



U.S. NUCLEAR REGULATORY COMMISSION  
**PDR (PI-37)**  
 RESPONSE TO FREEDOM OF  
 INFORMATION ACT (FOIA) REQUEST

NRC FOIA REQUEST NUMBER: **FOIA -- 90-545**  
 RESPONSE TYPE:  FINAL  PARTIAL  
 DATE: **DEC 19 1990**  
 DOCKET NUMBER(S) IF APPLICABLE:

REQUESTER: **Mr. James Wilson**

**PART I - AGENCY RECORDS RELEASED OR NOT LOCATED (See checked boxes)**

- No agency records subject to the request have been located.
- No additional agency records subject to the request have been located.
- Requested records are available through another public distribution program. See Comments Section.
- Agency records subject to the request that are identified on Appendixes \_\_\_\_\_ are already available for public inspection and copying in NRC Public Document Room, 2120 L Street, N.W., Washington, DC 20555.
- Agency records subject to the request that are identified on Appendixes **A** are being made available for public inspection and copying in NRC Public Document Room, 2120 L Street, N.W., Washington, DC in a folder under this FOIA number and requester name.
- The nonproprietary version of the proposal that you agreed to accept in a telephone conversation with a member of my staff is now being made available for public inspection and copying at the NRC Public Document Room, 2120 L Street, N.W., Washington, DC in a folder under this FOIA number and requester name.
- Agency records subject to the request that are identified on Appendixes \_\_\_\_\_ may be inspected and copied at the NRC Local Public Document Room identified in the Comments Section.
- Enclosed is information on how you may obtain access to and the charges for copying records placed in the NRC Public Document Room, 2120 L Street, N.W., Washington, DC.
- Agency records subject to the request are enclosed.
- Records subject to the request have been referred to another Federal agency(ies) for review and direct response to you.
- You will be billed by the NRC for fees totaling \$ **18.95**.
- In view of NRC's response to this request, no further action is being taken on appeal letter dated \_\_\_\_\_ No.

**PART II - INFORMATION WITHHELD FROM PUBLIC DISCLOSURE**

Certain information in the requested records is being withheld from public disclosure pursuant to the exemptions described in and for the reasons stated in Part B sections B, C and D. Any released portions of the documents for which only part of the record is being withheld are being made available for public inspection and copying in the NRC Public Document Room, 2120 L Street, N.W., Washington, DC in a folder under this FOIA number and requester name.

**COMMENTS**

The fees associated with the processing of your FOIA request are as follows:

Clerical Search/Review - 40 minutes = \$8.00  
 Professional Review - 15 minutes = \$6.15  
 Reproduction of Records - 24 pages = \$4.80  
 Total = \$18.95

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 PDR FOIA  
 WILSON90-545 PDR

SIGNATURE, DIRECTOR, DIVISION OF FREEDOM OF INFORMATION AND PUBLICATIONS SERVICES

*Donna H. Crowley*

## Appendix A

DOCUMENTS TO BE RELEASED  
FOIA REQUEST NUMBER 90-545

<u>DATE</u>	<u>ORIGINATOR</u>	<u>RECIPIENT</u>	<u>DESCRIPTION</u>
1. 02/10/86	J. Taylor, DED for RO, NRC	Precision Materials Corporation	Letter subject: Order Revoking License (6 Pages)
2. 12/22/87	J. White, Region I, NRC	M. Rosenblum, Precision Materials Corporation	Letter subject: Special Inspection Nos. 87-001 and 87-002 (18 Pages)



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

FEB 10 1988

Docket No.: 30-22063  
License No.: 29-20777-01  
EA 87-156

Precision Materials Corporation  
Replogle Avenue  
Mine Hill, New Jersey 07801

Gentlemen:

SUBJECT: ORDER REVOKING LICENSE

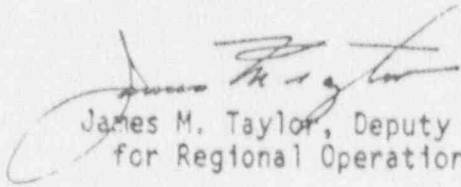
On September 4, 1987, the NRC issued an Order Modifying License (Effective Immediately) to Precision Materials Corporation (PMC). The Order required (1) the suspension of operation of the irradiator at your facility, (2) placement of the radioactive sources in NRC approved storage or shipping casks and daily monitoring of the irradiator pool until such storage was accomplished, (3) either submittal of a plan to the NRC for resumption of operations, or transfer of the radioactive sources to an authorized recipient (and submittal of a plan to the NRC for subsequent shipment of waste, decontamination of the facility and release of the facility for unrestricted use), and (4) providing telephone notification to the NRC prior to any movement of sources from the pool and/or facility. Since that time, the NRC has confirmed that you have ceased operations, transferred all NRC licensed radioactive sources to an authorized recipient, successfully decontaminated the facility so that it could be released for unrestricted use, and transferred all waste generated during the cleanup effort to an authorized disposal site. Accordingly, all terms of the Order have been met.

By letter dated December 22, 1987, the NRC notified you that no plan had been submitted by PMC for resumption of licensed activities, and that unless a plan was submitted within 10 days of the date of that letter, the NRC would take action to terminate the NRC license for the PMC facility. Since we have not, as of this date, received from PMC any plan for resumption of licensed activities, in accordance with our letter dated December 22, 1987, we are terminating this license by issuance of the enclosed "Order Revoking License".

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed Order will be placed in the NRC's Public Document Room.

Sincerely,

8802120196 880210  
REG1 LIC30  
29-20777-01 PDR

  
James M. Taylor, Deputy Executive Director  
for Regional Operations

Enclosure: As stated

AIH

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

Precision Materials Corporation  
Replogle Avenue  
Mine Hill, New Jersey 07801

) Docket No. 30-22063  
) License No. 29-20777-01  
) EA 87-156

ORDER REVOKING LICENSE

I

Precision Materials Corporation (the "licensee") is the holder of Byproduct Material License No. 29-20777-01, which authorizes the licensee to possess a maximum of 2,000,000 curies of cobalt-60 as sealed sources for use in a custom designed OMEGA irradiator for irradiation of certain materials. The license was issued by the Nuclear Regulatory Commission (the "Commission" or "NRC") on March 29, 1985, was most recently amended on January 28, 1986, and is due to expire on March 31, 1990. The licensee currently does not possess any radioactive material, having transferred all licensed material to an authorized recipient as of December 15, 1987.

