

DECOMMISSIONING PLAN

For the
Radiological Laboratories
and
Alpha Field
at the
U.S. Army Chemical School
Fort McClellan, Alabama

Prepared by:
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TABLE OF CONTENTS

1.0	General Information
2.0	Description of Planned Decommissioning Activities
2.1	Decommissioning Objective, Activities, Tasks, and Schedules
2.1.1	Decommissioning Objective, Activities, and Tasks
2.1.2	Description
2.1.3	Procedures
2.1.4	Schedules
2.2	Decommissioning Organization and Responsibilities
2.3	Training
2.4	Contractor Assistance
3.0	Description of Methods Used for Protection of Occupational and Public Health and Safety
3.1	Facility Radiological History Information
3.2	Ensuring that Occupational Radiation Exposures Are AS Low As Reasonably Achievable (ALARA)
3.3	Health Physics Program
3.4	Contractor Personnel
3.5	Radioactive Waste Management
4.0	Planned Final Radiation Survey
4.1	Classification of Areas by Contamination Potential
4.2	Identification of Survey Units
4.3	Background Radiation
4.4	Instruments to be Used During Final Survey
5.0	Funding
6.0	Physical Security Plan and Material Control and Accounting Plan Provisions in Place During Decommissioning
Attachment 1	Diagrams of Facilities
Attachment 2	Data for Baseline
Attachment 3	Historical Monthly Dose Rate Surveys
Attachment 4	Table I, Draft Regulatory Guide 1.86
Attachment 5	Blank Forms
Attachment 6	Diagram of Alpha Field
Attachment 7	Baseline, Alpha Field

DECOMMISSIONING PLAN

1. GENERAL INFORMATION

This decommissioning plan is intended to cover the scope and intent of actions necessary for the release of the radiological laboratories located at building 1081 and the alpha field operated by the U.S. Army Chemical School at Fort McClellan, AL.

Department of the Army
U.S. Army Chemical School
ATZN-CMA-HP
Fort McClellan, AL 36205-5020

NRC License Number 01-02861-05, Docket Number 030-17584
NRC License Number SNM-1877, Docket Number 070-02934

2. DESCRIPTION OF PLANNED DECOMMISSIONING ACTIVITIES

Decommissioning will take place in increments, since the laboratories will be conducting normal operations in some of the rooms of the laboratories during the decommissioning effort. As operations in each room terminate, that room will be shut down and decommissioned.

2.1. Decommissioning Objective, Activities, Tasks, and Schedules

The objective of this decommissioning plan is the unrestricted release of the radiological laboratories in building 1081 and the alpha field. Since no radioactive material was ever introduced into the alpha field and the history of routine monthly surveys in the laboratories indicate no contamination, decommissioning will consist of transferring licensed material and a detailed survey of the facility to insure no contamination is present.

2.1.1. Decommissioning Objective, Activities, and Tasks.

Objectives	Activities	Tasks
2.1.1.1 Prepare for final closeout surveys of facilities.	1) Transfer operational control of facilities from Directorate of Training to Health Physics Office.	<ol style="list-style-type: none"> 1. Cease normal operations in laboratories. 2. Clear rooms of furniture and equipment. 3. Turn keys over to Health Physics Office.
	2) Transfer Radioactive material to Fort Leonard Wood, MO	<ol style="list-style-type: none"> 1. Prepare sources for shipment. 2. Ship Sources
2.1.1.2 Verification Survey	1) Final Survey	<ol style="list-style-type: none"> 1. Design Sampling Strategy 2. Sample Collection 3. Independent Laboratory Analysis 4. Data Evaluation 5. Report of Survey Findings
2.1.1.3 Vacate Facilities.	1) Move equipment offsite	<ol style="list-style-type: none"> 1. Survey equipment for release 2. Ship equipment to Ft Leonard Wood
	2) Transfer personnel	<ol style="list-style-type: none"> 1. Survey party personnel depart site.
2.1.1.4 Submit Final Report	1) Final Report	<ol style="list-style-type: none"> 1. Receive Independent Laboratory Results 2. Compare Data 3. Draft Report 4. Assemble Report and Supporting Data
	2) Submit Final Report	<ol style="list-style-type: none"> 1. Send Final Report to NRC.

2.1.2. Description

Activities	Tasks	Description
2.1.1.1 1) Transfer operational control of facilities from Directorate of Training to Health Physics Office.	<ol style="list-style-type: none"> 1. Cease normal operations in laboratories. 2. Clear rooms of furniture and equipment. 3. Turn keys over to Health Physics Office. 	Due to a requirement to phase out operations at Fort McClellan and phase in operations at Fort Leonard Wood, the laboratories will be closed in phases. When a room or area at McClellan is no longer needed for training, the furniture and equipment in that room will be sent to the new lab at Leonard Wood and the keys to the room turned over to the Health Physics Office for decommissioning.
2.1.1.1 2) Transfer Radioactive material to Fort Leonard Wood, MO	<ol style="list-style-type: none"> 1. Prepare sources for shipment. 2. Ship Sources 	The licensed material will be transferred to the U.S. Army Chemical School at Fort Leonard Wood, Missouri under license number 01-32063-01, docket number 030-34652. Transfer of licensed material will involve leak testing of sources, packaging, and shipping to Fort Leonard Wood.
2.1.1.2 1) Final Survey	<ol style="list-style-type: none"> 1. Design Sampling Strategy 2. Sample Collection 3. Independent Laboratory Analysis 4. Data Evaluation 5. Report of Survey Findings 	<p>Release surveys of the facilities will be conducted as each room and/or area is closed to use. Release surveys will consist of dose rate surveys and contamination surveys. Since the entire history of the facility is known, each room/area will be classified based on contamination potential, as recommended by MARSSIM. Class 1, class 2, and class 3 areas will be designated. The number of data points will be determined.</p> <p>Grid each room/area and perform the designated scan survey. Collect the designated number of samples, as smears. Each smear will be evaluated in a gas proportional counter and liquid scintillation counter. A portion of the smears will be sent to an independent laboratory for counting to confirm results.</p> <p>Laboratory counting and exposure rate measurement data will be evaluated.</p>
2.1.1.3 1) Move equipment offsite	<ol style="list-style-type: none"> 1. Survey equipment for release 2. Ship equipment to Ft Leonard Wood 	<p>Equipment used during the decommissioning will be surveyed for contamination.</p> <p>Equipment used during final survey will be shipped to Fort Leonard Wood.</p>
2.1.1.3 2) Transfer personnel	<ol style="list-style-type: none"> 1. Survey party personnel depart site. 	Personnel performing decommissioning efforts will depart.
2.1.1.4 1) Final Report	<ol style="list-style-type: none"> 1. Receive Independent Laboratory Results 2. Compare Data 3. Draft Report Assemble Report and Supporting Data 	Approximately 500 samples will be shipped for third party analysis. Results of third party analysis will be compared to results of Chemical School analysis. Write draft narrative report. Assemble field data and analytical results and compile into a single report.
2.1.1.4 2) Submit Final Report	<ol style="list-style-type: none"> 1. Send Final Report to NRC. 	The narrative, field data, and analytical results will be compiled into a single submittal.

