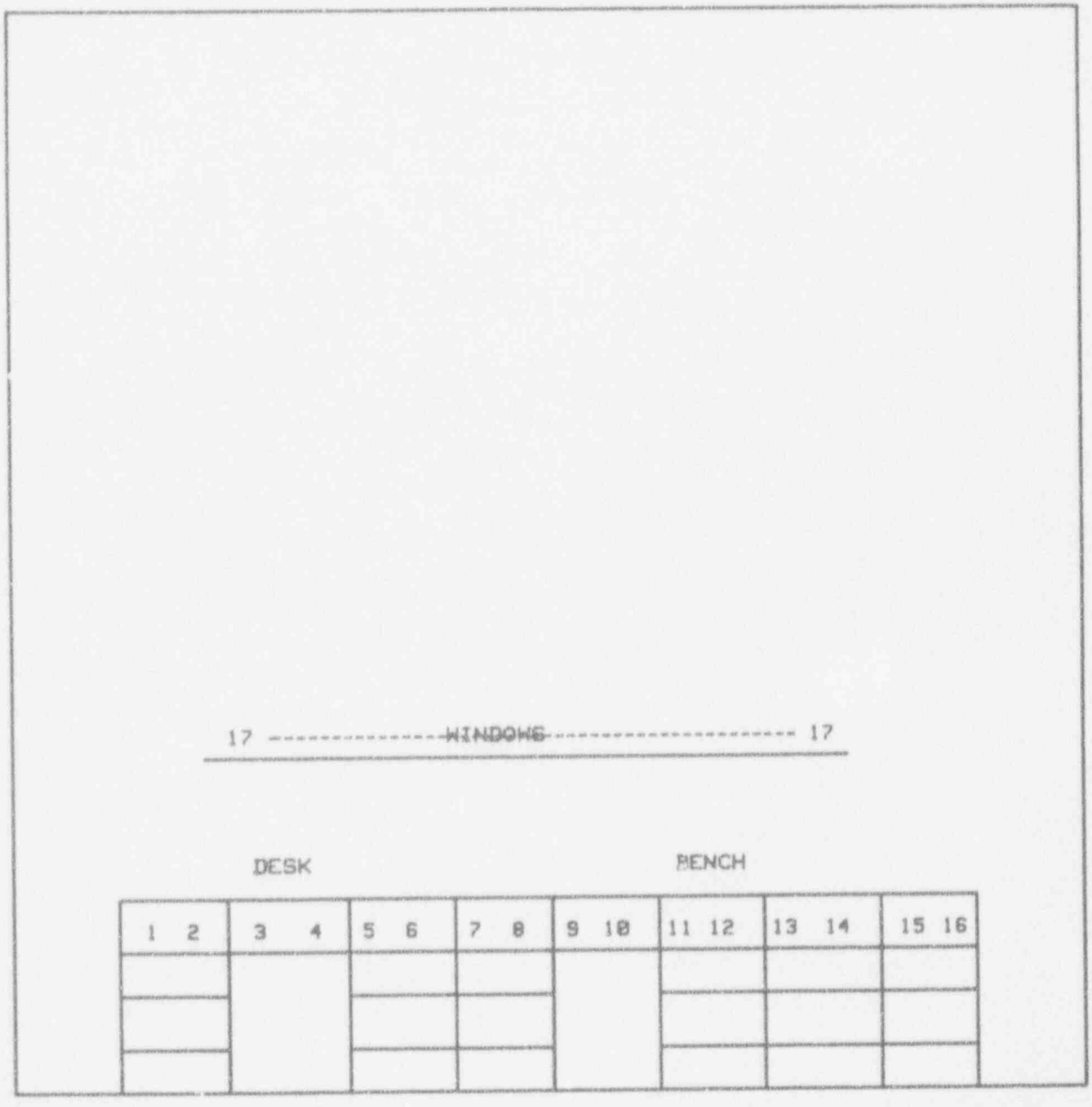
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-135 VIEW-B

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-135 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

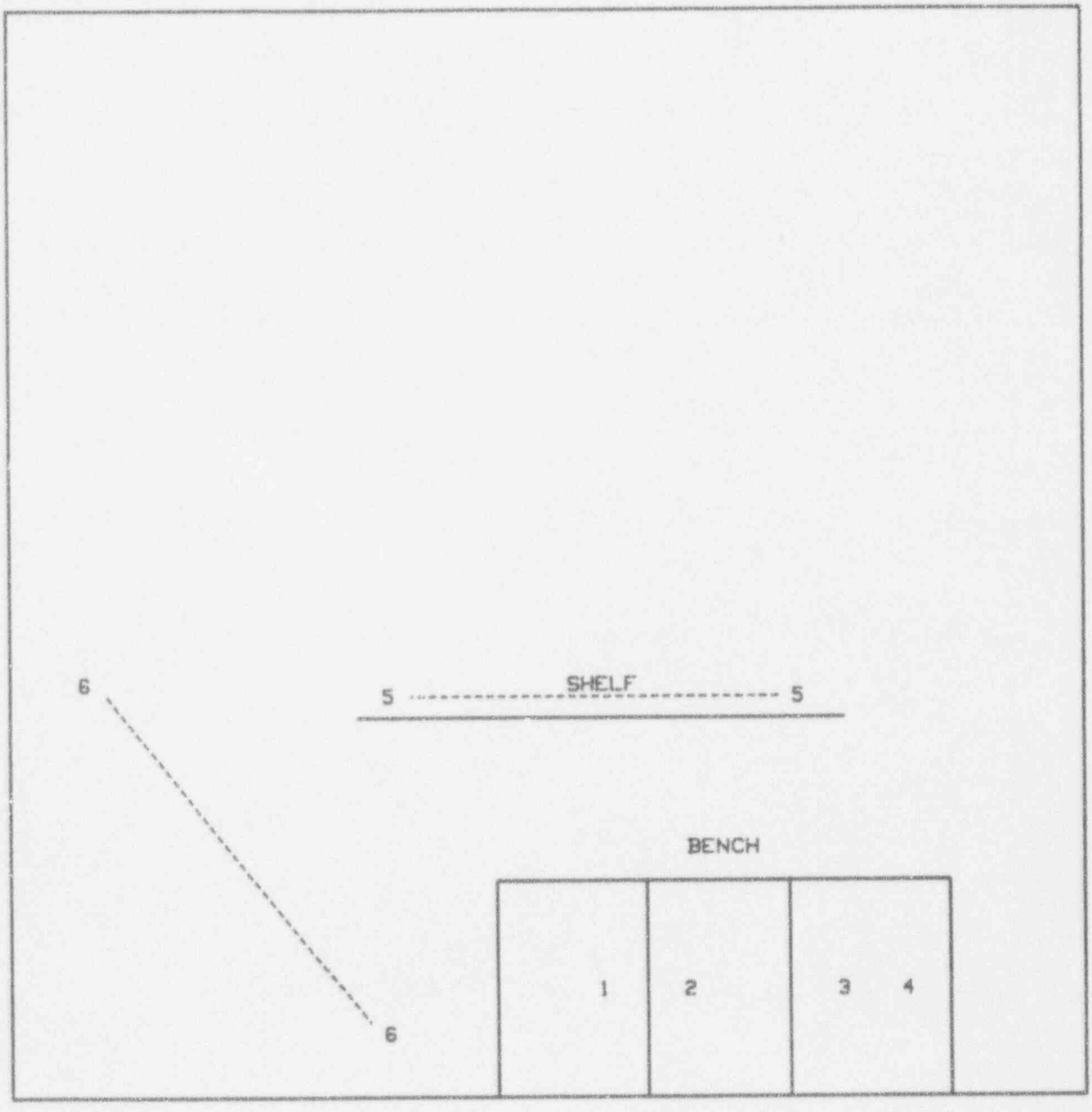
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-135 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-135 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | 401 ±40 | 201 |
| 5 | <50 | <25 |
| 6 | 51 ±5 | 26 |
| 7 | 517 ±52 | 259 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

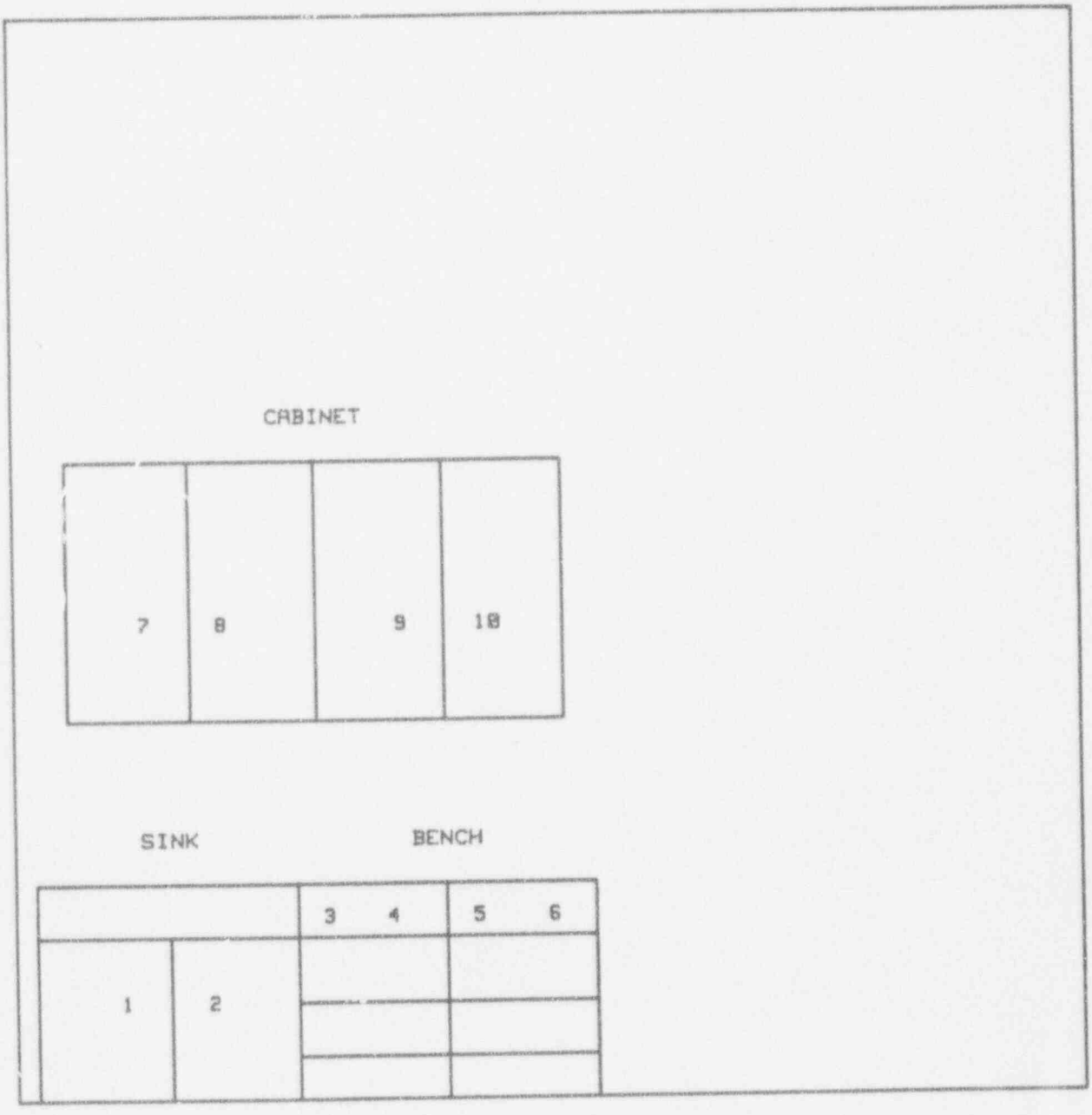
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-135 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-135 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-136 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |

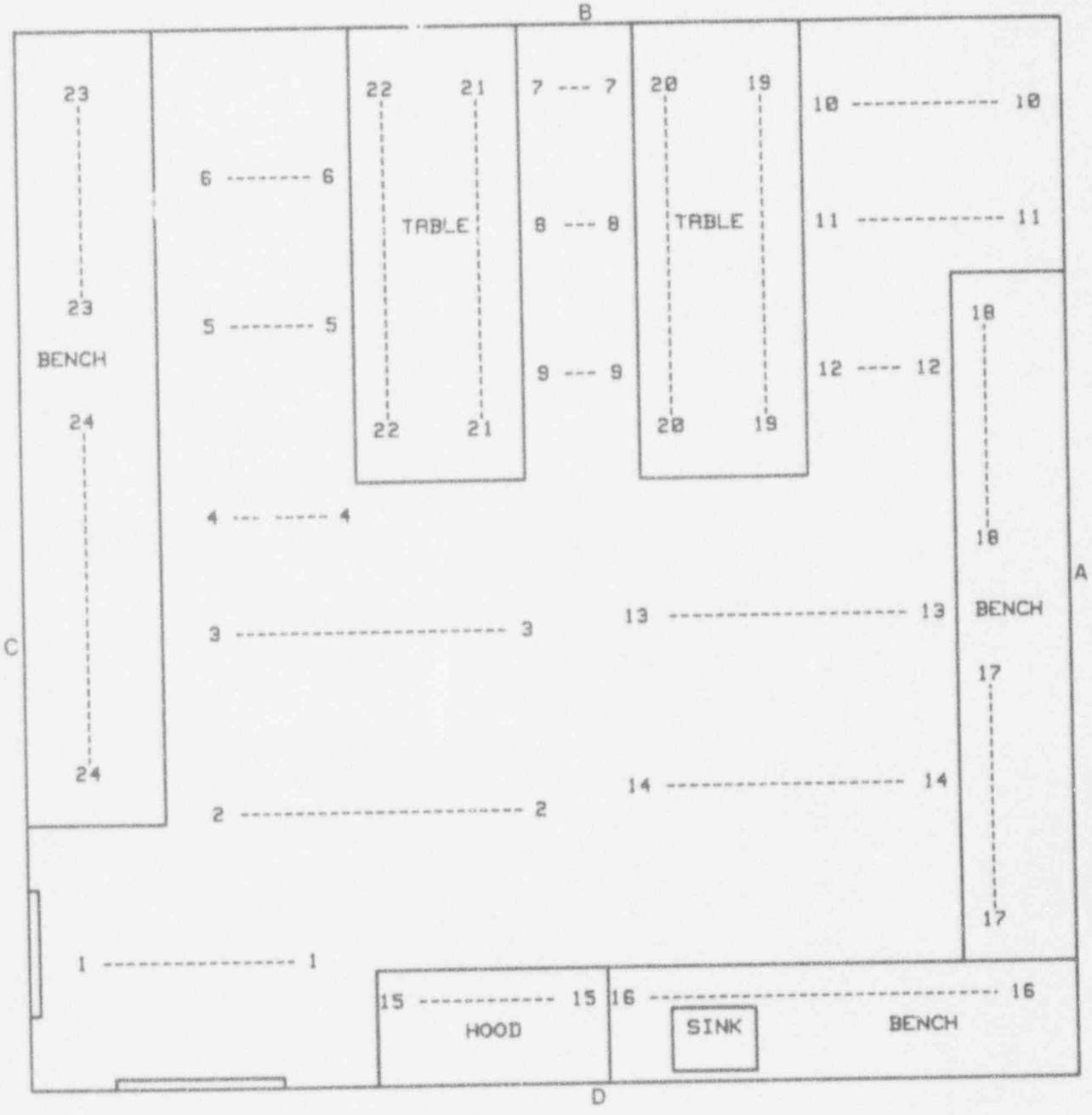
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-136 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-136 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |

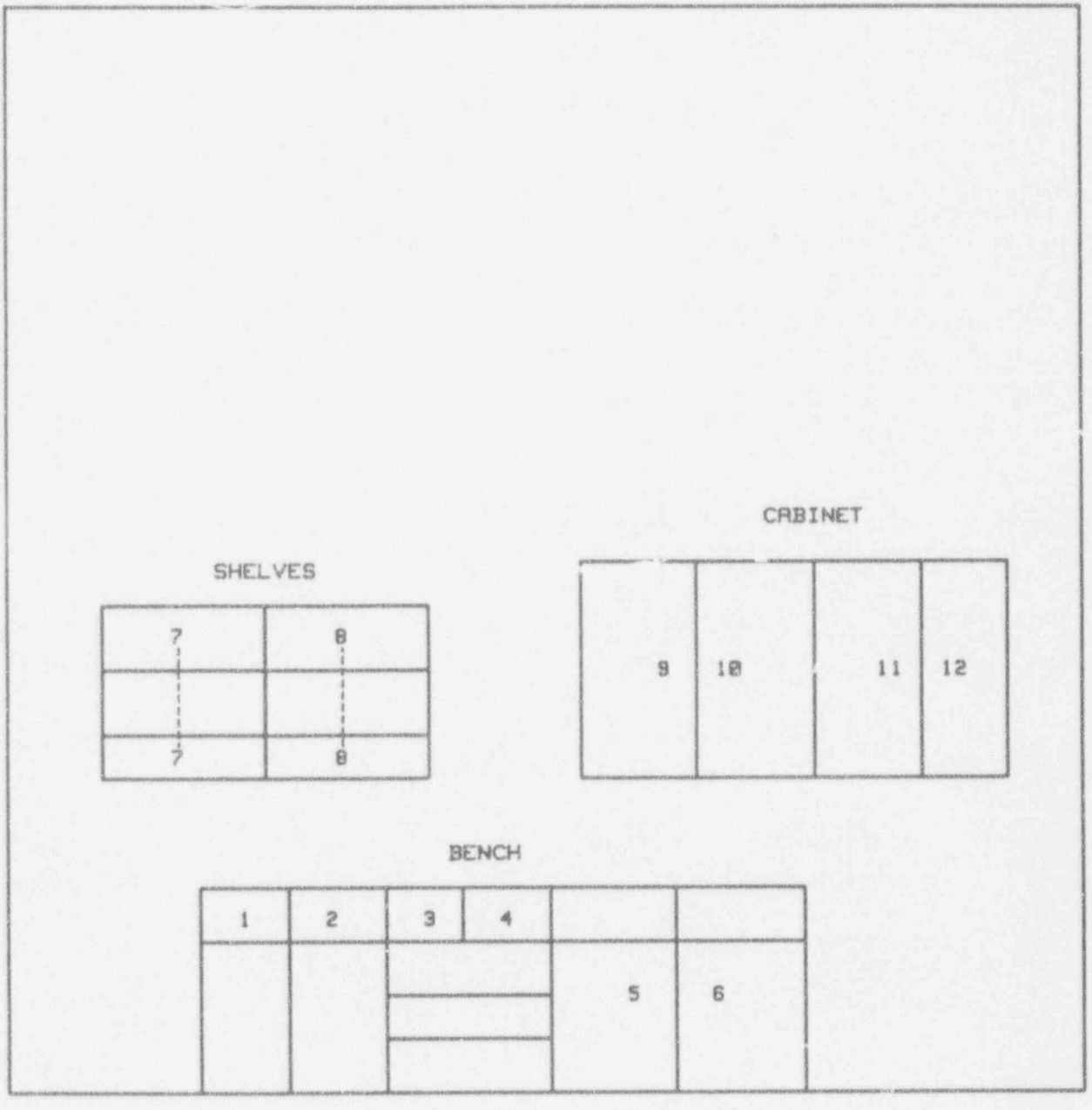
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-136 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-136 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |

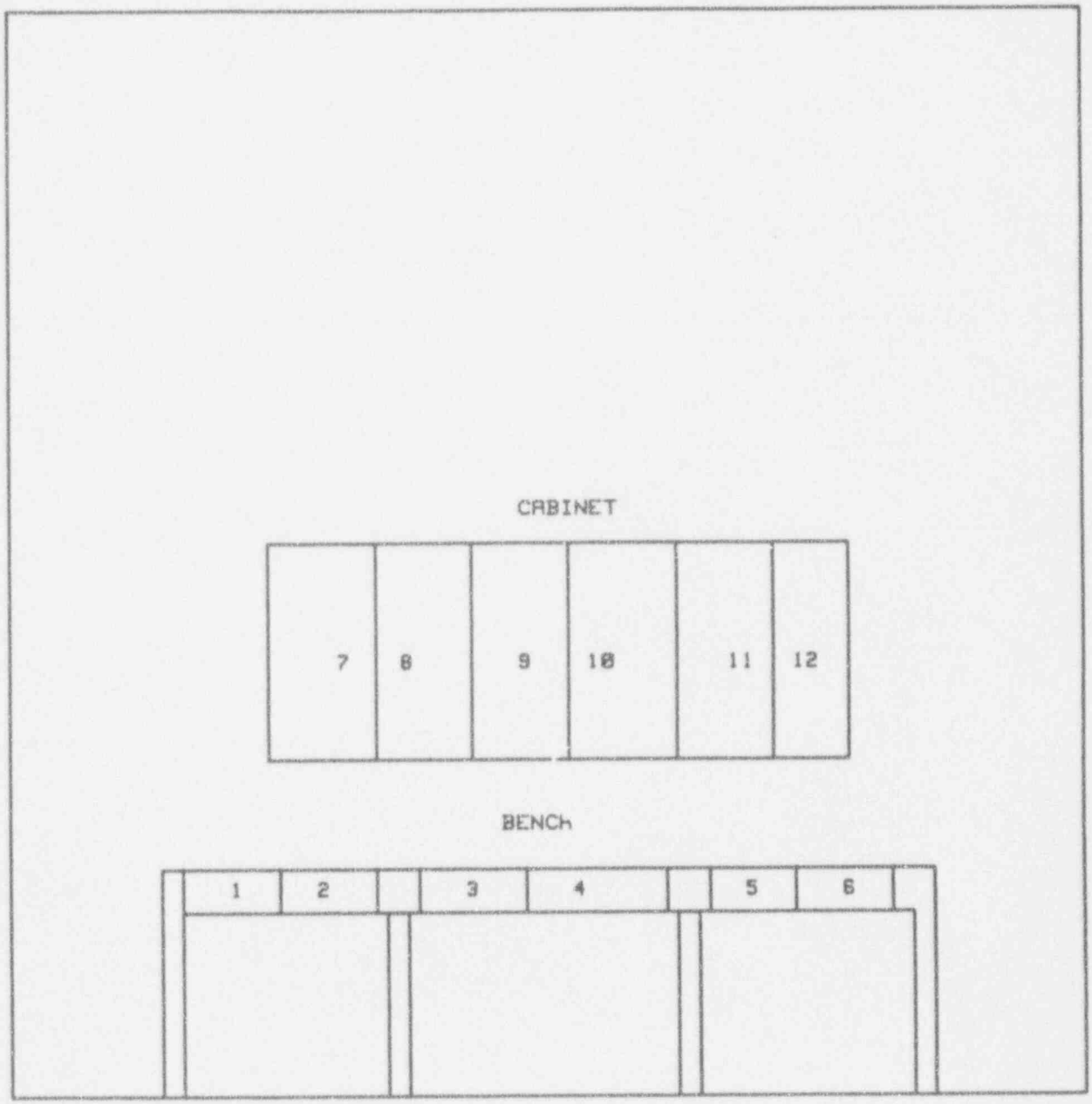
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-136 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-136 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