II

On September 4, 1987, the NRC issued an Order Modifying License (Effective Immediately) to the licensee which required (1) the suspension of operations at the facility, (2) placement of the radioactive sources in NRC approved storage or shipping casks and daily monitoring of the storage pool until such storage was accomplished; (3) either submittal of a plan to the NRC for resumption of operations, or transfer of the radioactive sources to an authorized recipient (and submittal of a plan to the NRC for subsequent shipment of waste, decontamination of the facility and release of the facility for unrestricted use), and (4) telephone notification to the NRC prior to any movement of the sources from the pool and/or the facility.

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REG1 LIC30  
29-20777-01 PDR

The Order was issued because the NRC no longer had reasonable assurance that use or storage of licensed material at the facility would be performed safely and in accordance with the terms of the license, given the financial status of the licensee, the planned resignations of the President and Vice President (the then two remaining Radiation Safety Officers), the apparent lack of sufficient technical knowledge of facility design and operation by any remaining employee, officer or director of the licensee, and a continuing problem of water leakage from the irradiator pool.

111

Since the Order Modifying License was issued on September 4, 1987, the NRC has confirmed that the licensee has ceased operations, transferred all NRC licensed radioactive sources to an authorized recipient, successfully decontaminated the facility so that it can be released for unrestricted use, transferred all waste generated during the cleanup effort to an authorized recipient, and no longer employs individuals qualified to engage in licensed activities. By letter dated December 22, 1987, the NRC notified you that no plan had been submitted by PMC for resumption of licensed activities, and that unless a plan was submitted within 10 days of the date of that letter, the NRC would take action to terminate the NRC license for the PMC facility. As of this date, the licensee has not submitted any plan for resumption of licensed activities. 10 CFR 30.61(b) provides, in part, that any license may be revoked because of conditions revealed by an inspection or other means which would warrant the Commission to refuse to grant a license on an original application. As part of those requirements for an original application, as set forth in 10 CFR 30.33,

an applicant must be qualified by training and experience to use the material for the purpose requested in the license in such a manner as to protect health and minimize danger to life or property. Presently, this licensee has no licensed material or qualified individuals to use the material in such a manner as to protect the public health and safety and to minimize danger to life or property. Moreover, notwithstanding the opportunities to submit a plan for resumption of licensed activities in response to the NRC Order of September 4, 1987 and an NRC letter dated December 22, 1987, the licensee has not made any submittals to the NRC which describe such a plan. Permitting resumption of licensed activities under these circumstances would be contrary to the public health and safety and keeping the license in effect serves no purpose. Therefore, I have determined that the public health, safety and interest, require that this license should be revoked.

IV

Accordingly, pursuant to Sections 81, 161(b) and (d), 182, and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 30.61, IT IS HEREBY ORDERED THAT LICENSE No. 29-20777-01 IS REVOKED.

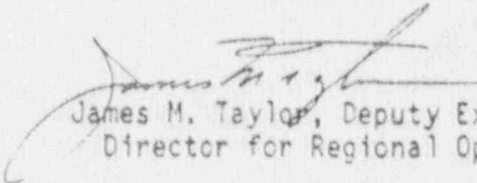
V

The licensee or any other person adversely affected by this Order may request a hearing within 30 days after issuance of this Order. Any answer to this Order or any request for hearing shall be submitted to the Director, Office

of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Copies shall also be sent to the Assistant General Counsel for Enforcement at the same address and to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region I, 475 Allendale Road, King of Prussia, Pennsylvania 19406. If a person other than the licensee requests a hearing, that person shall set forth with particularity the manner in which the petitioner's interest is adversely affected by this Order and should address the criteria set forth in 10 CFR 2.714(d). Upon the failure of the licensee to answer or request a hearing within the specified time, this Order shall be final without further proceedings.

If a hearing is requested, the Commission will issue an order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Order should be sustained.

FOR THE NUCLEAR REGULATORY COMMISSION

  
James M. Taylor, Deputy Executive  
Director for Regional Operations

Dated at Bethesda, Maryland  
This 10<sup>th</sup> day of February 1988

cc w/encl:

Marvin A. Rosenblum, The Crystal Group of Companies  
Bernard J. D'Avella, Hannock Weisman  
John W. Kondracki, Midlantic National Bank  
John Carluccio, PMC Realty Corporation  
Robert Magnussen, Township of Mine Hill, New Jersey  
Martin Stein, PMC Corporation

bcc w/encl:

Hugh Thompson, NMSS  
Richard Cunningham, NMSS  
Vandy Miller, NMSS  
James Lieberman, OE  
James Allan, RI  
Thomas Martin, RI  
Jay Gutierrez, RI  
Daniel Holody, RI  
James Joyner, RI  
John White, RI  
John Miller, RI  
Lawrence Chandler, OGC  
Enforcement Directors, RII-RIII  
Enforcement Officers, RIV-RV  
F. Ingram, PA  
E. Jordan, AEOD  
B. Hayes, OI  
S. Connelly, OIA  
D. Nussbaumer, SP  
EA File  
EDO Rdg File  
Day File  
DCS

OE <del>EF</del>	<i>Telephone</i> D. Holody RA:RI	<i>Telephone</i> M. Tomastra NMSS <del>RS</del>	<i>Telephone</i> L. Chandler OGC <del>for</del>	<del>RS</del> D:OE <del>for</del>	<del>RS</del> JLieberman
EFlack	WRussell	RCunningham	LChandler	JLieberman	MTaylor
2/5/88	2/5/88	2/5/88	2/9/88	2/8/88	2/9/88



DEC 22 1987

Docket No. 030-22063

License No. 29-20777-01

Precision Materials Corporation  
ATTN: Marvin Rosenblum  
Replogle Avenue  
Mine Hill, New Jersey 07801

Gentlemen:

Subject: Special Inspection Nos. 87-001 and 87-002

Messrs. John Miller and John Pelchat and Ms. Marlene Taylor of this office conducted special safety inspections of the licensee's facility at Replogle Avenue, Mine Hill, New Jersey of activities authorized by the above listed NRC license. Inspection No. 87-001 was performed on July 23-24 and August 12, 1987, to review the performance of the licensed program. Inspection No. 87-002 performed on September 8-10, and October 20, 1987, was conducted to verify removal of radioactive material from the facility to support release for unrestricted use. The findings of these inspections were discussed with Martin and Russell Stein at the conclusion of the inspection. A copy of the NRC inspection reports are enclosed.