2.1.3. Procedures

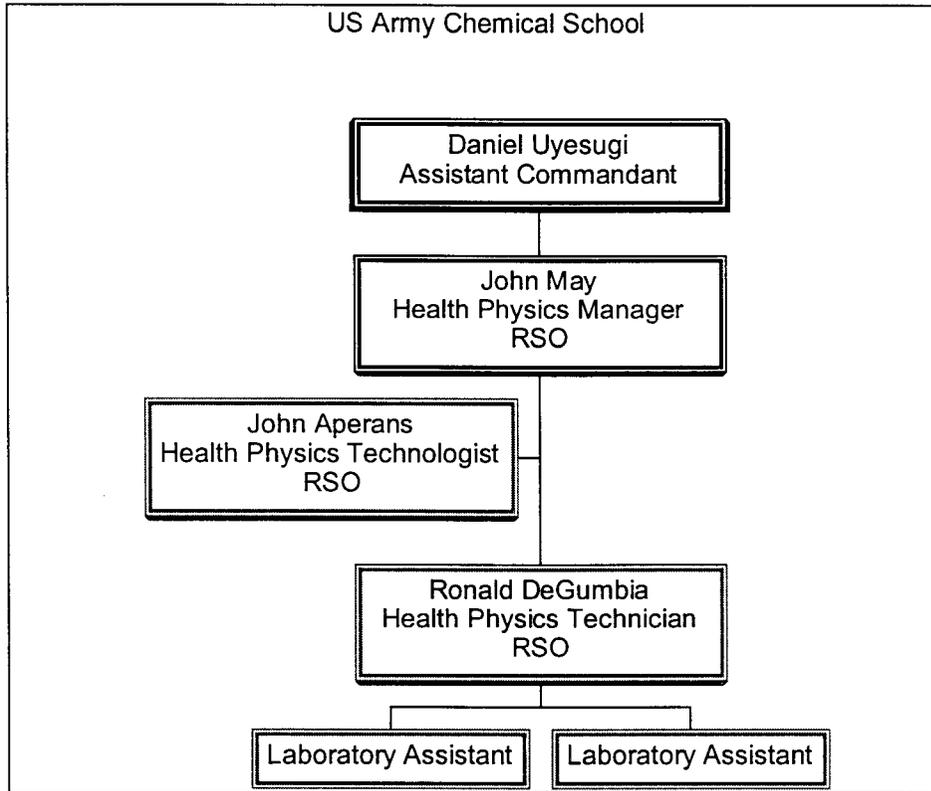
Execution of this decommissioning plan will be in accordance with U.S Army Chemical School Regulation 385-1 and the Chemical School Health Physics Standing Operating Procedures unless a different procedure is stated in this plan. Both documents are currently used under the operating licenses.

2.1.4. Schedules

TASK	Start Date	Due Date
<i>1. Planning Phase</i>		
Submit Decommissioning Plan	Mon 3/22/99	Tue 3/23/99
Regulatory Comment period	Wed 3/24/99	Fri 4/23/99
Decommissioning Plan Approval	Mon 4/26/99	Fri 4/30/99
<i>2. Decommissioning Phase</i>		
Transfer Laboratories 4, 5, and 6 to Health Physics	Mon 5/3/99	Mon 5/10/99
Final survey of Laboratories 4, 5, and 6.	Mon 5/11/99	Fri 5/28/99
Transfer Alpha Field to Health Physics	Mon 6/7/99	Fri 6/11/99
Final Survey of Alpha Field	Fri 6/11/99	Fri 6/18/99
Transfer Radioactive Material to FLW	Mon 7/5/99	Fri 7/9/99
Transfer laboratories 1, 2, 3 and tank room to Health Physics	Fri 7/9/99	Wed 7/14/99
Final Survey of Laboratories 1, 2, 3 and tank room.	Wed 7/14/99	Mon 7/19/99
Transfer Admin areas to Health Physics	Mon 8/2/99	Mon 8/9/99
Final survey of Admin areas, H. P. Lab, prep Lab, and storage vault.	Mon 8/9/99	Mon 8/16/99
Final Survey of non-impacted areas	Mon 8/16/99	Fri 8/20/99
<i>3. Final Report</i>		
Send Samples for third party analysis	Mon 8/23/99	Fri 8/27/99
Move decommissioning equipment offsite	Mon 8/30/99	Mon 9/6/99
Receive field and analytical results	Mon 9/6/99	Wed 9/15/99
Compile Final Report	Thu 9/16/99	Thu 9/30/99
Transfer remaining personnel	Mon 9/20/99	Wed 9/29/99
Submit Final Report	Thu 9/30/99	Thu 9/30/99

2.2. Decommissioning Organization and Responsibilities.

The Organization and Responsibilities for this plan will be the same as for operation under the current licenses



2.3. Training

The training for this decommissioning plan will be the same as that under the current operating licenses.