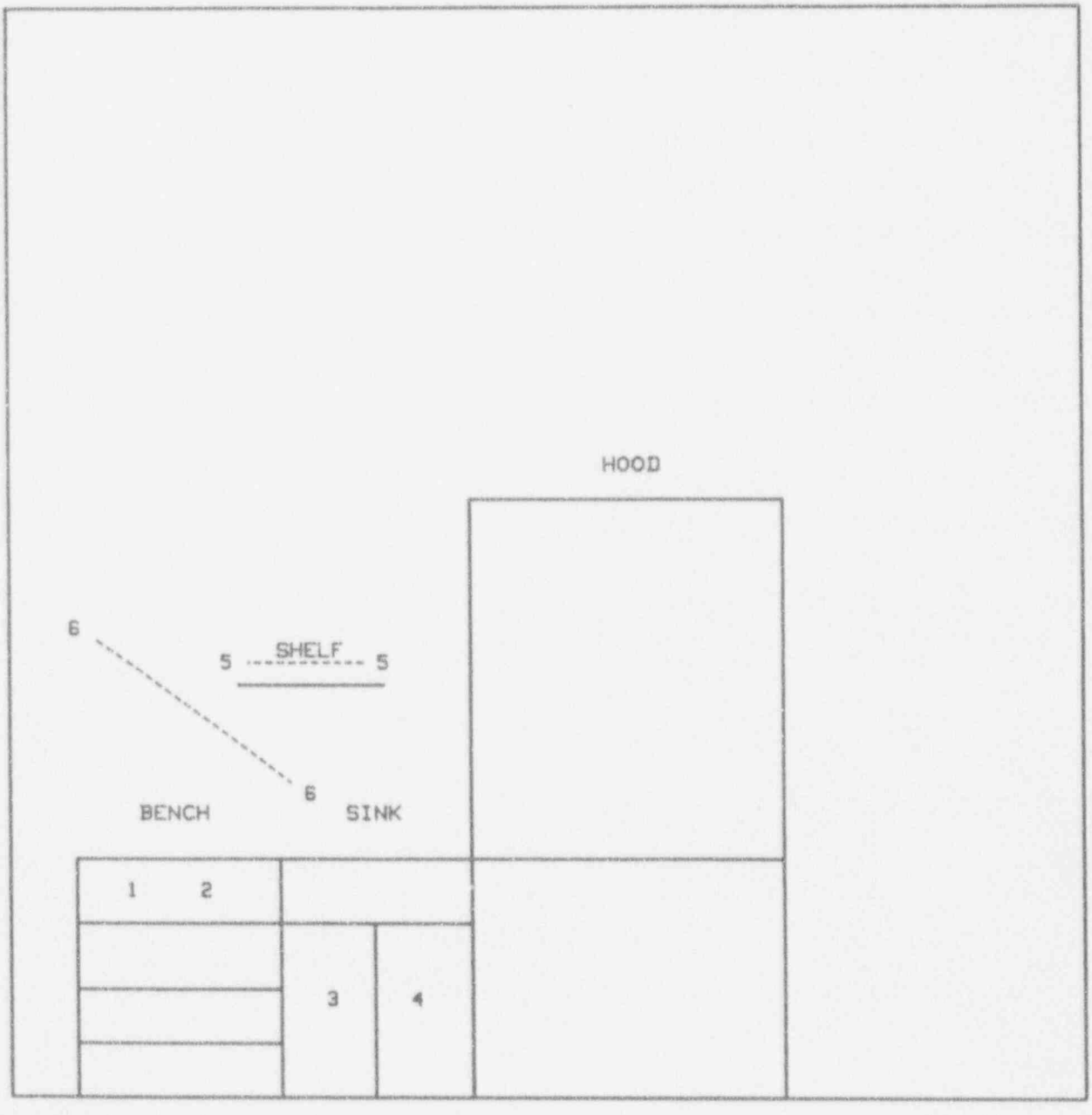
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-136 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-136 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

# FINAL SITE SURVEY

# FOR

# CIBA-GEIGY CORPORATION

# SUMMIT, NEW JERSEY

# SEPTEMBER 1993

# BUILDING V, SECOND FLOOR

Joel Antkowiak
Robert S. Bell, Jr.

Survey Date: August 30 through September 3, 1993
Report Date: October 15, 1993

Teledyne Isotopes
50 Van Buren Avenue
Westwood, New Jersey 07675

TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-202 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |

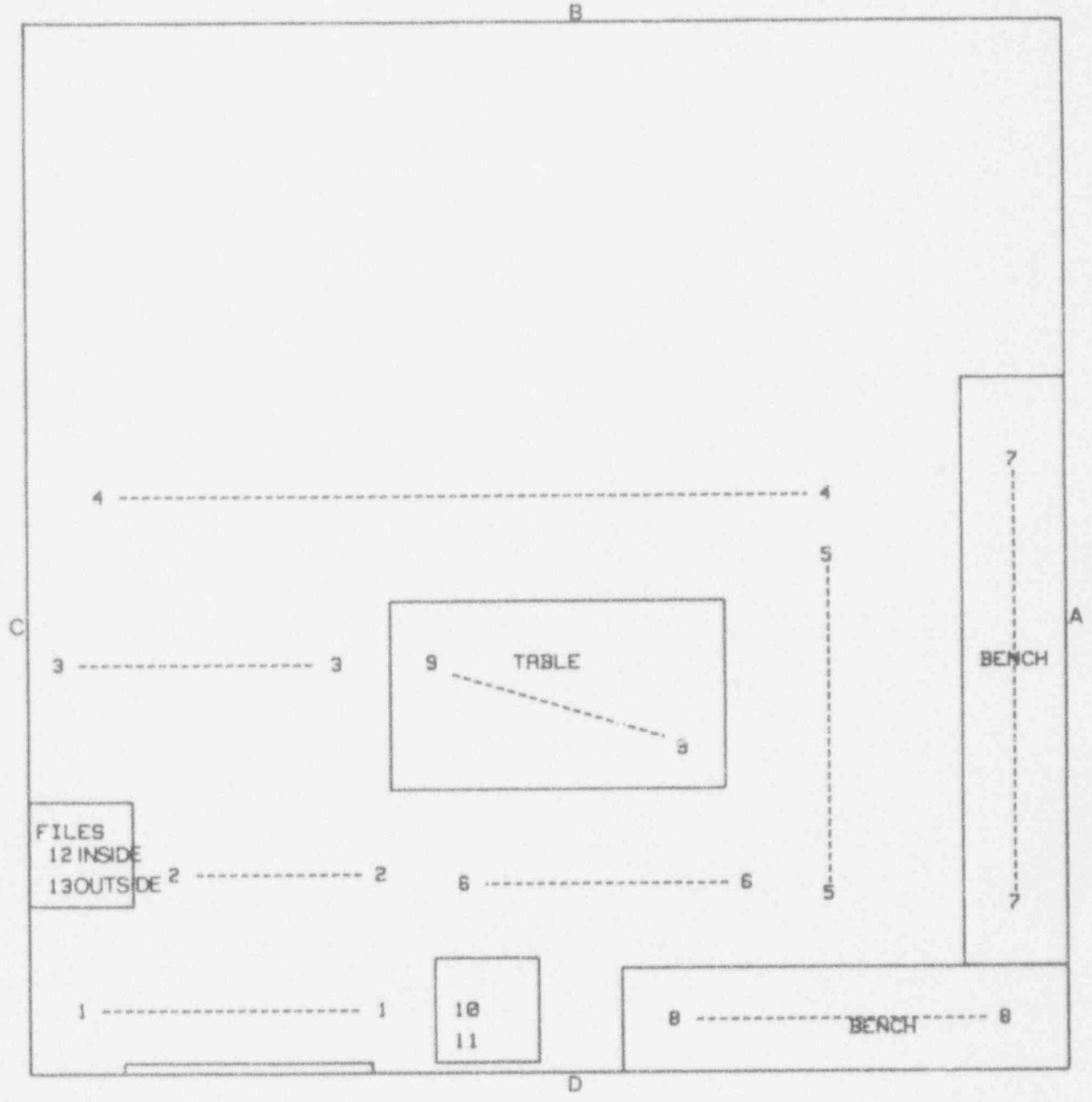
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-202 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-202 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

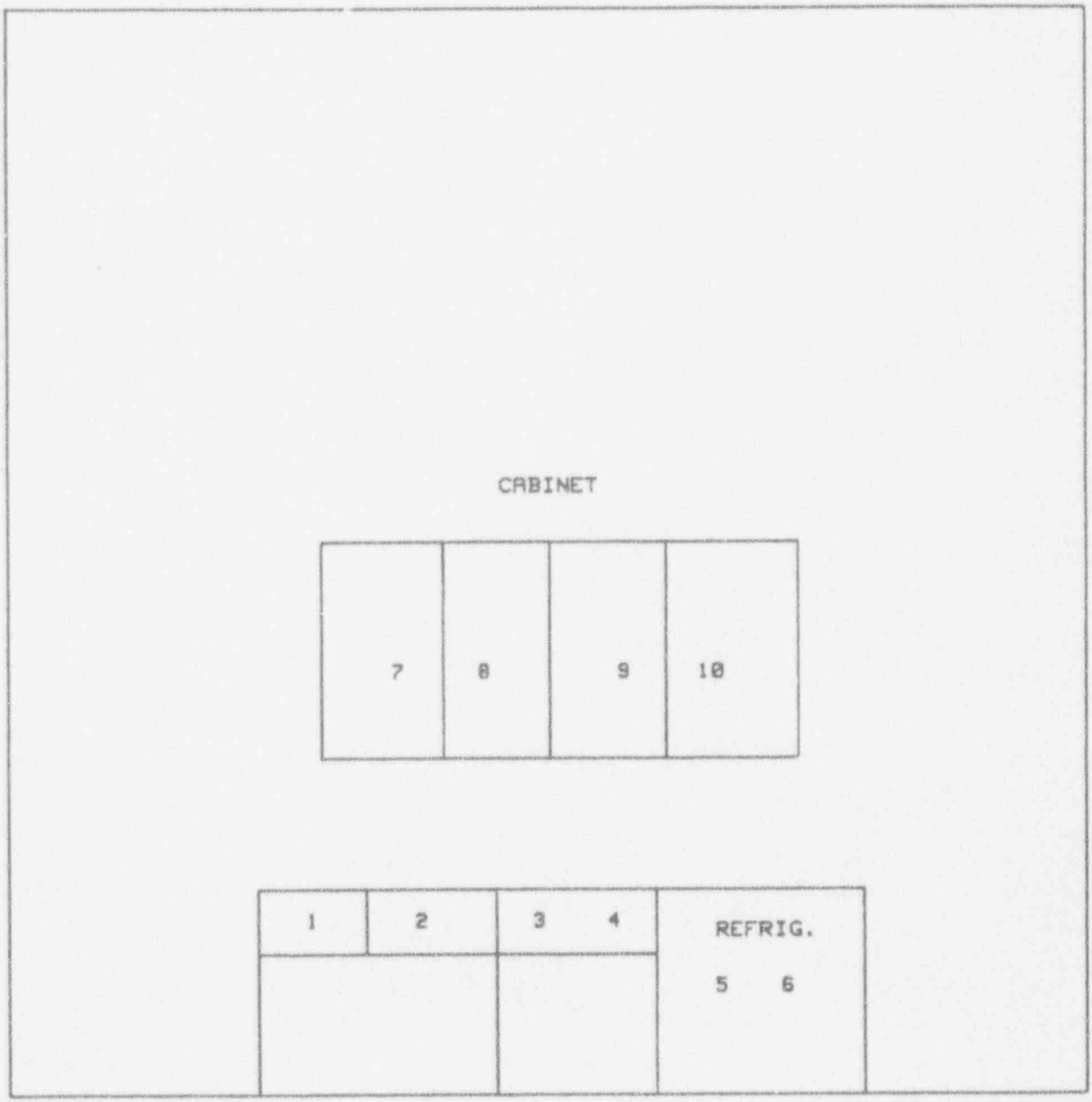
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-202 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-202 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

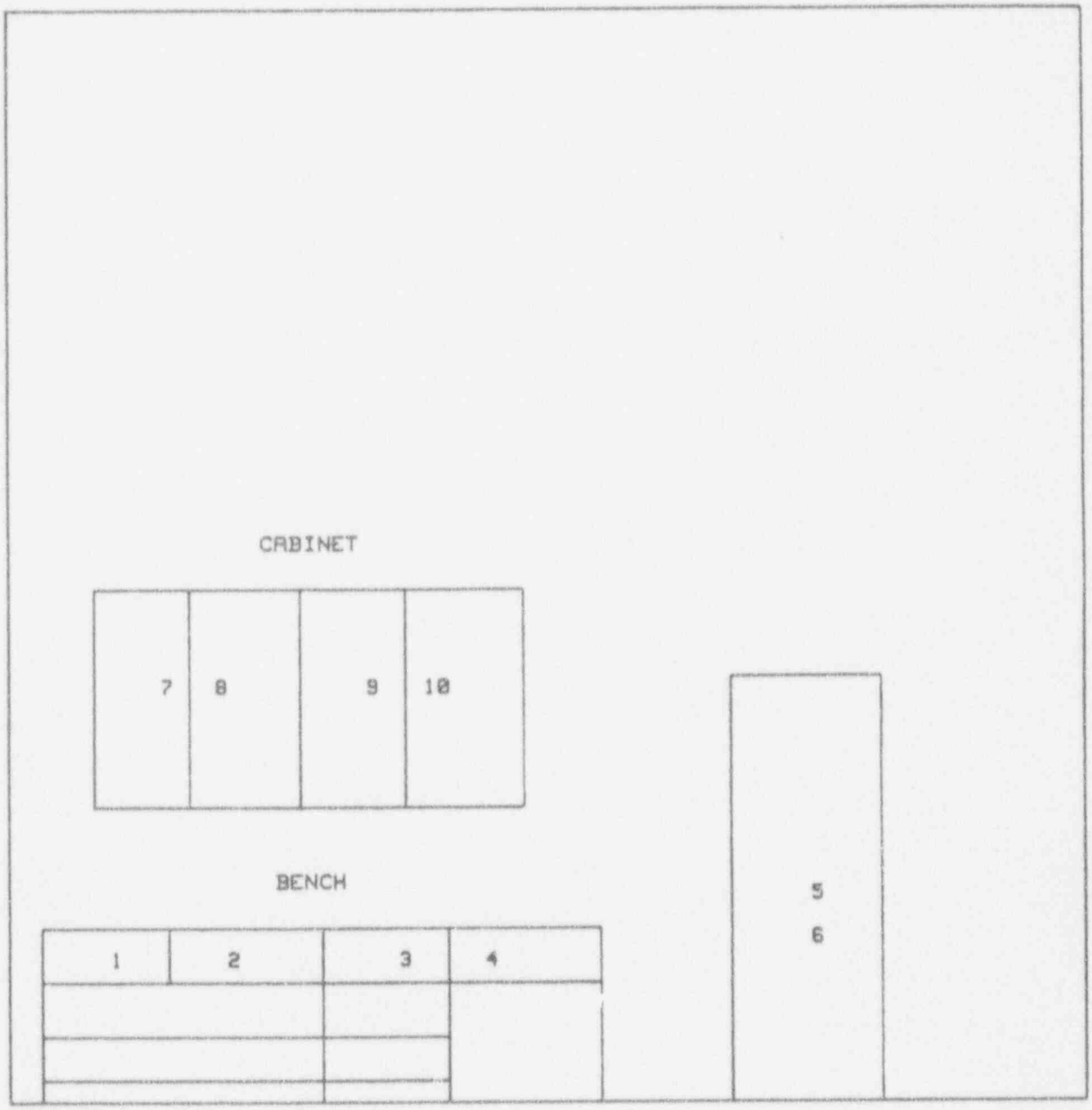
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-202 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-202 Island

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

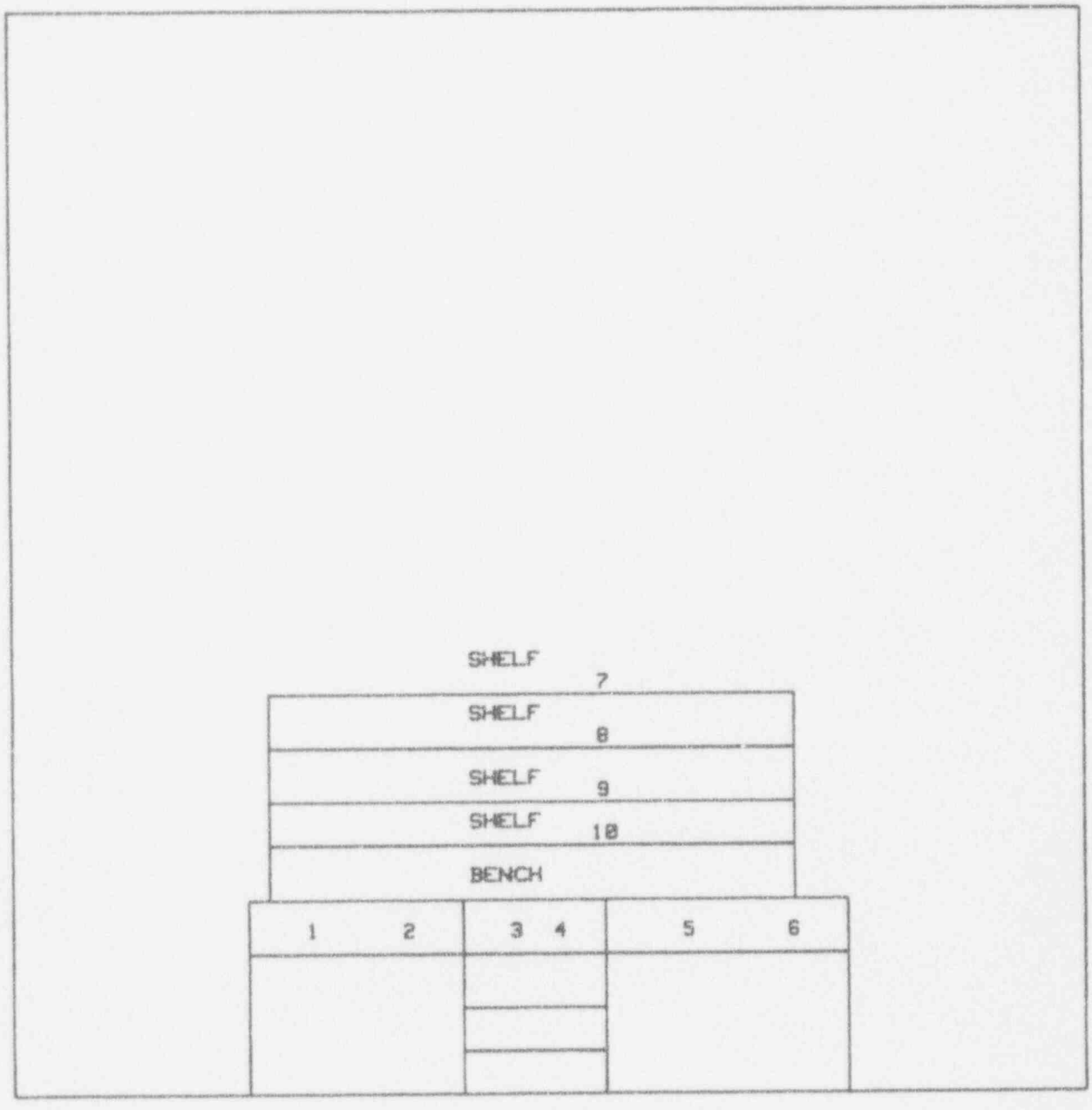
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-202 ISLAND

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-204 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

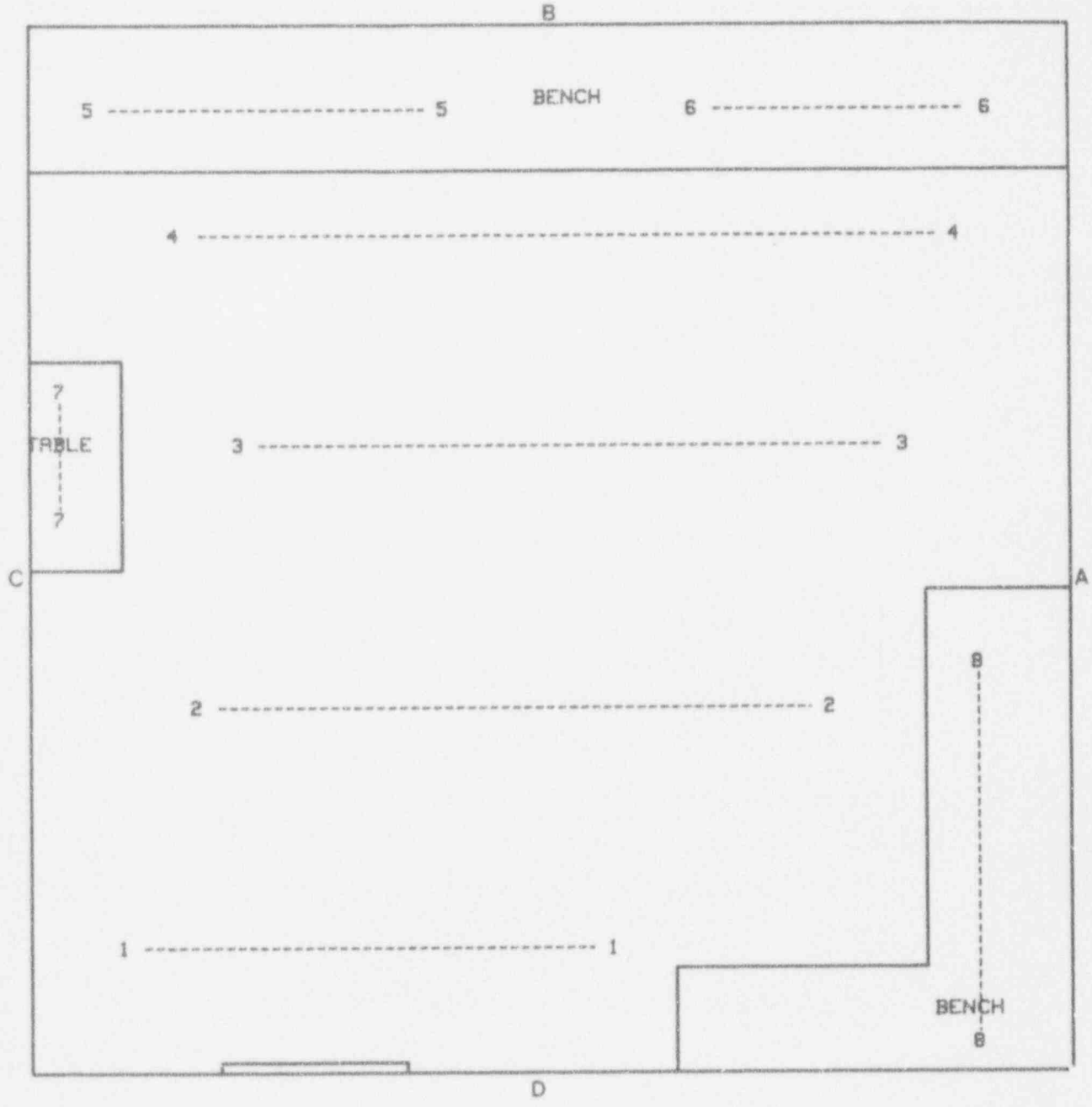
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-204 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-204 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