Within the scope of these inspections, no violations were identified. Relative to Inspection 87-002, our survey showed no residual radiation or contamination in excess of NRC "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Materials," dated May 1987. In this regard, NRC Region I has no objection to the release of this facility for unrestricted use.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the Public Document Room. No reply to this letter is required.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:  
John R. White

John R. White, Chief  
Nuclear Materials Safety Section C  
Division of Radiation Safety  
and Safeguards

Enclosure: Inspection Report Nos. 030-22063/87-01 and 87-02

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OFFICIAL RECORD COPY

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cc:  
Public Document Room (PDR)  
Nuclear Safety Information Center (NSIC)  
State of New Jersey  
Township of Mine Hill  
John Carluccio  
Martin Stein

bcc:  
Region I Docket Room (w/concurrences)  
Management Assistant, DRMA

RI:DRSS  
J. Pelchat/bc  
11/ /87

RI:DRSS  
J. Miller  
~~11/ /87~~  
12/22/87

RI:DRSS  
J. White  
11/ /87

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 030-22063/87-01

Docket No. 030-22063

License No. 29-20777-01

Priority 1

Category E3

Licensee: Precision Materials Corporation  
Replogle Avenue  
Mine Hill, New Jersey 07801

Facility Name: Precision Materials Corporation

Inspection At: Mine Hill, New Jersey

Inspection Conducted: July 23 and 24, and August 12, 1987

Inspectors: *John J. Miller*  
John J. Miller  
Health Physicist

10/22/87  
date

*Marlene J. Taylor*  
Marlene J. Taylor  
Health Physicist

10/21/87  
date

Approved by: *John R. White*  
John R. White, Chief

10/27/87  
date

Inspection Summary: Inspection conducted July 23 and 24, and August 12, 1987  
(Report No. 030-22063/87-01)

Areas Inspected: A routine unannounced inspection of an in-air wet source-storage irradiator. The inspection consisted of an examination of the facilities and safety related interlocks, a review of procedures and representative records, interviews with personnel and measurements performed by the inspectors.

Results: No apparent violations were identified.

## DETAILS

### 1. Persons Contacted

- \*Martin Stein, President
- \*Russell Stein, Vice President-Operations
- \*Eugene Nestor, Vice President-Regulatory Affairs
- \*Frank Brazitis, Production Manager and Operator

\*Individuals present at the Exit Interview

### 2. Organization and Licensee Internal Audits

The Precision Materials Omega irradiator functions strictly in the batch mode and is operated one or two shifts per day as required by production demand. The management organization is as stated in the license application. The Vice President Regulatory Affairs is responsible for interfacing with the NRC relative to licensing and inspection issues. The President, and the Vice-Presidents all serve as Radiation Safety Officers for the program.

An outside consultant performs annual audits of the radiation safety program. The last such audit was performed on October 13, 1986. A report of this audit was filed with the Commission on October 15, 1986.

No violations of NRC rules, regulations, or license conditions were identified.

### 3. Training and Instructions to Employees

All operators had completed the required training program described in the license application. Training included instruction to workers required by 10 CFR 19.12. There was no evidence that the irradiator had been operated without a fully qualified operator physically present on site.

No violations of NRC rules, regulations or license conditions were identified.

### 4. Radiation Protection Procedures

Operating procedures are dictated by the computer program which controls the operation of the irradiator. Procedures must be followed in a precise sequence to allow the operator to raise the source. The safety interlock systems are continuously monitored by the computer to determine that they are operational. Emergency procedures are posted and were followed by operators. System malfunctions were identified by the computer irradiator.

No violations of NRC rules, regulations or license conditions were identified.

5. Materials, Facilities and Instruments

Facilities were as described in the license application. The area radiation monitor was functioning properly. Survey instruments were operating and calibrated. The deionizer system was fully operable at the time of the inspection. Records indicated that the deionizer system had been functional since the last inspection. The resistivity meter indicated that the pool water was within the specifications described in the license application.

The inspectors reviewed the operators logs and computer print-outs that provide a chronology of the status of the irradiator systems. The inspectors noticed in these records that frequently the water level in the pool dropped below the level at which the deionizer system pump draws suction on the pool, and tripped the computer system into an alarm mode (Mode C). The inspectors also noted that records indicated that the operators were periodically adding an inordinate amount of make-up water to the irradiator pool.

The inspectors asked the Vice President-Regulatory Affairs about the frequent water additions and frequent alarm modes attributed to low water levels. The Vice President-Regulatory Affairs stated that much of the water loss could be attributed to evaporation but that he suspected that the low water levels were also due to an unexplained water loss. The licensee representative added that a possible cause for the water losses was a leaking pool. The inspectors asked the Vice President-Regulatory Affairs if he was compiling data in a record or log in an effort to quantify the water loss and evaluate whether water losses were purely evaporative. The licensee stated that he was not maintaining a record of water losses and additions, but he was agreeable to begin compiling such data immediately.

No violations of NRC rules, regulations or license conditions were identified.

6. Control of the High Radiation Area

The entry to the irradiator cell is controlled by a computer program which will not allow the doors to be opened except when the source is in the shielded position and radiation monitors indicate normal low radiation levels. The source can not be raised with either or both doors open. Operational procedures require that the operator "sweep" the cell area before raising the source rack. Emergency door switches were operational.

No violations of NRC rules, regulations or license conditions were identified.

7. Personnel Protection

Personnel dosimetry records indicated no exposures in excess of regulatory limits. Leak tests of sealed sources were performed at the required frequency and indicated no leaking sources.

No violations of NRC rules, regulations or license conditions were identified.

8. Effluent Control and Waste Disposal

Slightly contaminated ion exchange resins, contaminated as a result of the initial source loadings, were stored on the roof of the irradiator cell. Ion exchange resins, that were awaiting return to a processor in order that they may be regenerated had all been assayed. Records indicated that the radioactivity in the ion exchange resins prepared for regeneration was less than the minimal detectable activity.

No violations of NRC rules, regulations or license conditions were identified.

