

Decommissioning Plan for Room B118 Building 222  
11 August 1989  
Doug Eagleson

**Introduction:** The NIST materials license No. SNM-362 specifically allows the use of room B118, the "vault" in building 222, for the storage of licensable material. The standard reference material program that necessitated storage in this room has been transferred to another facility. Plans are to decommission the room for use as an unrestricted storage vault.

**Historic Review:** The vault was initially constructed for the storage of uranium and plutonium standard reference materials and began usage in 1968. Since then, the vault has continued to be used exclusively for SNM storage. The room is approximately 300 square feet and contains 18 steel shelf units to ensure a well distributed source configuration for criticality safety. Material was always stored in sealed containers, as there was never any processing work performed in the room. The sealed vials used for SNM containment were placed in plastic boxes, reducing the possibility of residual contamination on the shelves. An interview with the vault users indicated no unusual events ever occurred which may have contaminated vault surfaces. All authorized material for the vault has been alpha emitting. This review indicates that no significant surface contamination levels are expected to exist within the vault.

**Regulatory Review:** Code of Federal Regulations Title 10 Part 30 contains specific requirements for termination of licenses. Although the NIST license is not being terminated, a substantial portion of its SNM operations are ending, making a formal release of Room B118 from any further regulatory concern an appropriate action. Decommissioning of the vault requires that a room survey be conducted and a report sent to the NRC for review. A decommissioning plan, approved by the NRC, is not required because it is judged that there will be no increase in the potential safety impact to workers or the public over the currently reviewed and licensed operations.

GUIDELINES FOR DECONTAMINATION OF FACILITIES AND EQUIPMENT  
PRIOR TO RELEASE FOR UNRESTRICTED USE  
OR TERMINATION OF LICENSES FOR BYPRODUCT, SOURCE,  
OR SPECIAL NUCLEAR MATERIAL

U.S. Nuclear Regulatory Commission  
Division of Industrial and  
Medical Nuclear Safety  
Washington, DC 20555

August 1987

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The instructions in this guide, in conjunction with Table 1, specify the radionuclides and radiation exposure rate limits which should be used in decontamination and survey of surfaces or premises and equipment prior to abandonment or release for unrestricted use. The limits in Table 1 do not apply to premises, equipment, or scrap containing induced radioactivity for which the radiological considerations pertinent to their use may be different. The release of such facilities or items from regulatory control is considered on a case-by-case basis.

1. The licensee shall make a reasonable effort to eliminate residual contamination.
2. Radioactivity on equipment or surfaces shall not be covered by paint, plating, or other covering material unless contamination levels, as determined by a survey and documented, are below the limits specified in Table 1 prior to the application of the covering. A reasonable effort must be made to minimize the contamination prior to use of any covering.
3. The radioactivity on the interior surfaces of pipes, drain lines, or ductwork shall be determined by making measurements at all traps, and other appropriate access points, provided that contamination at these locations is likely to be representative of contamination on the interior of the pipes, drain lines, or ductwork. Surfaces of premises, equipment, or scrap which are likely to be contaminated but are of such size, construction, or location as to make the surface inaccessible for purposes of measurement shall be presumed to be contaminated in excess of the limits.
4. Upon request, the Commission may authorize a licensee to relinquish possession or control of premises, equipment, or scrap having surfaces contaminated with materials in excess of the limits specified. This may include, but would not be limited to, special circumstances such as razing of buildings, transfer of premises to another organization continuing work with radioactive materials, or conversion of facilities to a long-term storage or standby status. Such requests must:
  - a. Provide detailed, specific information describing the premises, equipment or scrap, radioactive contaminants, and the nature, extent, and degree of residual surface contamination.
  - b. Provide a detailed health and safety analysis which reflects that the residual amounts of materials on surface areas, together with other considerations such as prospective use of the premises, equipment, or scrap, are unlikely to result in an unreasonable risk to the health and safety of the public.

5. Prior to release of premises for unrestricted use, the licensee shall make a comprehensive radiation survey which establishes that contamination is within the limits specified in Table 1. A copy of the survey report shall be filed with the Division of Industrial and Medical Nuclear Safety, U. S. Nuclear Regulatory Commission, Washington, DC 20555, and also the Administrator of the NRC Regional Office having jurisdiction. The report should be filed at least 30 days prior to the planned date of abandonment. The survey report shall:

- a. Identify the premises.
- b. Show that reasonable effort has been made to eliminate residual contamination.
- c. Describe the scope of the survey and general procedures followed.
- d. State the findings of the survey in units specified in the instruction.

Following review of the report, the NRC will consider visiting the facilities to confirm the survey.

TABLE 1  
ACCEPTABLE SURFACE CONTAMINATION LEVELS

NUCLIDES <sup>a</sup>	AVERAGE <sup>b c f</sup>	MAXIMUM <sup>b d f</sup>	REMOVABLE <sup>b e f</sup>
U-nat, U-235, U-238, and associated decay products	5,000 dpm $\alpha$ /100 cm <sup>2</sup>	15,000 dpm $\alpha$ /100 cm <sup>2</sup>	1,000 dpm $\alpha$ /100 cm <sup>2</sup>
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	100 dpm/100 cm <sup>2</sup>	300 dpm/100 cm <sup>2</sup>	20 dpm/100 cm <sup>2</sup>
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm <sup>2</sup>	3000 dpm/100 cm <sup>2</sup>	200 dpm/100 cm <sup>2</sup>
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above.	5000 dpm $\beta\gamma$ /100 cm <sup>2</sup>	15,000 dpm $\beta\gamma$ /100 cm <sup>2</sup>	1000 dpm $\beta\gamma$ /100 cm <sup>2</sup>

<sup>a</sup>Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

<sup>b</sup>As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

<sup>c</sup>Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.

<sup>d</sup>The maximum contamination level applies to an area of not more than 100 cm<sup>2</sup>.

<sup>e</sup>The amount of removable radioactive material per 100 cm<sup>2</sup> of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.

<sup>f</sup>The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at 1 cm and 1.0 mrad/hr at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.

Site Release Survey for Room B118 Building 222

Doug Eagleson  
Health Physics Group  
Occupational Health and Safety Division, NIST

August 28, 1989

Background: The National Institute of Standards and Technology currently holds USNRC license No. SNM-362. This license specifically allows the use of room B118 in Building 222, commonly referred to as "the vault", for the storage of SNM. Recent programmatic changes eliminate the need to maintain the vault as a licensed SNM storage location. This document is intended to satisfy the radiation survey requirements of the Nuclear Regulatory Commission (NRC) before release of the vault for unrestricted use.

Survey Criteria: Limits of residual contamination are recommended in "Guidelines For Decontamination of Facilities and Equipment Prior to Release For Unrestricted Use Or Termination Of Licenses For Byproduct, Source, Or Special Nuclear Material", U.S. Nuclear Regulatory Commission, 1987 and were used as pass/fail criteria in this survey. The survey method's Lower Limits of Detection (LLD) were lower than the limits referenced in the publication. The LLD for direct alpha radiation detection was equal to about one half the applicable guideline. All other types of survey had LLDs less than 20 percent of the corresponding guideline.

Survey Method: Direct radiation levels were assessed using an Eberline Model ASP-1 count rate meter (serial number 252) with a 75 cm<sup>2</sup> zinc sulfide detector, Ludlum Model PR-2124, for detection of alpha emitting surface contamination, and a Technical Associates Model TBM-3S count rate meter (serial number 12682) with an internal pancake GM detector for detection of beta surface contamination. Each alpha measurement was performed by placing the face of the detector in contact with the surface and acquiring a ten second integrated count. Each beta measurement was performed by placing the detector in contact with the surface and averaging the count rate indicated on the meter over a period of about five seconds. Attachments 1 and 2 are current records of calibration for these survey meters. Attachment 3 contains lower limits of detection and counting efficiencies for the survey meters.

Removable contamination was assessed by the smear technique. Absorbent paper disks were wiped over an area of 300 cm<sup>2</sup> using moderate pressure. The filter papers were then analyzed on a Tennelec model LB 5100 (serial number 208) gas proportional detector for gross alpha and beta activity. Attachment 4 contains records of calibration and lower limits of detection for this instrument.

Survey Frequency: Survey criteria guidelines indicate that survey measurements will be averaged over an area of not more than one square meter. To aid in locating surveyed areas, the entire vault was divided into approximately one meter square blocks. Attachment 5 contains diagrams of the grids. Within each grid, a single swipe was taken, along with four separate alpha and beta survey measurements. All grids covering the floor and shelf areas were surveyed. Ten percent of the ceiling and wall grids were surveyed. Miscellaneous items such as electrical panels, ventilation ducts, storage boxes, extra shelving and plastic sheeting were surveyed individually.

Results: All survey results indicate that the vault meets the criteria for release as an unrestricted area. Attachment 6 contains the survey results after application of background, efficiency and geometry factors while Appendix A contains the survey data as recorded. A slight increase above background was observed in several direct beta measurements. All these occurrences were on tiled portions of the room and are presumed to be due to natural activity within the tiles themselves.

Certificate of Calibration

Health Physics Group

NIST

Instrument: Eberline ASP-1

Serial Number: 252

Calibration Date: 4/25/89

Calibration Notes

This certificate is based on NIST calibration records.

Meter Range	Pulser CPM	Instrument CPM
x100K	70000	78000
x100K	10000	10000
x10K	1000	1000
x10K	7000	7000
x1K	700	700
x1K	100	100
x100	10	10
x100	7	7

Signature: James Gray

Date: 8/31/89



Certificate of Calibration

Health Physics Group

NIST

Instrument: TA TBM-35

Serial Number: 12682

Calibration Date: 6/21/89

Calibration Notes

Radiation levels are based on standards whose calibrations are traceable to the NIST.

The source used was Cs-137.

This certificate is based on NIST calibration records.

Meter Range	Exposure Rate (mR/hr)	Observed reading (mR/hr)
x10	0.5	0.6
x10	1.5	1.5
x100	5.0	5.0
x100	15	15

Signature: James Fray

Date: 8/31/89

Alpha and Beta Direct Radiation Detectors

Doug Eagleson

8-14-89

Background: The absolute detection efficiencies, lower limits of detection and backgrounds for the listed survey meters were determined in order to allow calculation of residual surface contamination activities.

Survey Meters: Eberline ASP-1 with PR-2124 Alpha Probe, SN 252

Technical Associates TBM-3S with Pancake GM, SN 12682

Alpha Detector

The detector efficiency was determined using NBS Americium-241 point sources.

Source Number	Activity (dpm)	Detector Response (cpm)	Efficiency
4904-E-100	1860	620	0.33
4904-F-68	11600	3800	0.33

The detector background was determined over a ten minute counting interval.

Background = 1.8 cpm

The detector Lower Limit of Detection(LLD) is calculated using the listed parameters.

Efficiency = 0.33  
Background = 1.8 cpm  
Detector Active Area = 75 cm<sup>2</sup>  
Sample Count Time = 10 sec.

LLD (95% confidence level) = 52 dpm/ 100 cm<sup>2</sup>

Beta Detector

Detector efficiency was determined using an Isotope Product Laboratories Sr-90 disk source.

Source Number	Activity (dpm)	Detector Response (cpm)	Efficiency
8530-6	41660	22000	0.53

Detector Background was estimated by averaging the meter response over a two minute time interval.

Background = 100 cpm

Detector Lower Limit of Detection is estimated based on the operators ability to distinguish a count rate of 100 cpm above background.