2.4. Contractor Assistance

Contract workers will be used if needed to assist with layout, sampling, and data entry. This will consist of personnel hired through a local employment agency.

3. DESCRIPTION OF METHODS USED FOR PROTECTION OF OCCUPATIONAL AND PUBLIC HEALTH AND SAFETY.

3.1. Facility Radiological History Information.

3.1.2. Radiological Laboratories, Building 1081. Construction of the facility was completed in late 1988.

On 14 November 1988, random smears were taken in the vault and laboratory 7 to establish a baseline. The smears were counted on the Tenelec LB5100 gas-proportional counter. Ten (10) smears were taken in the vault and counted. The highest activities were: 1.14 dpm alpha, 11.24 dpm beta, and 9.91 dpm gamma. Fifteen (15) smears were taken in laboratory 7. The highest activities were: 0.36 dpm alpha, 4.53 dpm beta, and 15.03 dpm gamma.

On 9 December 1988, random smears were again taken in the vault and laboratory 7 and counted on the Tenelec LB5100. Fifteen (15) samples were taken in Laboratory 7. The highest activities were: 1.25 dpm alpha, 8.56 dpm beta, and 12.11 dpm gamma. Ten (10) samples were taken in the vault. The highest activities were: 0.34 dpm alpha, 4.08 dpm beta, and 12.47 dpm gamma.

An instrument survey conducted 4-12 January 1989 using an Eberline E-520 survey meter indicated an average background reading of 0.02 mR/hr.

The only unsealed radioactive materials used in the facility were Au-198, Co-60, Cs-137, Ca-45 and Sr/Y-90. Less than 10 mCi of Co-60, Ca-45 and Au-198 were used at any one time and less than 100 uCi of Cs-137 and Sr/Y-90. The only locations where unsealed radioactive materials were present were Laboratory 1, the Preparation Laboratory, the Health Physics Laboratory, and the storage vault.

Only sealed sources were used in the other laboratories. Laboratory 2 housed a gamma calibrator with a Cs-137 source with a maximum activity of 120 Curies. Also used in Laboratory 2 were a 100 mCi Co-60 source and a 10 mCi Cs-137 source. Sealed sources of Co-60, Cs-137, Ca-45, Sr/Y-90, U-235, U-238, Pu-239, Am-241, H-3, P-147, Ni-63, Mn-54, Cd-109, Co-57, Na-22, C-14, Tc-99, Cl-36, Th-230 and Bi-210 of less than 10 uCi each were used in Laboratory 1, laboratory 5, Laboratory 7, the preparation laboratory and the Health Physics Laboratory. All sources were stored in the storage vault except the multi-curie Cs-137 calibrator. The largest sources in the storage vault were two 500 mCi Cs-137 sealed sources.

The only contamination during the history of the facility was in the preparation laboratory isotope hood and that intentionally introduced into laboratory 1 for training. Contamination in the isotope hood was Ca-45 and Au-198. Contamination in Laboratory 1 was Au-198. Areas are decontaminated after each use.

3.1.3. Alpha Field (see diagram at Attachment 6)

The current operating license authorized operation of an alpha field. Even though licensed for operation, the field was never used. No licensed material was ever placed in the field. A baseline survey was conducted in June 1985. Swipes and soil samples were taken. Analysis of the soil samples indicated elevated levels of Cs-137 in the soil. There is no record of radioactive material ever being used in this area. A copy of the survey results are at Attachment 7.

3.2. Ensuring that Occupational Radiation Exposures Are As Low As Is Reasonably Achievable (ALARA)

The current ALARA plan for the operating licenses will remain in effect during decommissioning.

3.3. Health Physics Program

The Health Physics Program for the operating licenses will remain in effect during decommissioning.

3.4. Contractor Personnel.

The current radiation protection plan will apply to any contractors used during decommissioning of the laboratories.

3.5. Radioactive Waste Management

The Radioactive waste management section of the current operating licenses will be in effect during decommissioning. Since routine surveys of the facilities show no contamination, no radioactive waste is expected to be generated during decommissioning.

4. PLANNED FINAL RADIATION SURVEY

The final radiation survey will be used to demonstrate that the radiological laboratories and the alpha field at the U.S. Army Chemical School meets the criteria for unrestricted use. The Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) and NUREG-5849 were used in developing the survey plan.

Based upon prior surveys and the facility history, no residual radioactivity is expected. Release limits will be based upon NRC Notice published in the Federal Register Vol. 63, No.222, November 18, 1998 "Supplemental Information on the Implementation of the Final Rule on Radiological Criteria for License Termination. These guidelines will become the Derived Concentration Guideline Limits (DCGL) for this survey. The release limits for exposure rates will be 5 microrem per hour above background, at 1 meter. This is the limit routinely applied by the NRC where site specific criteria has not been established.

4.1 Classification of Areas by Contamination Potential.

Each individual room or area within the impacted area has been assigned a Classification based upon contamination potential. The contamination potential was determined based upon the types and quantity of radioactive material used or stored in each room. There will be 4 Class 1 areas, 4 Class 2 areas, and 16 Class 3 areas. Also being surveyed will be 4 non-impacted areas adjacent to the impacted areas. Diagrams of the facility and individual rooms within the facility are in Attachment 1 to this Decommissioning Plan. The Alpha field will be surveyed as a Class 3 area,

4.2 Identification of Survey Units.

Survey units are indicated on the diagrams at Attachment 1. The number of data points per unit has been standardized throughout the survey area as follows.