9. Independent Measurements

The inspectors obtained two pool water samples. Both of the samples were assayed in the Region I laboratory and were found to contain less than the minimum detectable activity, i.e., less than  $1 \text{ E-6 } \mu\text{Ci/ml}$ .

No violations of NRC rules, regulations or license conditions were identified.

10. Exit Interview

The results of the inspection were discussed with individuals in Section 1. The licensee representatives agreed to compile daily water levels in a log and submit the data to Region I along with an explanation that accounts for all water losses. In addition, licensee representatives stated that radiological evaluations of pool water would be performed daily instead of weekly as required by the license.

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 030-22063/87-02

Docket No. 030-22063

License No. 29-20777-01

Priority I

Category E3

Licensee: Precision Materials Corporation  
Reptogle Avenue  
Mine Hill, New Jersey 07801

Facility Name: Precision Materials Corporation

Inspection At: Mine Hill, New Jersey

Inspection Conducted: September 8, 9, and 10 and October 20, 1987

Inspectors:

John J. Miller  
John J. Miller  
Health Physicist

12-22-87  
date signed

John Pelchat  
John Pelchat  
Health Physicist

12/22/87  
date signed

Approved by:

John R. White  
John R. White, Chief  
Nuclear Materials Safety Section C

12/22/87  
date signed

Inspection Summary:

Inspection on September 8, 9, and 10, and October 20, 1987 (Inspection Report No. 30-22063/87-02)

Areas Inspected: Special, announced inspection, limited to observation of source removal and shipment; and survey for residual contamination to support release of the facility for unrestricted use. Seventy-nine wipes were taken and assayed for gamma and beta removable activity. The facility was surveyed to identify if any contamination or radioactive materials remained.

Results: The inspectors confirmed that no contamination or radiation levels exist at the facility in excess of the NRC "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licensees for Byproduct, Source, or Special Nuclear Materials," dated May 1987.

## DETAILS

### 1. Persons Contacted

Martin Stein, Consultant

(Former President of Precision Materials Corporation)

Russell Stein, Consultant

• (Former Vice President of Precision Materials Corporation)

### 2. Purpose

The purpose of this inspection was to observe the removal of the sources from the irradiator pool. In addition an independent survey was performed to verify and validate the licensee's survey and ensure the facility and equipment were releasable for unrestricted use in accordance with NRC's "Guidelines For Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material."

### 3. Background

On September 4, 1987, the Commission issued an Order, effective immediately, that modified Precision Materials Inc. License No. 29-20777-01. The Order required that the licensee suspend operation of the irradiator as of close of business on September 4, 1987. In addition, the Order required that the licensee place all radioactive sources in NRC-approved storage casks or shipping cask within 7 days of the Order's issuance. The Order also required the licensee to perform daily monitoring of the irradiator pool to determine and maintain the water level and detect any radioactive contaminants and report to Region I the results of such monitoring.

Precision Materials Corporation (PMC) contracted Neutron Products, Inc. (NPI), to remove all of the radioactive sources from the irradiator pool, and also to ship all the residual low level radioactive waste (e.g. contaminated resins) to a burial site. On September 8, 1987, NPI personnel were on site at PMC to commence with the source removal. On September 10, 1987, all the radioactive sources had been removed from the storage pool, loaded into shipping casks, and shipped to NPI's facility in Dickerson, Maryland.

Licensee representatives submitted a report, dated October 14, 1987, documenting the results of surveys performed to demonstrate the facility and equipment was releasable for unrestricted use in accordance with NRC's "Guidelines For Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material."



#### 4. Instrumentation Used in Survey

Radiation level measurements were made with a Ludlum Model 12S Micro R Meter sensitive to gamma radiation and a Ludlum Model 14C survey meter with an end window G-M probe sensitive to beta and gamma radiation.

Wipes were counted collectively with a GeLi detector and a multi-channel analyzer and were counted individually with a gas flow proportional counter. The estimated minimal detectable activity (MDA) for gas flow proportional counter is 20 disintegrations per minute or  $9.0 \times 10^{-6}$  microcuries.

#### 5. Radiation Survey Results

No radiation levels in excess of the NRC guidelines were detected throughout the area surveyed, except as noted below. Actual levels measured with the Micro R Meter are noted on the attached maps of the facility. The grounds of the facility were also surveyed with a Micro R Meter with no significant radiation levels above background detected.

Two areas on the floor of the irradiator pool exhibited elevated radiation levels. One area measured 0.4 millirem per hour and another area measured 0.1 millirem per hour. Both elevated radiation levels were attributable to "hot" particles which were located with a thin-end window G-M survey meter. The particles were removed from the floor of the irradiator pool by using a wet vacuum cleaner. The particles were removed from the vacuum cleaner, isolated on filter papers, and properly disposed as radioactive waste.

#### 6. Survey for Removable Contamination

Seventy-nine wipes were taken from floors, pool walls, pipe walls, and various surfaces in the locations marked on the attached maps. There was no contamination detected in excess of the NRC guidelines.

#### 7. Residual Materials

All low-level radioactive material, such as contaminated resin and equipment, was collected and placed in a shipping container for ultimate disposal. Contaminated resins were solidified with concrete in the container. The radioactive waste container was shipped to Hanford, Washington via the waste broker, U.S. Ecology Inc., on December 2, 1987.

Two exempt check sources are currently stored in a vault at the facility in Mine Hill, New Jersey.