Efficiency = 0.53  
Detector Active Area = 16 cm<sup>2</sup>

LLD (estimated) = 1000 dpm/100 cm<sup>2</sup>

Calibration of Tennesse LB 5100

GROUP B Some Alpha & Beta Efficiencies:

TUE AUG 15, 1989

Iso	Beta High	Energy	Activity	Time	Alpha	Beta	Alpha	
ID	Voltage	(A,B MEV)	DPM	min	CPM	CPM	Eff	
C14	0.12	1425	0.156	239800	5	7	29429	0
Pm147	0.20	1425	0.225	2996	5	1	625	0
Tc99	0.29	1425	0.292	32410	5	3	9672	0
C136	0.35	1425	0.712	24200	5	10	8603	0
Pb210	0.46	1425	1.160	18237	5	14	8424	0
Sr90	0.63	1425	2.270	41495	5	2	26181	0
Am241	0	1425	5.490	11600	5	3490	1317	0.30
Am243	0	1425	5.280	21000	5	6078	15750	0.28

OPERATION COMPLETE

By: *James D. Gray*

Background:

Count Time: 1000 min.

Alpha Counts: 168

Beta Counts: 1215

Lower Limits of Detection: (95% confidence level)

Sample Count Time: 1 min.

Sample Size: 300 cm sq. or 3 X 100 cm sq.

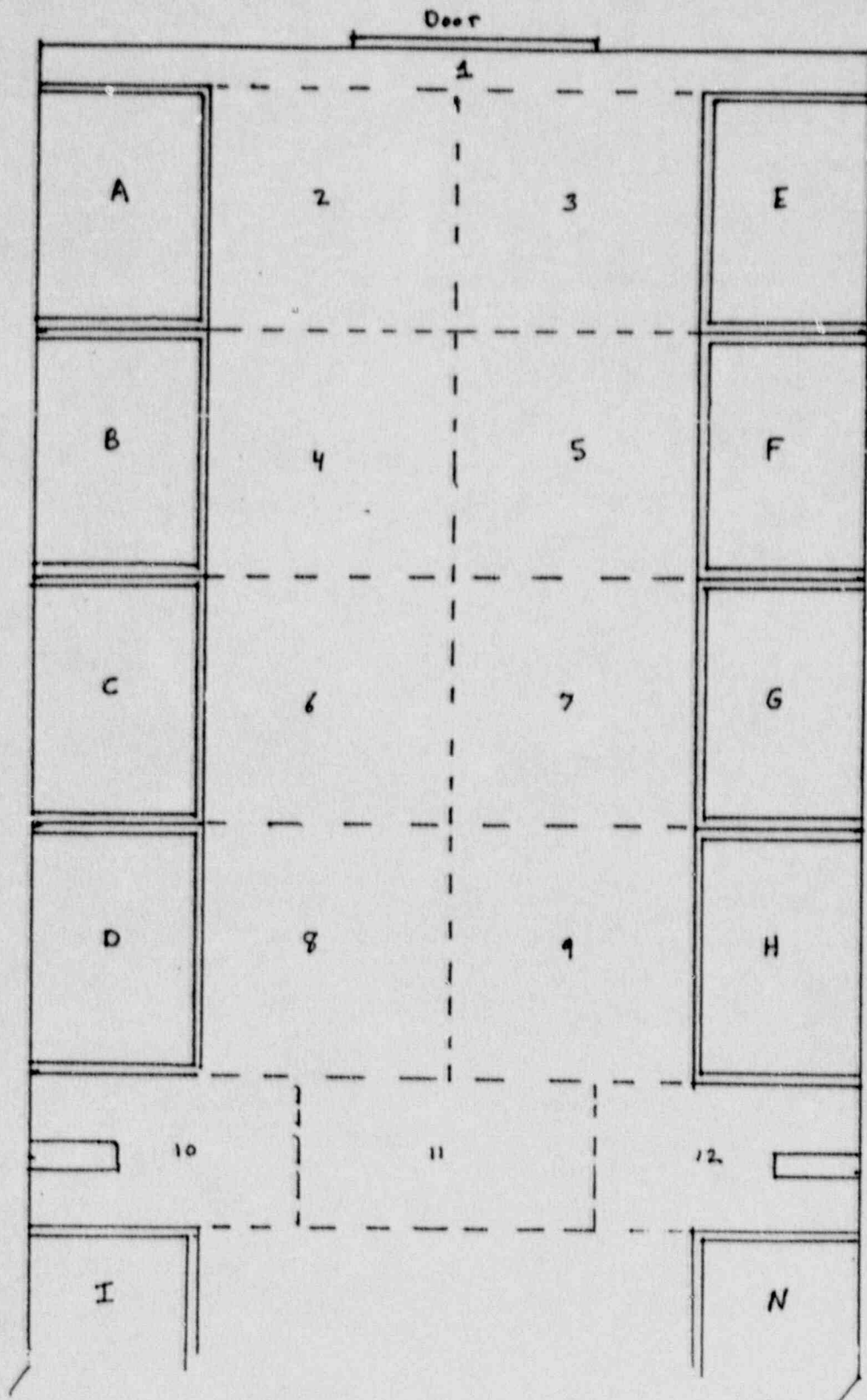
Alpha Efficiency: 0.300 (Am-241)

Beta Efficiency: 0.63 (Sr-90)

LLD (alpha) : 2 dpm/100 cm sq.

LLD (beta) : 3 dpm/100 cm sq.

# SNM Vault Floor - Part 1

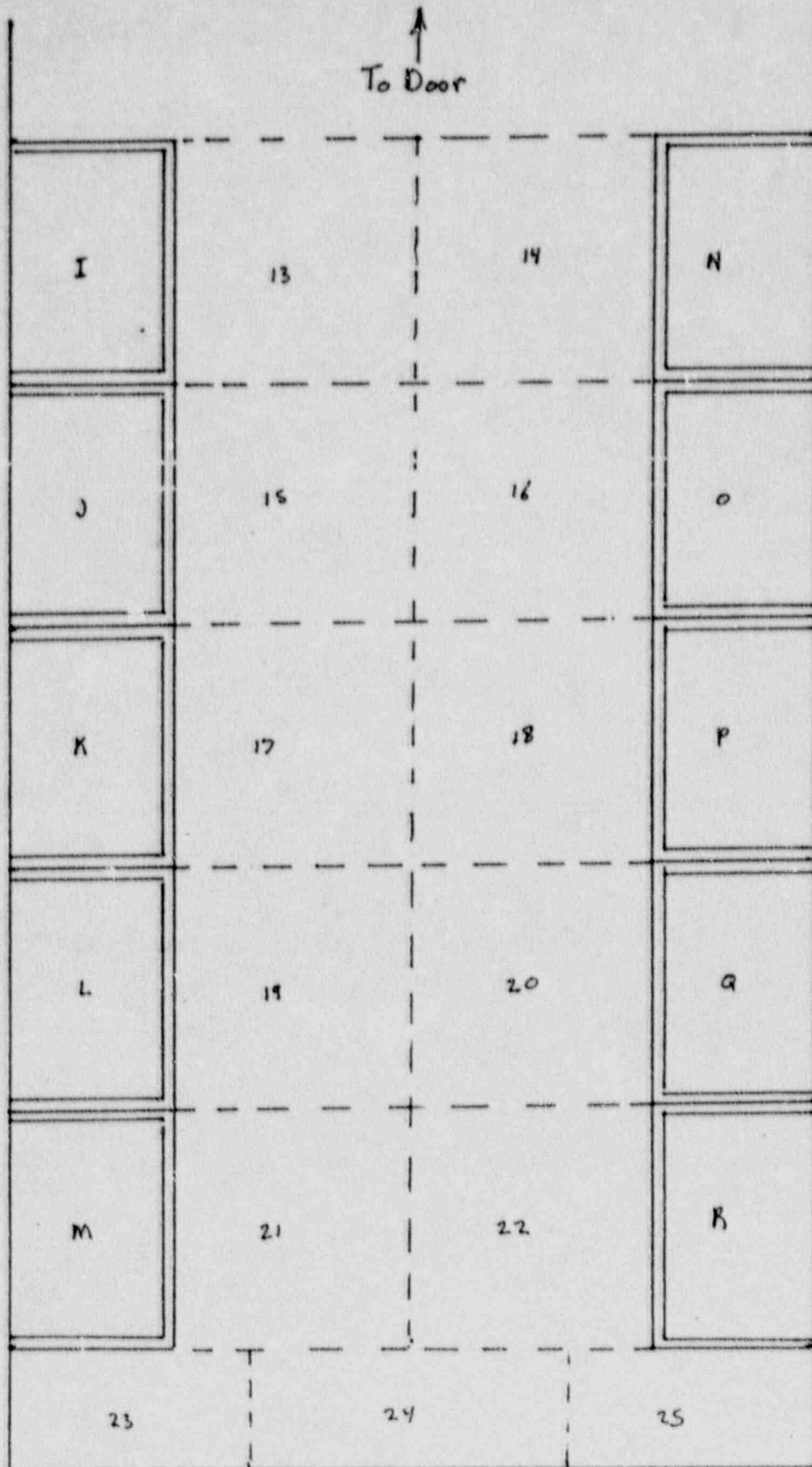


Top View

Shelves are labeled with Letters

Attachment 5

# SNM Vault Floor - Part 2

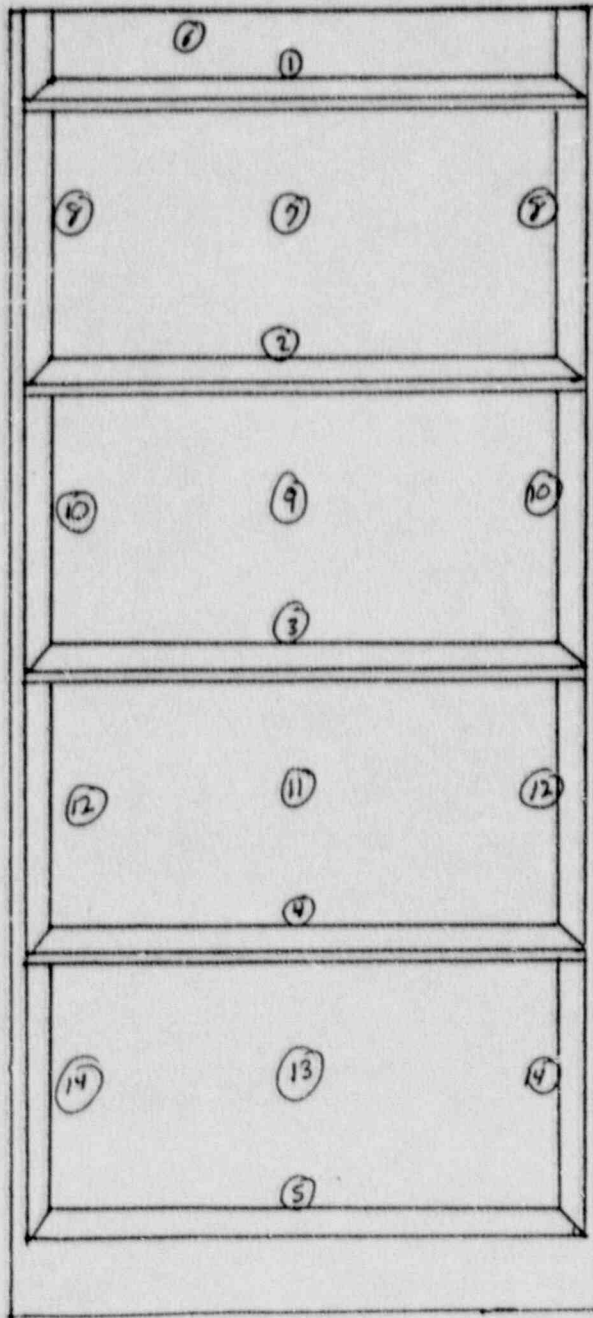


Top View  
Shelves are labeled with Letters

# SNM Vault Shelf

ID: A.B.C.D.E.F.G.H.J.L

Swipes 1 to 5 are on shelf surfaces.