Class 1 Area (inside):

Grid floors, walls, and ceilings in 1 meter squares. Divide each 1 meter grid into 4 quadrants. Take a smear sample of 100 square centimeters in each quadrant and count each sample in the Tenelec Gas-proportional counter. Take a meter reading at each smear location with the Eberline 520 survey meter with the HP 260 pancake probe. Perform a 100% scan of floors, walls and ceiling with the Bicon MicroRem meter.

Class 2 Area (inside):

Grid floors and lower walls, to a height of 2 meters, in 1 meter squares. Divide each 1 meter grid into 4 quadrants. Take a smear sample of 100 square centimeters in each quadrant of the floors and lower walls, to a height of 2 meters, and count each sample in the Tenelec Gas-proportional counter. Take a meter reading at each smear location with the Eberline 520 survey meter with the HP 260 pancake probe. Perform a 100% scan of floors and walls, to a height of 2 meters, with the Bicon MicroRem meter. Grid upper walls, and ceiling in 1 meter squares. Take a smear sample of 100 square centimeters in each 1 meter grid of the upper walls and ceiling and count each sample in the Tenelec Gas-proportional counter. Take a meter reading at each smear location with the Eberline 520 survey meter with the HP 260 pancake probe. Perform a 50% scan of upper walls and ceilings with the Bicon MicroRem meter.

Class 3 Area (inside):

Grid floors and lower walls, to a height of 2 meters, in 1 meter squares. Take a smear sample of 100 square centimeters in each 1 meter grid and count each sample in the Tenelec Gas-proportional counter. Take a meter reading at each smear location with the Eberline 520 survey meter with the HP 260 pancake probe. Perform a 25% scan of floors, walls, and ceilings with the Bicon MicroRem meter.

Alpha Field:

Since no radioactive material was ever used in the Alpha Field a detailed survey is not required. Perform a 25% scan of the field with the Bicon MicroRem meter.

Non-Impacted Area:

Grid floors and lower walls, to a height of 2 meters, in 2 meter square grids. Take a smear sample of 100 square centimeters in each grid and count each sample in the Tenelec Gas-proportional counter. Perform a 10% scan of floors and lower walls with the Bicron MicroRem meter.

In addition to the samples and measurements shown above, random samples will be taken and counted on the Packard Liquid Scintillation Counter. A copy of the form to be used for recording results smear analysis and point monitoring are at Attachment 5.

4.3. Background Radiation

The Laboratories have been surveyed monthly during the entire history of operations and baseline surveys were conducted in November and December 1988 prior to radioactive material being moved to the facility. Two rooms of the laboratory were selected for the baseline, the radiation storage vault and laboratory 7. The data sheets for these surveys are at Attachment 2.

An instrument survey performed in January 1989 and subsequent monthly surveys to date indicate an average background of 0.015 mR/hr. Copies of selected monthly dose rate surveys are at Attachment 3. A copy of the Baseline survey performed of the alpha field is at Attachment 7.

4.4. Instruments to be Used During Survey.

<u>INSTRUMENT TYPE</u>	<u>MAKE & MODEL</u>	<u>RADIATION DETECTED</u>	<u>SENSITIVITY RANGE</u>	<u>WINDOW THICKNESS (mg/sqcm)</u>	<u>USE</u>
Scintillation, NaI Proportional gas flow	Tennelec, LB5100-III	alpha, beta, gamma	to 999,999 counts	0.08	low level counting
Liquid Scintillation	Packard 1900	alpha/ beta/ gamma		na	low level counting
Geiger-Mueller	Eberline Md 520 w/HP-260 probe	beta, gamma	0.01-200 mR/hr bkg-24k cpm	30 1.4	survey & monitoring
Scintillation, ZnS	AN/PDR-77	alpha, beta, gamma	to 999k cpm to 999k mR/hr	1.5 11	survey & monitoring
Scintillation, NaI	Eberline SPA-3	gamma	bkg to 3M cpm	na	survey
Scintillation	Bicron MicroRem	gamma	bkg to 2k uRem/hr	na	survey

