DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE CENTER
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202

8 FEB 1994

040-00341

IN REPLY REFER TO DNSC-O (Kevin Reilly/703-607-3227/jnp)

SUBJECT: Renewal of Defense Logistics Agency/Defense National Stockpile Center (DLA/DNSC) Radioactive Materials -- License Number STC-133

Licensing Assistance Section
Nuclear Materials Safety Branch
U.S. Nuclear Regulatory Commission,
Region 1
475 Allendale Road
King of Prussia, PA 19406-1415

LICENSE NO. STC-133
RENEWAL APPLICATION

Gentlemen:

Pursuant to the requirements of the Nuclear Regulatory Commission (NRC), the Defense Logistics Agency/Defense National Stockpile Center (DLA/DNSC) submits the enclosed for the renewal of our NRC Radioactive Materials License No. STC-133.

Due to the recent regulatory changes we have submitted a complete and up to date package for your review. We have submitted a copy of our updated Radiation Protection Guidelines (see Enclosure 5) that supersedes previous submissions and incorporates by reference, the new 10 CFR 20 requirements that became effective 01 January 1994.

We have also submitted a close out survey for our site at Seneca Army Depot, Romulus, NY (see Enclosure 6). All the licensed material previously stored at this facility has been relocated to our DLA/DNSC Binghamton Depot and is reflected in the updated inventory of licensed DLA/DNSC commodities provided in Enclosure 1. We wish to remove this site from our license and open the area for unrestricted use.

Due to Administration changes our organization has experienced and will probably continue to experience in the future, all subsequent correspondence should simply be directed to the Administrator of the DLA/DNSC.

119798

pulled out of 5/25/94 ~~119283~~

FEB 7 1994

OFFICIAL RECORD COPY ML 10

SUBJECT: Renewal of Defense Logistics Agency/Defense National Stockpile Center (DLA/DNSC) Radioactive Materiels -- License Number STC-133

We hope this information meets your approval. Should you have any questions please feel free to contact me on 703-607-3227.

Enclosures

F. KEVIN REILLY
Radiological Program Manager

ENCLOSURE 6

ENCLOSURE 6

DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE ZONE
26 FEDERAL PLAZA
NEW YORK, NY 10278-0043

IN REPLY
REFER TO

DNSZ-NYQ (M.Pecullan/212-264-2653/jk) 10 JAN 1994

SUBJECT: Closeout Survey
Seneca Army Depot Activity
Romulus, NY

TO: DNSC-D
Attn: K. Reilly
Occupation Radiation Program Manager

1. The Defense National Stockpile formerly maintained 1,327 ST of Columbium/Tantalum minerals in warehouse 356, Section D at the Seneca Army Depot activity in Romulus, NY. The material had been stored in accordance with source materials license STC-133, issued by the Nuclear Regulatory Commissions.

2. Part of this material was transferred to the Cabot Performance Materials Co. of Boyertown, PA for upgrading into tantalum and Columbium metals. The great majority of the material was relocated to the DNSC Depot in Binghamton, NY. The final removal of all materials stored under license STC-133 was completed in May of 1993.

3. Beginning in June of 1993 a radiological survey to determine the status of warehouse 356, Section D, was started. By July of 1993 four surveys of various types had been performed. The enclosed report recommends that the warehouse be released for unrestricted use (Paragraph 5.0, page 4).

4. We concur with the recommendation and further recommend that the Seneca Army Depot Activity no longer be listed as a storage site on license STC-133.

Encl

T. J. De GRAZIA
Zone Administrator

SURVEY REPORT

1.0 Background Information

Seneca Army Depot Activity (SEDA) is an east coast depot, which is part of the network of over 300 installations, subinstallations and separate units that comprise the U.S. Army Material Command (AMC). Seneca stores a diverse array of supplies including strategic and critical materials for the Defense Logistics Agency (DLA).

In 1992 DLA decided to sell part of its stockpile of Tantilum and Columbite to Cabot Performance Materials, County Line Road, Boyertown, Pennsylvania and consolidate the rest at DLA/DNSZ Binghamton Depot, Binghamton, New York. Tantilum and Columbite ore are subject to the conditions of NRC Materials License STC-133, issued to DLA.

Beginning in June of 1993 a radiological survey to determine the radiological status of the storage area was started. This report describes the the survey and demonstrates that the facility may be released for unrestricted use.

2.0 Site Information

2.1 Construction of Seneca Ordnance, as it was known, began in 1941. The depots covers 11,00 acres in central New York State. The Depot has approximately one and a half million square feet of maintenance, demilitarization, and storage facilities. The general supply storage comprises of two million square feet. The Industrial Plant Equipment division occupied one million square feet for storage and maintenance. The north side of the Depot contains a High Security storage and maintenance facility. The various areas of the depot are connected by 139 miles of roadway and 42 miles of rail network, additionally the depot has family quarters, barracks, and supporting facilities. See figure 1. The Depot was designated Seneca Army Depot Activity 15 Jul 1993.

The storage area for the ore was warehouse 356 section D. This warehouse is located in the southeast corner of the Depot along with another warehouse of similar construction. Warehouse 356 is 1000 feet long and 200 wide, divided into five sections, 200 feet by 200 feet, division is by a block fire wall. The warehouse is not climate controlled. The ore was stored in section D, along the northern wall. See Figures 2 and 3. Figure 3 shows the area in which the ore was banded for shipment and repalletized by lot number. In Dec of 1992 seven trucks loads of ore was shipped to: Cabot Performance Materials,County Line Road, Boyertown, PA 19512. The U.S. government was not the shipper. The drums where swiped for removable contamination for compliance with 49 CFR paragraph 173.443 by the Depot Alpha Team with the results read on a Nuclear Measurements PC-5 gas proportional counter, no removable contamination was found. During the time frame of April 1993 to Jun 1993 the remaining ore was shipped to Defense Logistics Agency, Defense National Stockpile Zone, Hoyt Ave., Binghamton, NY 13901. The drums where swiped again by the Alpha team with the same results, no removable contamination found.

2.2 Site Conditions at Time of Survey

The site remains empty with the exception of some residue left of the banding operation performed on the ore prior to shipment. All quarterly surveys performed on the ore stockpile showed no removable contamination.

2.3 Identity of Potential Contaminants

Table 1, a report generated by the U.S. Army Environmental Hygiene Agency shows the parent Radionuclides to be Th232 and U238.

3.0 Survey Overview

3.1 The purpose of the survey was to show that the area is not contaminated and may be used for other purposes. It is the responsibility of the licensee, Defense Logistics Agency for confirmatory surveys and certification for unrestricted use. The specific objectives of the survey were to show that:

A. Activity levels are background only and therefore at or below guideline values established as acceptable by NRC.

B. Reasonable efforts have been made to identify, evaluate, and remove if necessary, any contamination.

C. Exposure rates do not exceed background levels for the area and type of building.

3.2 Identity of Contaminates

Based on the knowledge of the operation (storage only), The U.S. Army Environmental Hygiene Agency report, the DLA license STC-133, and DLA stock records the Radionuclides are Th232 and U238 with associated daughters.

3.3 Organization and Responsibilities

The area was surveyed by the local Radiation Protection Officer. A in house check was performed by the Radiological Assistance Team (RAT). Review was performed by the Depot Safety Manager with final approval by the licensee, Defense Logistics Agency.