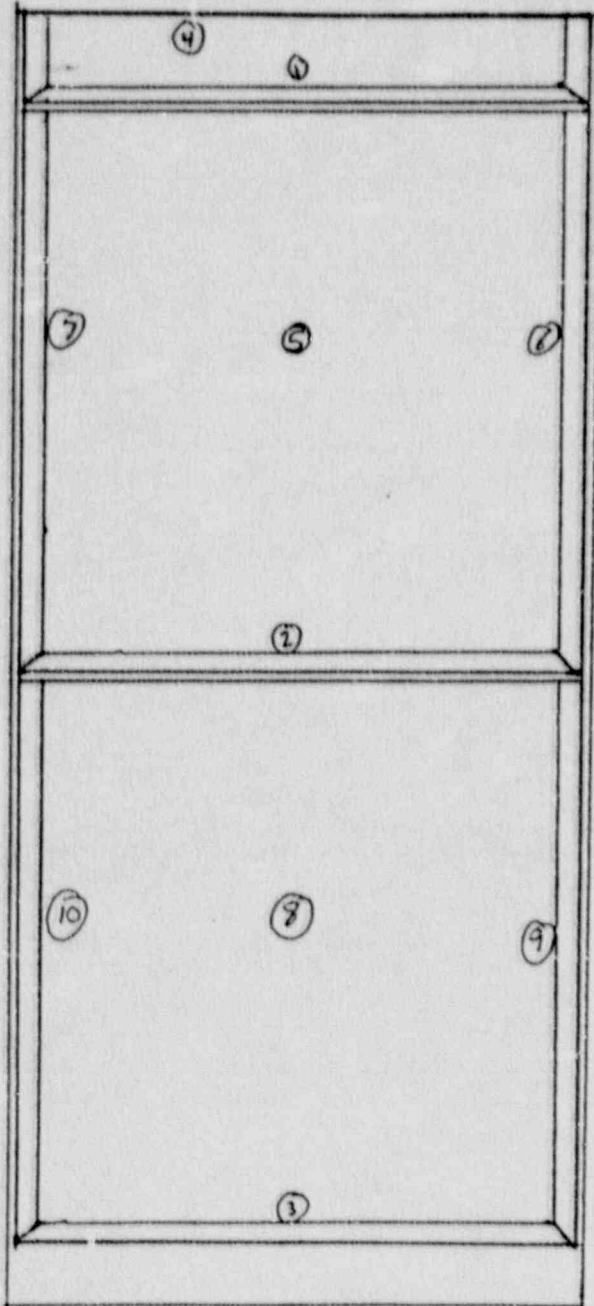


Front View

# SNM Vault Shelf

ID: N.Q.R

Swipes 1 to 3 are on shelf surfaces.



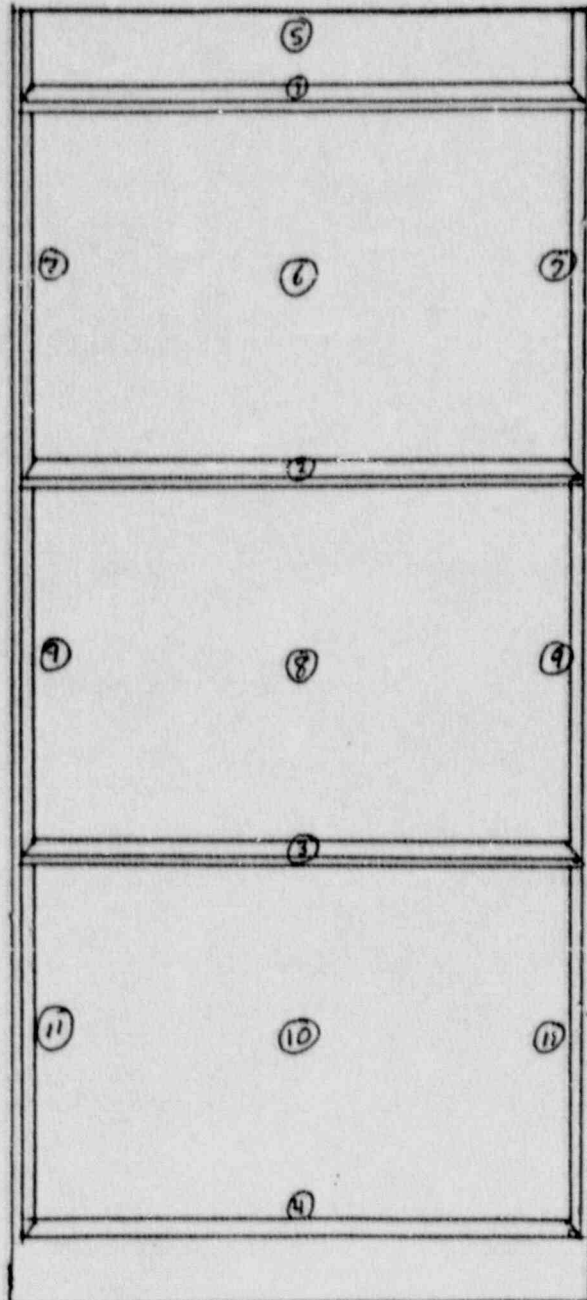
Front View



# SNM Vault Shelf

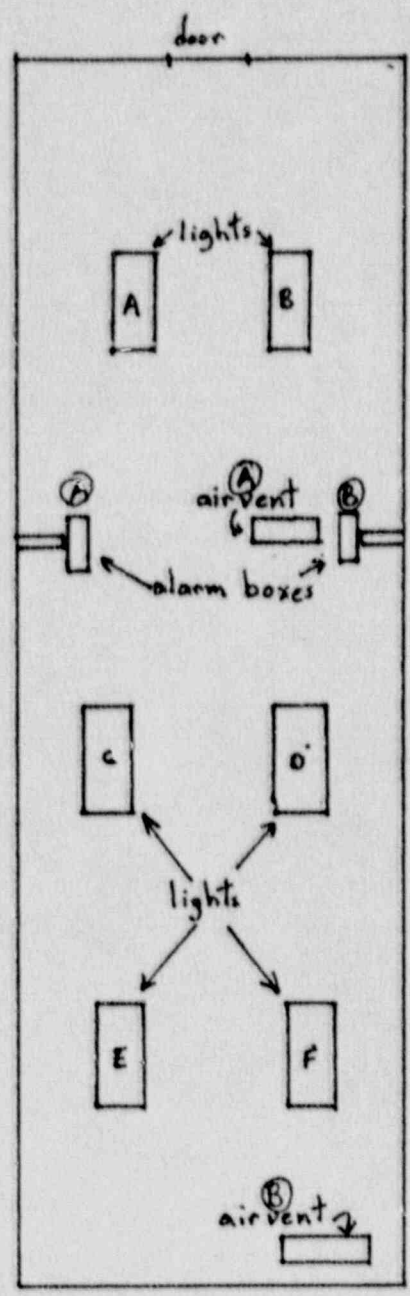
ID: I, K, M, O, P

Swipes 1 to 4 are on shelf surfaces.