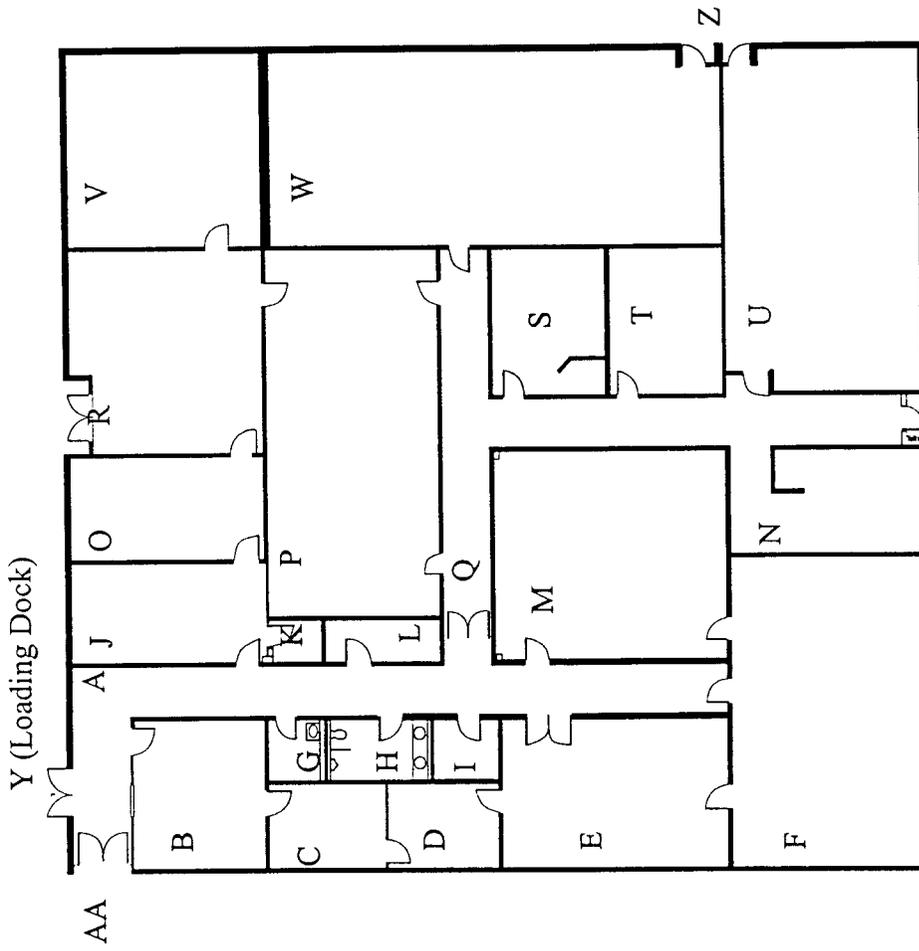
5. FUNDING

Decommissioning will be performed by the Chemical School Health Physics staff, augmented by temporary hires. The Direct Labor cost is for the manhours of the staff and contract labor cost reflect the cost of the temporary hires.

Direct Labor	\$30,000
Supplies	\$70,000
Freight	\$ 5,000
Analysis	\$12,820
Contract Labor	\$11,520
 TOTAL Direct Cost	 \$129,340

6. PHYSICAL SECURITY PLAN AND MATERIAL CONTROL AND ACCOUNTING PLAN PROVISIONS IN PLACE DURING DECOMMISSIONING

No special provisions are applicable for this decommissioning plan. Physical security and control of the facility will remain the same as under the current operating licenses.



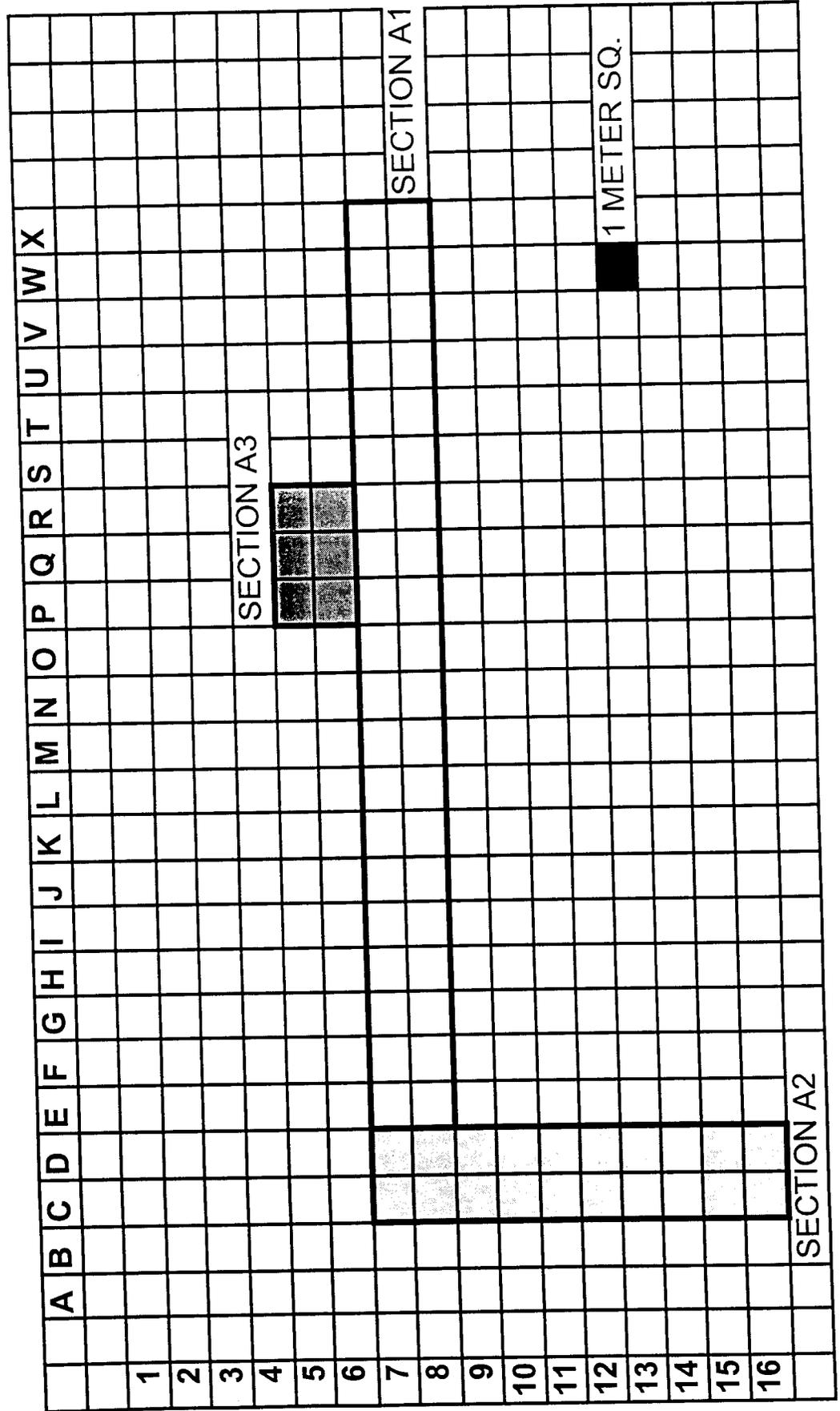
X (Tank Room)
 AB (Tank Room Landing)