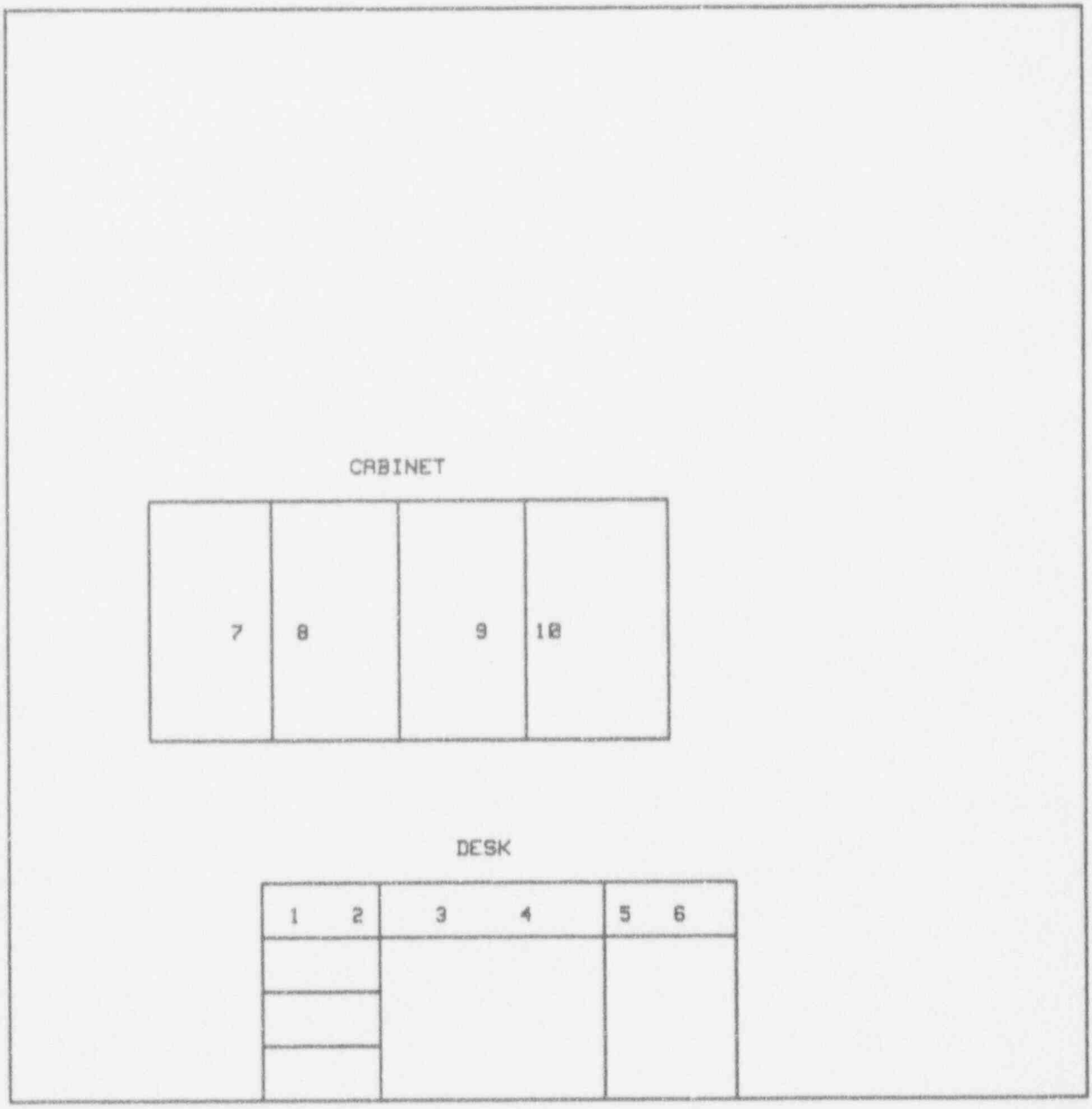
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-204 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-204 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |

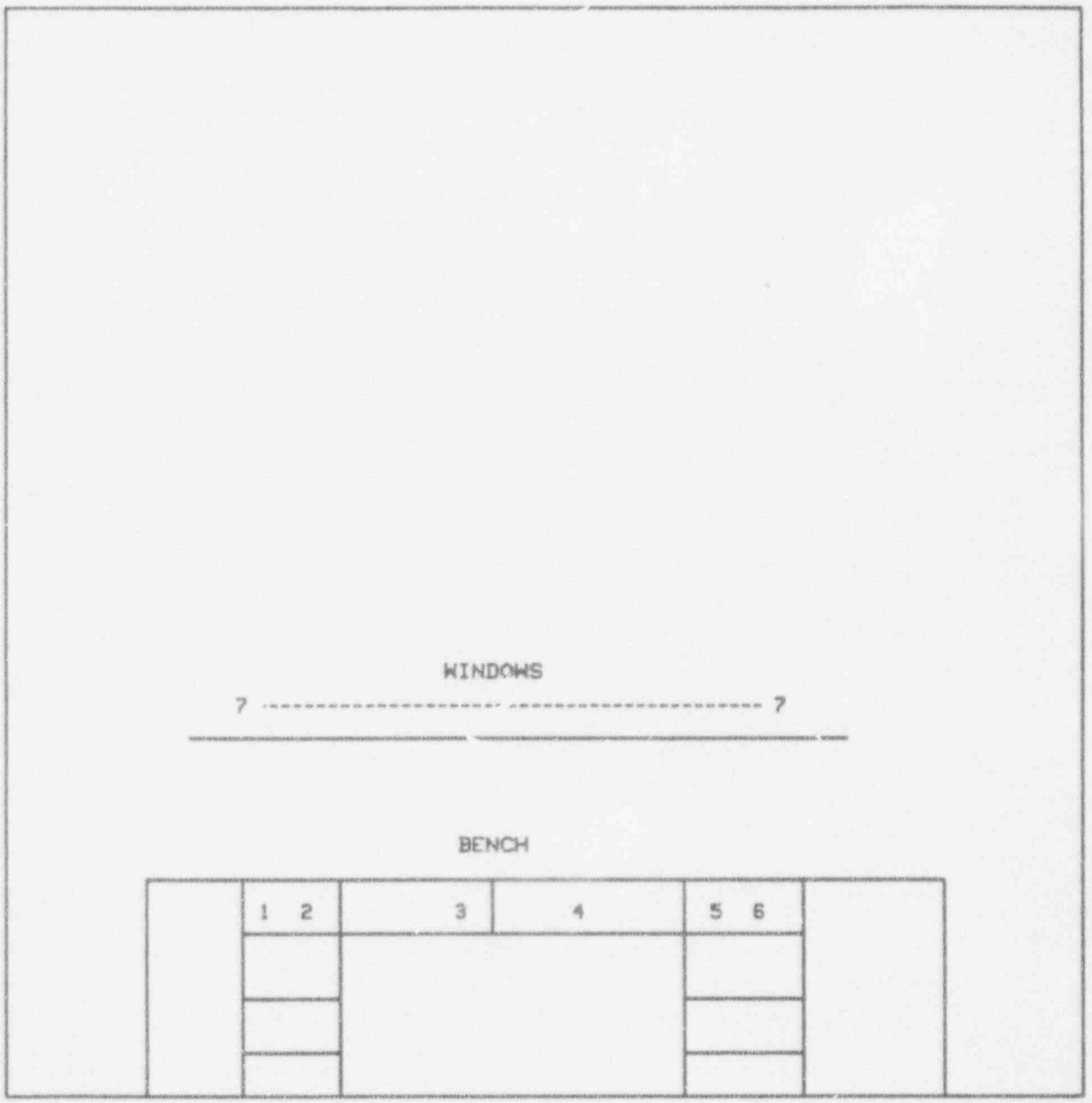
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-204 VIEW-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-204 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

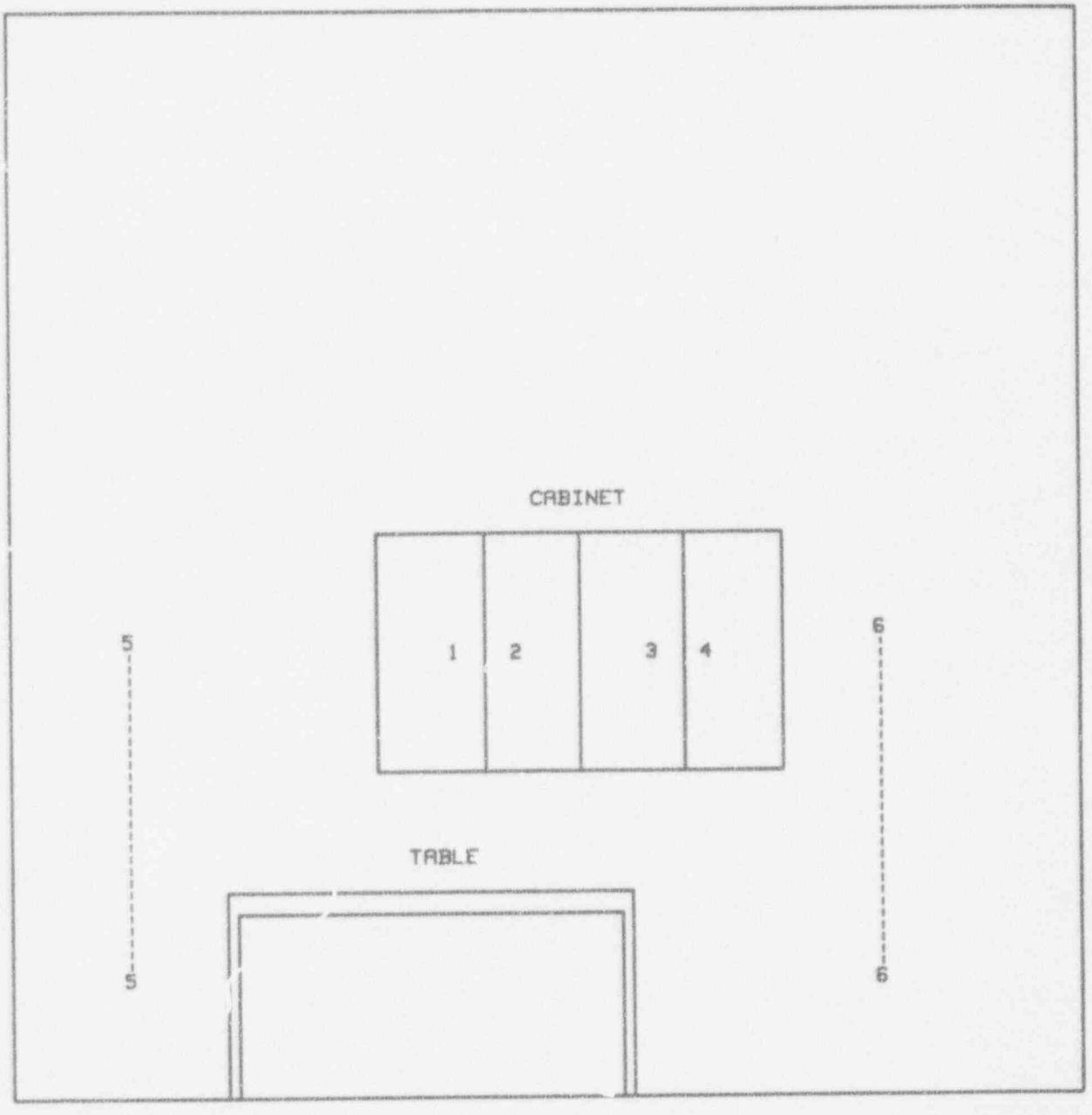
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-204 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-204 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |

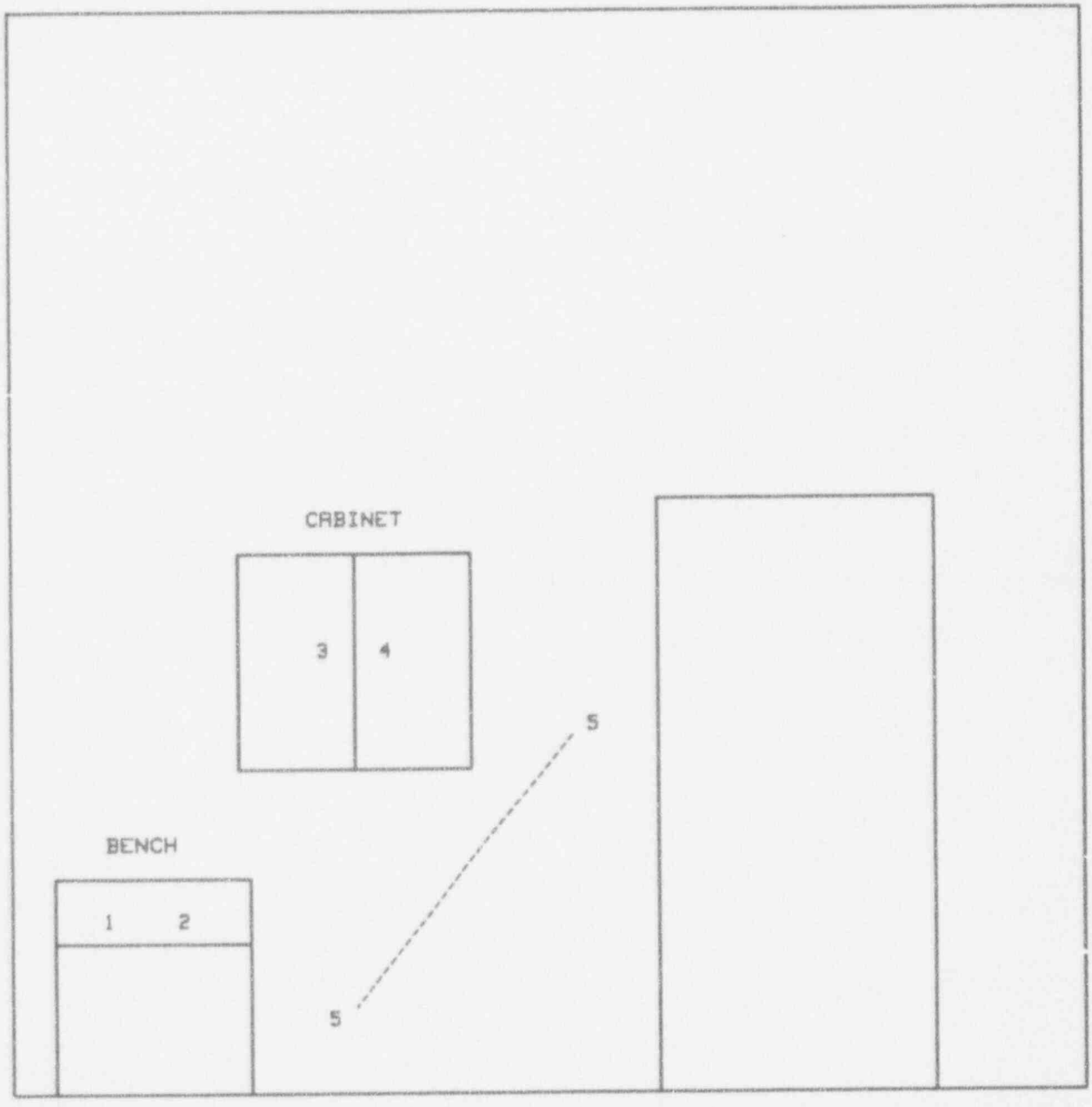
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-204 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-205 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

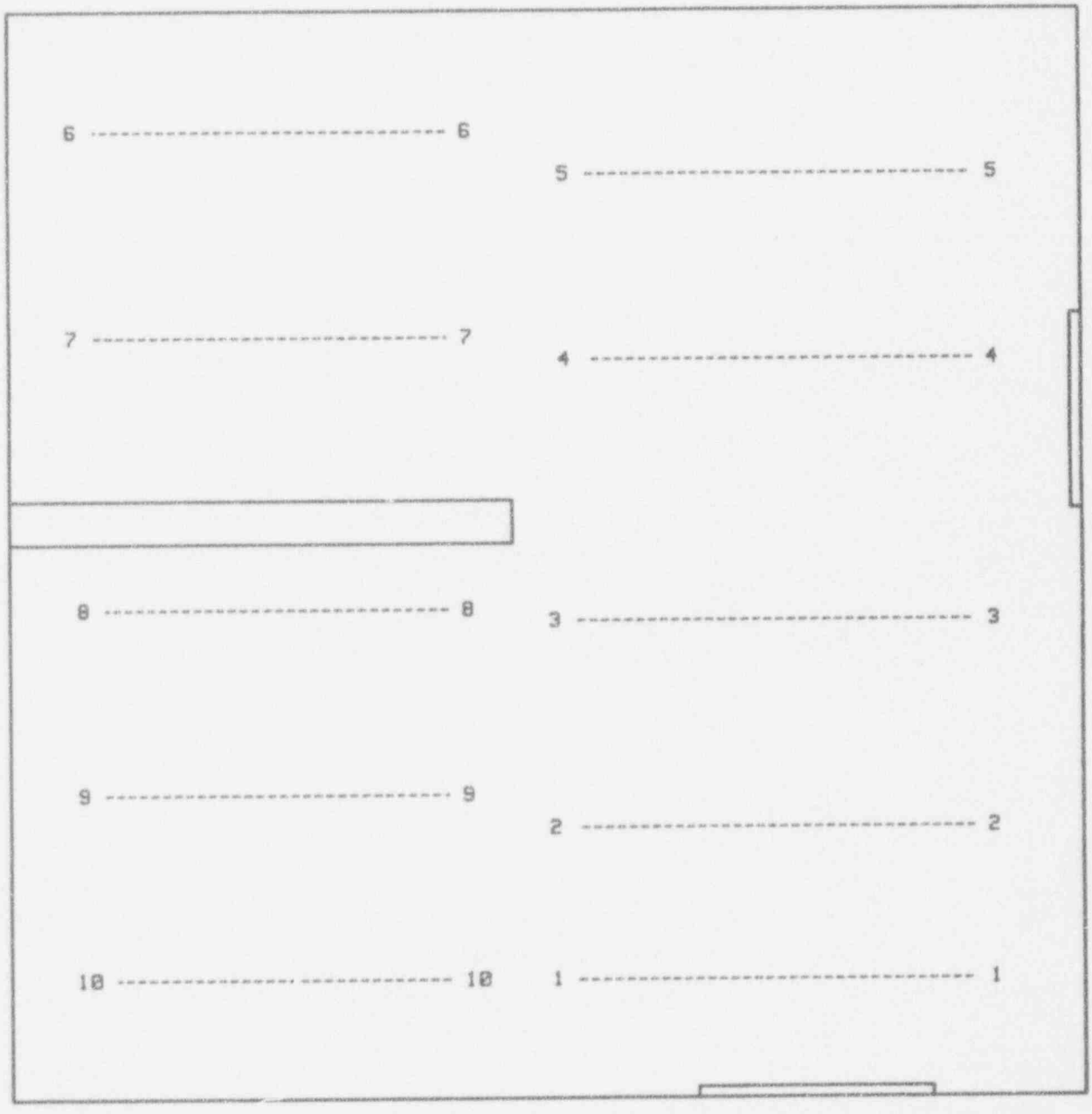
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-205 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-206 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