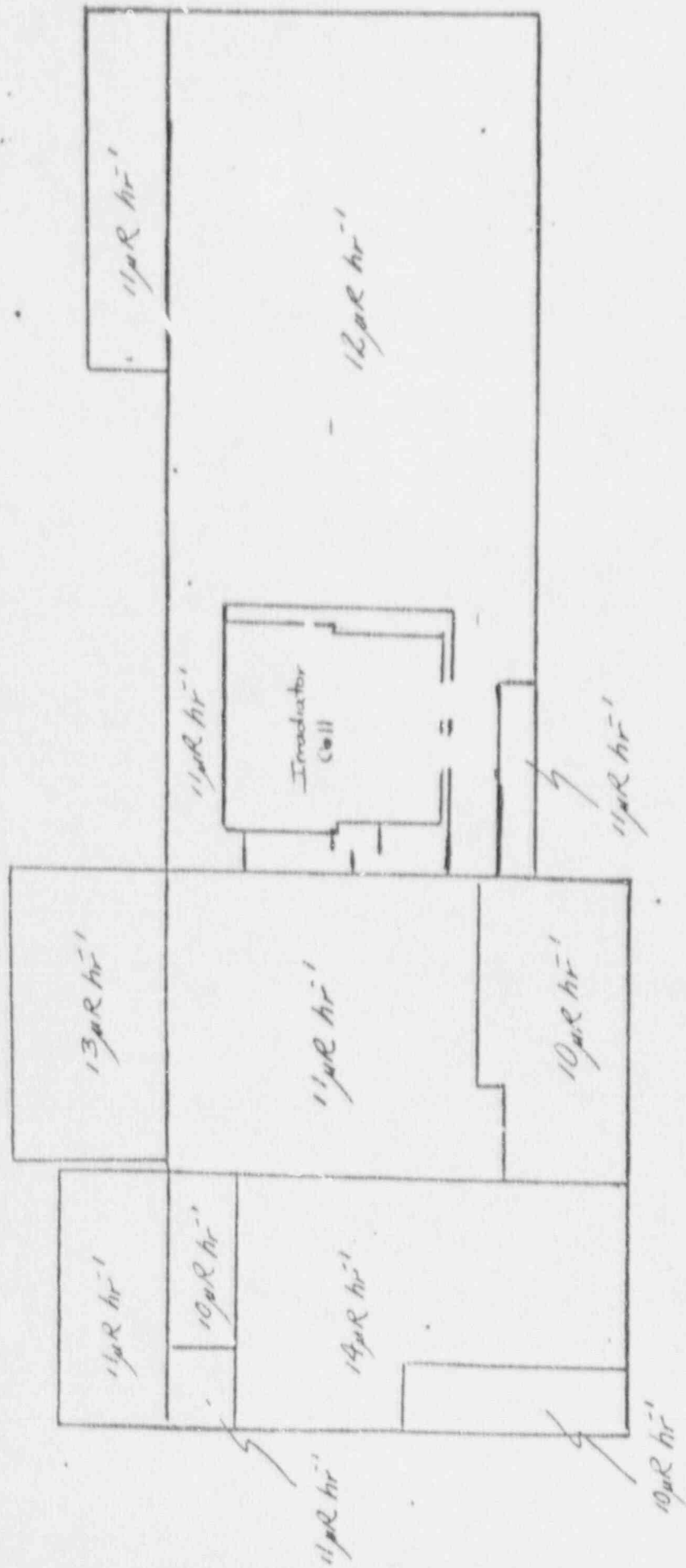
8. Transfer of Licensed Material

On September 8 and 9, 1987, licensee representatives removed the radioactive sources from the source rack. Neutron Products, Inc., loaded the sources into casks and transported them to their facility in Dickerson, Maryland. 59 pencil sources were transported in total. An inspector inventoried the sources as they were loaded into the cask to ensure accountability. An inspector visually inspected the bottom of the pool and source rack with a high intensity light to ensure no source pencils remained in the bottom of the pool.

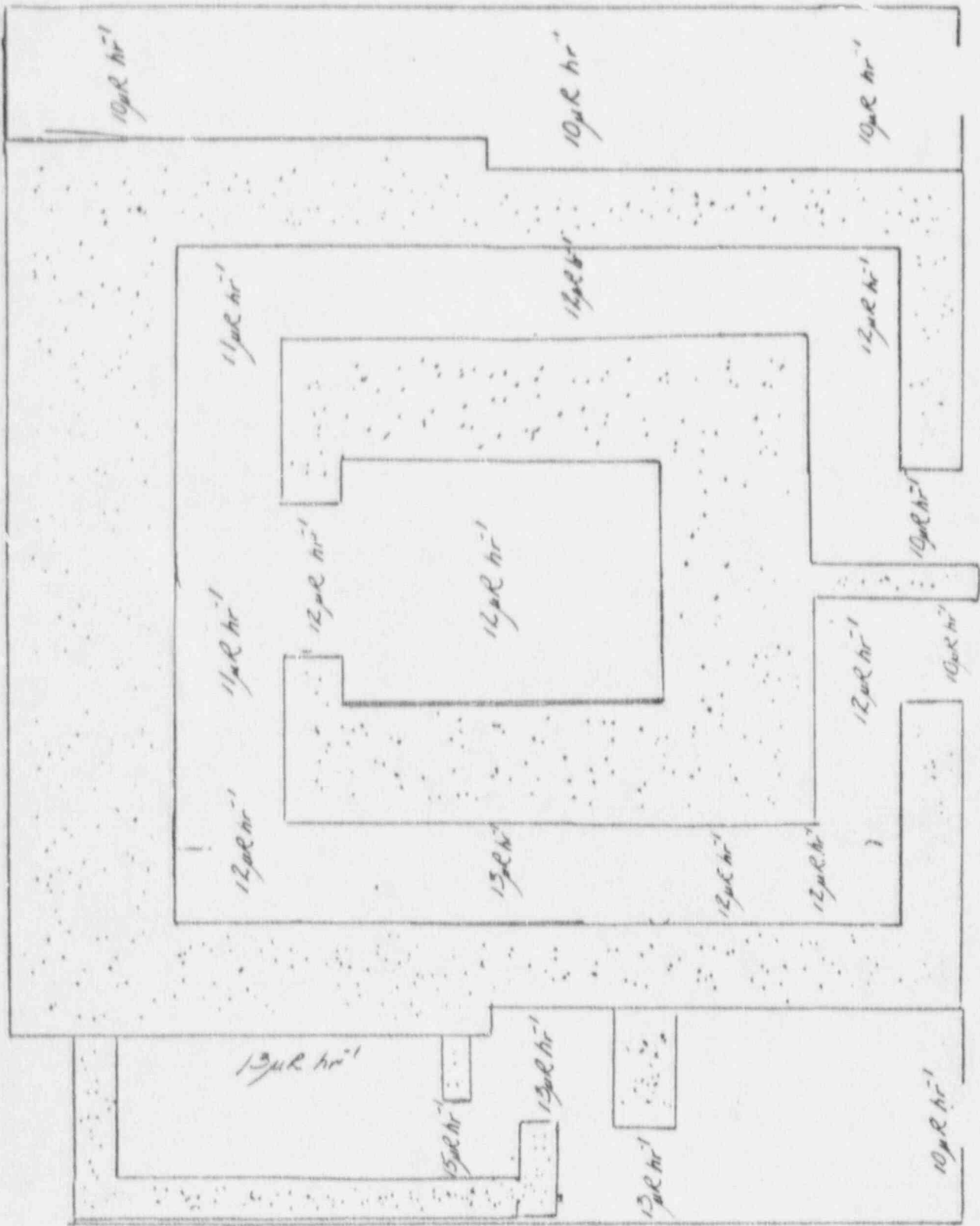
Radiation levels in the irradiator cell were measured with a Micro R Meter by the inspector. No radiation levels above background were detected.