Front View

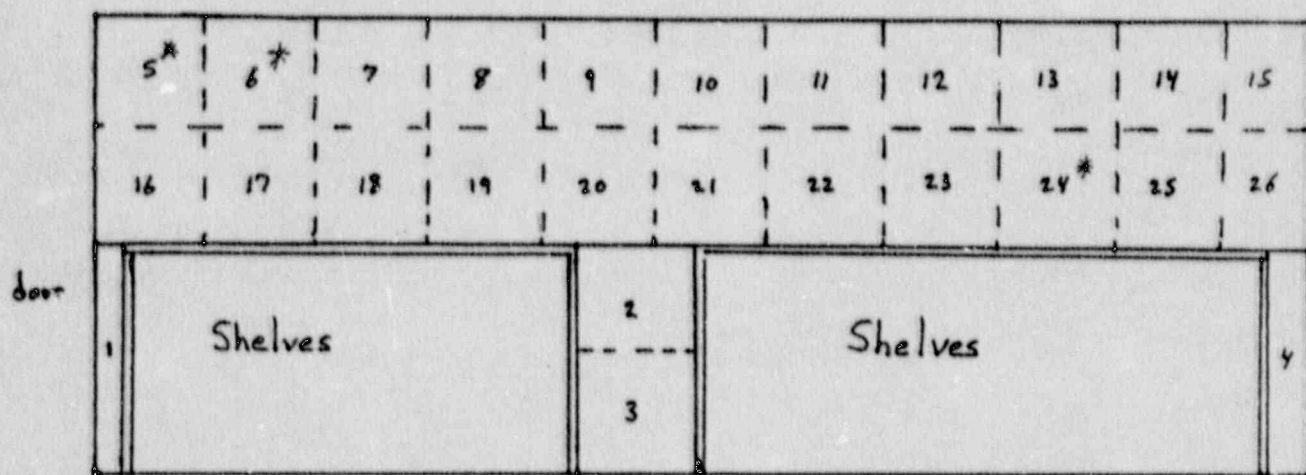
SNM Vault: Misc. Items



Looking down from ceiling

# SNM Vault Side Wall

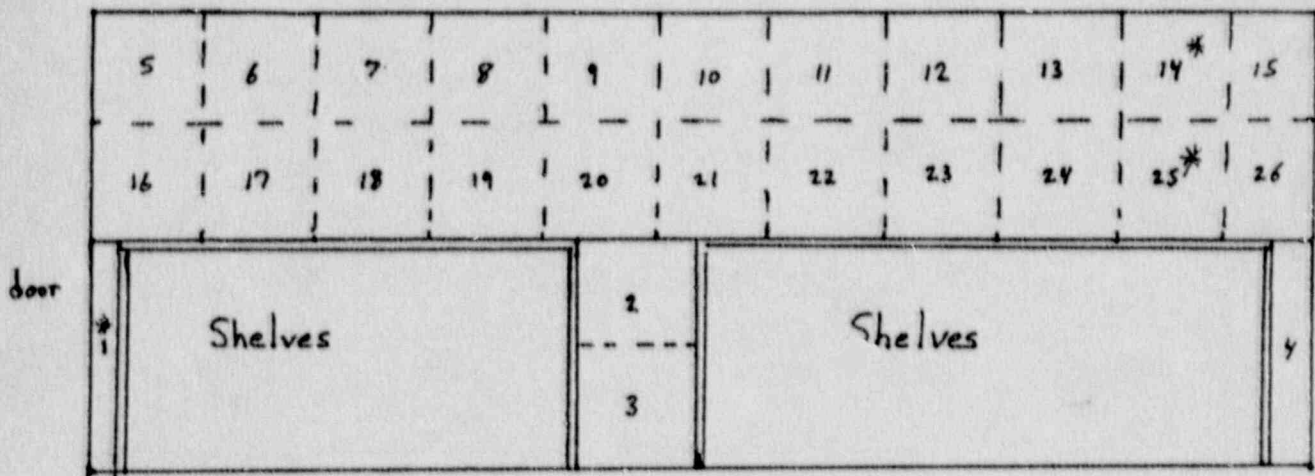
Left Side, Looking In From Door



\* - surveyed grid

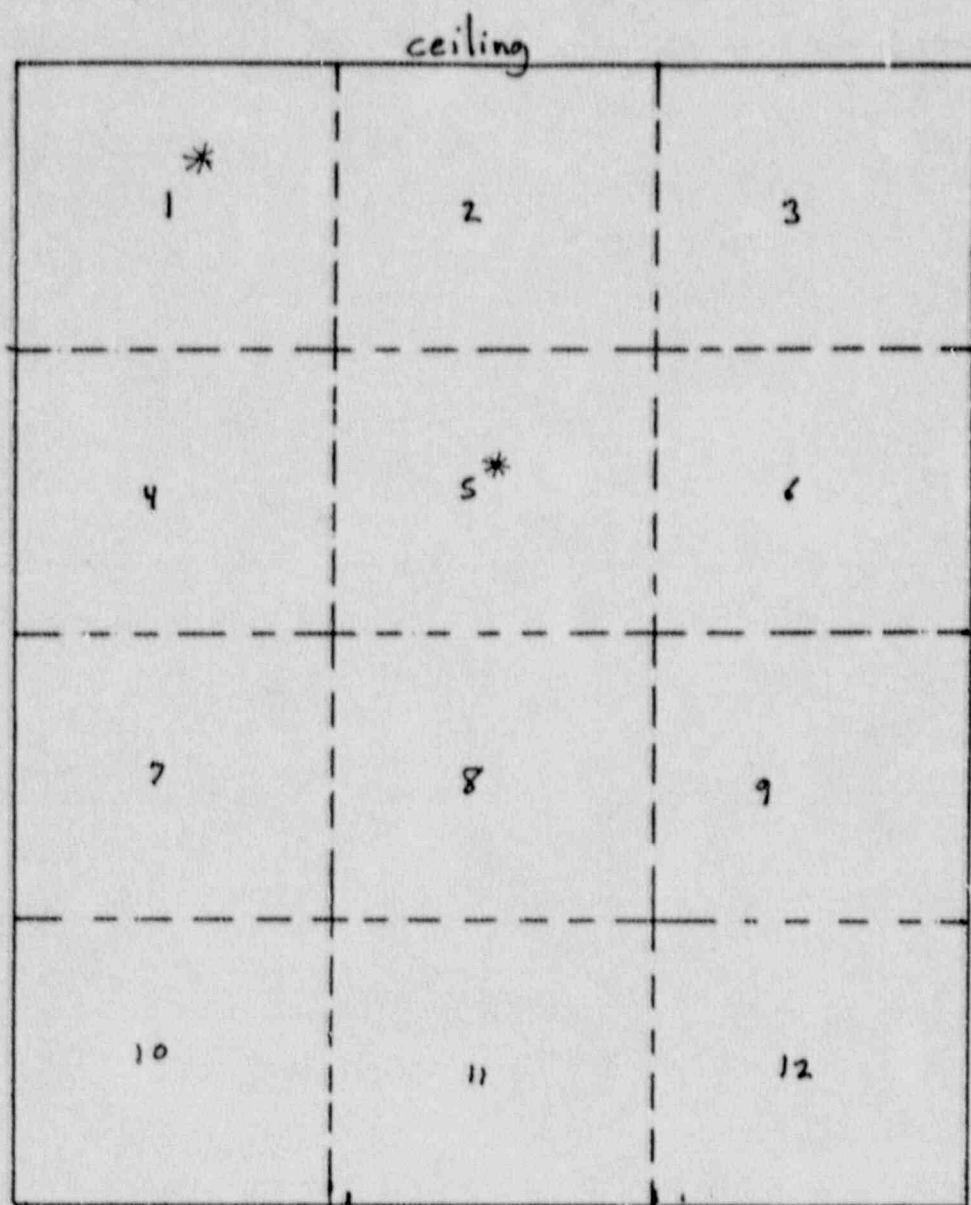
# SNM Vault Side Wall

Right Side, Looking In From Door



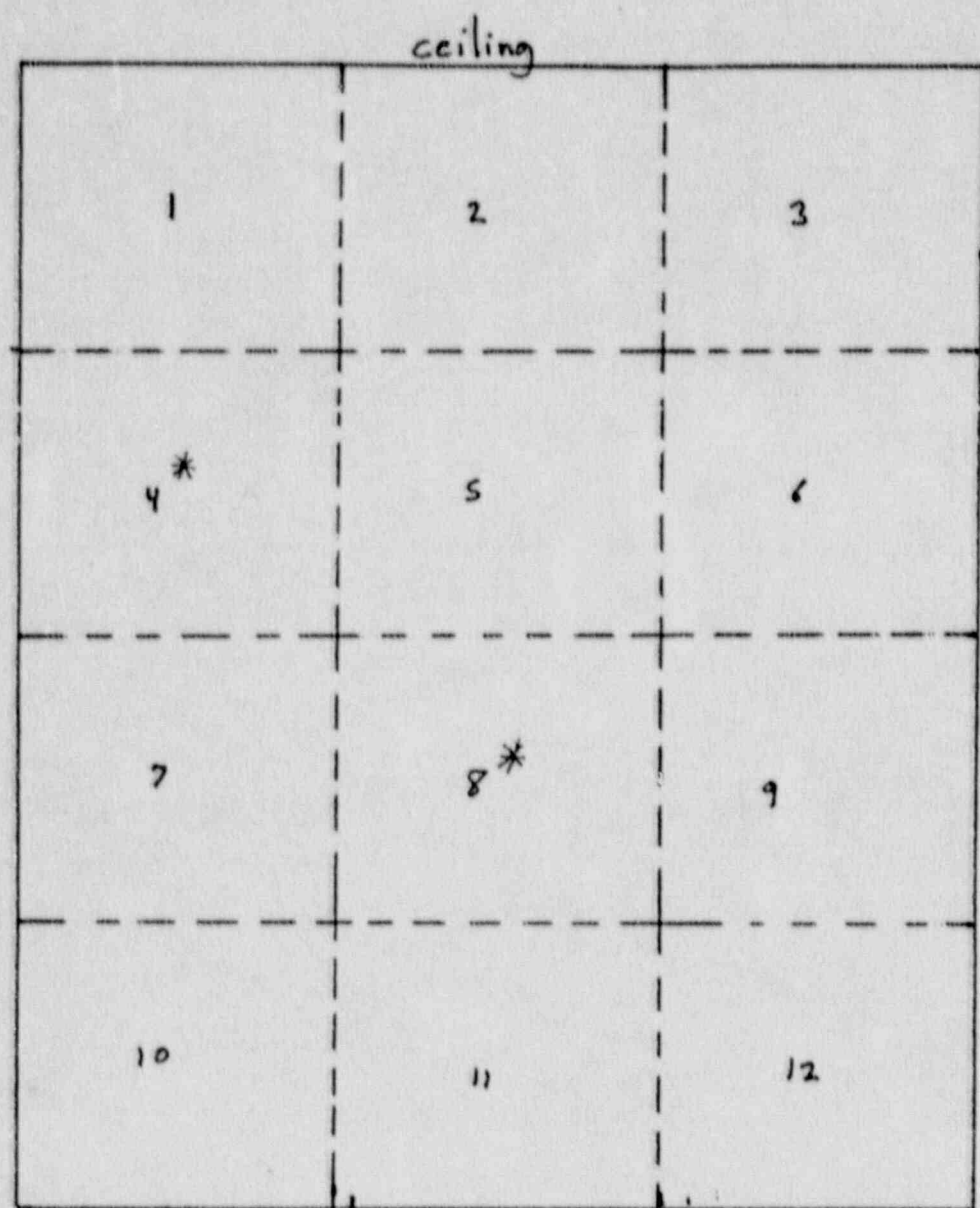
\* - surveyed grid

Vault End Wall Door Side



\* - surveyed grid

Vault End Wall Far Side



\* - surveyed grid

Storage Vault B118, Bldg. 222, Survey Results

Floor	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
12	<50	<50	<1000	<1000	<2	<3
13	<50	<50	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3
15	<50	<50	<1000	<1000	<2	<3
16	<50	<50	<1000	<1000	<2	<3
17	<50	<50	<1000	<1000	<2	<3
18	<50	<50	<1000	<1000	<2	<3
19	<50	<50	<1000	<1000	<2	<3
20	<50	<50	<1000	<1000	<2	<3
21	<50	<50	<1000	<1000	<2	<3
22	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
23	<50	<50	<1000	<1000	<2	<3
24	<50	<50	<1000	<1000	<2	<3
25	<50	<50	<1000	<1000	<2	<3
End Wall						
1	<50	72	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
4	<50	72	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
Side Walls						
14	<50	72	<1000	<1000	<2	<3
25	<50	99	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	72	<1000	<1000	<2	<3
24	<50	72	<1000	<1000	<2	<3
1	<50	72	<1000	<1000	<2	<3



Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
Ceiling						
8	<50	<50	<1000	<1000	<2	<3
16	<50	<50	<1000	<1000	<2	<3
27	<50	72	<1000	<1000	<2	<3
Shelf A						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	72	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	99	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
12	<50	<50	<1000	<1000	<2	<3
13	<50	<50	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
Shelf B						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	72	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
12	<50	72	<1000	<1000	<2	<3
13	<50	72	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3
Shelf C						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
12	<50	<50	<1000	<1000	2	<3
13	<50	<50	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3
Shelf D						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
8	<50	72	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	72	<1000	<1000	<2	<3
11	<50	72	<1000	<1000	<2	<3
12	<50	<50	<1000	<1000	<2	<3
13	<50	<50	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3
Shelf E						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	72	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
12	<50	72	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
13	<50	<50	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3
Shelf F						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	72	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
12	<50	<50	<1000	<1000	<2	<3
13	<50	72	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
Shelf G						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	72	<1000	<1000	<2	<3
12	<50	<50	<1000	<1000	<2	<3
13	<50	<50	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3
Shelf H						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	72	<1000	<1000	<2	<3
8	<50	72	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
12	<50	<50	<1000	<1000	<2	<3
13	<50	<50	<1000	<1000	<2	<3
14	<50	<50	<1000	<1000	<2	<3
Shelf I						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
11	<50	<50	<1000	<1000	<2	<3
Shelf J						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	72	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	72	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	72	<1000	<1000	<2	<3
12	52	72	<1000	<1000	<2	<3
13	<50	<50	<1000	<1000	<2	<3
14	<50	72	<1000	<1000	<2	<3
Shelf K						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3



Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	72	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	99	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
Shelf L						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	72	<1000	<1000	<2	<3
10	<50	72	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
12	<50	<50	<1000	<1000	<2	<3
13	<50	<50	<1000	<1000	<2	<3
14	<50	72	<1000	<1000	<2	<3
Shelf M						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	72	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3
Shelf N						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	3	<3
5	<50	<50	<1000	<1000	2	<3
6	<50	72	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	52	99	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3

Shelf O

1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	3	3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	72	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	72	<1000	<1000	<2	<3
9	<50	72	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
Shelf P						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
11	<50	72	<1000	<1000	<2	<3
Shelf Q						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	72	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3
Shelf R						
1	<50	<50	<1000	<1000	<2	<3
2	<50	<50	<1000	<1000	<2	<3
3	<50	<50	<1000	<1000	<2	<3
4	<50	<50	<1000	<1000	<2	<3
5	<50	<50	<1000	<1000	<2	<3
6	<50	<50	<1000	<1000	<2	<3
7	<50	<50	<1000	<1000	<2	<3
8	<50	<50	<1000	<1000	<2	<3
9	<50	<50	<1000	<1000	<2	<3
10	<50	<50	<1000	<1000	<2	<3

Storage Vault B118, Bldg. 222, Survey Results

	Average Alpha dpm/100 cm sq.	Maximum Alpha dpm/100 cm sq.	Average Beta dpm/100 cm sq.	Maximum Beta dpm/100 cm sq.	Removable Alpha dpm/100 cm sq.	Removable Beta dpm/100 cm sq.
Misc. Items						
Step Ladder	<50	<50	<1000	<1000	<2	<3
Plastic Sheet	<50	72	<1000	<1000	4	<3
Loose Shelving	<50	<50	<1000	<1000	<2	<3
Storage Bins	<50	<50	<1000	<1000	<2	<3
Loose Wood	<50	<50	<1000	<1000	<2	<3
Two Pipe Boxes	<50	<50	<1000	<1000	<2	<3
Two Pipe Boxes	<50	<50	<1000	<1000	<2	<3
One Pipe Box	<50	<50	<1000	<1000	<2	<3
Paperwork	<50	<50	<1000	<1000	<2	<3
Box of Tools	<50	<50	<1000	<1000	<2	<3
Trash Pail	<50	<50	<1000	<1000	<2	<3
Vault Door	<50	<50	<1000	<1000	<2	<3
Lights	<50	<50	<1000	<1000	<2	<3
Lights	<50	<50	<1000	<1000	<2	<3
Air Vent	59	99	<1000	<1000	2	3
Alarm Box	<50	<50	<1000	<1000	<2	<3

# SNM Vault

Survey Meters: ASP-19252 alpha  
GM

Date: 8-16-89

Surveyor: JWE

$\alpha$  Counts

Floor      Grid #

	1	2	3	4
1	0	0	1	2
2	0	0	2	1
3	0	0	0	1
4	0	0	0	0
5	0	0	0	1
6	0	2	0	0
7	1	0	0	1
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	1	0	0
12	0	0	0	0
13	1	1	0	0

All results indicate no contamination of this area.