3.4 Training

A summary of training and experience is provided Appendix A for the RPO, Chief Radiological Assistance Team, and Tom Reynolds who assisted in the survey. All RAT members have Alpha Team training.

3.5 Labortory Service

The initial survey conducted by the RPO for removable contamination was performed by U.S. Army Belvoir Research, Development and Engineering Center, Ft. Belvoir, Virginia. The RAT performed their own analysis but the U238 Standard lost its calibration due to a change in calibration interval and as such the results will show detection only. Survey instruments where calibrated by U.S. Army Test, Measurement and Diagnostic Support Center using standard calibration procedures with sources traceable to the National Institute of Standards and Technology.

4.0 Survey Plan and Procedures

4.1 General

The history of the quarterly surveys and the swiping of the drums prior to shipment indicate that this area can be treated as an unaffected area. The ore was stored in metal drums, no processing of any kind was performed.

4.2 Instrumentation

Instrumentation consisted of a Ludlum Model 3 micro R meter. All instruments where within calibration intervals and checked prior to use. Analysis at Ft. Belvoir was done with a Tennelec Model LD5100 with standards traceable to National Institute of Standards and Technology. Gross alpha beta analysis at the depot was done on two Nuclear Measurement PC-5 gas proportional counters, however the standard used for QC had lost its calibration due to a change in calibration intervals.

4.3 Grids

The 200 foot by 200 foot sections of the warehouse are divided by 25 foot by 25 foot sections of concrete. Each 625 square foot section was further divided every 5 foot by a movable metal scale. See figure 4.

4.4 Surface Activity Measurements

Surface Activity measurements done by Ft. Belvoir are listed in Appendix B. Appendix C has the analysis for gross alpha beta done on Depot using the Nuclear Measurements PC-5s. Grid location diagrams precede each analysis.

4.5 Exposure Rate Measurements

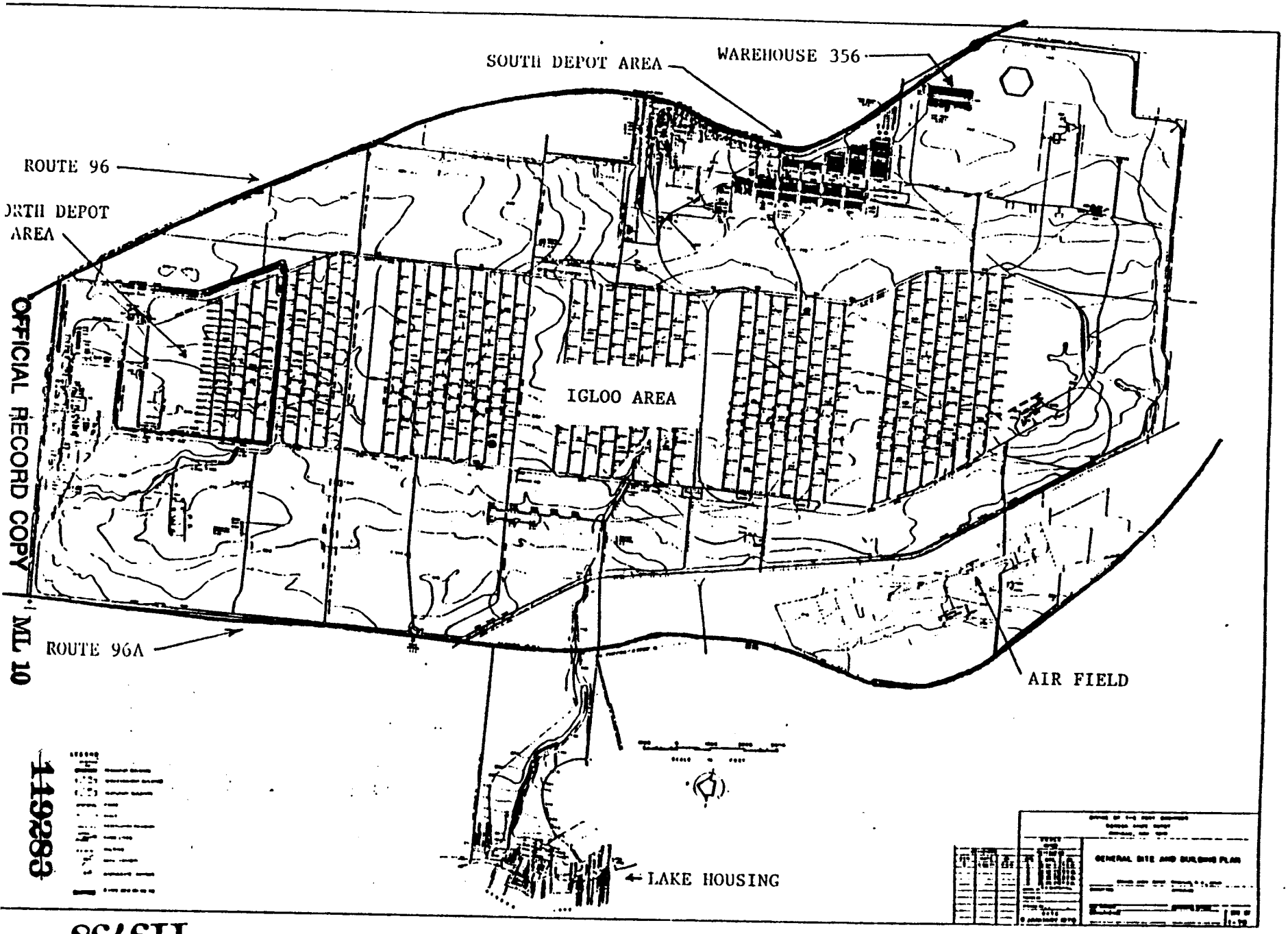
Exposure rate measurements are shown in Appendix D.

4.6 New York State

New York State Department of Environmental Conservation and New York State Department of Health visited Seneca Army Depot Activity 10 Jun 1993 for a radiological survey of SEAD Solid Waste Management Site 49, Columbite Ore Storage buildings 356, 357 and 324. Site was classified No Action. Letter dated Sep 21, 1993 from New York State Department of Environmental Conservation regarding Solid Waste Management Classification Report with Radiological Analysis is enclosed as Appendix E.

5.0 Summary

Between 10 Jun 1993 and 20 Jul 1993, four surveys of various types where performed. Recommend that Defense Logistics Agency release the warehouse for unrestricted use.



OFFICIAL RECORD COPY
ML 10
149283
119798

APPENDIX A

RADIATION PROTECTION OFFICER/ALTERNATE

1. General.

a. The Radiological Protection Officer (RPO) is Michael R. Lewis. The alternate Radiological Protection Officer is Thomas J. Stincic. This listing Includes Radiological Assistance Team members John F. Cleary and Thomas E. Reynolds. Mr. Stincic is the depot Safety Manager.

2. Type of training.

a. Principles and practices of radiation protection. (A)

b. Radioactivity measurement standardization, monitoring techniques, and instruments. (B)

c. Mathematics and calculations basic to the use and measurements of radioactivity. (C)

d. Biological effects of radiation. (D)

e. Safety practices applicable to the protection from radiation, chemical toxicity, pyrophoric property, and explosive property of source materials. (E)

3. Format of training and experience.

a. Name.

b. Type of training.

c. Course and location.

d. Duration and year.

e. On-the-job-training. (OJT)

f. Formal training.

g. Experience.