9. Exit Interview

The results of the survey were reviewed with the licensee representatives identified in Paragraph 1.

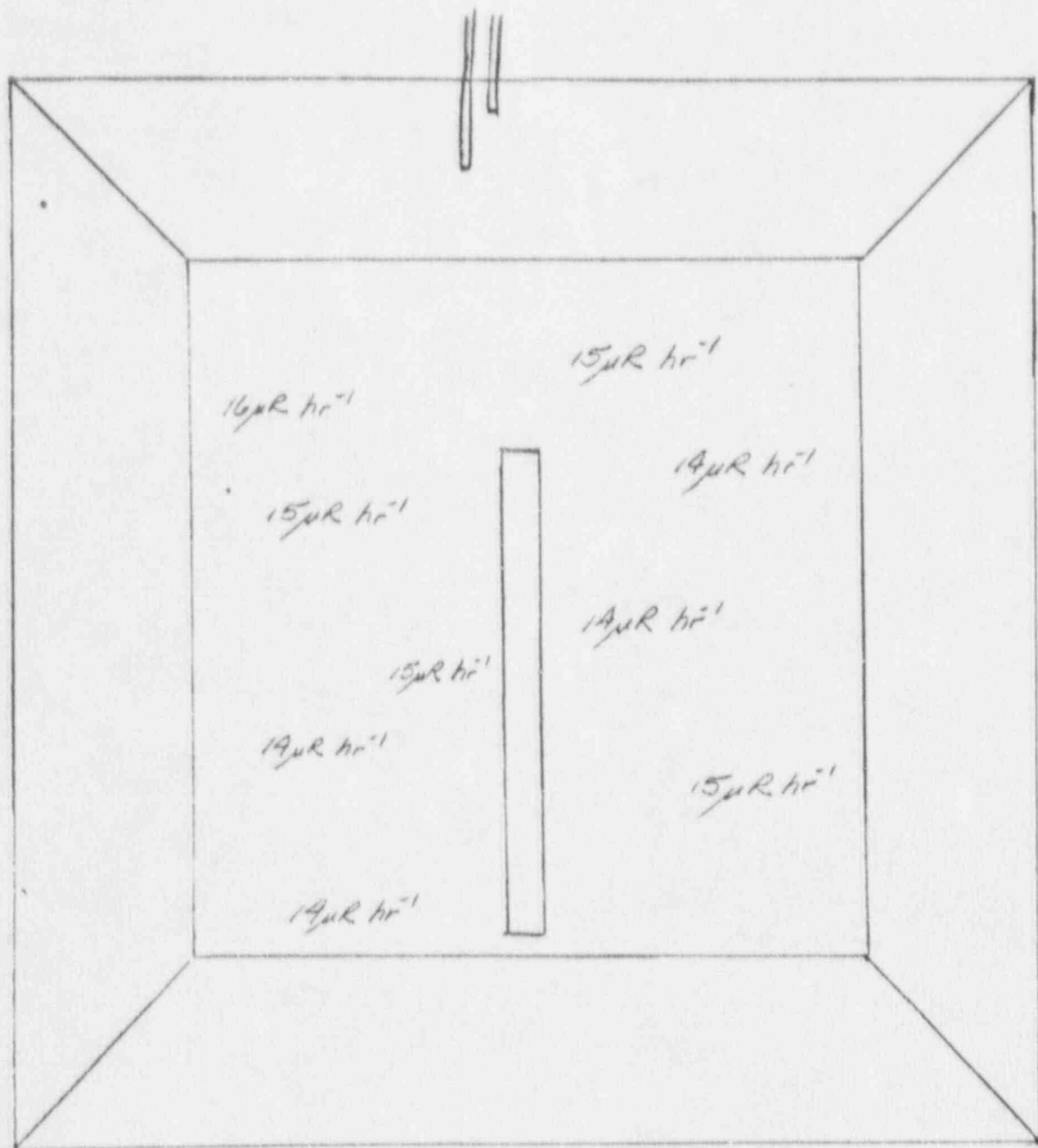


PRECISION MATERIALS FACILITY  
 DIRECT RADIATION MEASUREMENTS



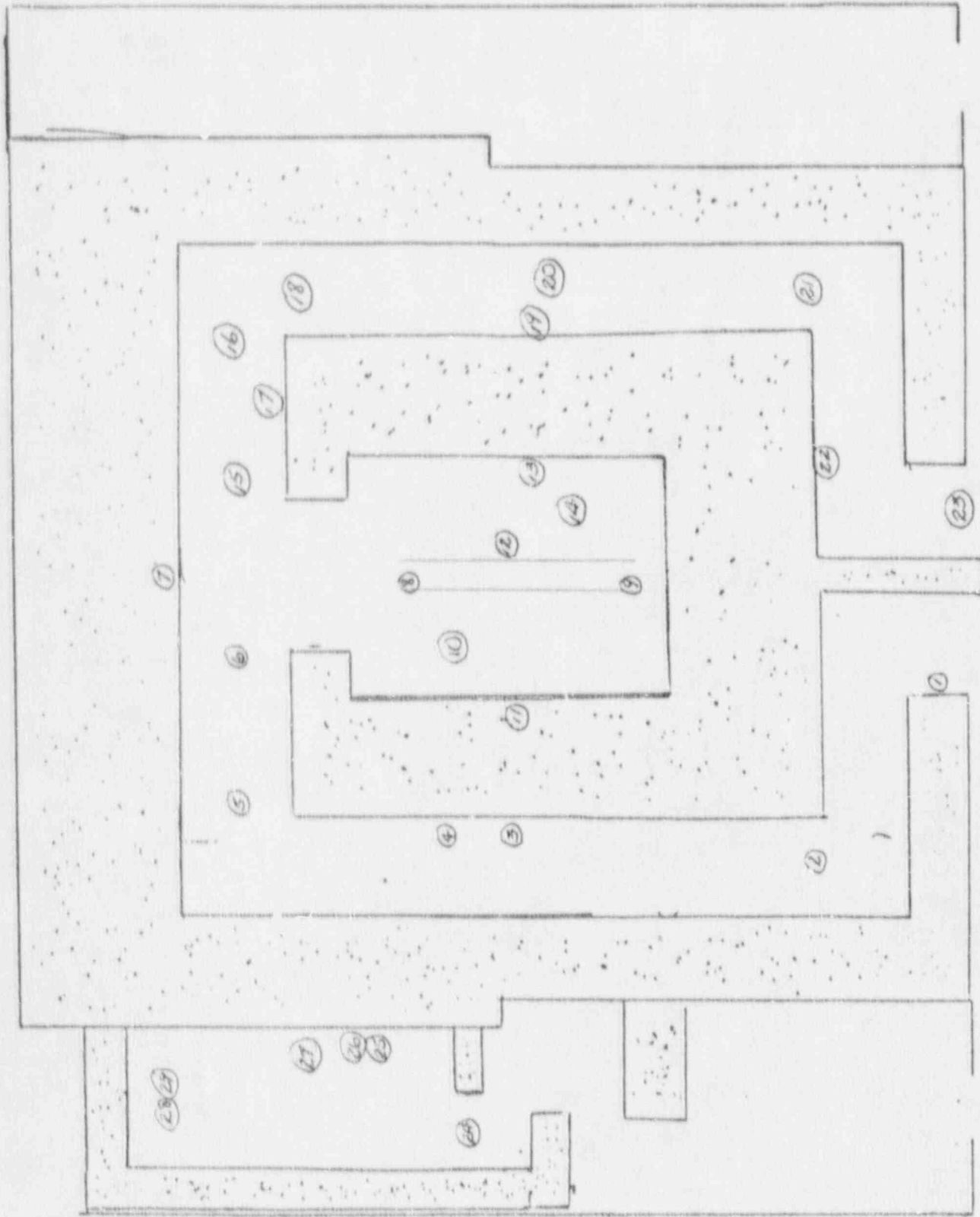