Appendix A

# SNM Vault

Survey Meters: ASP-1 252 alpha  
GM

Date: 8-16-89

Surveyor: JME

α Counts

Floor Grid #

	1	2	3	4
14	0	0	0	0
15	0	0	0	0
16	0	0	0	2
17	0	0	0	0
18	0	0	0	0
19	1	0	1	0
20	0	0	0	0
21	0	2	0	1
22	0	2	1	0
23	0	0	0	1
24	1	0	0	0
25	0	0	0	0
<del>26</del>				

All results indicate no contamination of this area.





# SNM Vault

Survey Meters: A=9-1#252 alpha  
TBM-35 12682 GM

Date: 8-16-89

Surveyor: JME

Side  
Walls Grid #

$\alpha$  Counts /  $\beta$  CPM

	1	2	3	4
14	0 <100	0 <100	3 ~100	0 ~100
25	3 ~100	0 ~100	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">4</span> ~100	1 ~100
5	1 ~100	0 <100	0 ~100	1 ~100
6	1 ~100	1 <100	0 ~100	3 ~100
24	1 ~100	3 ~100	3 ~100	1 ~100
1	3 ~100	1 ~100	1 ~100	2 ~100

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha  
TBM-35 #12612 GM

Date: 8-16-89

Surveyor: DMK

Misc. Room Items

$\alpha$  Counts /  $\beta$  CPM

Grid #

	1	2	3	4
Step Ladder	0 <100	1 <100	0 <100	0 <100
Plastic Slect	0 <100	1 <100	0 <100	3 <100
Loose Shelving	1 <100	1 <100	1 <100	0 <100
Storage Bins	1 <100	0 <100	0 <100	0 <100
Loose Wood	0 <100	0 <100	0 <100	0 <100
2 pipe Boxes	0 <100	1 <100	1 <100	0 <100
2 pipe Boxes	1 <100	0 <100	0 <100	1 <100
1 pipe Box	0 <100	1 <100	0 <100	0 <100
Inventory Paper work	2 <100	0 <100	0 <100	0 <100
Box of Misc. labels tools	1 <100	1 <100	0 <100	1 <100
Trash Pail *Contents a Foam	1 <100	1 <100	0 <100	0 <100
Vault Door Knob Area	1 <100	1 <100	1 <100	0 <100

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252  
TBM-35 #12682

Date: 8-16-89

Surveyor: MAE

Lights                      Counts/CPM

A                              0 / <100

B                              1 / <100

C                              0 / <100

D                              1 / <100

E                              1 / <100

F                              1 / <100

Air Vent                      Counts/CPM

A                              1 / <100

B                              4 / <100

Alarm Box                      Counts/CPM

A                              0 / <100

B                              0 / <100

All results indicate no contamination of this area.

All results indicate no contamination of this area.

2017	2017	2017	2017	12
2017	2017	2017	2017	11
2017	2017	2017	2017	10
2017	2017	2017	2017	6
2017	2017	2017	2017	8
2017	2017	2017	2017	7
2017	2017	2017	2017	9
2017	2017	2017	2017	5
2017	2017	2017	2017	4
2017	2017	2017	2017	3
2017	2017	2017	2017	2
2017	2017	2017	2017	1

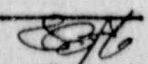
Floor Grid #

Survey Meters: alpha T60-158 1282 GM

β CPM

SNM Vault

Date: 8-15-89

Surveyor: 

All results indicate no contamination of this area.

25	< 100	< 100	< 100	< 100
24	< 100	< 100	< 100	< 100
23	< 100	< 100	< 100	< 100
22	< 100	< 100	< 100	< 100
21	< 100	< 100	< 100	< 100
20	< 100	< 100	< 100	< 100
19	< 100	< 100	< 100	< 100
18	< 100	< 100	< 100	< 100
17	< 100	< 100	< 100	< 100
16	< 100	< 100	< 100	< 100
15	< 100	< 100	< 100	< 100
14	< 100	< 100	< 100	< 100
13	< 100	< 100	< 100	< 100

Floor Grid #

SNM Vault

Survey Meters: alpha T68-15012682 GM

B CPM

Date: 8-15-89

Surveyor: H. DSO



0017	0017	0017	0017	14
0017	0017	0017	0017	13
0017	0017	0017	0017	12
0017	0017	0017	0017	11
0017	0017	0017	0017	10
0017	0017	0017	0017	9
0017	0017	0017	0017	8
0017	0017	0017	0017	7
0017	0017	0017	0017	6
0017	0017	0017	0017	5
0017	0017	0017	0017	4
0017	0017	0017	0017	3
0017	0017	0017	0017	2
0017	0017	0017	0017	1

All results indicate no contamination of this area.

SNM Vault

Survey Meters: ~~1262 GM~~ alpha

B CPM

Grid #

SLH

Survey Meters:

4

3

2

1

Date: 8-15-89

Surveyors: ~~HE~~



All results indicate no contamination of this area.

0017	0017	0017	0017	14
0017	0017	0017	0017	13
0017	0017	<del>0017</del> 0017	0017	12
0017	0017	0017	0017	11
0017	0017	0017	0017	10
0017	0017	0017	0017	9
0017	0017	0017	0017	8
0017	0017	0017	0017	7
0017	0017	0017	0017	6
0017	0017	0017	0017	5
0017	0017	0017	0017	4
0017	0017	0017	0017	3
0017	0017	0017	0017	2
0017	0017	0017	0017	1

Grid #

Sheet

Survey Meters:

alpha  
TBM-55P 1282 GM

B CPM

SNM Vault

Date: 8-15-89

Surveyor: ~~W. Dyer~~

1 2 3 4

2017	2017	2017	2017	2017	1
2017	2017	2017	2017	2017	2
2017	2017	2017	2017	2017	3
2017	2017	2017	2017	2017	4
2017	2017	2017	2017	2017	5
2017	2017	2017	2017	2017	6
2017	2017	2017	2017	2017	7
2017	2017	2017	2017	2017	8
2017	2017	2017	2017	2017	9
2017	2017	2017	2017	2017	10
2017	2017	2017	2017	2017	11
2017	2017	2017	2017	2017	12
2017	2017	2017	2017	2017	13
2017	2017	2017	2017	2017	14

All results indicate no contamination of this area.

SNM Vault

Survey Meters: alpha 780-350-1282 GM

B CPM

Date: 8-15-89

Surveyor: *[Signature]*

Grid #

SheH

Survey Meters:

1 2 3 4

# SNM Vault

Survey Meters: alpha TBM-158 1282 GM

B CPM

Date: 8-15-89

Surveyor: HTD

Grid #

1	L100	L100	L100	L100	1
2	L100	L100	L100	L100	2
3	L100	L100	L100	L100	3
4	L100	L100	L100	L100	4
5	L100	L100	L100	L100	5
6	L100	L100	L100	L100	6
7	L100	L100	L100	L100	7
8	L100	L100	L100	L100	8
9	L100	L100	L100	L100	9
10	L100	L100	L100	L100	10
11	L100	L100	L100	L100	11
12	L100	L100	L100	L100	12
13	L100	L100	L100	L100	13
14	L100	L100	L100	L100	14

All results indicate no contamination of this area.

All results indicate no contamination of this area.

7100	7100	7100	7100	14
7100	7100	7100	7100	13
7100	7100	7100	7100	12
7100	7100	7100	7100	11
7100	7100	7100	7100	10
7100	7100	7100	7100	9
7100	7100	7100	7100	8
7100	7100	7100	7100	7
7100	7100	7100	7100	6
7100	7100	7100	7100	5
7100	7100	7100	7100	4
7100	7100	7100	7100	3
7100	7100	7100	7100	2
7100	7100	7100	7100	1

Grid #

F  
SLH

Survey Meters:

alpha  
TBM-150  
GM

SNM Vault

B CPM

Surveyor: H. D. S.

Date: 8-15-89

4

3

2

1

All results indicate no contamination of this area.

2017	2017	2017	2017	14
2017	2017	2017	2017	13
2017	2017	2017	2017	12
2017	2017	2017	2017	11
2017	2017	2017	2017	10
2017	2017	2017	2017	9
2017	2017	2017	2017	8
2017	2017	2017	2017	7
2017	2017	2017	2017	6
2017	2017	2017	2017	5
2017	2017	2017	2017	4
2017	2017	2017	2017	3
2017	2017	2017	2017	2
2017	2017	2017	2017	1

SNM Vault

Survey Meters: alpha TBM-150 1282 GM

B CPM

Date: 8-15-89

Surveyor: HEN

Grid #

Sheet

1 2 3 4

All results indicate no contamination of this area.

0017	0017	0017	0017	14
0017	0017	0017	0017	13
0017	0017	0017	0017	12
0017	0017	0017	0017	11
0017	0017	0017	0017	10
0017	0017	0017	0017	9
0017	0017	0017	0017	8
0017	0017	0017	0017	7
0017	0017	0017	0017	6
0017	0017	0017	0017	5
0017	0017	0017	0017	4
0017	0017	0017	0017	3
0017	0017	0017	0017	2
0017	0017	0017	0017	1

SNM Vault

Survey Meters: Alpha  
 T68-158 7282 GM

B CPM

Grid #

SLH

4

3

2

1

Surveyors: HE

Date: 8-15-89

All results indicate no contamination of this area.

					11
					10
					9
					8
					7
					6
					5
					4
					3
					2
					1

SNM Vault

Survey Meter: alpha 1282 GM 168-158

Shift I

Grid # \_\_\_\_\_

1 2 3 4

Date: 8-15-89

Surveyor: HE J/S

All results indicate no contamination of this area.

0017	0017	0017	0017	h1
0017	0017	0017	0017	13
0017	0017	0017	0017	12
0017	0017	0017	0017	11
0017	0017	0017	0017	10
0017	0017	0017	0017	9
0017	0017	0017	0017	8
0017	0017	0017	0017	7
0017	0017	0017	0017	6
0017	0017	0017	0017	5
0017	0017	0017	0017	4
0017	0017	0017	0017	3
0017	0017	0017	0017	2
0017	0017	0017	0017	1

Grid #

Sheet

Survey Meters:

alpha  
TGM-150 12002 GM

B CPM

SNM Vault

Date: 8-15-89

Surveyor: HERDSON

4

3

2

1



2017	2017	2017	2017	h1
2017	2017	2017	2017	13
2017	2017	2017	2017	12
2017	2017	2017	2017	11
2017	2017	2017	2017	10
2017	2017	2017	2017	6
2017	2017	2017	2017	8
2017	2017	2017	2017	7
2017	2017	2017	2017	9
2017	2017	2017	2017	5
2017	2017	2017	2017	4
2017	2017	2017	2017	3
2017	2017	2017	2017	2
2017	2017	2017	2017	1

All results indicate no contamination of this area.