RADIOLOGICAL LABORATORIES
 BUILDING 1081, SIBERT HALL
 FORT MCCLELLAN, AL 36205

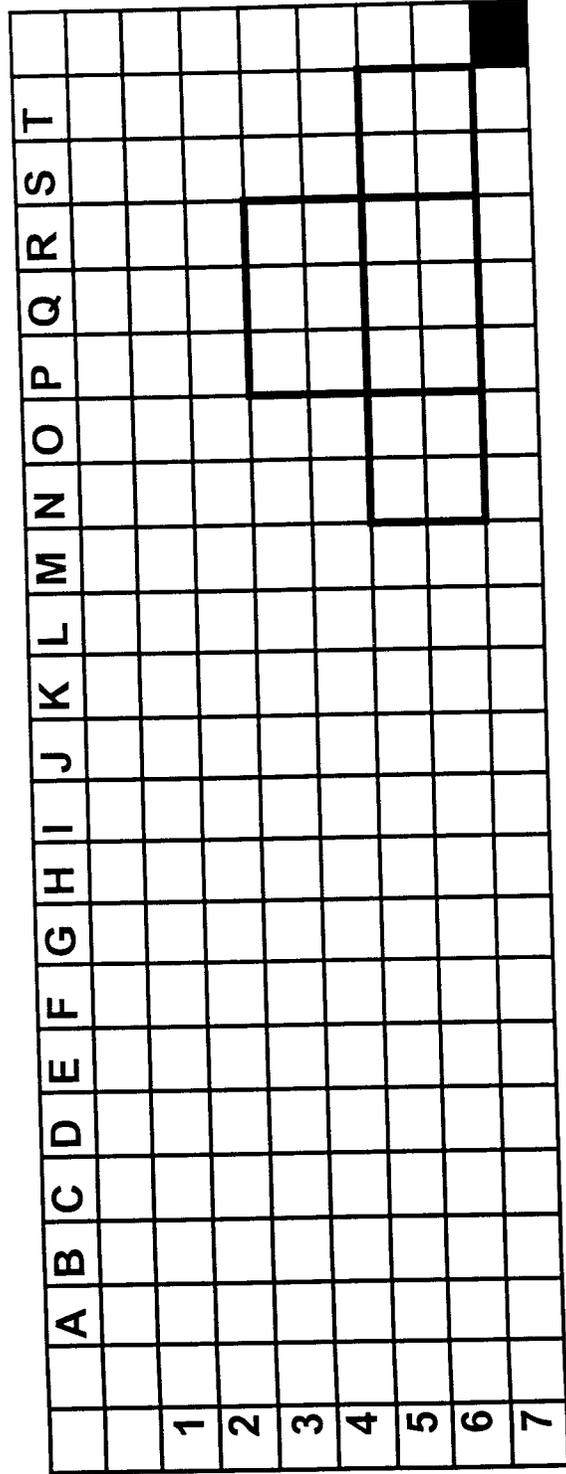
AREA CODE	LOCATION	ROOM NUMBER	AREA CLASS	# OF SMEARS A & B	Floor/Ceiling SIZE	WALL (L) SIZE	WALL (W) SIZE	AREA IN METERS SQ		NUMBER OF SMEARS FOR	
								FLOOR AREA	CEILING WALL AREA	FLOOR SMEARS	CEILING WALL SMEARS
	IMPACT AREA										
A	MAIN HALLWAY	NA	3	198	198 33.83 X 2.00	(2) 33.83	(2) 2.00	67.66	143.32	64	0
B	Rad Lab OFFICE	1010	3	84	84 5.56 X 5.18	(2) 5.56	(2) 5.18	28.81	58.86	36	0
C	Instructor's OFC	1010-A	3	56	56 4.57 X 3.51	(2) 4.57	(2) 3.51	16.02	44.28	20	0
D	Rad Lab CHIEF	1010-B	3	56	56 4.57 X 3.51	(2) 4.57	(2) 3.51	16.02	44.28	20	0
E	Electronic SHOP	1010-C	3	114	114 8.99 x 5.59	(2) 8.99	(2) 5.59	50.24	79.9	54	0
F	LAB 7	1017	3	176	176 11.89 x 7.67	(2) 11.89	(2) 7.67	91.18	107.19	96	0
G	WOMEN's RM	1013	3	20	20 1.93 x 1.78	(2) 1.93	(2) 1.78	3.43	20.17	4	0
H	MEN's RM	1015	3	32	32 3.45 x 1.78	(2) 3.45	(2) 1.78	6.14	28.66	8	0
I	JANITOR RM	1016	3	32	32 2.79 x 1.78	(2) 2.79	(2) 1.78	4.97	25.04	8	0
J	H. P. OFFICE	1011	3	80	80 7.62 x 3.71	(2) 7.62	(2) 3.71	28.26	62.09	32	0
K	H. P. STORAGE	1012	3	20	20 1.85 x 1.40	(2) 1.85	(2) 1.40	2.59	17.81	4	0
L	RAD Lab Storage	1014	3	38	38 4.57 x 1.40	(2) 4.57	(2) 1.40	6.38	32.72	10	0
M	LAB 8	1018	3	152	152 9.14 x 7.62	(2) 9.14	(2) 7.62	69.65	91.84	80	0
N	LAB 6	1023	3	80	80 7.62 x 3.45	(2) 7.62	(2) 3.45	26.32	60.66	32	0
Nw	Lab 6 X Wall	1023	3	4	4 Both Sides	(2) 0.94	NA	NA	5.15	0	0
O	H. P. LAB	1011-A	1	516	516 7.62 x 3.71	(2) 7.62	(2) 3.71	28.26	62.09	120	120
P	LAB 1	1019	1	1288	1288 13.64 x 6.60	(2) 13.64	(2) 6.60	90.08	110.91	392	392
Q	Hallway To LABS	NA	2	850	850 29.57 x 1.93	(2) 29.57	(2) 1.93	57.06	172.62	264	66
R	PREP LAB	1011-B	1	810	810 7.62 x 7.47	(2) 7.62	(2) 7.47	56.92	82.69	225	225
S	LAB 3	1021	3	74	74 5.28 x 4.34	(2) 5.28	(2) 4.34	22.92	52.72	30	0
Sw	Lab 3 X Wall	1021	3	8	8 Both Sides	(2) 2.24	NA	NA	12.25	0	0
T	LAB 4	1022	3	74	74 5.28 x 4.47	(2) 5.28	(2) 4.47	23.60	53.43	30	0
U	LAB 5	1024	2	800	800 12.8 x 7.62	(2) 12.8	(2) 7.62	97.54	111.90	389	91
V	VAULT	1011-C	1	810	810 7.47 x 7.39	(2) 7.47	(2) 7.39	55.21	81.43	225	225
Vw	Vault, X Wall	1011-C	1	156	156 Both Sides	(2) 6.25	NA	NA	34.24	0	0
W	LAB 2	1020	2	0	0 18.08 x 7.37	(2) 18.08	(2) 7.37	133.29	139.47	0	0
Ww	Lab 2 X Wall	1020	2	0	0 Both Sides	(2) 2.54	(2) 1.37	NA	21.44	0	0
X**	TANK ROOM	1025	2	0	0 5.31 x 2.11	(2) 5.31	(2) 2.11	11.20	40.66	0	0
Xw	Tank Rm X Wall	1025	2	0	0 Both Sides	(2) 1.19	NA	NA	5.90	0	0
	NON IMPACT AREA										
Y	Loading Dock		non-imp	0							0
Z	Outside Lab 2&5		non-imp	0							0
AA	Ajadcent		non-imp	0							0
AB	Outside Exit To Tank RM		non-imp	0							0
			TOTAL	6528							0