4. Michael R. Lewis Radiation Protection Officer

a. Training.

Type	Course/Location	Duration	OJT	Formal
A,B,C,D	Alpha Team Operations Savanna Army Depot Savanna, IL	2 weeks 1-12 Aug 77	Yes	Yes

A,B,C,D	NETEX Defense Nuclear Agency Kirkland AFB, NM	1 week 7-11 May 79	Yes	Yes
A,B,C,D	NETEX Defense Nuclear Agency Kirkland AFB, NM	1 week 16-20 Jun 80	Yes	Yes
A,B,C,D	Radiological Safety Ft. McClellan, AL	3 weeks 21 Jan-10 Feb 81	Yes	Yes
A,B,C,D,E	DU Safety Course Ft. Belvoir, VA	1 week 5-9 Mar 84	No	Yes
A,B,C,D	Occupational Radiation Safety, Ft. Belvoir, VA	2 weeks 9-20 Jul 84	No	Yes
A,C	Chemical Nuclear Systems Inc, Seminar, Columbia, SC	1 week 22-26 Apr 85	No	Yes
A,C	Chemical Nuclear Systems Inc, Seminar, Columbia, SC	1 week 20-24 Jul 87	No	Yes
A,C	Computer Based Occuptional Radiation Protection Ft. Belvoir, VA	1 week 24-28 Jul 89	No	Yes

b. Experience

Activity	Site	Duration	Responsibility
SW Munitions Storage Check Sources:Am241 .1uCi,Th230 .01uCi, Cs137 1uCi,Kr85 5mCi	Seneca Army Depot	Aug 77 - May 80	Alpha Team Member
Depleted Uranium Storage 0-1300 Ci	Seneca Army Depot	Feb 81 - Feb 91	Alternate RPO
Depleted Uranium Storage 0-1300 Ci	Seneca Army Depot	Feb 91 - Present	Radiation Protection Officer

5. Thomas J. Stincic

a. Training.

Type	Course/Location	Duration	OJT	Formal
A,B,C,D	Alpha Team Operations Savanna Army Depot Savanna, IL	2 weeks 1-12 Aug 77	Yes	Yes

A,B	AMC Ammunition School Seneca Army Depot Romulus, NY	2 days 16-17 Feb 79	No	Yes
A,B,C,D	Health Physics & Radiation Accidents Oak Ridge Assoc. Universities Oak Ridge, TN	1 week 23-27 Jan 79	Yes	Yes
A	NUWAX-79 Defense Nuclear Agency/DOE, Nevada Test Site, NV	3 days 18-20 Apr 79	Yes	No
A,B,C,D	NETEX Defense Nuclear Agency Kirkland AFB, NM	1 week 16-20 Jul 79	Yes	Yes
A,B,C,D,E	Instrumentation Eberline Corp. Santa Fe, NM	1 week 7-11 Apr 80	Yes	Yes
A,B,C,D	Radiation Safety by Leo Foley, Field Safety Activity Romulus, NY	2 weeks 10-21 Aug 81	No	Yes
A,B,C,D	Radiation Safety by Thomas Grucci, Romulus, NY	2 weeks Oct 81	No	Yes
A,B,D	RMC Technical Svcs Ft. Belvoir, VA	1 week 9-13 Jun 84	No	Yes
A,B,C,D,E	DU Safety Course Ft. Belvoir	1 week 5-9 Mar 84	No	Yes
A,B,C,D	Occupational Radiation Safety, Ft. Belvoir, VA	2 weeks 9-20 Jul 84	No	Yes
A,B,D	Trans. Radioactive Mat. Ft. Belvoir, VA	1 week 14-18 Jan 85	No	Yes
A,B,C,D	Radiation Dosimetry and Measurement Ft. Belvoir, VA	1 week 9-13 Mar 87	No	Yes
A,C	Computer Based Occuptional Radiation Protection Ft. Belvoir, VA	1 week 24-28 Jul 89	No	Yes
A,C	Radioactive Waste Guildance Chemical Nuclear Systems Inc., Seminar, Columbia, SC	1 week 4-8 May 92	No	Yes

b. Experience.

Activity	Site	Duration	Responsibility
SW Munitions Storage Check Sources: Am241 .1uCi,Th230 .01uCi, Cs137 1uCi, Kr85 5mCi	Seneca Army Depot	2 Years	Alpha Team Chief

Depleted Uranium Storage 0-1300 Ci	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Radioactive Source Set M3A1: Co60 300uCi per set	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Radiac Calibrator AN/UDM-6 Pu239 1.4uCi	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Columbite Concentrate Storage 1400 Tons Unknown Ci content	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Radiac Calibrator UDM-2 Sr90 180 mCi	Seneca Army Depot	Jul 80 - Present	Radiation Safety
Radiological Decontamination of Pitchblende Ore Unknown Ci content	Seneca Army Depot	Jul 95	Radiation Safety

6. John Cleary

a. Training

Type	Course/Location	Duration	OJT	Formal
A,B,C,D	Alpha Team Operations Savanna Army Depot Act. Savanna, IL	2 weeks 1980	Yes	Yes
A,B,C,D	NAIRA Operations Savanna Army Depot Act. Savanna, IL	2 weeks 1984	Yes	Yes
A,B,C,D	Management of Radiation Accidents and Emergency Preparedness Home Study	1987	No	Yes
A,B,C,D	Emergency Program Manager FEMA Home Study	Oct 1990	No	Yes
A,B,C	Emergency Management U.S.A FEMA Home Study	Mar 1991	No	Yes
A,B,C	Preparedness Planning FEMA Home Study	1991	No	Yes
A,B,C,D	Radiological Emergency Management FEMA Home Study	1992	No	Yes

A,B,C,D	Joint Forces Training-RADCON TEAM Nevada Test Site	1 week 1983 & 1987	Yes	Yes
A,B,C	SFRX 86/90 Seneca Army Depot Romulus, NY	1 week 1986 & 1990	Yes	Yes
A,B,C,D	Army Research Laboratory Radiation Worker Course Seneca Army Depot Romulus, NY	1 week Nov 92	Yes	Yes
A,B,C	Radioactive Waste Guildance Course, Chem Nuclear Systems Inc., Columbia, SC	1 week May 92	No	Yes

b. Experience

Activity	Site	Duration	Responsibility
SW Munitions Storage, 10Ci	Seneca Army Depot	1977-Present	Worker, Alhpa
H3, 10Ci	Various TACOM Depots	1992-Present	Radiological Assistance Team (RAT) Leader
DU	Army Reaserch Laboratory, Watertown, MA	Jan 92-Feb 93	RAT Leader/ Site Cleanup
Am241,Cs137,U238, C14, and H3 as check sources and standards	SW Munitions Seneca Army Depot	1977-Present	Worker/RAT Leader

7. Thomas E. Reynolds

a. Training

Type	Course/Location	Duration	OJT	Formal
A,B,C,D	Alpha Team Operations Savanna Army Depot Act Savanna, IL	2 weeks May 80	Yes	Yes
A,B,C,D	Joint Forces Training RADCON Nevada Test Site NV	1 week Oct 83	Yes	Yes
A,B,C	SRFX-90 Seneca Army Depot Romulus, NY	1 week Jul 90	Yes	Yes