Grid #

Shelf

Survey Meter:

alpha  
1282 GM  
788-158

B CPM

SNM Vault

Date: 8-15-89

Surveyor: HEDSON

4

3

2

1

# SNM Vault

Survey Meters: alpha  
~~TBR-358~~ GM

Date: 8-15-89

Shelf

$\beta$  cpm

Surveyor: HE. Tyson

M Grid #

	1	2	3	4
1	L 100	L 100	L 100	L 100
2	L 100	L 100	L 100	L 400
3	L 100	L 100	L 100	L 100
4	L 100	L 100	L 100	L 100
5	L 100	L 100	L 100	L 100
6	L 100	L 100	L 100	L 100
7	L 100	L 100	L 100	L 100
8	L 100	L 100	L 100	L 100
9	L 100	L 100	L 100	L 100
10	L 100	L 100	L 100	L 100
11	L 100	L 100	L 100	L 100

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: alpha  
~~TGM-150~~ <sup>12682</sup> GM

Date: 8-15-89

Shelf

$\beta$  CPM

Surveyor: HE [Signature]

N Grid #

	1	2	3	4
1	< 100	< 100	< 100	< 100
2	< 100	< 100	< 100	< 100
3	< 100	< 100	< 100	< 100
4	< 100	< 100	< 100	< 100
5	< 100	< 100	< 100	< 100
6	< 100	< 100	< 100	< 100
7	< 100	< 100	< 100	< 100
8	< 100	< 100	< 100	< 100
9	< 100	< 100	< 100	< 100
10	< 100	< 100	< 100	< 100

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: alpha  
~~TBM-150~~ <sup>12682</sup> GM  
 Shelf  
 0 Grid #

Date: 8-15-89  
 Surveyor: HE Dyson

	1	2	3	4
1	L 100	L 100	L 100	L 100
2	L 100	L 100	L 100	L 100
3	L 100	L 100	L 100	L 100
4	L 100	L 100	L 100	L 100
5	L 100	L 100	L 100	L 100
6	L 100	L 100	L 100	L 100
7	L 100	L 100	L 100	L 100
8	L 100	L 100	L 100	L 100
9	L 100	L 100	L 100	L 100
10	L 100	L 100	L 100	L 100
11	L 100	L 100	L 100	L 100

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: TBM-350 <sup>12782</sup> alpha GM

$\beta$  CPM

Date: 8-15-89

Surveyor: [Signature]

P Grid #

	1	2	3	4
1	< 100	< 100	< 100	< 100
2	< 100	< 100	< 100	< 100
3	< 100	< 100	< 100	< 100
4	< 100	< 100	< 100	< 100
5	< 100	< 100	< 100	< 100
6	< 100	< 100	< 100	< 100
7	< 100	< 100	< 100	< 100
8	< 100	< 100	< 100	< 100
9	< 100	< 100	< 100	< 100
10	< 100	< 100	< 100	< 100
11	< 100	< 100	< 100	< 100

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: 1282 alpha  
~~120-150~~ GM

Date: 8-15-89

Shelf

$\beta$  CPM

Surveyor: H. E. Dyer

D Grid #

	1	2	3	4
1	L 100	L 100	L 100	L 100
2	L 100	L 100	L 100	L 100
3	L 100	L 100	L 100	L 100
4	L 100	L 100	L 100	L 100
5	L 100	L 100	L 100	L 100
6	L 100	L 100	L 100	L 100
7	L 100	L 100	L 100	L 100
8	L 100	L 100	L 100	L 100
9	L 100	L 100	L 100	L 100
10	L 100	L 100	L 100	L 100

All results indicate no contamination in this area.



# SNM Vault

Survey Meters: TBM-350 <sup>12882</sup> alpha GM

Date: 8-15-89

Sheet R

$\beta$  CPM

Surveyor: NE D. S. ...

R Grid #

	1	2	3	4
1	< 100	< 100	< 100	< 100
2	< 100	< 100	< 100	< 100
3	< 100	< 100	< 100	< 100
4	< 100	< 100	< 100	< 100
5	< 100	< 100	< 100	< 100
6	< 100	< 100	< 100	< 100
7	< 100	< 100	< 100	< 100
8	< 100	< 100	< 100	< 100
9	< 100	< 100	< 100	< 100
10	< 100	< 100	< 100	< 100

All results indicate no contamination in this area.

THU AUG 17, 1989 GROUP A

Smear Evaluation: Surveyor's Name Doug Eagleson / Area Surveyed SNM Vault

Smpl No	Count Time	Alpha Count	Beta Count	Alpha DPM	Beta DPM	Time of Day	Smear Location Info
1	1	1	4	1.8	5.0	09:29:48	Shelf 6 1
2	1	0	3	-0.2	3.0	09:30:59	
3	1	0	3	-0.2	3.0	09:32:10	
4	1	0	3	-0.2	3.0	09:33:21	
5	1	0	2	-0.2	1.0	09:34:33	
6	1	0	1	-0.2	-1.0	09:35:44	
7	1	0	3	-0.2	3.0	09:36:55	
8	1	1	3	1.8	3.0	09:38:07	
9	1	2	0	3.8	-3.0	09:39:18	
10	1	0	2	-0.2	1.0	09:40:29	
11	1	0	1	-0.2	-1.0	09:41:40	
12	1	0	1	-0.2	-1.0	09:42:51	
13	1	0	0	-0.2	-3.0	09:44:02	
14	1	0	1	-0.2	-1.0	09:45:14	
15	1	0	4	-0.2	5.0	09:46:25	Shelf A 1
16	1	1	2	1.8	1.0	09:47:36	
17	1	0	2	-0.2	1.0	09:48:47	
18	1	0	2	-0.2	1.0	09:49:58	
19	1	0	3	-0.2	3.0	09:51:09	
20	1	1	1	1.8	-1.0	09:52:20	
21	1	0	1	-0.2	-1.0	09:53:32	
22	1	0	1	-0.2	-1.0	09:54:43	
23	1	1	0	1.8	-3.0	09:55:54	
24	1	1	0	1.8	-3.0	09:57:05	
25	1	1	2	1.8	1.0	09:58:16	
26	1	0	2	-0.2	1.0	09:59:27	
27	1	0	0	-0.2	-3.0	10:00:39	
28	1	0	3	-0.2	3.0	10:01:50	
29	1	0	3	-0.2	3.0	10:03:01	Vault Door Knobs
30	1	0	0	-0.2	-3.0	10:04:12	
31	1	0	0	-0.2	-3.0	10:05:24	
32	1	1	1	1.8	-1.0	10:06:34	
33	1	0	4	-0.2	5.0	10:07:45	
34	1	0	1	-0.2	-1.0	10:08:56	
35	1	0	0	-0.2	-3.0	10:10:08	
36	1	0	0	-0.2	-3.0	10:11:44	
37	1	0	1	-0.2	1.0	10:14:51	
38	1	0	0	-0.2	-3.0	10:16:03	
39	1	0	6	-0.2	9.0	10:17:14	
40	1	0	0	-0.2	-3.0	10:18:26	
41	1	0	0	-0.2	-3.0	10:19:37	
42	1	1	2	1.8	1.0	10:20:49	
43	1	0	1	-0.2	-1.0	10:22:01	
44	1	0	0	-0.2	-3.0	10:23:12	
45	1	1	4	1.8	5.0	10:24:23	
46	1	1	0	1.8	-3.0	10:25:34	
47	1	0	2	-0.2	1.0	10:26:46	
48	1	0	0	-0.2	-3.0	10:27:57	
49	1	0	0	-0.2	-3.0		
50	1	0	0	-0.2	-3.0		

14  
14

SMR

SMR

SMR

SMR

SMR

OPERATION COMPLETE



OPERATION COMPLETE

WED AUG 16, 1989 GROUP A

Smear Evaluation: Surveyor's Name Doug Eagleson / Area Surveyed SVM Vault

Smpl No	Count Time	Alpha Count	Beta Count	Alpha DPM	Beta DPM	Time of Day	Smear Location Info
1	1	0	1	-0.2	-1.0	12:51:24	shelf D 1
2	1	1	2	1.8	1.0	12:52:35	
3	1	0	5	-0.2	7.0	12:53:46	
4	1	0	1	-0.2	-1.0	12:54:57	
5	1	0	1	-0.2	-1.0	12:56:08	
6	1	0	2	-0.2	1.0	12:57:19	
7	1	0	0	-0.2	-3.0	12:58:30	
8	1	0	4	-0.2	5.0	12:59:41	
9	1	0	2	-0.2	1.0	13:00:52	
10	1	0	3	-0.2	3.0	13:02:04	
11	1	0	3	-0.2	3.0	13:03:15	
12	1	0	2	-0.2	1.0	13:04:25	
13	1	0	3	-0.2	3.0	13:05:37	
14	1	0	1	-0.2	-1.0	13:06:48	14
15	1	0	3	-0.2	3.0	13:07:59	shelf C 1
16	1	0	1	-0.2	-1.0	13:09:10	
17	1	0	1	-0.2	-1.0	13:10:22	
18	1	0	0	-0.2	-3.0	13:11:33	
19	1	0	1	-0.2	-1.0	13:12:44	
20	1	0	3	-0.2	3.0	13:13:55	
21	1	0	1	-0.2	-1.0	13:15:07	
22	1	0	2	-0.2	1.0	13:16:18	
23	1	0	1	-0.2	-1.0	13:17:29	
24	1	1	2	1.8	1.0	13:18:40	
25	1	1	0	1.8	-3.0	13:19:51	
26	1	2	1	3.8	-1.0	13:21:02	
27	1	0	2	-0.2	1.0	13:22:13	
28	1	0	4	-0.2	5.0	13:23:24	14
29	1	0	0	-0.2	-3.0	13:24:35	shelf B 1
30	1	0	1	-0.2	-1.0	13:25:46	
31	1	0	2	-0.2	1.0	13:26:57	
32	1	0	0	-0.2	-3.0	13:28:09	
33	1	0	3	-0.2	3.0	13:29:20	
34	1	0	1	-0.2	-1.0	13:30:31	
35	1	0	1	-0.2	-1.0	13:31:42	
36	1	0	0	-0.2	-3.0	13:32:53	
37	1	0	3	-0.2	3.0	13:34:04	
38	1	0	3	-0.2	3.0	13:35:16	
39	1	0	3	-0.2	3.0	13:36:27	
40	1	0	2	-0.2	1.0	13:37:38	
41	1	0	0	-0.2	-3.0	13:38:49	
42	1	1	5	1.8	7.0	13:40:00	14
43	1	0	2	-0.2	1.0	13:41:12	4 End Wall
44	1	0	0	-0.2	-3.0	13:42:23	
45	1	0	0	-0.2	-3.0	13:43:35	Door Wall
46	1	0	2	-0.2	1.0	13:44:46	5
47	1	0	0	-0.2	-3.0	13:45:57	Wall
48	1	1	1	1.8	-1.0	13:47:08	14 Right Side
49	1	0	1	-0.2	-1.0	13:48:19	25
50	1	0	1	-0.2	-1.0	13:49:30	