IRRADIATOR CELL  
 DIRECT RADIATION MEASUREMENTS

IRRADIATOR POOL



DIRECT RADIATION MEASUREMENTS

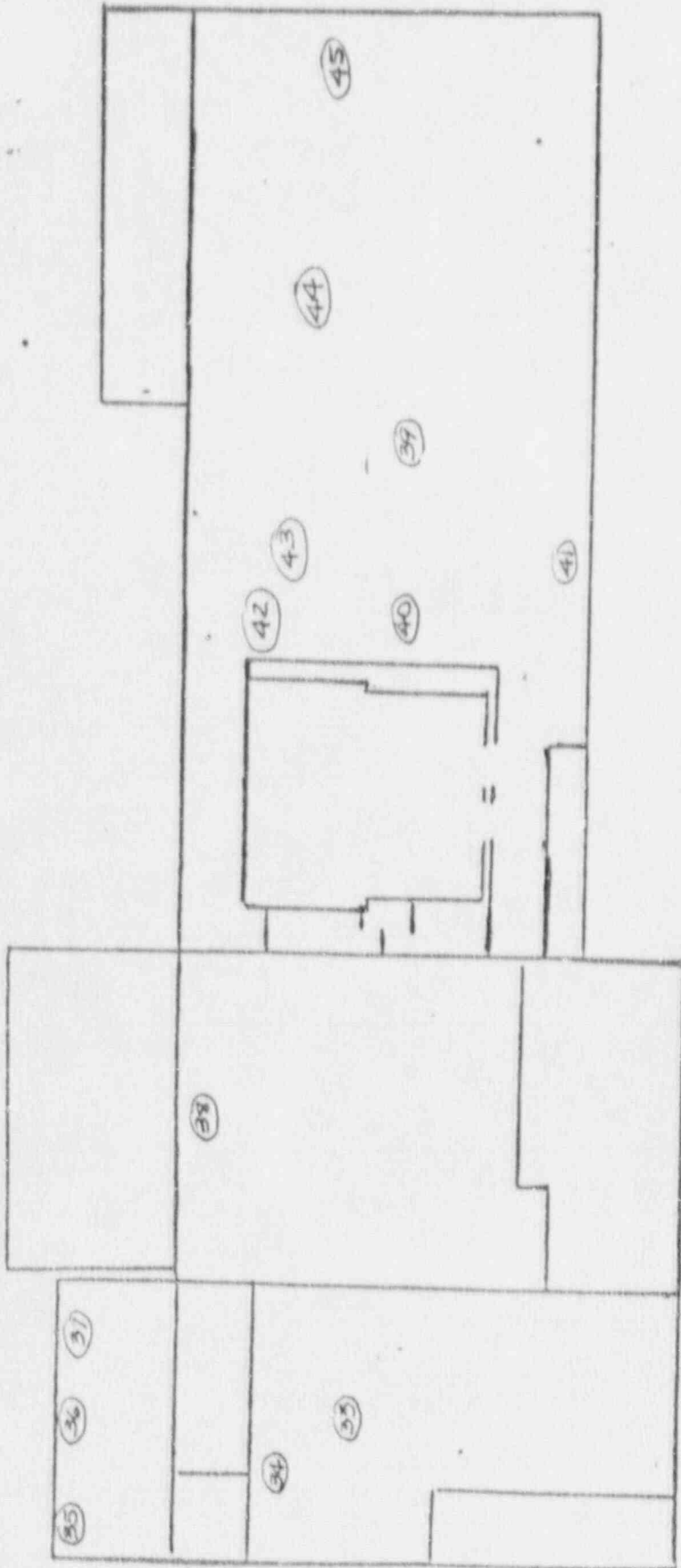
IRRADIATOR CELL



30) filter in ventilation system, cell exhaust (only filter in line)