A,C,D	Occupational Safety & Health Course, US Army Field Safety Activity Charlestown, IN	2 weeks May 91	Yes	Yes
A,B,D	Hazardous Materials Response Technicians Course, East Longmeadow, MA	1 week Sept 91	Yes	Yes
A,B,C,D	Health Physics Instrumention and Air Sampling for Radio-Active Materials, Ft. Belvoir, VA	1 week Jul 92	Yes	Yes
A,B,C,D	Army Research Laboratory Radiation Worker Course Seneca Army Depot Romulus, NY	1 week Nov 92	Yes	Yes
A,B,C	Radioactive Waste Guildance Course, Chen Nuclear Systems Inc., Columbia, SC	1 week Jul 93	Yes	Yes

b. Experience

Activity	Site	Duration	Responsibility
SW Munitions 10 Ci	Seneca Army Depot	Aug79-Present	Alpha Team Member SW Assembler and Repairer
H3, 10 Ci	Ft. Bragg	Jul 92-Aug 92	Radiological Assistance Team Member Spill Cleanup
Am241,Cs137,U238 C14, and H3 as check sources and standards	SW Munitions Seneca Army Depot	Feb80-Present	Radiological Assistance Team Member Worker

SATBE-TVR (385-11d) 11 Jun 1993

MEMORANDUM FOR Commander U.S. Seneca Army Depot (SEAD)
ATTN: SDSSE-LS (M. Lewis)
Romulus, NY 14541-5001

SUBJECT: Radiological Analysis

1. Reference: Memorandum, SEAD(SDSSE-LS), dated 8 Jun 93.

2. Radiological samples from SEAD do not exceed 1.5 dpm/100 cm^2 at encl 1, which is the lower limit of detection.

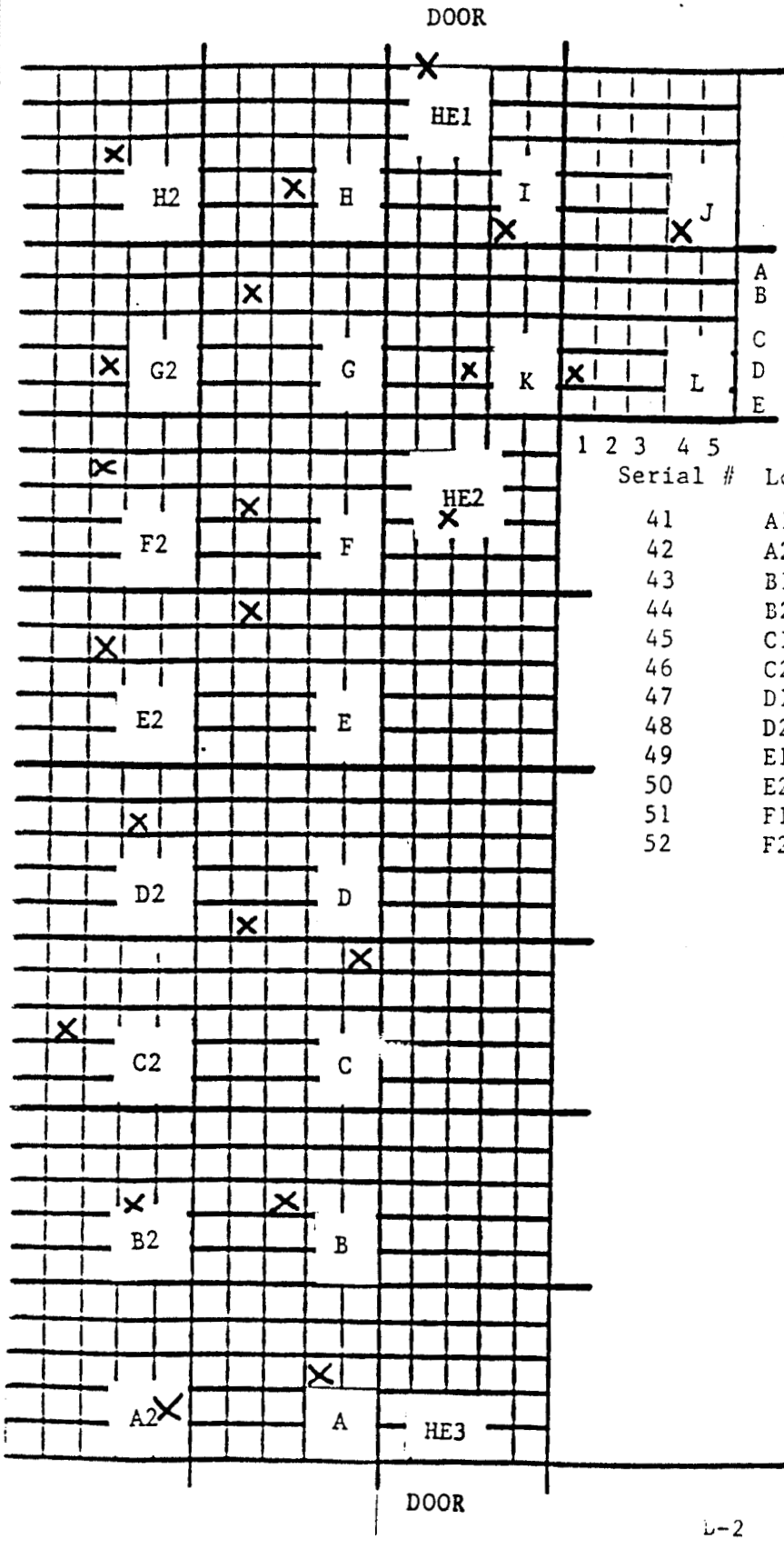
3. Point of contact is the undersigned at DSN 654-1987.