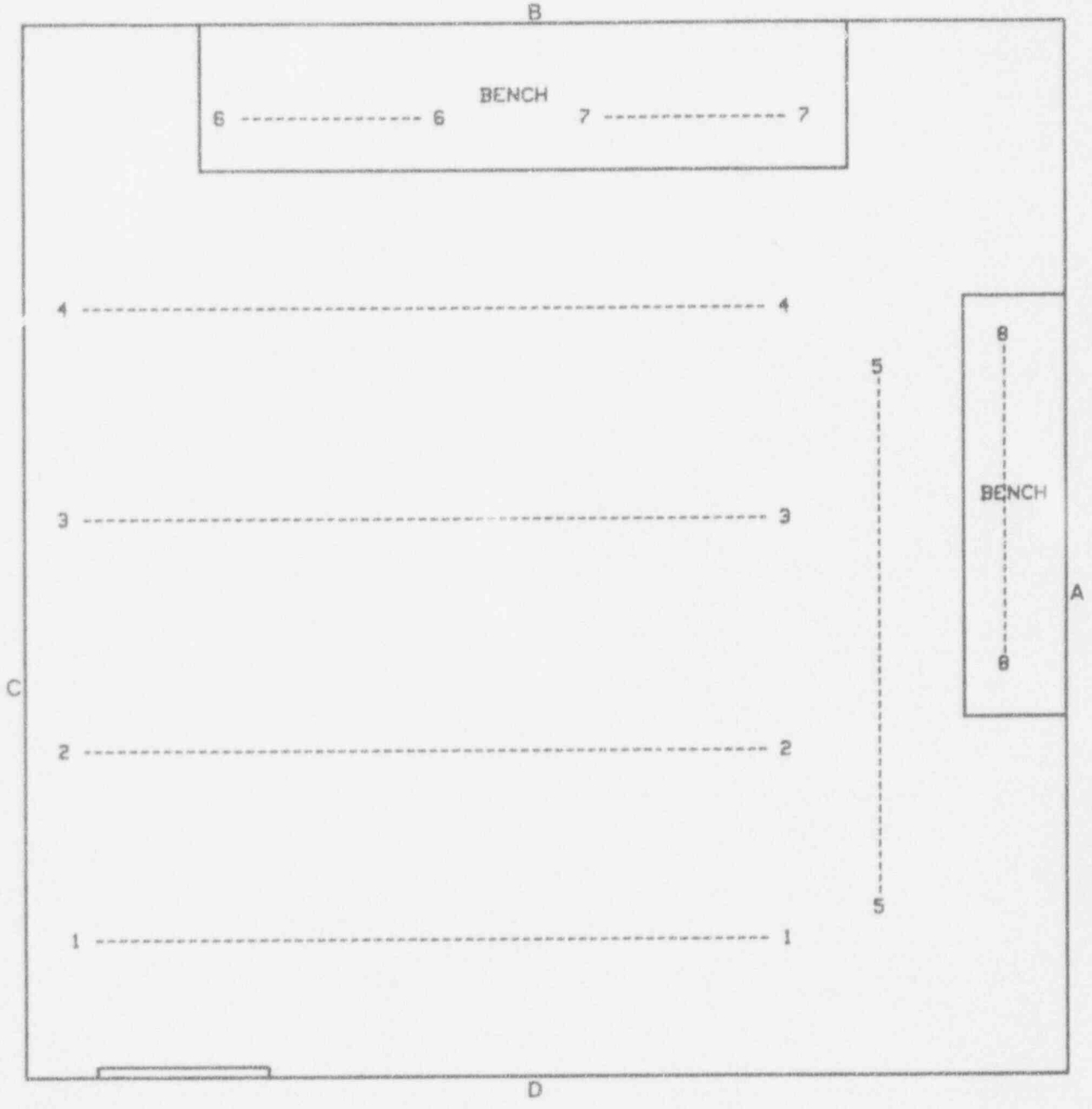
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-206 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-206 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |

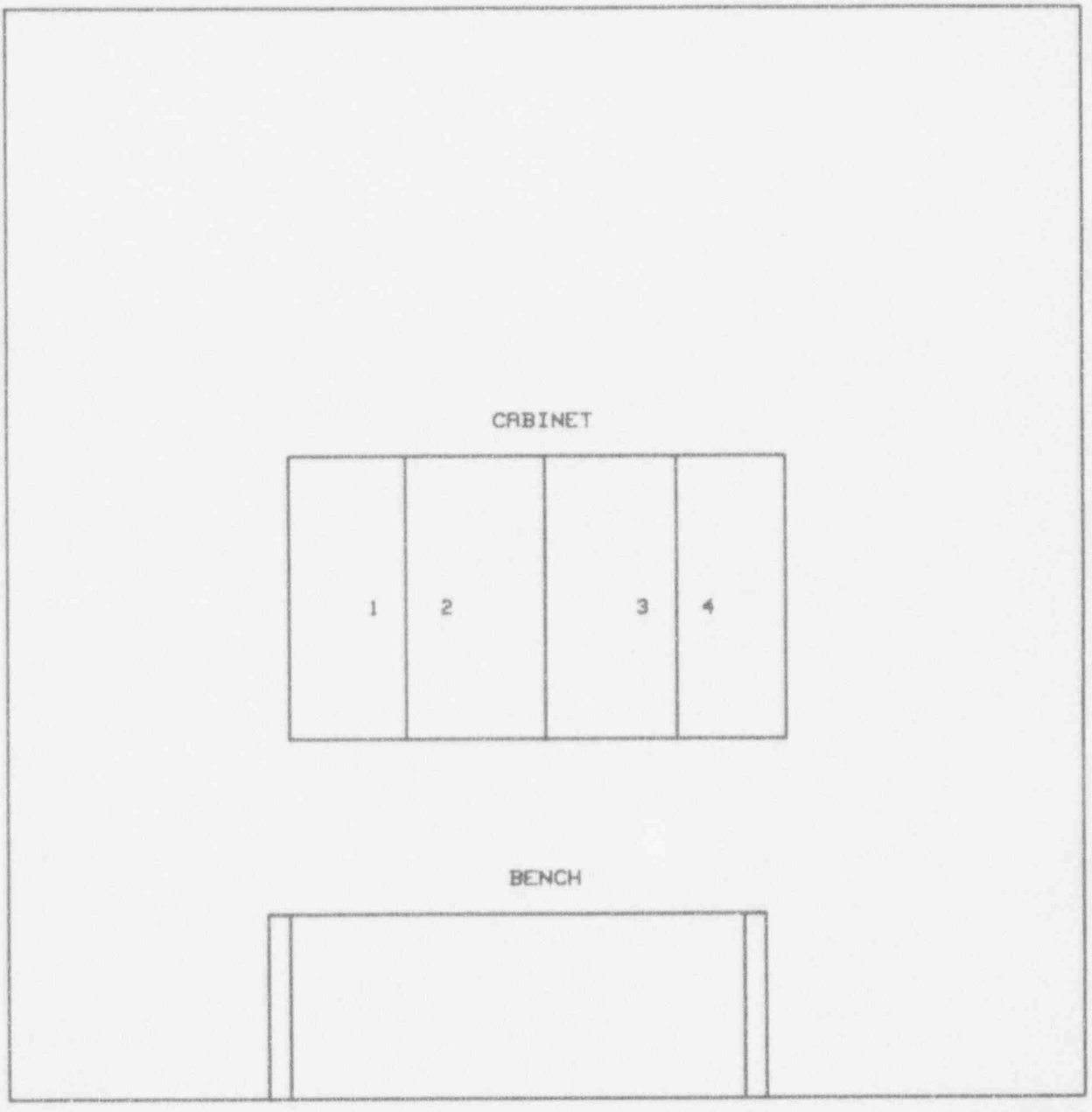
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-206 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-206 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |

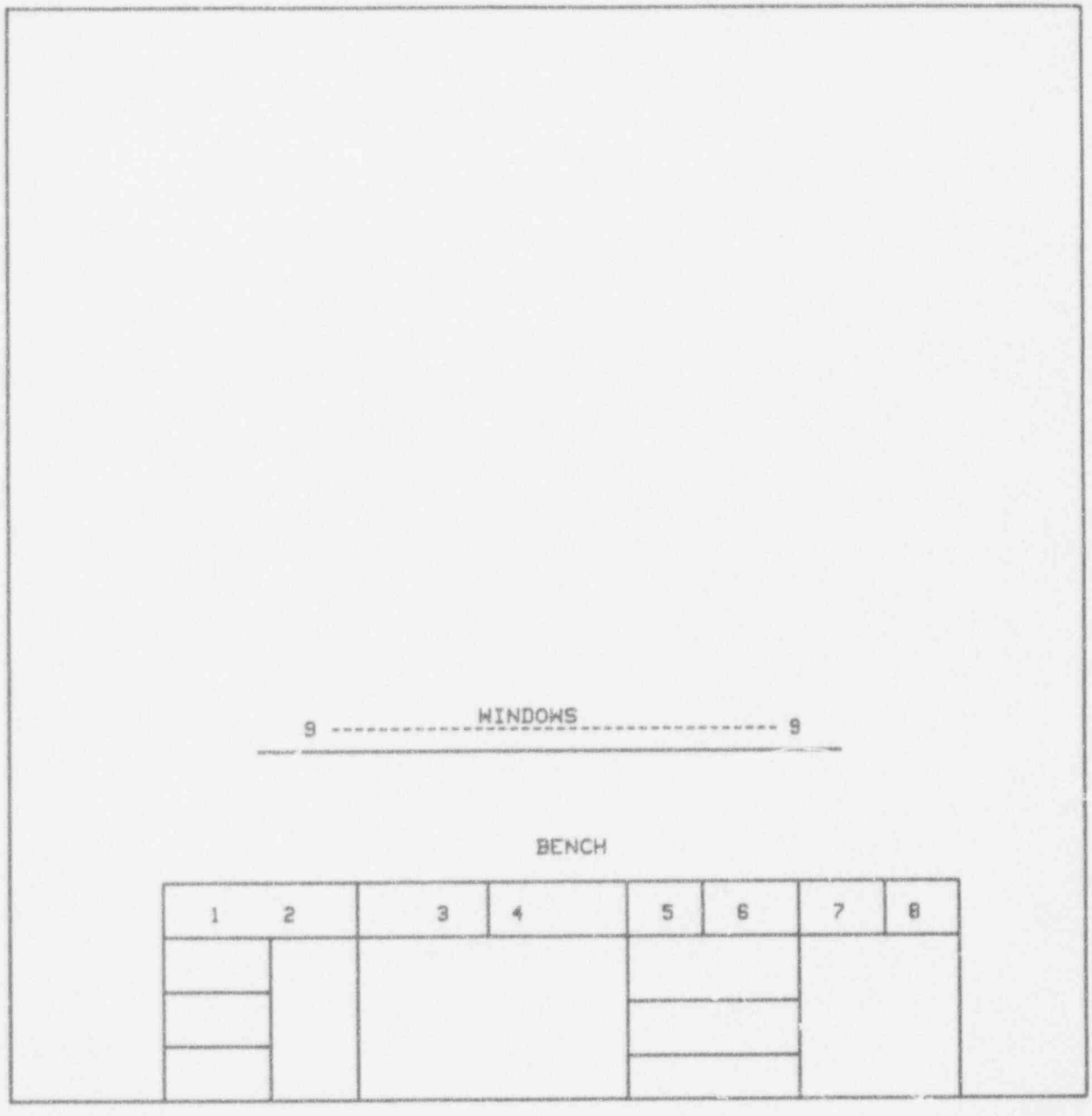
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-206 VIEW-B

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-206 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

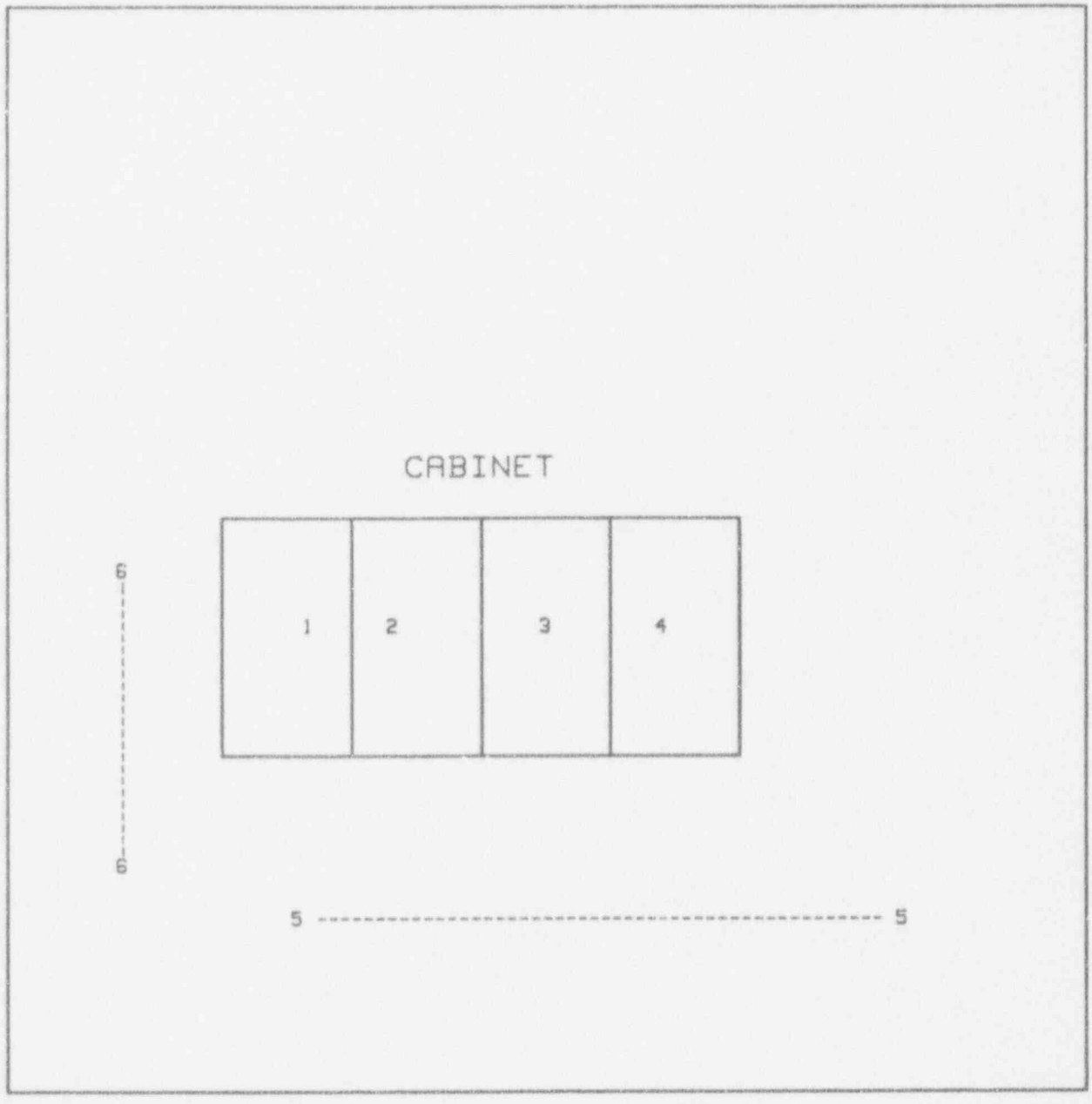
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-206 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-208 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |

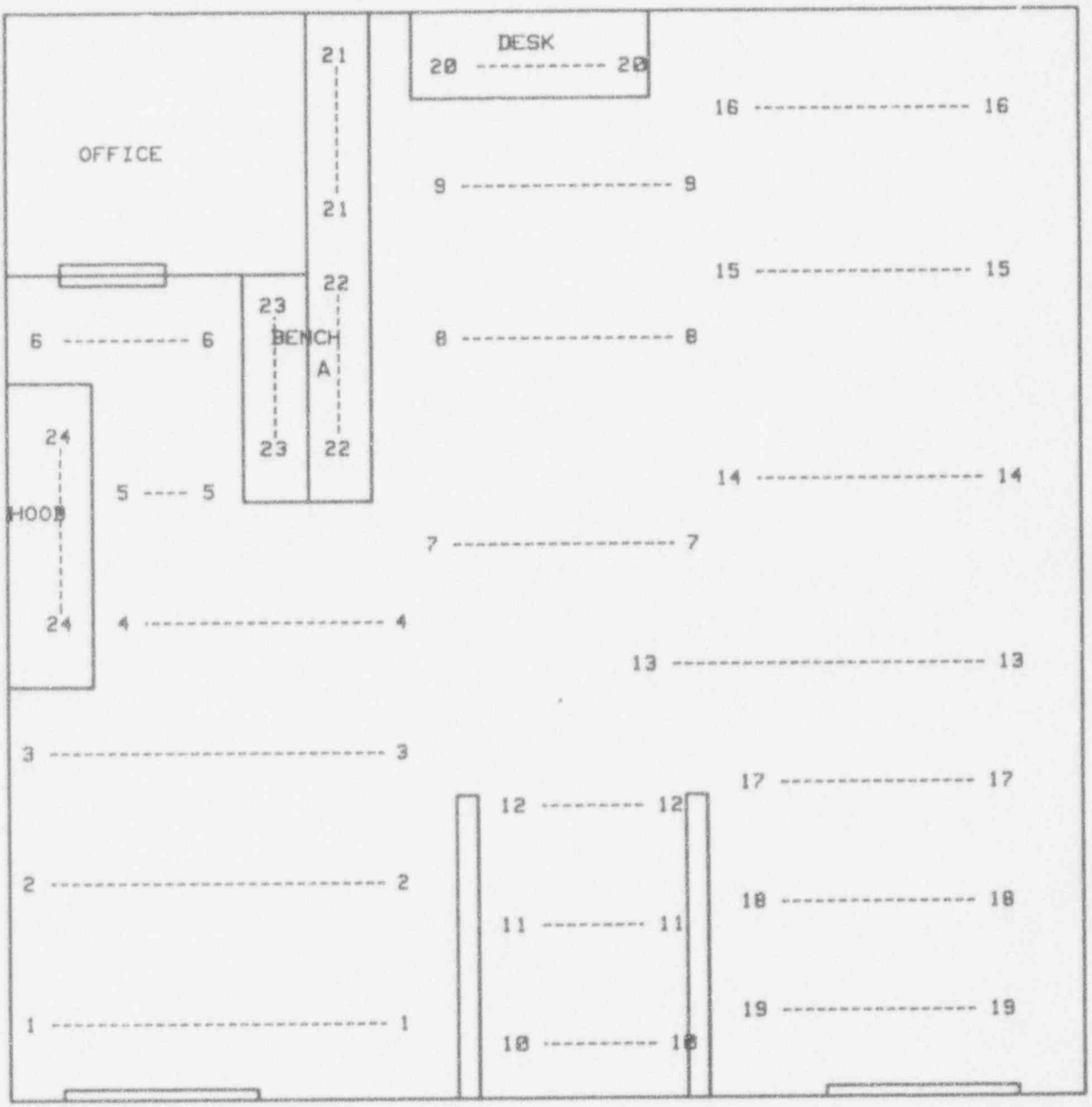
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-200 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-208 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |

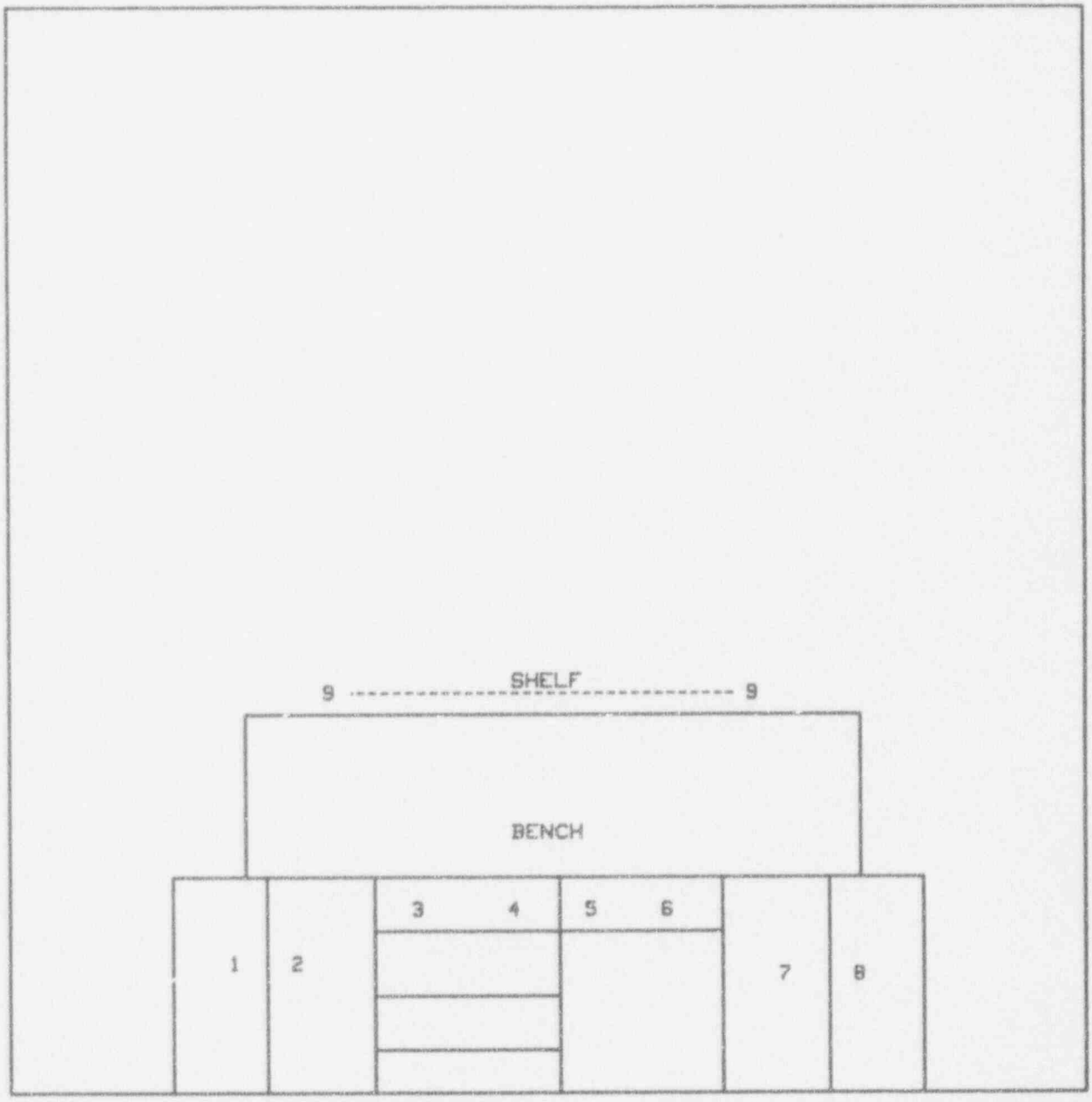
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-208 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-208 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-209 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |
| 19 | <50 | <25 |
| 20 | <50 | <25 |
| 21 | <50 | <25 |
| 22 | <50 | <25 |
| 23 | <50 | <25 |
| 24 | <50 | <25 |
| 25 | <50 | <25 |
| 26 | <50 | <25 |
| 27 | <50 | <25 |
| 28 | <50 | <25 |
| 29 | <50 | <25 |
| 30 | <50 | <25 |