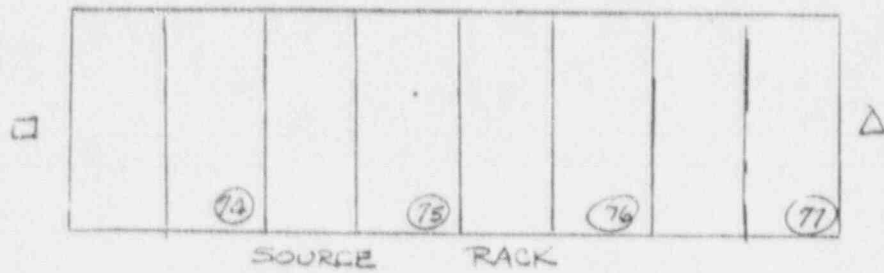
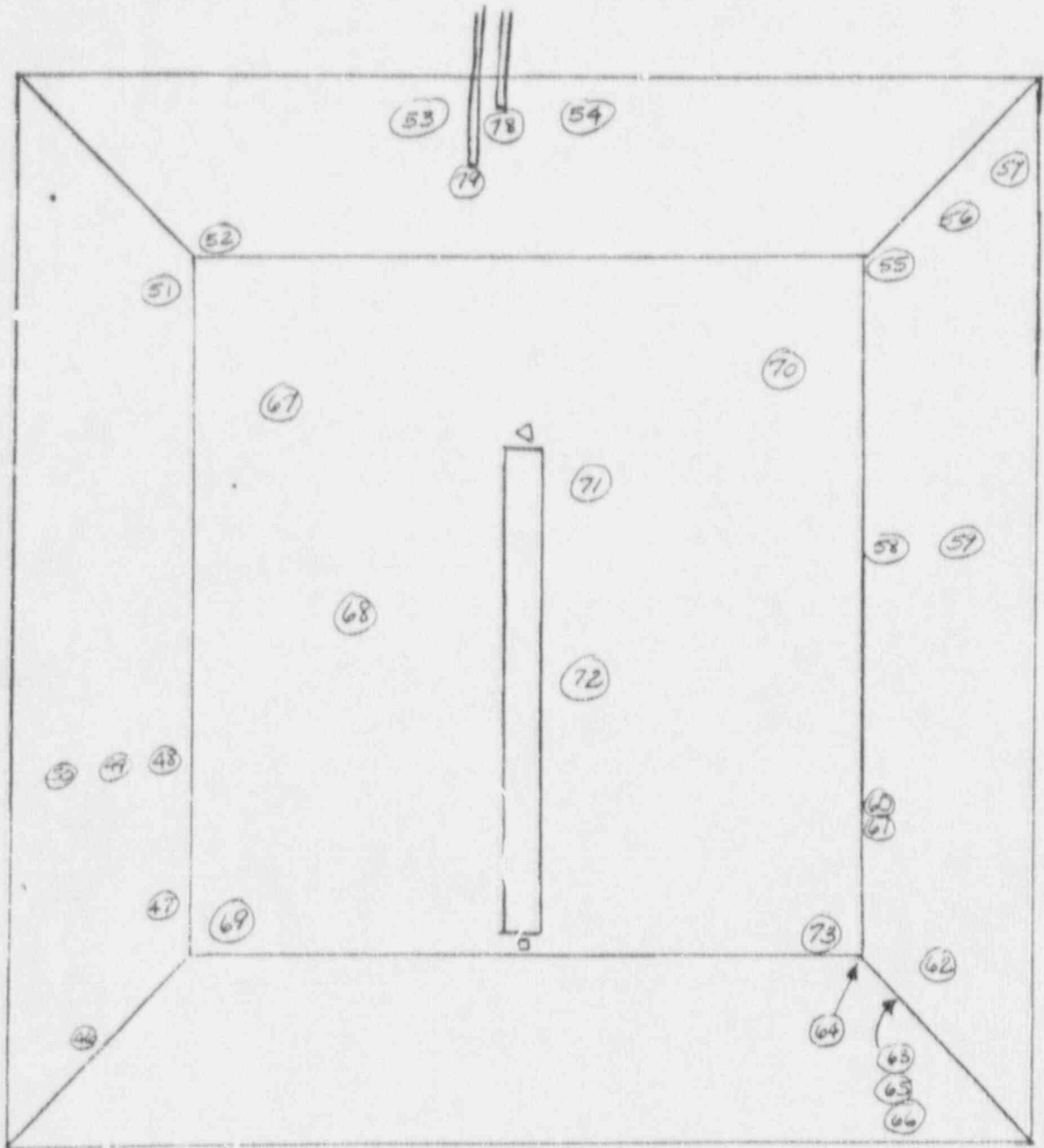
31) area above cell where contaminated resins were stored

32) area above cell where contaminated equipment was stored



PRECISION MATERIALS FACILITY

# IRRADIATOR POOL





REMOVABLE CONTAMINATION

<u>Sample Location</u>	<u>Results (net dpm)</u>
1	4
2	0
3	4
4	6
5	0
6	0
7 (wall)	12
8 (interior of shroud)	0
9 (interior of shroud)	0
10	0
11 (wall)	0
12 (exterior of shroud)	2
13 (wall)	0
14	0
15	4
16 (wall)	4
17	0
18 (wall)	0
19	0
20	0
21	0
22 (wall)	0
23	4
24	6
25 (inside suction pipe of recirculation system)	2
26 (inside discharge pipe of recirculation system)	2
27 (trough beneath recirculation system)	0
28 (inside resin bed discharge pipe)	0
29 (inside resin bed intake pipe)	0
30	0
31	0
32	0
33 vice area in workshop	0
34 grinding area in workshop	0
35 cold room #1 (room where spent resins were stored)	0
36 cold room #1	2
37 cold room #1	17
38 toilet where Neutron Products Inc. pumped discharged pool water	0
39	10

REMOVABLE CONTAMINATION

<u>Sample Location</u>	<u>Results (net dpm)</u>
40 chain on hoist for casks	0
41 cart used for transporting casks	2
42 area where resins were solidified	0
43 area where resins were solidified	0
44	6
45 storage container (B-25) for radioactive waste	6
46 eight feet above floor of pool	2
47	0
48	0
49 eight feet above floor of pool	15
50 water line	30
51	8
52	12
53 eight feet above floor of pool	0
54 water line	12
55	25
56 eight feet above floor of pool	4
57 water line	12
58	8
59 eight feet above floor of pool	0
60	0
61	4
62	8
63	10
64	0
65 eight feet above floor of pool	0
66 water line	17
67	6
68	0
69	0
70	0
71	0
72	0
73	6
74	10
75	35
76	35
77	12
78 inside the recirculation intake pipe	0
79 inside the recirculation return pipe	15