Mike Funkhouser

MICHAEL D. FUNKHOUSER
Radiation Protection Officer
Belvoir RDE Center/NVESD

D

Warehouse 356 Section D



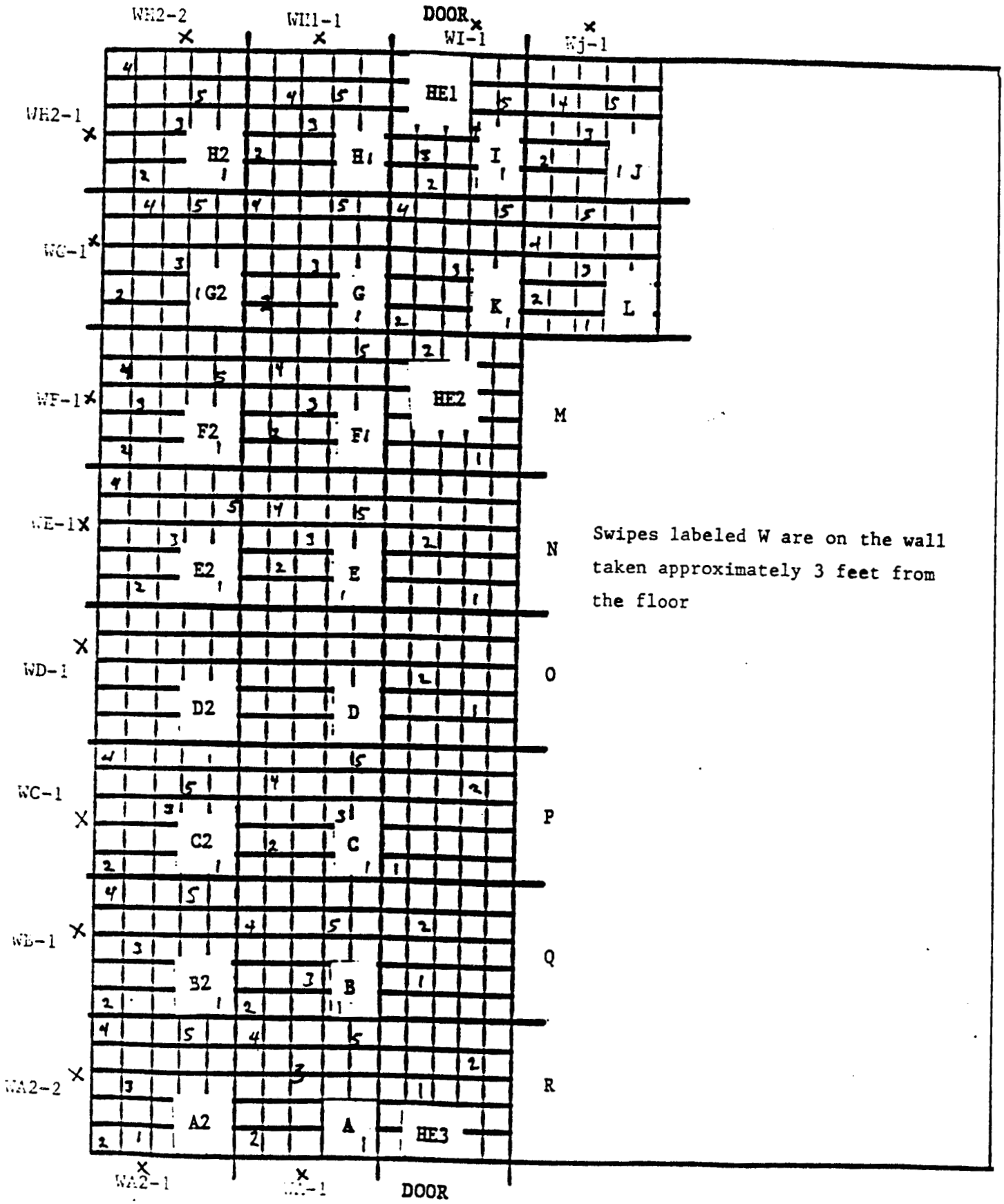
Crid locations for Ft. Belvoir swipe analysis. Serial number to location.

Serial #	Location	Serial #	Location
41	A1C4	53	G1B3
42	A2D5	54	G2B2
43	B1C3	55	H1D3
44	B2C4	56	H2C3
45	C1A5	57	HE1A2
46	C2C2	58	HE2D2
47	D1E2	59	HE3E2
48	D2B4	60	I1E4
49	E1A2	61	J1E4
50	E2A2	62	K1D3
51	F1B3	63	L1D1
52	F2C2		

SAT92-TVR (389-11d) 10 Jun 93
SUBJECT: Radiological Analysis
FILENAME: 851-SEAD

S/N	Delta-R File 851	Radio-nuclide	Net, removable Alpha emission dpm/100 cm^2	Net, removable Beta emissions dpm/100 cm^2	Gross alpha count per 100 cm^2 in 20 minutes	Gross beta count per 100 cm^2 in 20 minutes
41	A1	alpha	0.0	0.6	1	33
42	A2	alpha	-0.1	0.5	0	32
43	B1	alpha	-0.1	0.3	0	29
44	B2	alpha	0.0	0.1	1	25
45	C1	alpha	0.1	0.1	2	26
46	C2	alpha	-0.1	0.3	0	29
47	D1	alpha	0.1	0.1	2	26
48	D2	alpha	0.0	-0.3	1	19
49	E1	alpha	0.2	0.9	3	39
50	E2	alpha	0.0	0.1	1	26
51	F1	alpha	-0.1	0.3	0	29
52	F2	alpha	0.1	0.5	2	31
53	G1	alpha	0.1	0.1	2	26
54	G2	alpha	0.3	0.6	4	34
55	H1	alpha	0.2	-0.2	3	21
56	H2	alpha	0.1	0.6	2	33
57	HE1	alpha	0.2	-0.4	3	18
58	HE2	alpha	0.0	0.2	1	27
59	HE3	alpha	0.1	0.3	2	29
60	I1	alpha	0.2	0.1	3	25
61	J1	alpha	0.0	0.5	1	32
62	K1	alpha	0.1	0.7	2	35
63	L1	alpha	0.0	-0.1	1	22
BACKGROUND			0.0	0.0	1	24
LOWER LIMIT OF DETECTION			0.4	1.5	5	47
Standard, ANL 1502		nat-U	421.1	414.9	4,473	6,447
Error as unknown			alpha	beta	alpha 0.3%	beta -1.2%
Standard, ANL 1502		nat-U	420.0	420.0	4,461	6,506
Efficiency			alpha	beta	alpha 53.1%	beta 77.4%
Standard, ANL 1502		nat-U	426.0	427.2	4,525	6,437
Error as unknown			alpha	beta	alpha 1.4%	beta 1.7%

Warehouse 356 Section D



Swipes labeled W are on the wall taken approximately 3 feet from the floor

Appendix C

SWIPE TEST RESULTS WAREHOUSE 356

Counter Serial Number 7633
efficiency .344 %
LLD 5.54 dpm

Sample ID	Machine Number	dpm
A1-1	7634	<LLD
A1-2	7634	<LLD
A1-3	7634	<LLD
A1-4	7634	<LLD
A1-5	7633	<LLD
B1-1	7633	<LLD
B1-2	7634	<LLD
B1-3	7633	<LLD
B1-4	7634	<LLD
B1-5	7633	<LLD
C1-1	7633	<LLD
C1-2	7634	<LLD
C1-3	7633	<LLD
C1-4	7634	<LLD
C1-5	7633	8.72
D1-1	7633	<LLD
D1-2	7634	<LLD
D1-3	7633	<LLD
D1-4	7634	<LLD
D1-5	7633	5.81
E1-1	7633	<LLD
E1-2	7634	<LLD
E1-3	7633	<LLD
E1-4	7634	<LLD
E1-5	7633	<LLD
F1-1	7633	<LLD
F1-2	7634	<LLD
F1-3	7633	<LLD
F1-4	7634	<LLD
F1-5	7633	<LLD
G1-1	7634	<LLD
G1-2	7633	<LLD
G1-3	7634	<LLD
G1-4	7633	<LLD
G1-5	7634	<LLD
H1-1	7634	<LLD
H1-2	7633	<LLD
H1-3	7634	<LLD
H1-4	7633	<LLD
H1-5	7634	<LLD