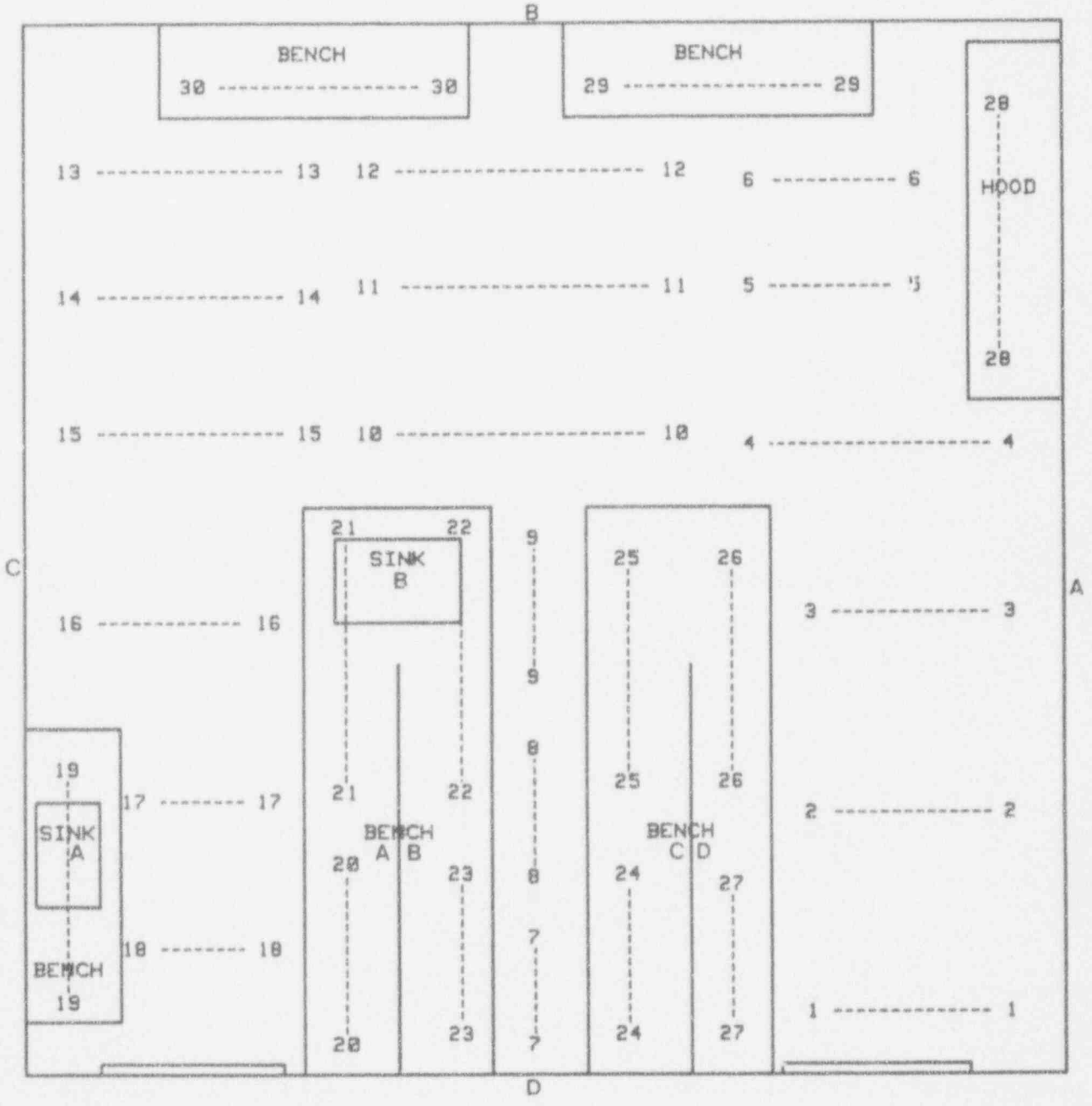
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-209 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-209 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |

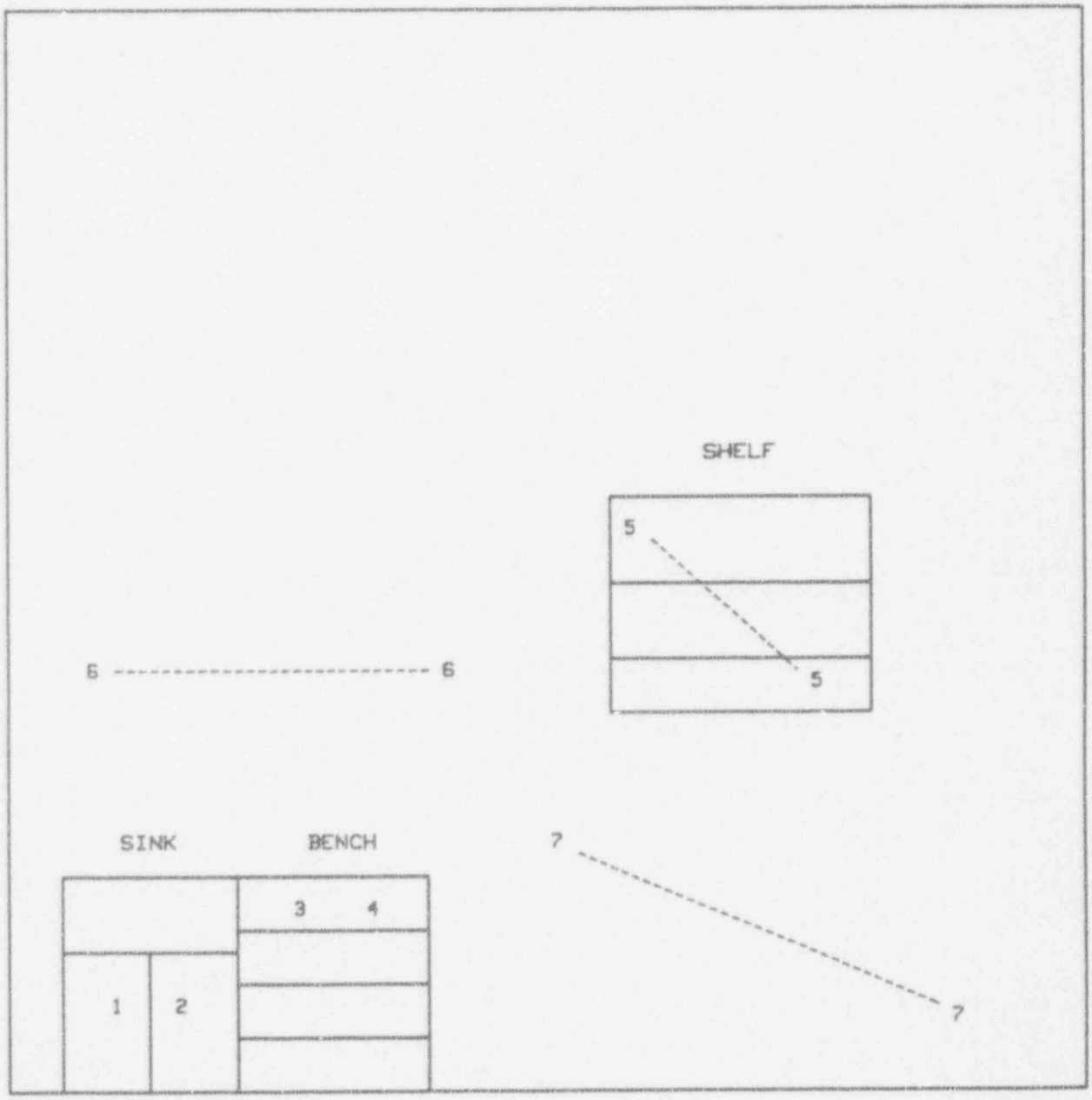
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-209 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-209 Island A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |

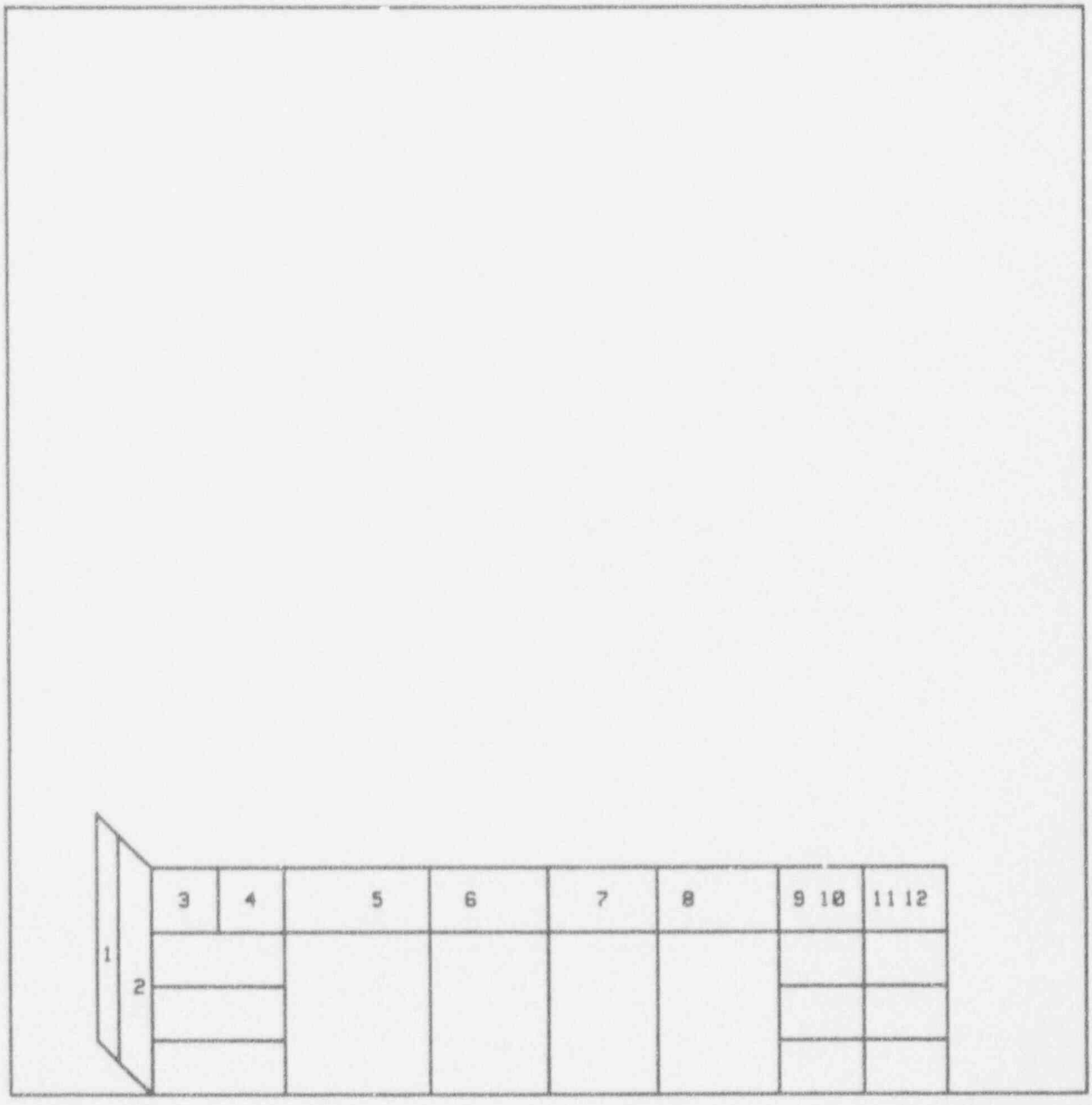
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-209 ISLAND-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-209 Island B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | 181 ±18 | 91 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |

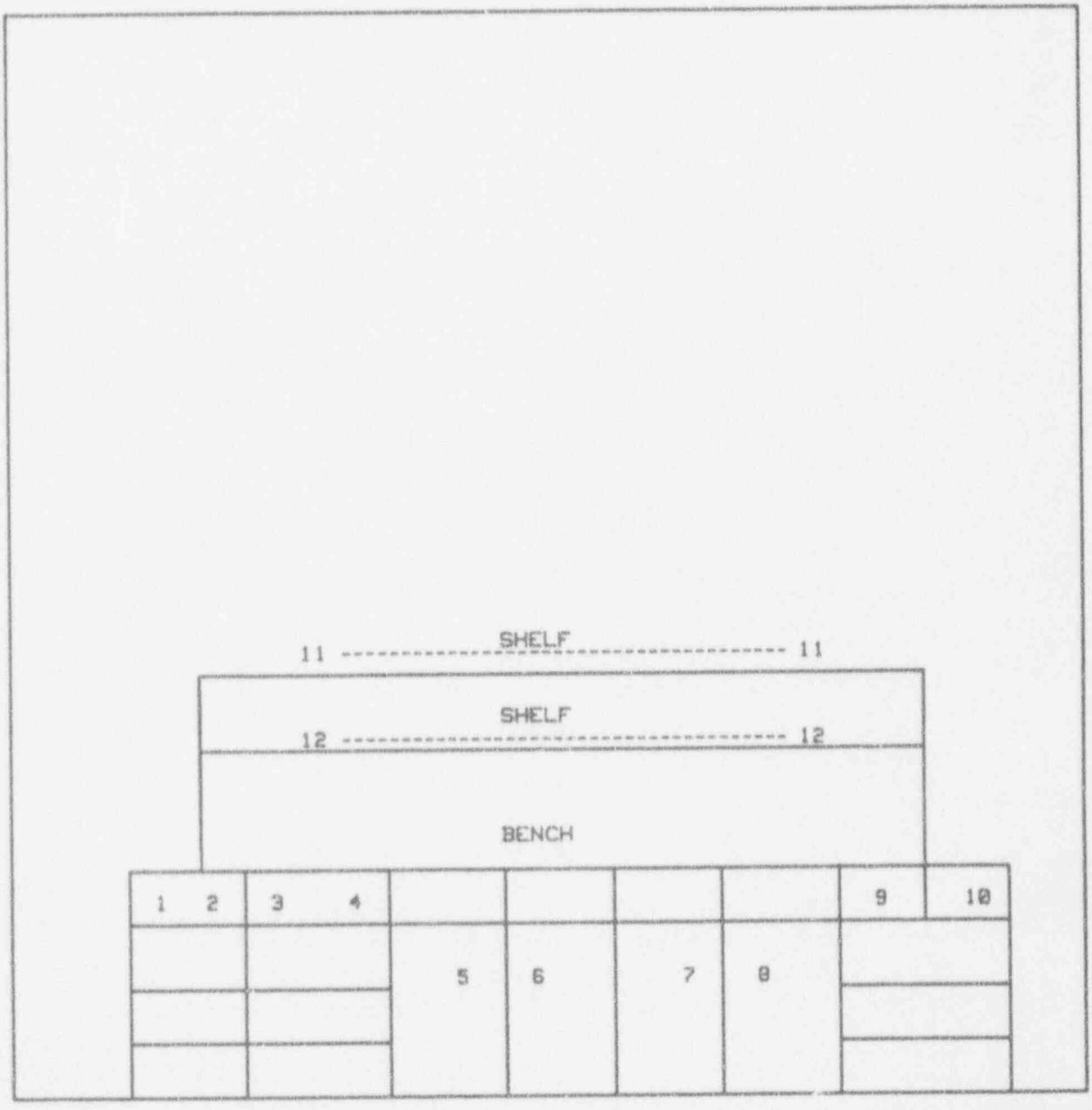
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-209 ISLAND-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-209 Island C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

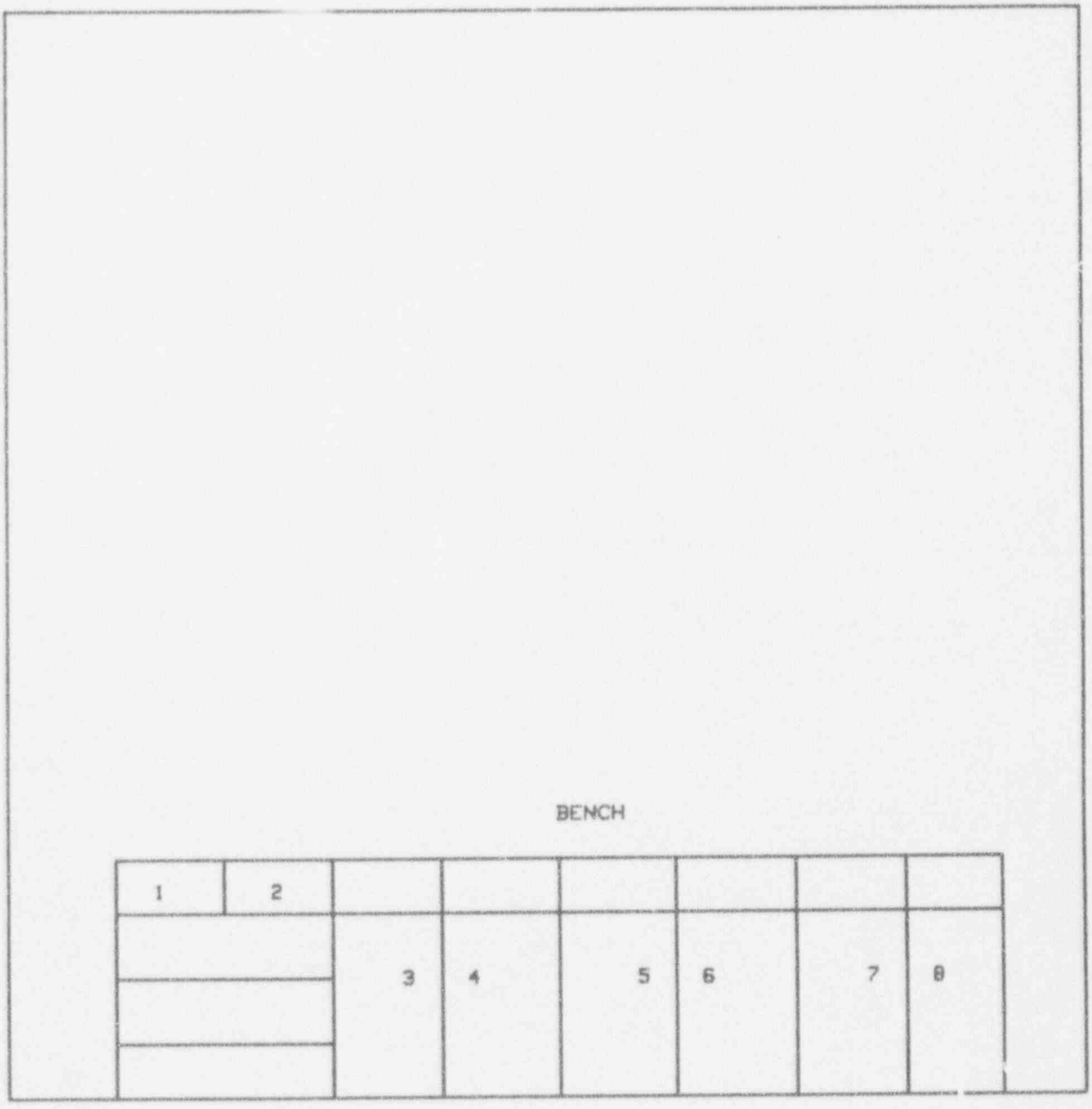
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-209 ISLAND-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-209 Island D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

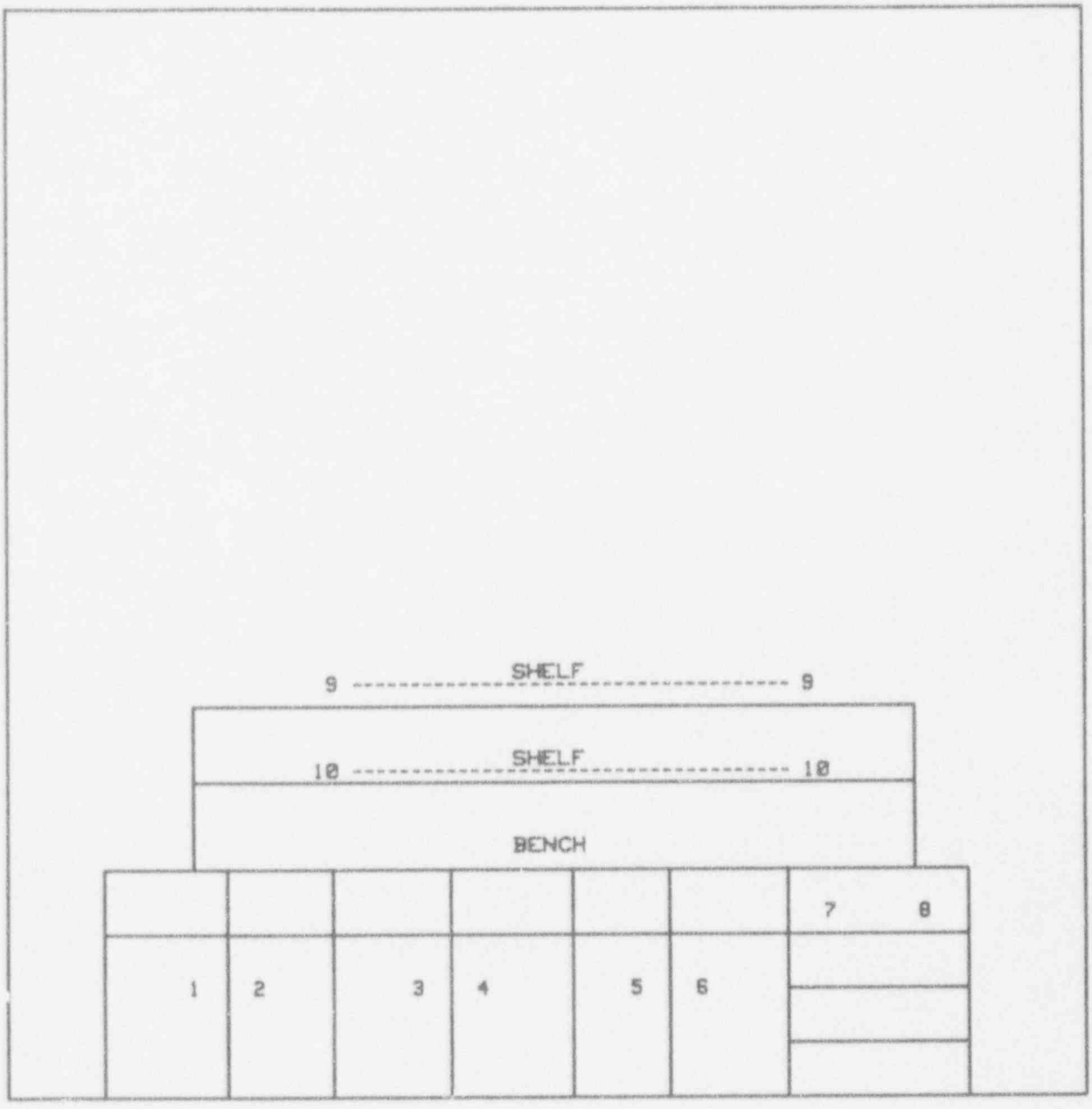
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-209 ISLAND-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-209 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-235 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |

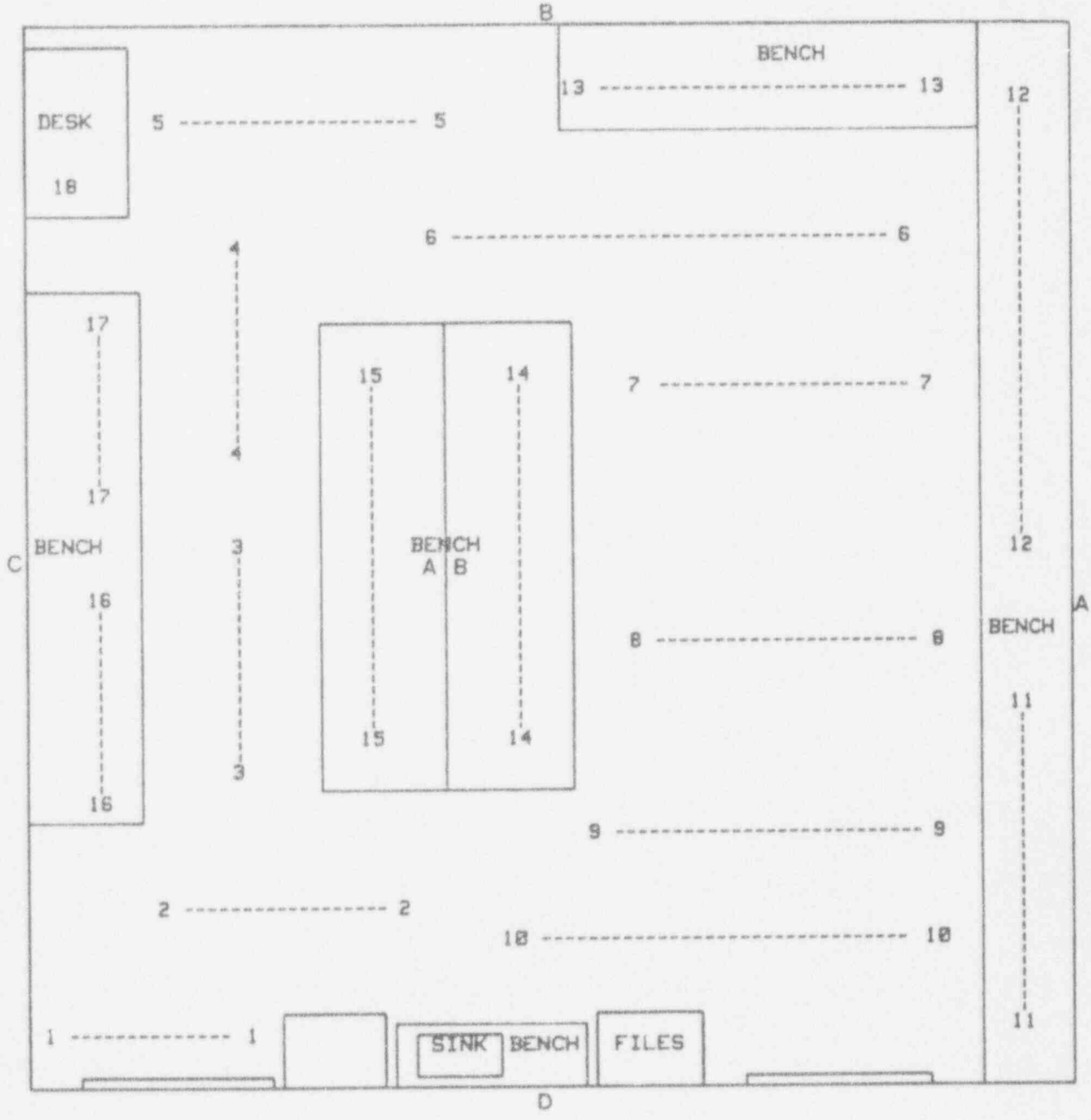
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-235 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-235 View A (Pre-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | 1104 ±110 | 552 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |

TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-235 View A (Post-decon)

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |

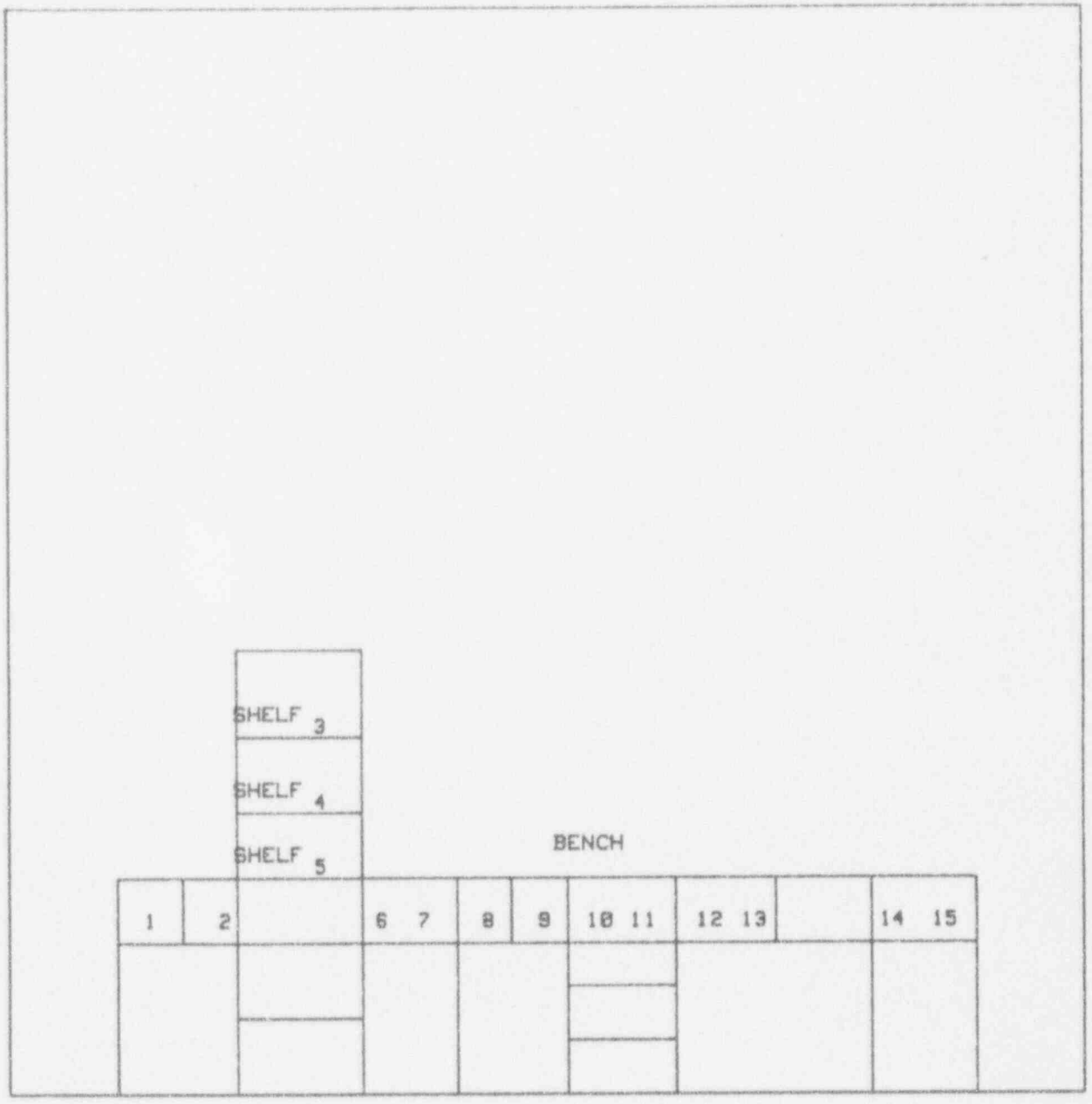
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-235 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-235 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |

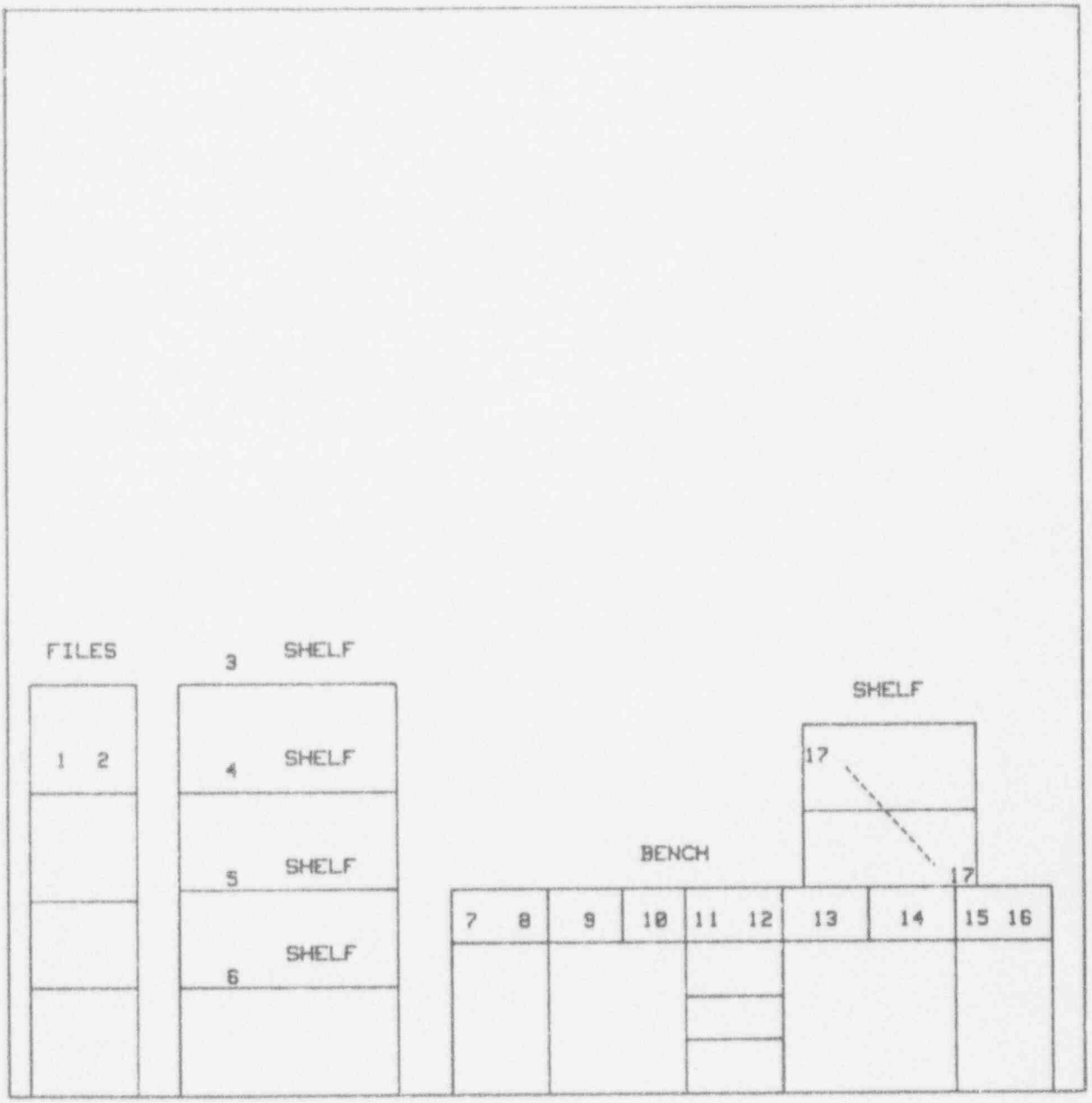
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-235 VIEW-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-235 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |

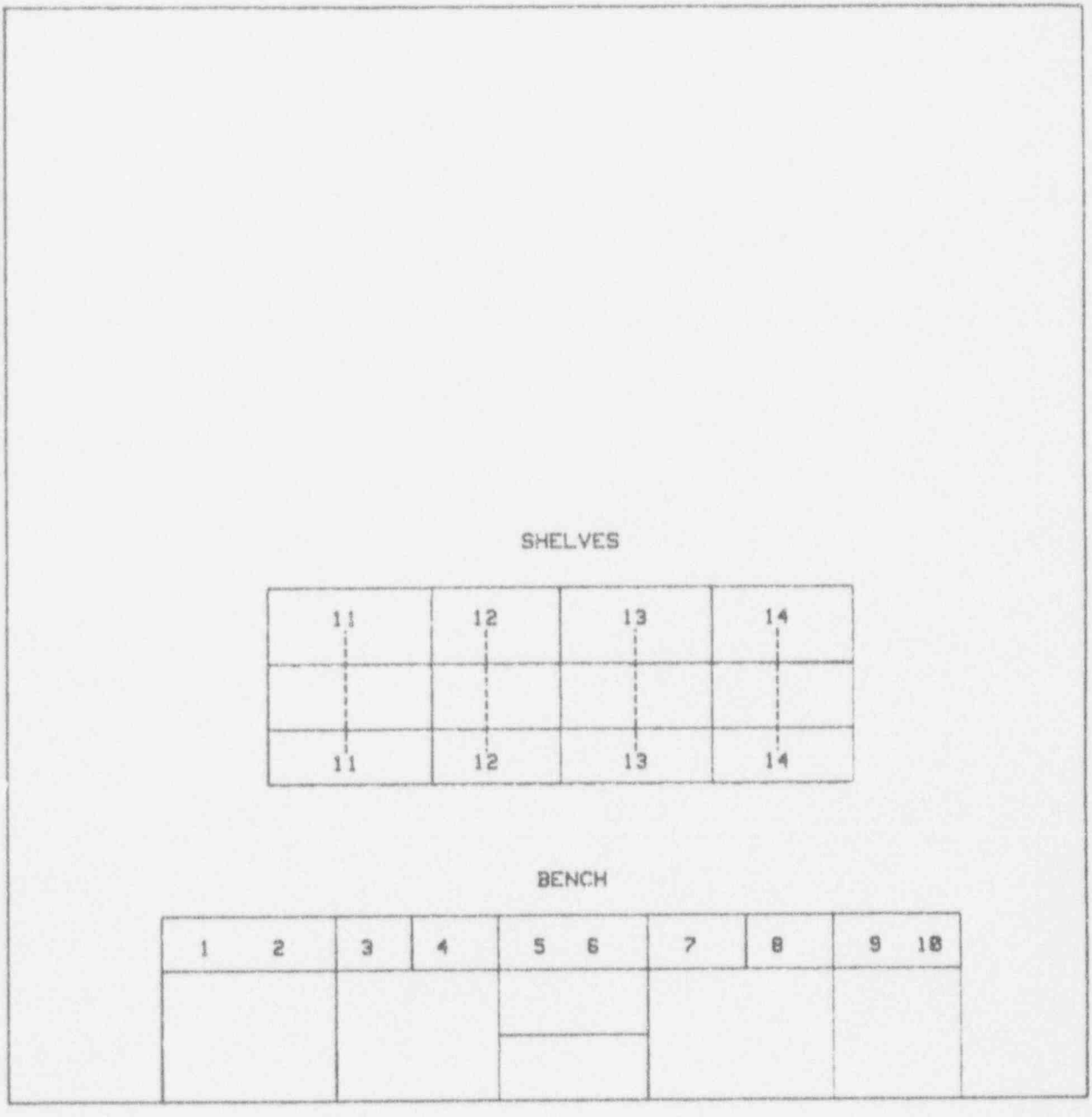
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-235 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-235 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |

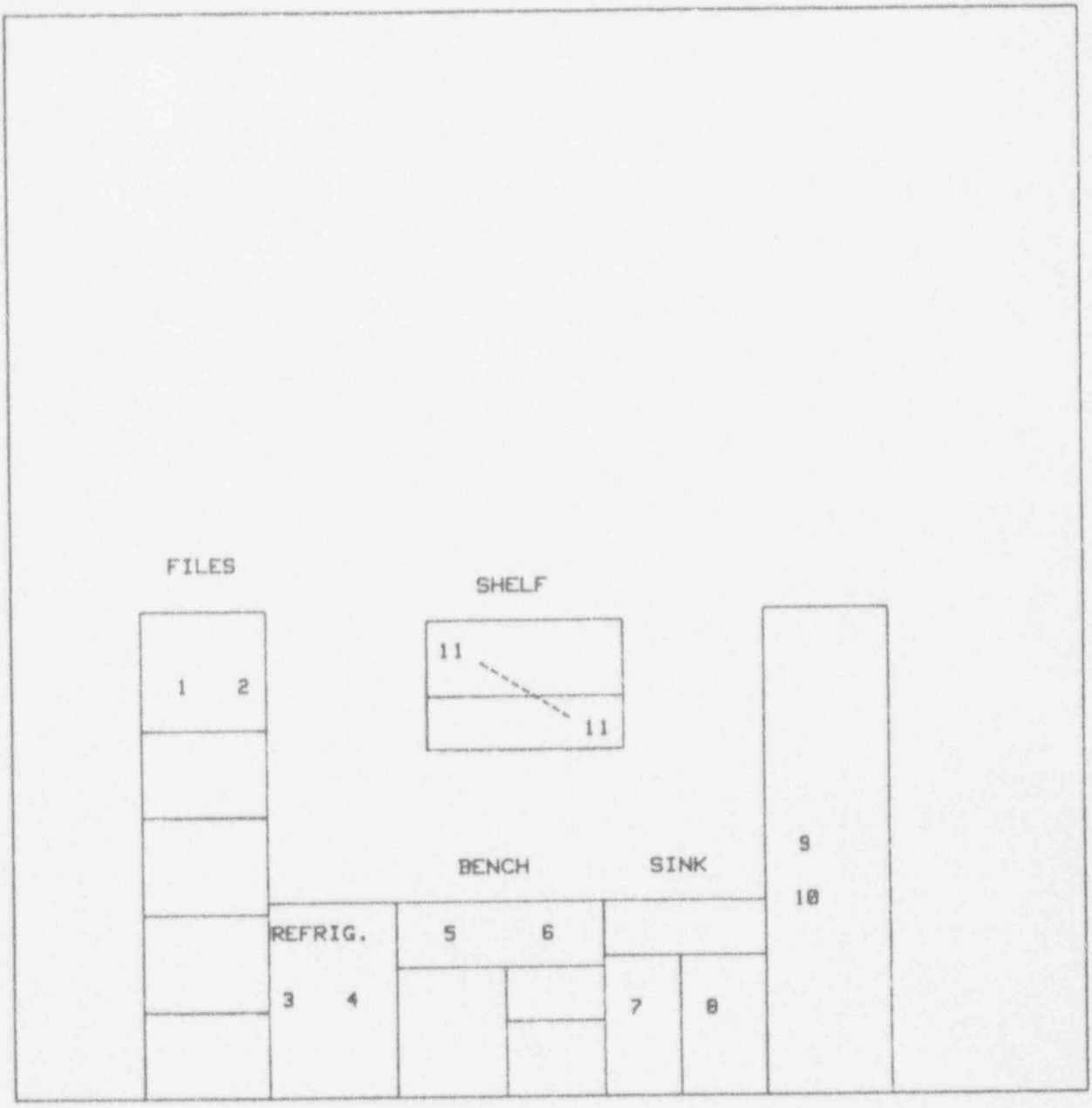
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-235 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-235 Island A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

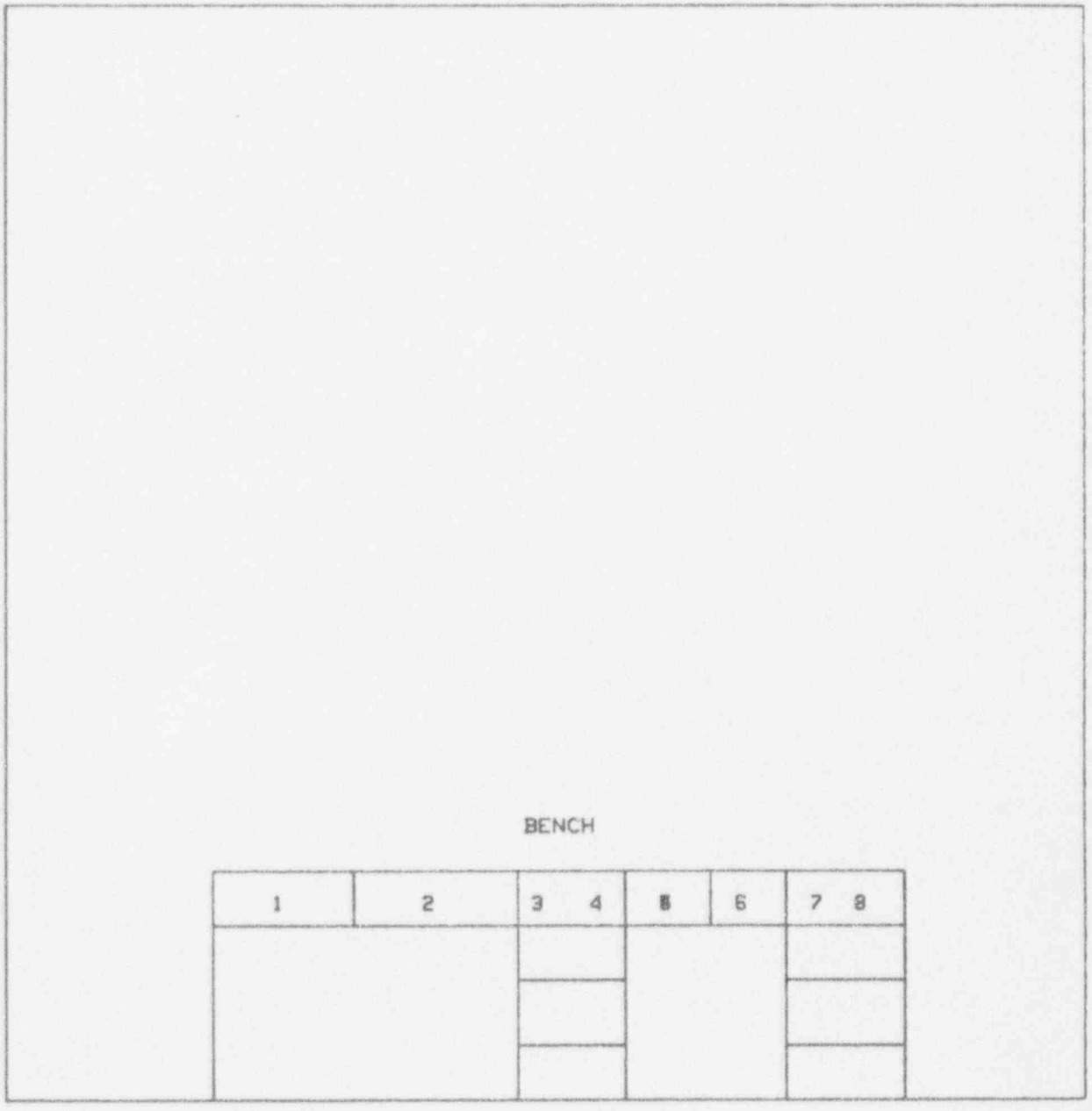
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-235 ISLAND-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-235 Island B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |

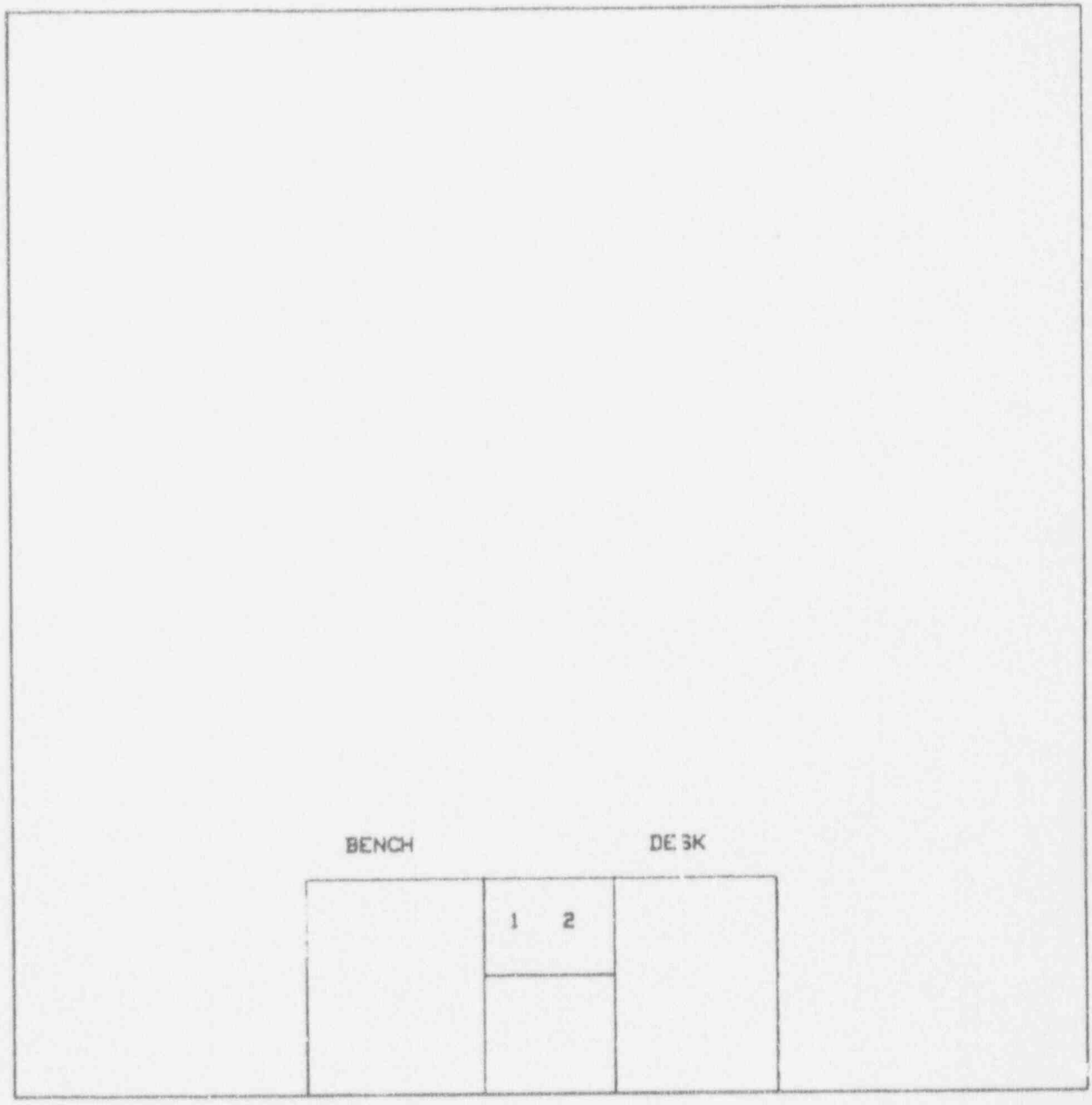
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-235 ISLAND-B

PRINCIPLE OCCUPANTS:

ISOTOPE USAGE:



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-243 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |
| 16 | <50 | <25 |
| 17 | <50 | <25 |
| 18 | <50 | <25 |

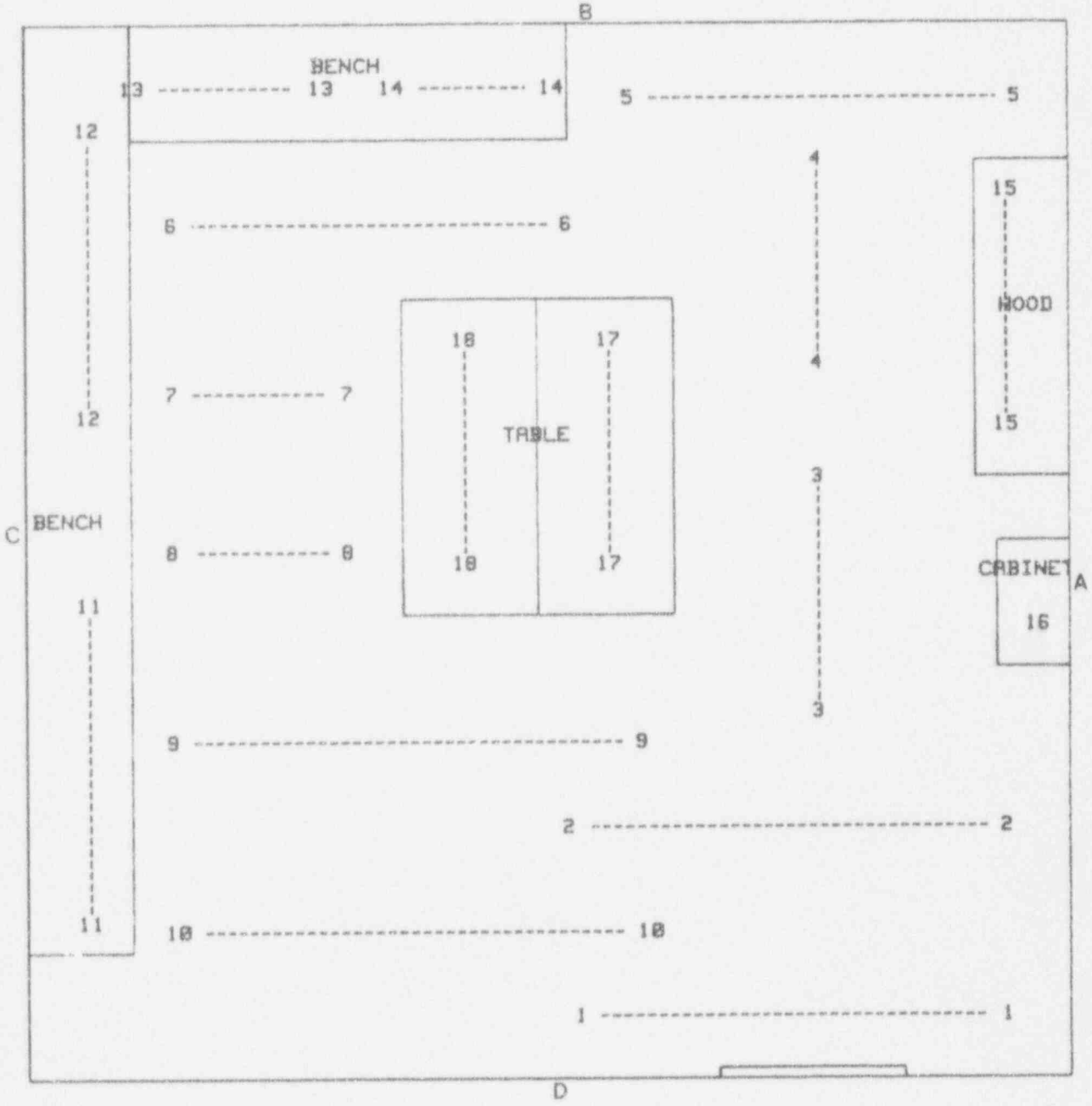
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-243 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-243 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |

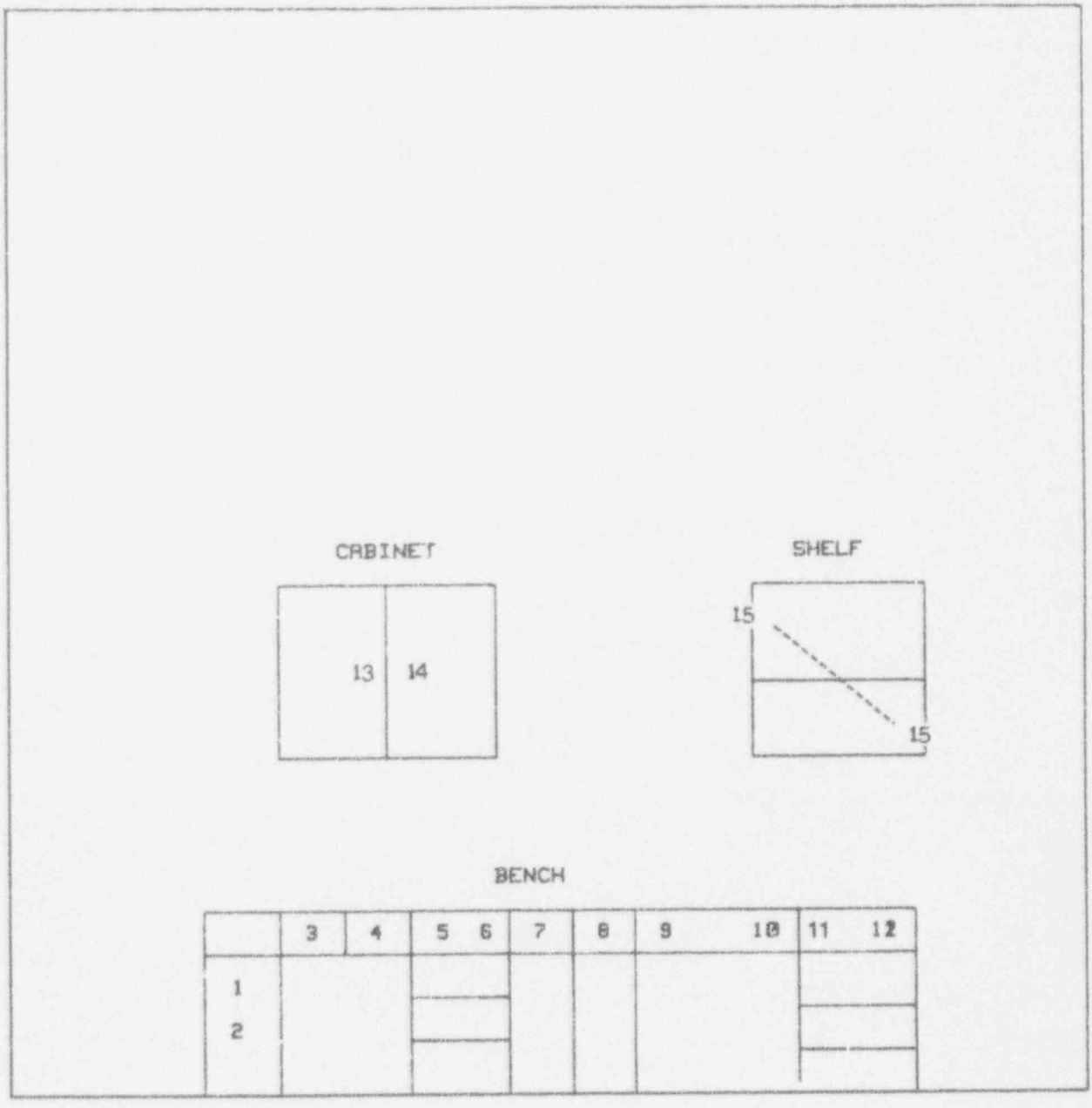
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-243 VIEW-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-243 View C

| SMEAR No. | Low Energy Beta Activity dprn/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |

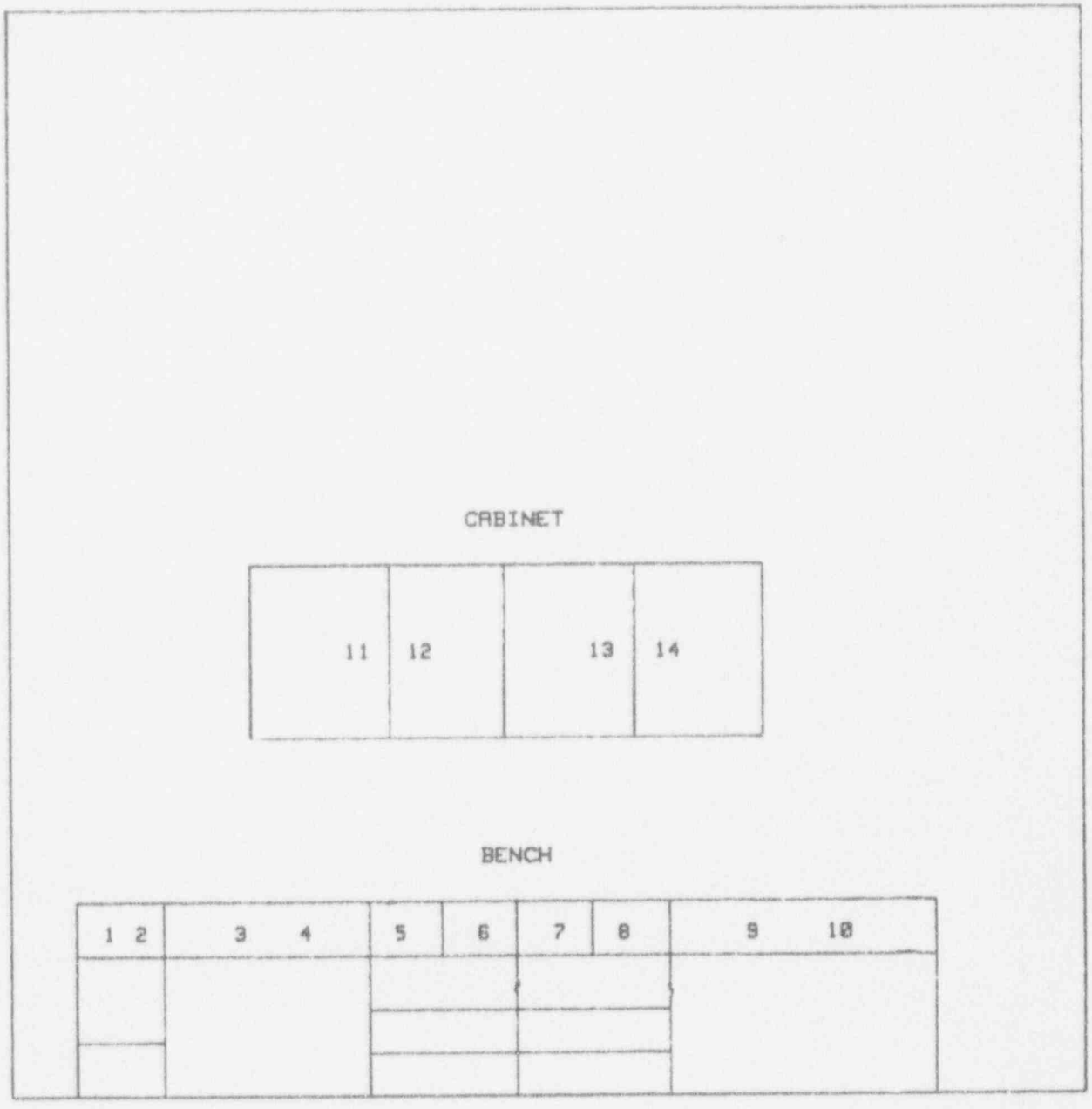
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-243 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-243 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |

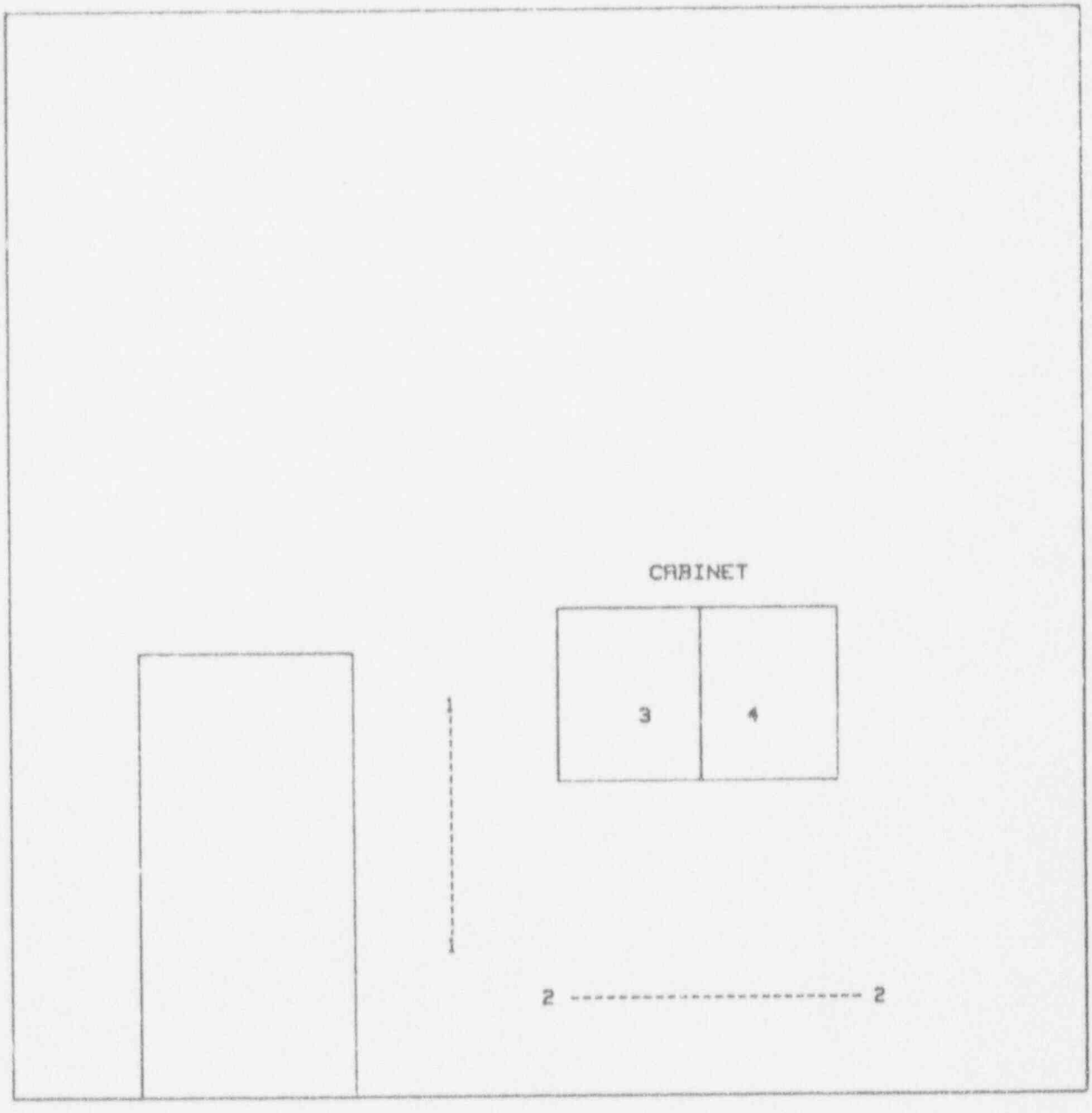
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-243 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-243 Hood 1

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |

TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-244 Main View

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |
| 12 | <50 | <25 |
| 13 | <50 | <25 |
| 14 | <50 | <25 |
| 15 | <50 | <25 |