NOTE: FOUR (4) CLASS 1; FOUR (4) CLASS 2; SIXTEEN (16) CLASS 3; & FOUR (4) NON AFFECTED AREAS.

AREA A SECTION FLOOR LAYOUT - MAIN HALLWAY - CLASS 3

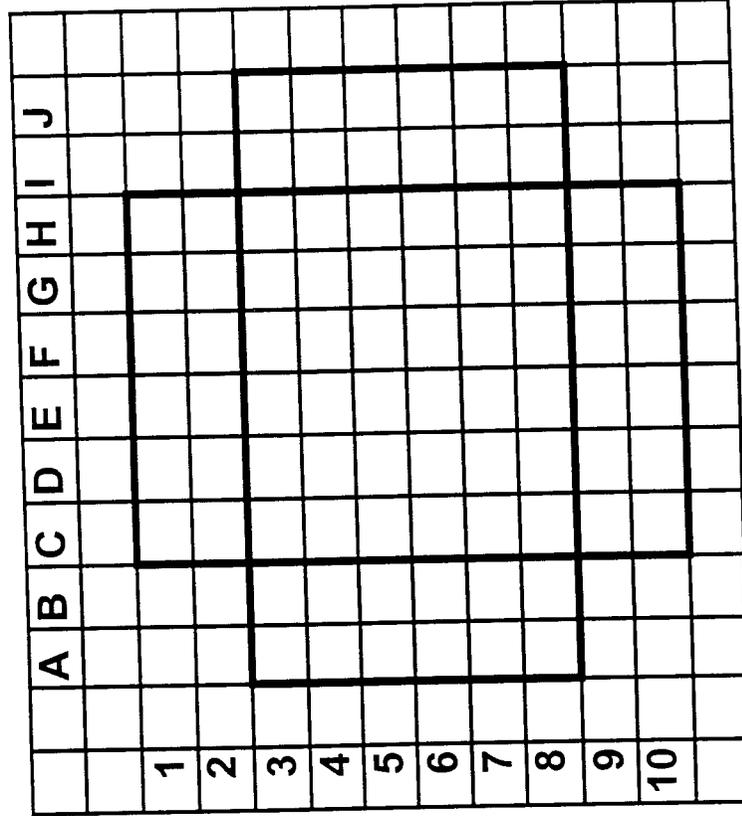


AREA A (SECTION 3) - MAIN HALLWAY - CLASS 3



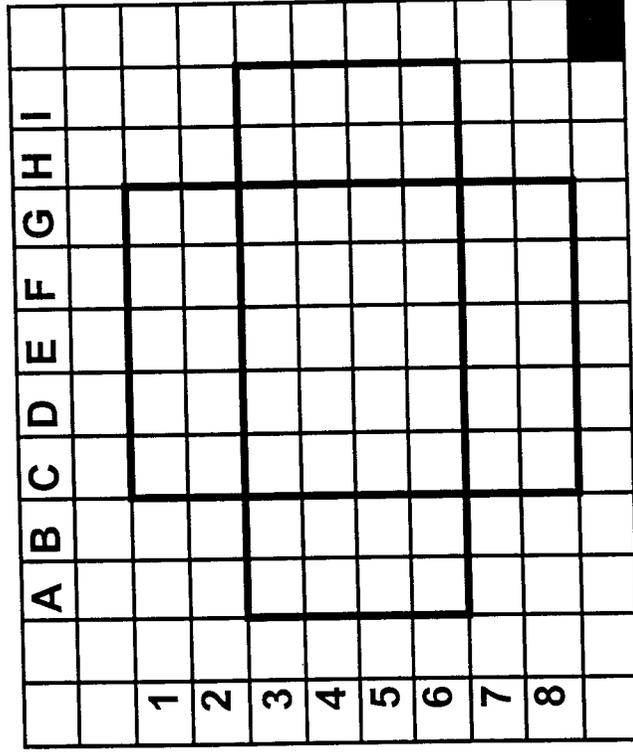
1 METER SQ.