Counter Serial Number 7634
efficiency .334 %
LLD 6.03 dpm

Sample ID	Machine Number	dpm
A2-1	7634	<LLD
A2-2	7633	<LLD
A2-3	7634	<LLD
A2-4	7633	<LLD
A2-5	7634	<LLD
B2-1	7634	<LLD
B2-2	7633	<LLD
B2-3	7634	<LLD
B2-4	7633	<LLD
B2-5	7634	<LLD
C2-1	7634	<LLD
C2-2	7633	5.81
C2-3	7634	<LLD
C2-4	7633	<LLD
C2-5	7634	<LLD
D2-1	7634	<LLD
D2-2	7633	<LLD
D2-3	7634	<LLD
D2-4	7633	8.72
D2-5	7634	<LLD
E2-1	7634	<LLD
E2-2	7633	<LLD
E2-3	7634	<LLD
E2-4	7633	<LLD
E2-5	7634	<LLD
F2-1	7634	<LLD
F2-2	7633	<LLD
F2-3	7634	<LLD
F2-4	7633	<LLD
F2-5	7634	<LLD
G2-1	7633	<LLD
G2-2	7634	<LLD
G2-3	7633	<LLD
G2-4	7634	<LLD
G2-5	7633	<LLD
H2-1	7633	<LLD
H2-2	7634	<LLD
H2-3	7633	<LLD
H2-4	7634	<LLD
H2-5	7633	<LLD

SWIPE TEST RESULTS WAREHOUSE 356

Counter Serial Number 7633
efficiency .344 %
LLD 5.54 dpm

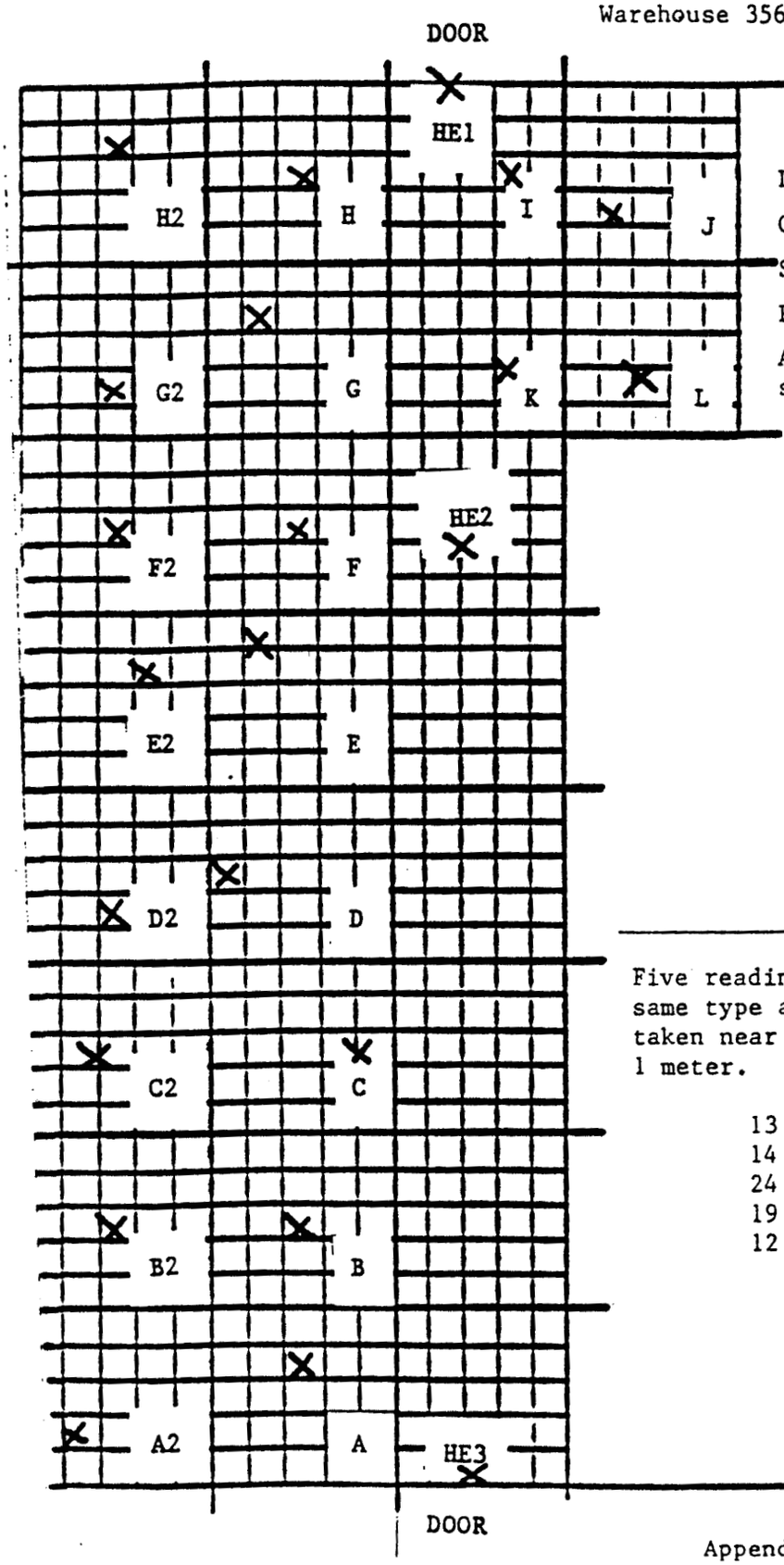
Sample ID	Machine Number	dpm
I-1	7634	<LLD
I-2	7633	<LLD
I-3	7634	<LLD
I-4	7633	5.81
I-5	7634	<LLD
K-1	7634	<LLD
K-2	7633	5.81
K-3	7634	<LLD
K-4	7633	<LLD
K-5	7634	<LLD
M-1	7633	<LLD
M-2	7634	<LLD
O-1	7633	<LLD
O-2	7634	<LLD
Q-1	7633	5.81
Q-2	7634	<LLD
WA1-1	7633	<LLD
WA2-1	7634	<LLD
WA2-2	7633	<LLD
WB2-1	7634	<LLD
WC2-1	7633	<LLD
WD2-1	7634	<LLD
WE2-1	7633	5.81
WF2-1	7634	<LLD
WG2-1	7633	5.81
WH2-1	7634	<LLD
WH2-2	7633	<LLD
WH1-1	7634	<LLD
WI-1	7633	<LLD
WJ-1	7634	<LLD

Counter Serial Number 7634
efficiency .334 %
LLD 6.03 dpm

Sample ID	Machine Number	dpm
J-1	7633	<LLD
J-2	7634	<LLD
J-3	7633	5.81
J-4	7634	<LLD
J-5	7633	8.72
L-1	7633	<LLD
L-2	7634	<LLD
L-3	7633	<LLD
L-4	7634	<LLD
L-5	7633	<LLD
N-1	7633	<LLD
N-2	7634	<LLD
P-1	7633	<LLD
P-2	7634	<LLD
R-1	7633	<LLD
R-2	7634	<LLD

D

Warehouse 356 Section D



Gamma Survey

Ludlum Model 19 Serial Number 33054

Calibration Due 13 Oct 93

Survey Date 20 Jul 93

Performed by Michael R. Lewis RPO M. Lewis

All reading are in μR/hr at 1 meter from surface

A	16	A2	18	HE1	19
B	15	B2	16	HE2	14
C	15	C2	17	HE3	14
D	15	D2	15		
E	15	E2	16		
F	14	F2	16		
G	14	G2	17		
H	15	H2	22		
I	17	J	14		
K	15	L	13	Background = 15 μR/hr	

Five readings taken at warehouse 357, section c, same type and construction as warehouse 356. Readings taken near door entrance. All readings in μR/hr at 1 meter.