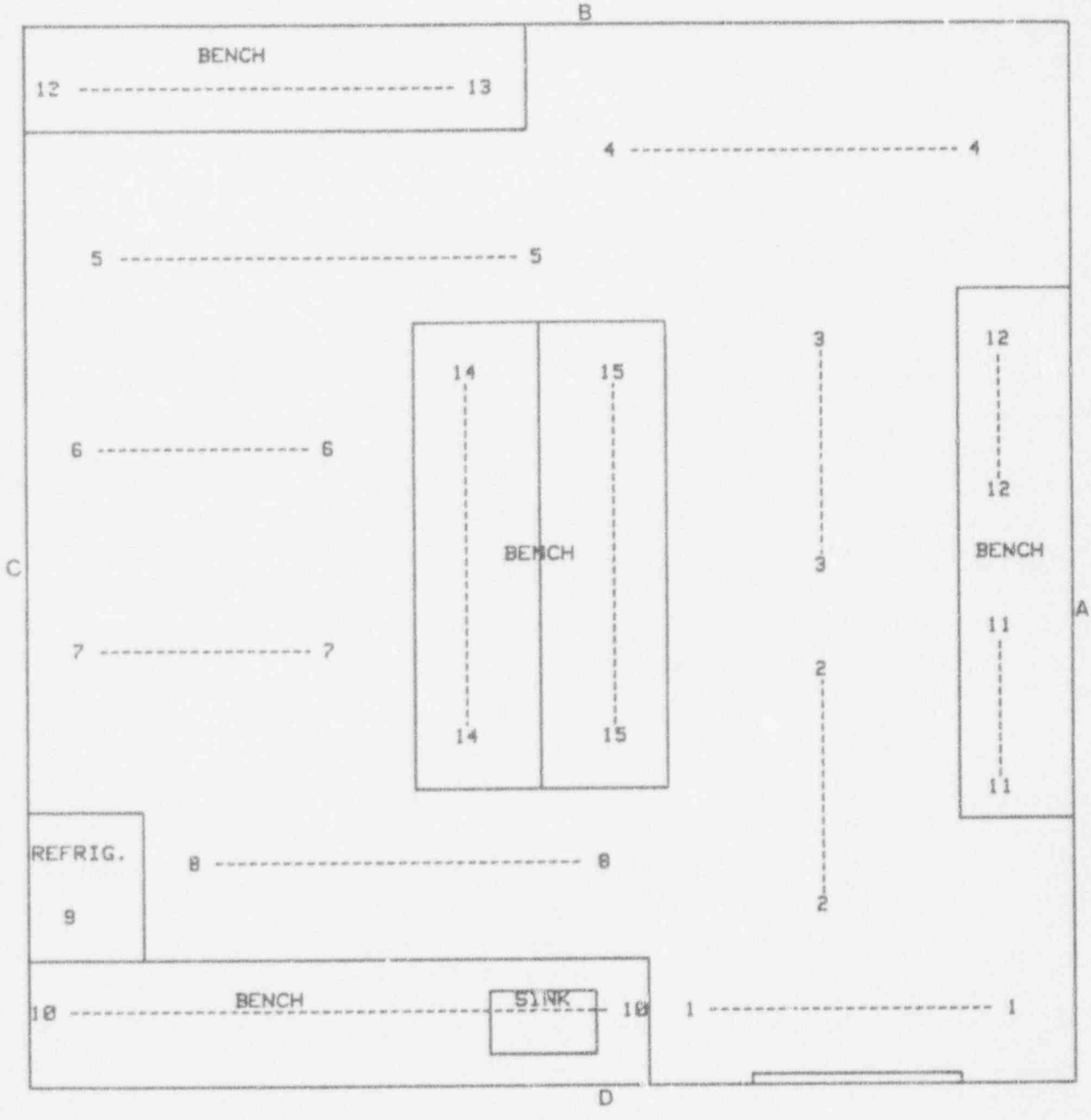
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-244 MAIN VIEW

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-244 View A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |

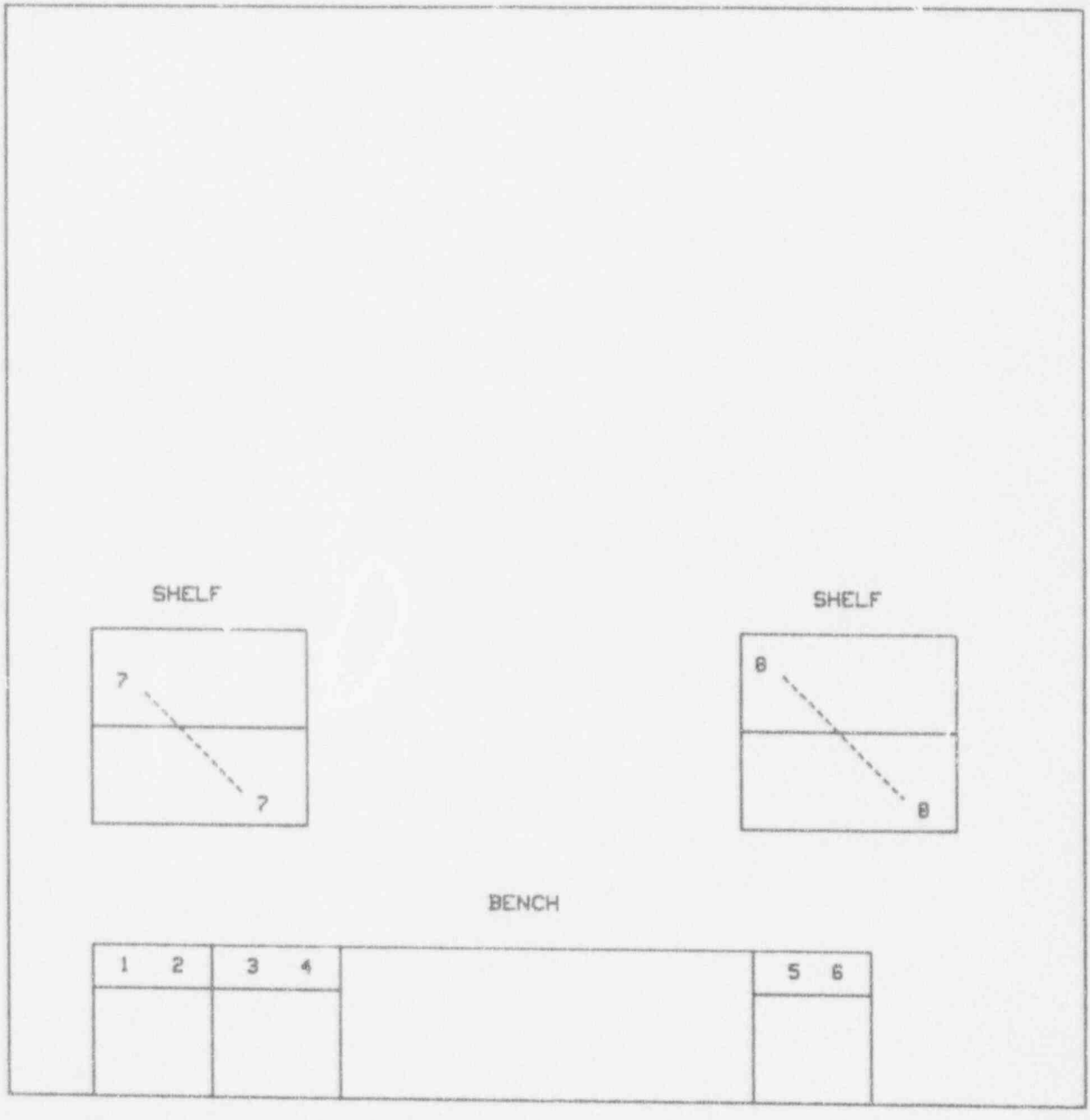
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-244 VIEW-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-244 View B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |

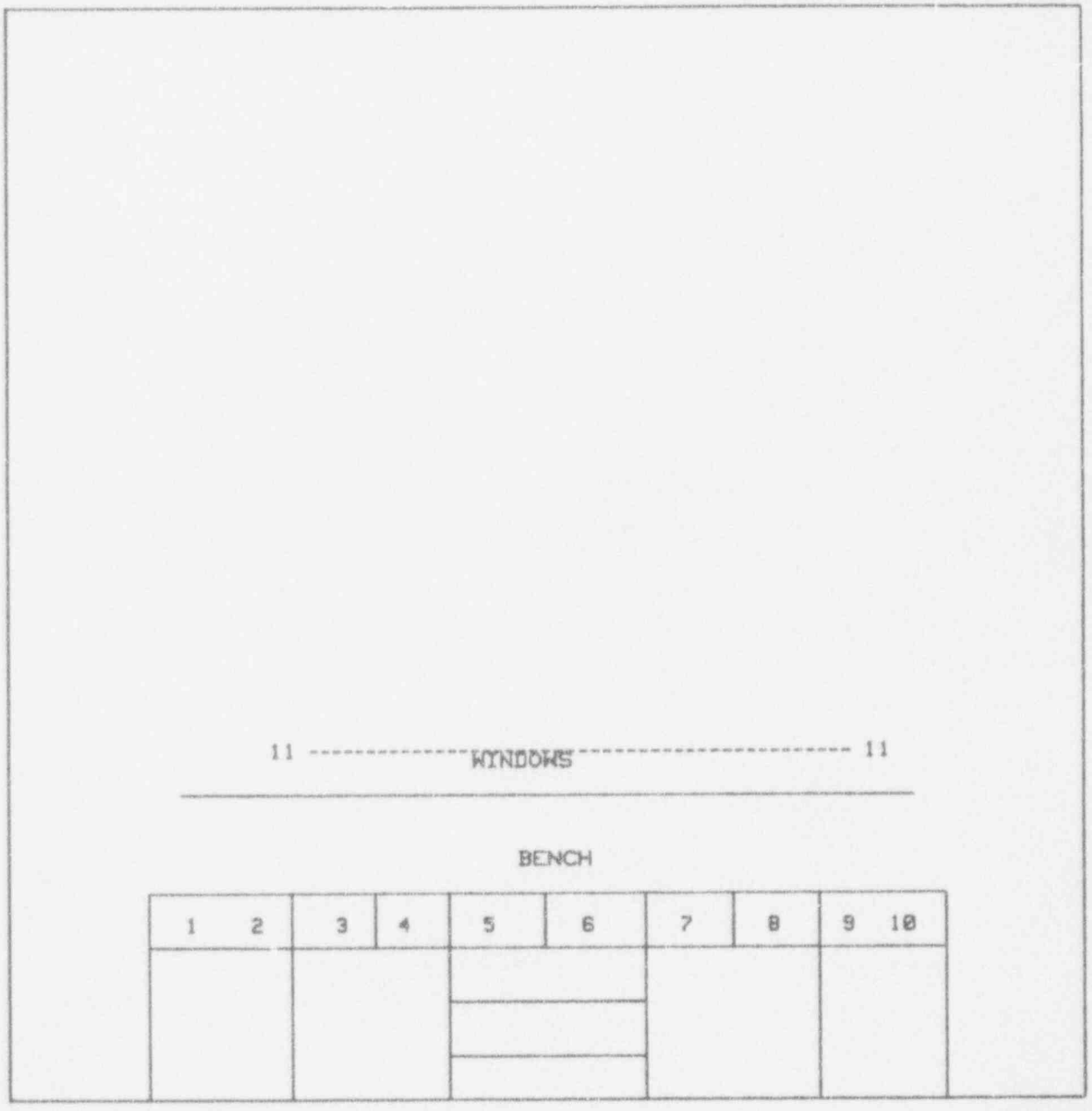
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-244 VIEW-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

SMEAR RESULTS
BY LIQUID SCINTILLATION
COUNTING

LOCATION: V-244 View C

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |

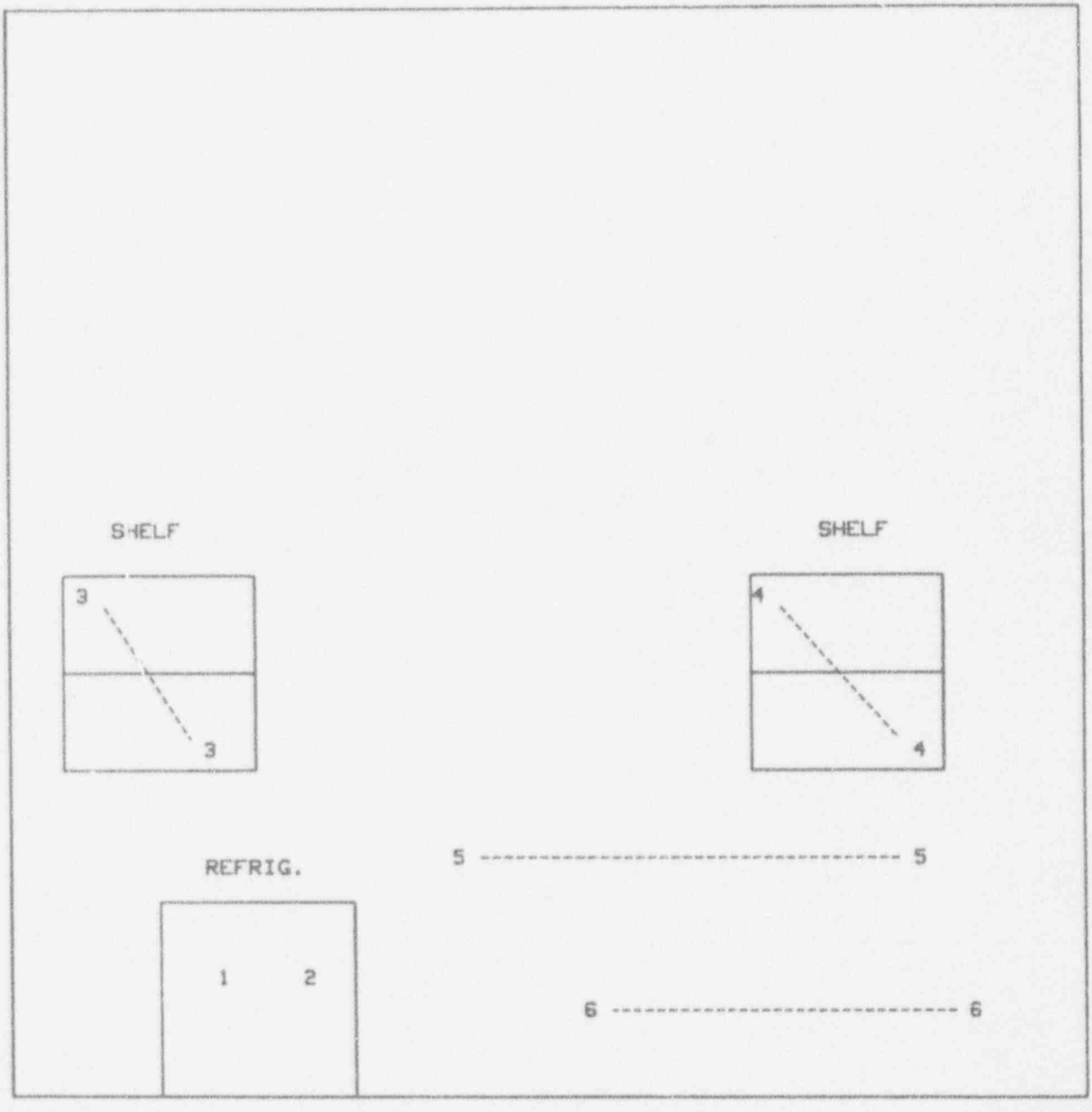
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-244 VIEW-C

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-244 View D

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |
| 3 | <50 | <25 |
| 4 | <50 | <25 |
| 5 | <50 | <25 |
| 6 | <50 | <25 |
| 7 | <50 | <25 |
| 8 | <50 | <25 |
| 9 | <50 | <25 |
| 10 | <50 | <25 |
| 11 | <50 | <25 |

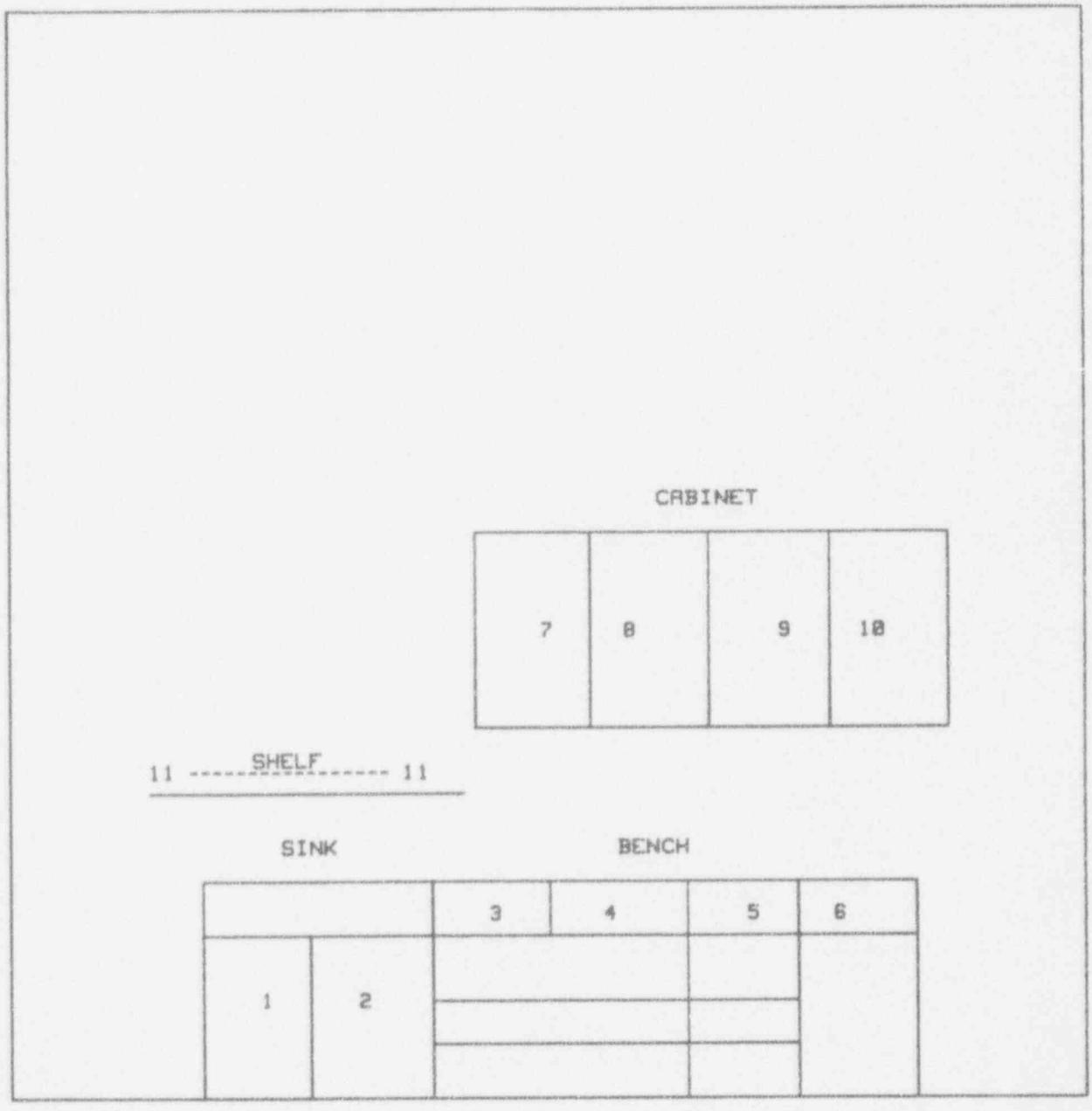
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-244 VIEW-D

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-244 Island A

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |

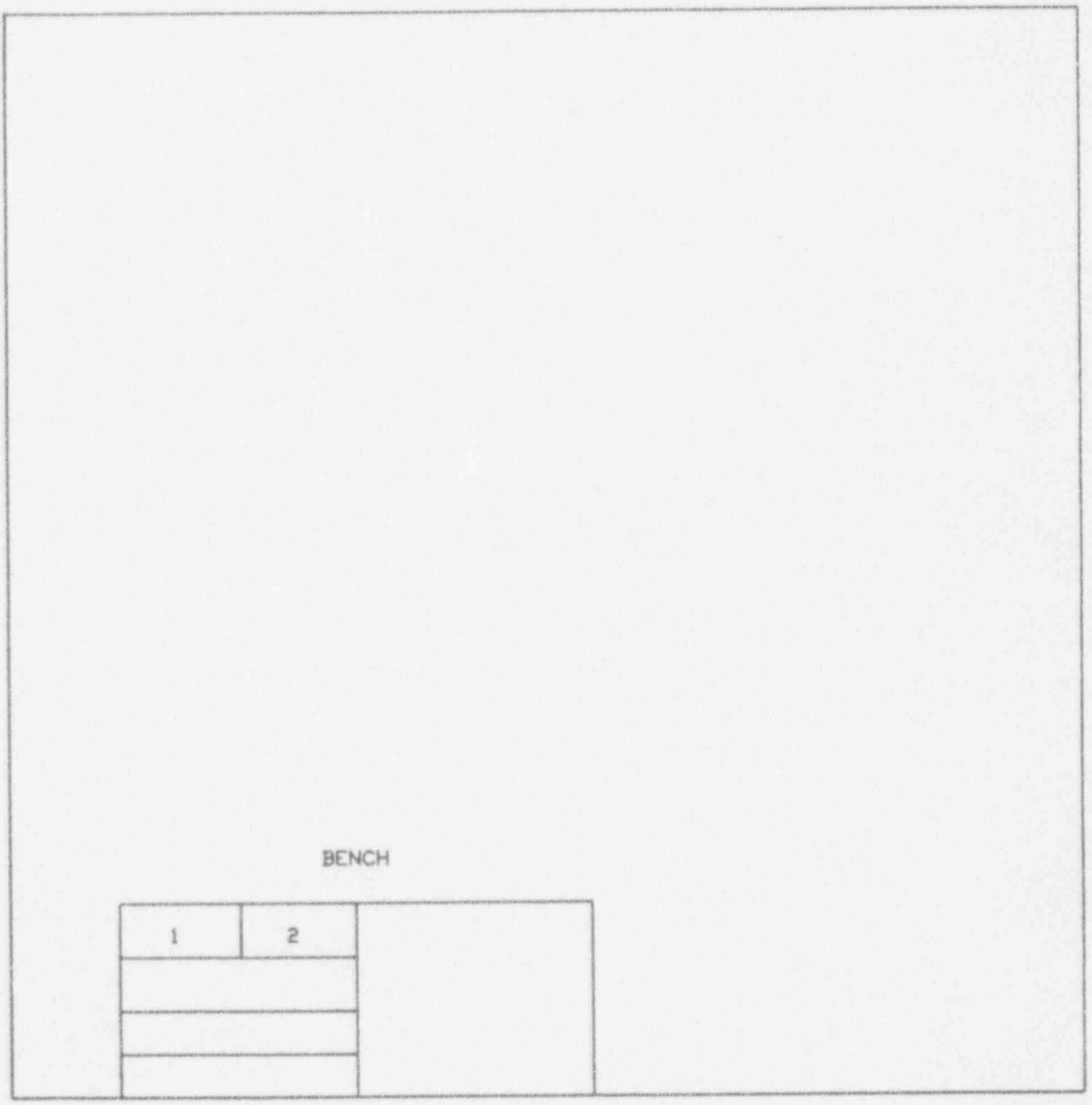
TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-244 ISLAND-A

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____



TELEDYNE ISOTOPES

# SMEAR RESULTS BY LIQUID SCINTILLATION COUNTING

LOCATION: V-244 Island B

| SMEAR No. | Low Energy Beta Activity dpm/sample | Low Energy Beta Activity dpm/100cm$^2$ |
|---|---|---|
| 1 | <50 | <25 |
| 2 | <50 | <25 |

TELEDYNE ISOTOPES

# DIAGRAM OF SURVEYED AREA

LOCATION: V-244 ISLAND-B

PRINCIPLE OCCUPANTS: _____

ISOTOPE USAGE: _____