OPERATION COMPLETE

OPERATION COMPLETE

TUE AUG 15, 1989 GROUP A

Smear Evaluation: Surveyor's Name Doug Eaglson / Area Surveyed SNM Vault

Smpi No	Count Time	Alpha Count	Beta Count	Alpha DPM	Beta DPM	Time of Day	Smear Location Info
1	1	0	0	-0.2	-3.0	16:13:17	shelf H 1 ↓ 14
2	1	0	4	-0.2	5.0	16:14:28	
3	1	1	0	1.8	-3.0	16:15:39	
4	1	0	0	-0.2	-3.0	16:16:49	
5	1	1	3	1.8	3.0	16:18:00	
6	1	0	1	-0.2	-1.0	16:19:12	
7	1	0	1	-0.2	-1.0	16:20:23	
8	1	0	2	-0.2	1.0	16:21:34	
9	1	0	0	-0.2	-3.0	16:22:45	
10	1	0	3	-0.2	3.0	16:23:56	
11	1	0	2	-0.2	1.0	16:25:06	
12	1	0	2	-0.2	1.0	16:26:17	
13	1	0	0	-0.2	-3.0	16:27:28	
14	1	0	0	-0.2	-3.0	16:28:40	
15	1	0	2	-0.2	1.0	16:29:51	shelf F 1 ↓ 14
16	1	0	0	-0.2	-3.0	16:31:02	
17	1	0	1	-0.2	-1.0	16:32:13	
18	1	0	0	-0.2	-3.0	16:33:25	
19	1	0	0	-0.2	-3.0	16:34:36	
20	1	0	1	-0.2	-1.0	16:35:47	
21	1	1	1	1.8	-1.0	16:36:58	
22	1	0	2	-0.2	1.0	16:38:09	
23	1	0	0	-0.2	-3.0	16:39:19	
24	1	0	1	-0.2	-1.0	16:40:30	
25	1	0	1	-0.2	-1.0	16:41:42	
26	1	0	1	-0.2	-1.0	16:42:54	
27	1	0	2	-0.2	1.0	16:44:04	
28	1	0	0	-0.2	-3.0	16:45:15	
29	1	0	1	-0.2	-1.0	16:46:26	shelf E 1 ↓ 14
30	1	2	3	3.8	3.0	16:47:37	
31	1	0	1	-0.2	-1.0	16:48:48	
32	1	0	2	-0.2	1.0	16:50:00	
33	1	0	0	-0.2	-3.0	16:51:12	
34	1	0	2	-0.2	1.0	16:52:23	
35	1	0	0	-0.2	-3.0	16:53:34	
36	1	0	2	-0.2	1.0	16:54:45	
37	1	0	3	-0.2	3.0	16:55:56	
38	1	0	3	-0.2	3.0	16:57:07	
39	1	0	1	-0.2	-1.0	16:58:18	
40	1	0	1	-0.2	-1.0	16:59:29	
41	1	0	3	-0.2	3.0	17:00:39	
42	1	1	3	1.8	3.0	17:01:50	
43	1	0	2	-0.2	1.0	17:03:02	ceiling grid 27 grid 8 grid 16 ← wall grid 5 ← grid 6 Left Side grid 24
44	1	0	1	-0.2	-1.0	17:04:13	
45	1	0	2	-0.2	1.0	17:05:24	
46	1	0	2	-0.2	1.0	17:06:35	
47	1	0	0	-0.2	-3.0	17:07:46	
48	1	0	1	-0.2	-1.0	17:08:57	
49	1	0	2	-0.2	1.0	17:10:08	
50	1	0	0	-0.2	-3.0	17:11:19	
50	1	0	2	-0.2	1.0	17:12:30	
50	1	1	0	1.8	-3.0	17:13:41	
50	1	0	2	-0.2	1.0	17:14:52	
50	1	1	4	1.8	5.0	17:16:03	

OPERATION COMPLETE

WED AUG 16, 1989 GROUP A

Smear Evaluation: Surveyor's Name Doug Eagleson / Area Surveyed SVM Vault

Smpl No	Count Time	Alpha Count	Beta Count	Alpha DPM	Beta DPM	Time of Day	Smear Location Info		
1	1	0	3	-0.2	3.0	08:44:11	shelf R 1 ↓ 10		
2	1	1	0	1.8	-3.0	08:45:22			
3	1	0	1	-0.2	-1.0	08:46:33			
4	1	0	3	-0.2	3.0	08:47:44			
5	1	0	3	-0.2	3.0	08:48:55			
6	1	1	2	1.8	1.0	08:50:06			
7	1	0	1	-0.2	-1.0	08:51:17			
8	1	0	3	-0.2	3.0	08:52:29			
9	1	0	1	-0.2	-1.0	08:53:40			
10	1	0	2	-0.2	1.0	08:54:51			
11	1	0	2	-0.2	1.0	08:56:03	shelf M 1 ↓ 11		
12	1	0	1	-0.2	-1.0	08:57:14			
13	1	0	2	-0.2	1.0	08:58:26			
14	1	0	1	-0.2	-1.0	08:59:38			
15	1	0	1	-0.2	-1.0	09:00:49			
16	1	0	3	-0.2	3.0	09:02:01			
17	1	0	1	-0.2	-1.0	09:03:13			
18	1	1	1	1.8	-1.0	09:04:24			
19	1	0	3	-0.2	3.0	09:05:35			
20	1	1	0	1.8	-3.0	09:06:47			
21	1	0	0	-0.2	-3.0	09:07:57			
22	1	0	0	-0.2	-3.0	09:09:09	shelf L 1 ↓ 14		
23	1	0	2	-0.2	1.0	09:10:21			
24	1	0	2	-0.2	1.0	09:11:32			
25	1	1	2	1.8	1.0	09:12:43			
26	1	0	3	-0.2	3.0	09:13:54			
27	1	1	0	1.8	-3.0	09:15:05			
28	1	1	4	1.8	5.0	09:16:17			
29	1	0	0	-0.2	-3.0	09:17:28			
30	1	0	1	-0.2	-1.0	09:18:39			
31	1	0	1	-0.2	-1.0	09:19:50			
32	1	0	1	-0.2	-1.0	09:21:02			
33	1	0	0	-0.2	-3.0	09:22:13			
34	1	0	2	-0.2	1.0	09:23:24			
35	1	1	0	1.8	-3.0	09:24:35			
36	1	0	3	-0.2	3.0	09:25:47	shelf K 1 ↓ 11		
37	1	0	4	-0.2	5.0	09:26:57			
38	1	0	2	-0.2	1.0	09:28:09			
39	1	0	4	-0.2	5.0	09:29:20			
40	1	0	2	-0.2	1.0	09:30:31			
41	1	1	1	1.8	-1.0	09:31:42			
42	1	0	5	-0.2	7.0	09:32:54			
43	1	0	4	-0.2	5.0	09:34:06			
44	1	0	0	-0.2	-3.0	09:35:17			
45	1	0	0	-0.2	-3.0	09:36:29			
46	1	0	2	-0.2	1.0	09:37:40			
47	1	0	1	-0.2	-1.0	09:38:52		A Alarm Boxes	
48	1	1	4	1.8	5.0	09:40:04			B
49	1	0	4	-0.2	5.0	09:41:14			C
50	1	0	1	-0.2	-1.0	09:42:25			

OPERATION COMPLETE

OPERATION COMPLETE

TUE AUG 15, 1989 GROUP A

Smear Evaluation: Surveyor's Name Doug Engleson / Area Surveyed SNM Vault

Smpl No	Count Time	Alpha Count	Beta Count	Alpha DPM	Beta DPM	Time of Day	Smear Location Info
1	1	0	0	-0.2	-3.0	18:53:39	Shelf N 1
2	1	0	1	-0.2	-1.0	18:54:51	
3	1	0	6	-0.2	9.0	18:56:01	
4	1	3	3	5.8	3.0	18:57:12	
5	1	2	3	3.8	3.0	18:58:24	
6	1	0	0	-0.2	-3.0	18:59:36	
7	1	0	3	-0.2	3.0	19:00:46	
8	1	1	2	1.8	1.0	19:01:57	
9	1	0	0	-0.2	-3.0	19:03:08	
10	1	1	1	1.8	-1.0	19:04:19	10
11	1	0	2	-0.2	1.0	19:05:30	Shelf O 1
12	1	1	1	1.8	-1.0	19:06:41	
13	1	3	7	5.8	11.0	19:07:52	
14	1	0	0	-0.2	-3.0	19:09:03	
15	1	1	0	1.8	-3.0	19:10:15	
16	1	1	5	1.8	7.0	19:11:26	
17	1	0	0	-0.2	-3.0	19:12:37	
18	1	0	1	-0.2	-1.0	19:13:48	
19	1	0	1	-0.2	-1.0	19:14:59	
20	1	0	1	-0.2	-1.0	19:16:11	
21	1	0	1	-0.2	-1.0	19:17:22	11
22	1	0	2	-0.2	1.0	19:18:33	Shelf P 1
23	1	0	2	-0.2	1.0	19:19:44	
24	1	0	0	-0.2	-3.0	19:20:55	
25	1	0	1	-0.2	-1.0	19:22:06	
26	1	0	1	-0.2	-1.0	19:23:17	
27	1	0	1	-0.2	-1.0	19:24:28	
28	1	0	3	-0.2	3.0	19:25:39	
29	1	0	1	-0.2	-1.0	19:26:50	
30	1	1	2	1.8	1.0	19:28:01	
31	1	0	1	-0.2	-1.0	19:29:12	
32	1	0	2	-0.2	1.0	19:30:23	11
33	1	1	3	1.8	3.0	19:31:35	Shelf Q 1
34	1	0	0	-0.2	-3.0	19:32:46	
35	1	0	1	-0.2	-1.0	19:33:57	
36	1	0	1	-0.2	-1.0	19:35:07	
37	1	0	2	-0.2	1.0	19:36:19	
38	1	0	1	-0.2	-1.0	19:37:30	
39	1	1	1	1.8	-1.0	19:38:41	
40	1	2	1	3.8	-1.0	19:39:53	
41	1	1	2	1.8	1.0	19:41:04	
42	1	0	4	-0.2	5.0	19:42:16	10
43	1	0	4	-0.2	5.0	19:43:27	A Lights
44	1	1	1	1.8	-1.0	19:44:38	B
45	1	0	2	-0.2	1.0	19:45:49	C
46	1	0	1	-0.2	-1.0	19:47:01	D
47	1	0	1	-0.2	-1.0	19:48:12	E
48	1	1	5	1.8	7.0	19:49:23	F
49	1	0	1	-0.2	-1.0	19:50:34	A Air Vents
50	1	2	7	3.8	11.0	19:51:44	B