13 at door entrance
14 middle of c section
24 north west corner section c
19 north wall middle
12 in office

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER FOR LABORATORIES AND RESEARCH
LABORATORY OF INORGANIC AND NUCLEAR CHEMISTRY
EMPIRE STATE PLAZA - BOX 509
ALBANY, N.Y. 12201-0509

RECEIVED
JUL 19 1993
NEW YORK STATE DEPARTMENT OF HEALTH
BUREAU OF ENVIRONMENTAL
RADIATION PROTECTION

Radiological Analysis of Wipe Samples

Samples taken at: Seneca Army Depot, Romulus N.Y.

Samples taken by: Gary Baker Date: 6/10/93

LINC Accession No.	Field Number	Specific Location	Suspected Contaminant	dpm Gross Alpha	dpm Gross Beta
9320835624	1	324-1 Bldg 324	Ra, U	<20	<20
9320835625	2	356-1 Bldg 356		<20	<20
9320835626	3	356-2 " "		<20	<20
9320835627	4	356-3 " "		<20	<20
9320835628	5	357-1 Bldg 357		<20	<20
9320835629	6	357-2 " "		<20	<20
9320835630	7	357-3 " "		<20	<20
9320835631	8	E0804W1-Iglo E0804		77±6	48±3
9320835632	9	E0804W2-Iglo E0804		52±5	54±4
9320835633	10	E0806 W1-Iglo E0806		<20	<20

Date Received: _____ Reported by DD Date Reported: 7/14/93

NCL-7 (6/93)

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is The Adjutant General's Office.

Coordinated With	Initials	Date

REFERENCE OR OFFICE SYMBOL	SUBJECT
HSE-LR-R	Results of Analyzing Ore Samples

XX THRU ~~DRA~~ G

FROM Chief, RBCD

DATE 2 Apr 76

CMT 1
Mr. Lang/gmd/2619

TO USAEHA Regional Div - ~~South~~ North
ATTN: HSE-MM/LT Metzger

The following are the results of analyzing ore samples received from LT Metzger of your Divison:

Sample Identification	Isotope Detected	Parent Radionuclide	Activity of Parent (Assuming Equilibrium) Picocurie per Gram
Tantilum, Argentina	^{212}Pb* ^{208}Tl ^{228}Ac	^{232}Th	23.5
	^{214}Pb ^{214}Bi*	^{238}U	48.4
Columbite, Brazil	^{212}Pb* ^{208}Ti	^{232}Th	106.6
	^{214}Pb ^{214}Bi*	^{238}U	361.7
Tantilum, Nigeria	^{212}Pb* ^{208}Tl	^{232}Th	24.[illegible]
	^{214}Pb ^{214}Bi*	^{238}U	158.8
Columbite, Belgium	^{212}Pb* ^{208}Tl	^{232}Th	2.3
	^{214}Pb ^{214}Bi*	^{238}U	25.3
Tantilum, Belgium	^{212}Pb* ^{208}Tl	^{232}Th	40.2
	^{214}Pb ^{214}Bi*	^{238}U	109.4

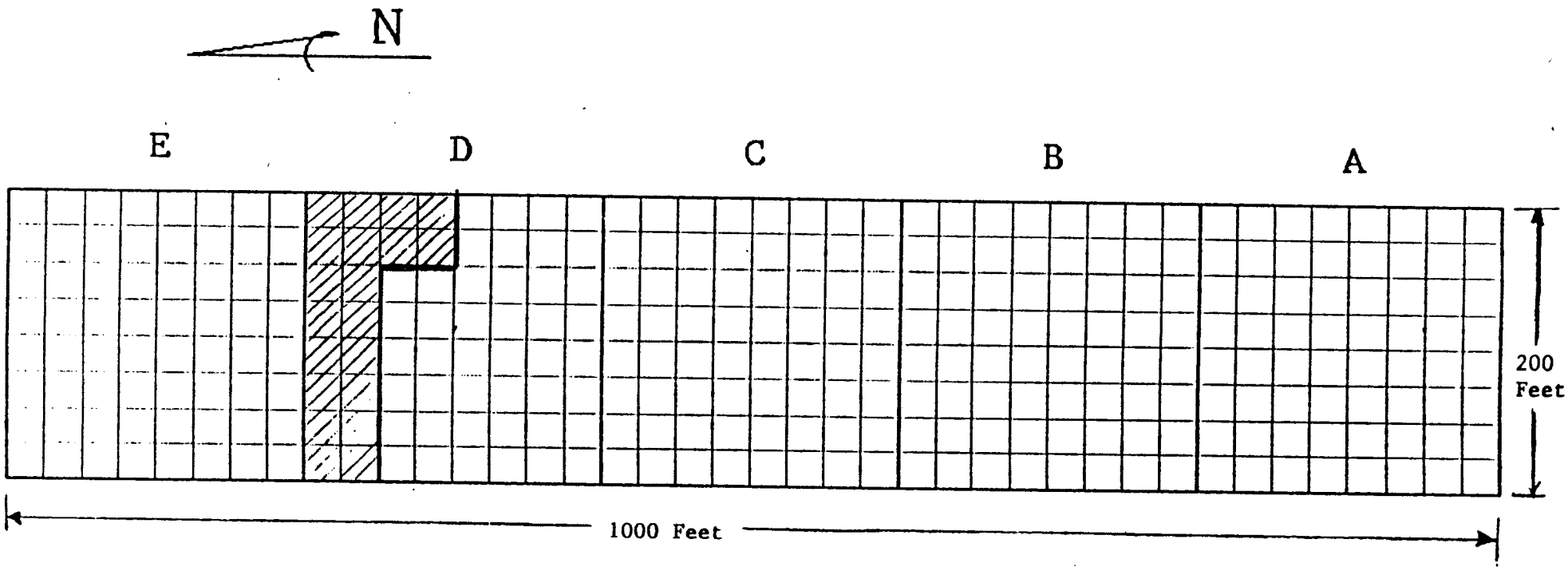
HSE-LR-R
SUBJECT: Results of Analyzing Ore Samples 2 Apr 76

Columbium, Portugal	^{212}Pb* ^{208}Tl ^{228}Ac	^{232}Th	95.3
	^{214}Pb ^{214}Bi*	^{238}U	223.7

*Daughter nuclide used to determine parent activity.

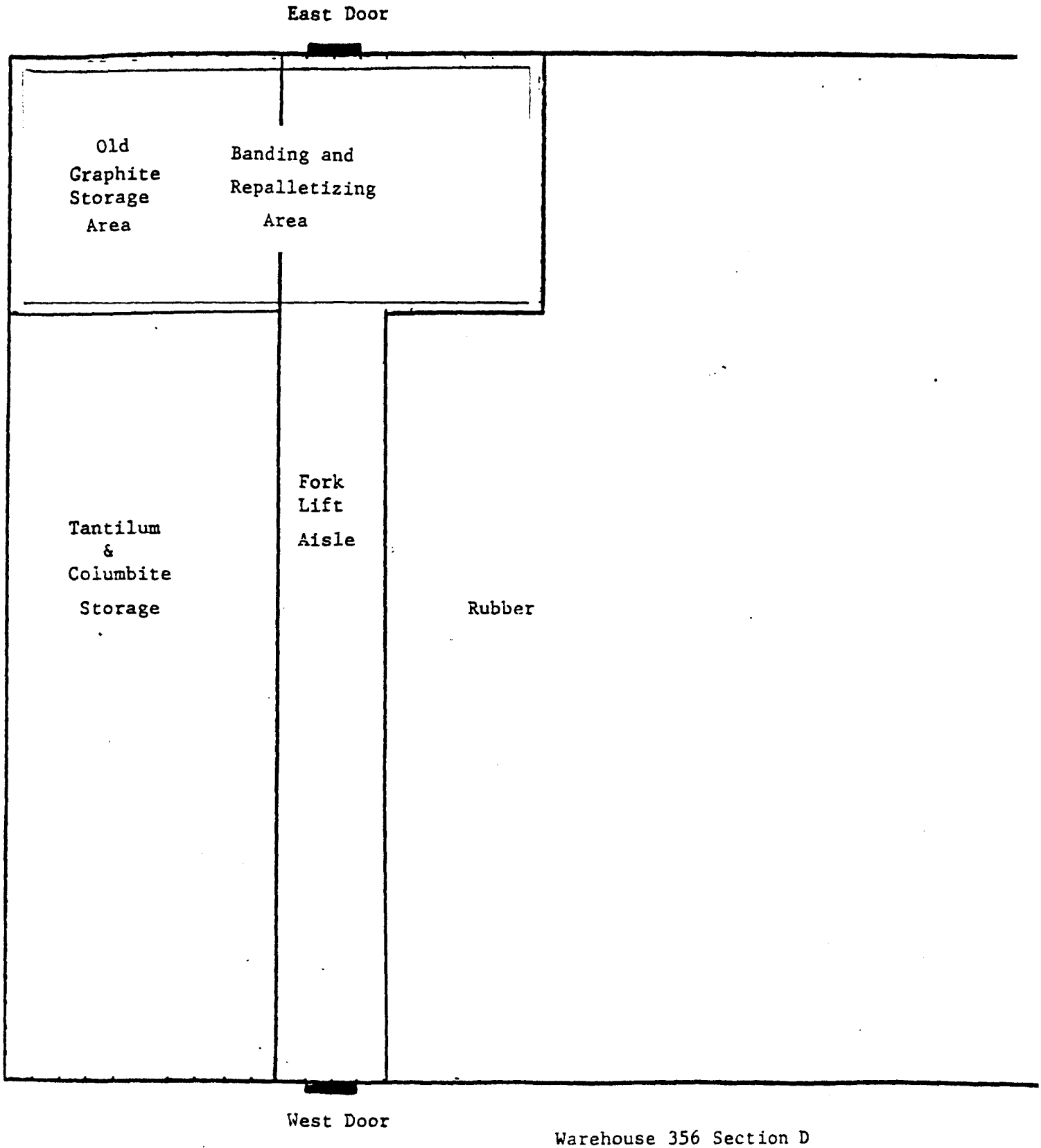
ALPHUS L. JONES, Chief
Radl & Biol Chem Div

Table 1



Warehouse 356

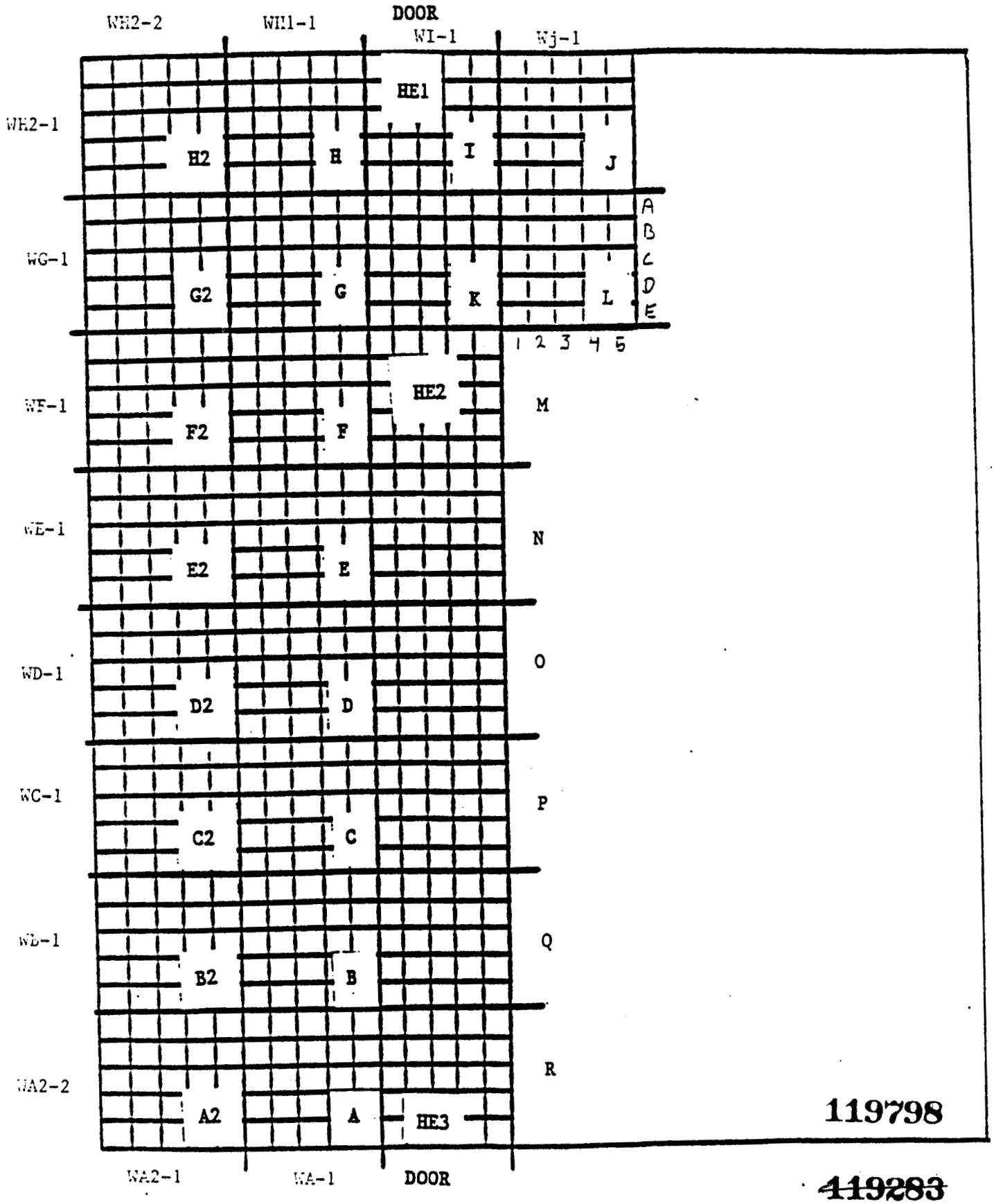
Figure 2



Warehouse 356 Section D

Figure 3

Warehouse 356 Section D



119798

~~119283~~

Figure 4

OFFICIAL RECORD COPY ML 10