OPERATION COMPLETE

WED AUG 16, 1989 GROUP A

Smear Evaluation: Surveyor's Name \_\_\_\_\_ / Area Surveyed \_\_\_\_\_

OPERATION COMPLETE  
 TUE AUG 15, 1989 GROUP A

Smear Evaluation: Surveyor's Name Doug Engason / Area Surveyed SNM Vault

Smpl No	Count Time	Alpha Count	Beta Count	Alpha DPM	Beta DPM	Time of Day	Smear Location Info
1	1	0	1	-0.2	-1.0	17:34:55	Floor 1
2	1	0	2	-0.2	1.0	17:36:07	
3	1	0	4	-0.2	5.0	17:37:17	
4	1	0	1	-0.2	-1.0	17:38:28	
5	1	0	4	-0.2	5.0	17:39:39	
6	1	0	1	-0.2	-1.0	17:40:50	
7	1	0	2	-0.2	1.0	17:42:01	
8	1	0	1	-0.2	-1.0	17:43:12	
9	1	0	1	-0.2	-1.0	17:44:23	
10	1	0	0	-0.2	-3.0	17:45:34	
11	1	0	2	-0.2	1.0	17:46:45	
12	1	0	0	-0.2	-3.0	17:47:57	
13	1	1	0	1.8	-3.0	17:49:08	
14	1	0	2	-0.2	1.0	17:50:20	
15	1	0	2	-0.2	1.0	17:51:31	
16	1	0	1	-0.2	-1.0	17:52:42	
17	1	0	1	-0.2	-1.0	17:53:53	
18	1	0	1	-0.2	-1.0	17:55:04	
19	1	0	1	-0.2	-1.0	17:56:16	
20	1	0	1	-0.2	-1.0	17:57:27	
21	1	0	1	-0.2	-1.0	17:58:39	
22	1	0	3	-0.2	3.0	17:59:50	
23	1	0	0	-0.2	-3.0	18:01:02	
24	1	1	1	1.8	-1.0	18:02:13	
25	1	0	3	-0.2	3.0	18:03:24	24
26	1	0	0	-0.2	-3.0	18:04:35	shelf 1
27	1	1	2	1.8	1.0	18:05:46	
28	1	0	0	-0.2	-3.0	18:06:57	
29	1	0	0	-0.2	-3.0	18:08:08	
30	1	0	0	-0.2	-3.0	18:09:20	
31	1	1	1	1.8	-1.0	18:10:31	
32	1	0	2	-0.2	1.0	18:11:42	
33	1	0	1	-0.2	-1.0	18:12:54	
34	1	0	3	-0.2	3.0	18:14:05	
35	1	0	0	-0.2	-3.0	18:15:17	
36	1	1	2	1.8	1.0	18:16:28	
37	1	0	3	-0.2	3.0	18:17:39	
38	1	0	1	-0.2	-1.0	18:18:51	14
39	1	0	1	-0.2	-1.0	18:20:02	Floor 25
40	1	0	1	-0.2	-1.0	18:21:13	shelf 1
41	1	0	0	-0.2	-3.0	18:22:25	
42	1	0	4	-0.2	5.0	18:23:37	
43	1	0	1	-0.2	-1.0	18:24:47	
44	1	0	0	-0.2	-3.0	18:25:58	
45	1	1	2	1.8	1.0	18:27:09	
46	1	0	0	-0.2	-3.0	18:28:21	
47	1	1	1	1.8	-1.0	18:29:32	
48	1	0	0	-0.2	-3.0	18:30:43	
49	1	0	1	-0.2	-1.0	18:31:54	
50	1	0	0	-0.2	-3.0	18:33:05	10

OPERATION COMPLETE



# SNM Vault

Survey Meters: ASP-1 #252 alpha  
GM

Date: 8-15-89

Surveyor: JVE

Shelf  
A

Grid #

$\alpha$  Counts

	1	2	3	4
1	0	1	1	0
2	0	1	0	0
3	1	0	0	0
4	1	0	0	0
5	0	0	1	0
6	0	0	0	1
7	1	3	0	0
8	0	2	2	0
9	0	0	(4)	0
10	0	0	0	0
11	0	1	2	0
12	1	2	0	1
13	0	0	2	0
14	0	0	0	0

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha  
GM

Date: 8-15-89

Surveyor: MAC

Sheet  
B

Grid #

$\alpha$  Counts

	1	2	3	4
1	2	0	0	0
2	0	0	0	1
3	0	1	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	1
7	1	3	0	0
8	1	0	1	2
9	0	0	1	1
10	0	1	1	2
11	2	1	1	1
12	1	1	1	3
13	1	0	0	3
14	1	0	1	1

All results indicate no contamination of this area.



# SNM Vault

Survey Meters: ASP-1 #252 alpha

Date: 8-15-89

Shelf

                     GM

$\alpha$  Counts

Surveyor:                     

C Grid #

	1	2	3	4
1	2	1	0	0
2	0	0	1	0
3	0	0	1	0
4	1	0	0	0
5	0	0	1	0
6	0	0	2	1
7	2	1	0	1
8	2	0	0	0
9	0	0	0	1
10	0	0	1	2
11	1	0	0	0
12	1	2	3	1
13	2	0	0	0
14	2	0	0	0

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha

Date: 8-15-89

Shelf

                     GM

$\alpha$  Counts

Surveyor: JME

02 Grid #

	1	2	3	4
1	0	1	0	0
2	1	0	0	1
3	1	0	1	0
4	2	0	1	0
5	2	0	1	1
6	0	0	1	0
7	0	0	0	1
8	3	0	0	0
9	2	0	1	0
10	1	3	0	0
11	0	3	2	0
12	<del>0</del> 2	1	0	1
13	0	1	0	1
14	1	0	1	2

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha

Date: 8-15-89

Shelf

GM

$\alpha$  Counts

Surveyor: JHE

E Grid #

	1	2	3	4
1	1	0	0	0
2	0	0	0	0
3	0	0	0	1
4	2	0	0	1
5	0	1	0	1
6	1	1	0	0
7	0	3	3	0
8	1	0	2	0
9	1	0	1	1
10	2	2	1	1
11	0	2	0	1
12	2	2	3	0
13	0	1	0	2
14	1	1	1	0

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha  
GM

Date: 8-15-89  
Surveyor: AE

F Grid #

	1	2	3	4
1	1	0	0	1
2	1	0	0	1
3	0	0	0	0
4	0	10	1	1
5	1	0	0	0
6	1	0	0	0
7	0	0	0	2
8	0	1	3	2
9	0	1	2	1
10	1	1	2	3
11	2	1	2	1
12	1	0	1	0
13	0	0	3	2
14	1	0	0	0

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha

Date: 8-15-89

Shelf \_\_\_\_\_

GM

$\alpha$  Counts

Surveyor: JAC

6 Grid #

	1	2	3	4
1	0	2	0	0
2	0	0	0	0
3	0	1	0	0
4	0	0	0	0
5	0	1	0	0
6	0	2	0	1
7	1	2	1	1
8	0	0	1	0
9	1	1	2	0
10	1	2	0	1
11	0	1	0	3
12	0	1	1	2
13	1	0	0	0
14	0	1	1	7

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha

Date: 8-15-89

Shelf \_\_\_\_\_

GM

α Counts

Surveyor: JSE

H Grid #

	1	2	3	4
1	1	0	1	0
2	0	1	0	1
3	0	0	0	0
4	0	0	1	0
5	0	0	0	1
6	0	0	0	0
7	1	2	1	3
8 <sup>some</sup>	1	0	3	0
9 <sup>some</sup>	1	0	0	0
10 <sup>some</sup>	0	1	1	0
11 <sup>some</sup>	0	2	2	0
12	1	2	1	2
13	0	0	1	1
14	1	0	0	2

All results indicate no contamination of this area.

# SNM Vault

Survey Meter: A: P-1 #252 alpha

Date: 8-15-89

Staff

GM

$\alpha$  Counts

Surveyor: JJK

I Grid #

	1	2	3	4
1	0	0	0	0
2	2	1	1	0
3	1	0	0	0
4	0	0	0	1
5	0	0	1	1
6	0	0	2	1
7	0	0	2	1
8	2	0	1	1
9	1	1	0	0
10	1	1	0	0
11	0	0	1	2

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-19252 alpha

Date: 8-15-89

Shift

GM

$\alpha$  Counts

Surveyor: MNE

2 Grid #

	1	2	3	4
1	0	0	1	0
2	0	0	1	0
3	0	0	0	0
4	2	0	0	0
5	0	0	1	2
6	1	0	0	1
7	0	0	1	3
8	1	2	2	0
9	0	0	3	1
10	0	1	1	0
11	1	1	0	3
12	2	2	2	3
13	0	0	0	0
14	3	0	0	1

All results indicate no contamination of this area.



# SNM Vault

Survey Meters: ASP-1 #252 alpha  
GM

Date: 8-16-89  
~~8-15-89~~  
Surveyor: JWE

Shelf  
K Count #

	1	2	3	4
1	0	0	0	1
2	0	0	0	0
3	0	0	1	2
4	0	0	0	0
5	2	2	1	0
6	0	0	1	2
7	3	2	1	1
8	0	1	2	0
9	0	(4)	2	0
10	2	0	1	0
11	0	1	0	1

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha

Date: 8-16-89 <sup>8-16-89</sup>

Shelf

GM

$\alpha$  Counts

Surveyor: MLP

L Grid #

	1	2	3	4
1	0	0	0	0
2	0	2	0	0
3	0	0	1	1
4	0	0	0	1
5	1	0	0	1
6	0	1	0	1
7	1	1	0	2
8	2	1	2	0
9	1	2	3	1
10	1	1	0	3
11	1	1	2	2
12	0	0	0	0
13	0	1	2	2
14	2	2	2	0

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha  
GM

Date: 8-16-89 *JME*  
~~8-15-89~~

Shelf

$\alpha$  Counts

Surveyor: JME

M Grid #

	1	2	3	4
1	0	0	1	0
2	0	0	1	<del>0</del> <i>JME</i>
3	1	0	0	0
4	2	0	0	0
5	1	2	0	2
6	0	2	1	0
7	0	1	1	1
8	1	2	2	0
9	1	0	1	0
10	3	1	1	3
11	0	0	0	0

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha  
GM

Date: 8-16-89 ~~8-15-89~~ AMS  
Surveyor: AMS

$\alpha$  Counts

N Grid #

	1	2	3	4
1	1	0	0	1
2	1	1	1	0
3	1	0	1	1
4	1	0	0	0
5	1	2	0	0
6	0	0	1	3
7	0	1	1	1
8	1	1	3	4
9	1	2	1	0
10	2	2	1	0

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-19252 alpha

Date: 8-16-89 *JME*

Shelf \_\_\_\_\_

GM

$\alpha$  Counts

Surveyor: JME

0 Grid #

	1	2	3	4
1	0	1	0	1
2	0	1	0	0
3	0	0	0	0
4	0	0	0	<del>0</del> <sup>JME</sup>
5	0	0	0	0
6	2	0	3	0
7	1	0	0	0
8	3	1	1	0
9	3	1	1	2
10	0	1	0	1
11	1	1	2	2

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha

Date: ~~8-15-89~~ 8-16-89 JML

Shelf

GM

$\alpha$  Counts

Surveyor: JML

P Grid #

	1	2	3	4
1	0	0	0	0
2	0	0	0	0
3	0	0	1	1
4	1	2	0	0
5	0	1	1	0
6	0	2	1	0
7	0	2	0	0
8	1	0	1	1
9	1	1	0	0
10	1	0	2	1
11	0	3	0	1

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha  
GM

Date: 8-11-89 ~~8-15-89~~ JME  
Surveyor: JME

Sheet

$\alpha$  Counts

Q Grid #

	1	2	3	4
1	2	1	0	1
2	0	1	0	0
3	1	1	1	0
4	1	2	1	1
5	2	1	1	0
6	1	1	0	1
7	0	3	3	2
8	0	1	0	2
<del>8</del> 9	1	0	2	1
10	0	0	1	0

All results indicate no contamination of this area.

# SNM Vault

Survey Meters: ASP-1 #252 alpha  
GM

Date: 8-16-89 *JM*  
~~8-15-89~~  
Surveyor: JMG

Sheet

$\alpha$  Counts

B Grid #

	1	2	3	4
1	0	1	1	1
2	1	0	0	0
3	0	0	0	0
4	1	1	0	1
5	0	1	0	1
6	0	1	1	0
7	0	0	1	1
8	0	0	1	0
9	0	0	1	1
10	0	1	0	0

All results indicate no contamination of this area.