AREA B, RAD LAB OFFICE - ROOM 1010 - CLASS 3



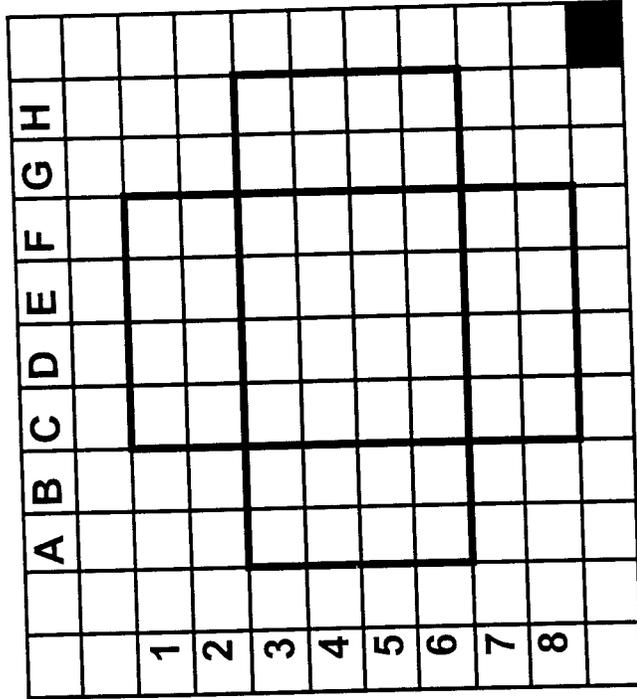
1 METER SQ.

AREA C, RAD LAB INSTR OFFICE- ROOM 1010A - CLASS 3



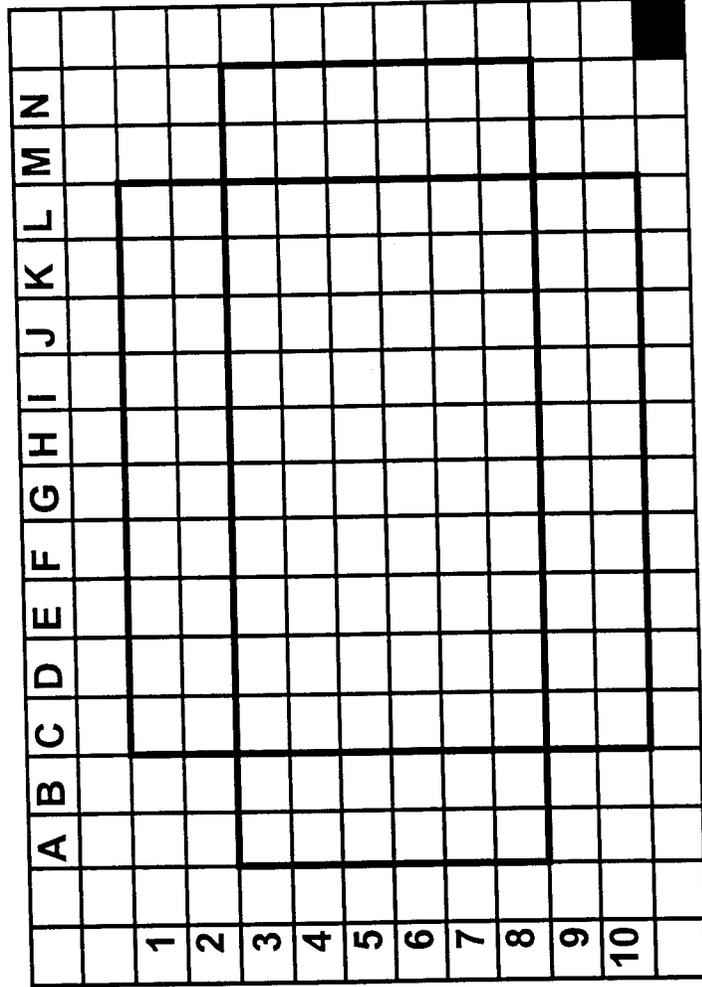
1 METER SQ.

AREA D - RAD LAB CHIEF'S OFFICE- ROOM 1010B - CLASS 3



1 METER SQ.

AREA E - ELECTRONIC SHOP - ROOM 1010C - CLASS 3



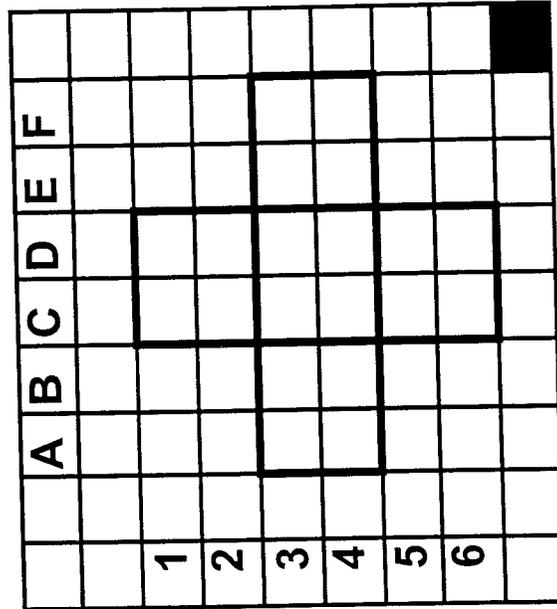
1 METER SQ.

AREA F - LABORATORY 7 - ROOM 1017 - CLASS 3

	A	B	C	D	E	F	G	H	I	J	K	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
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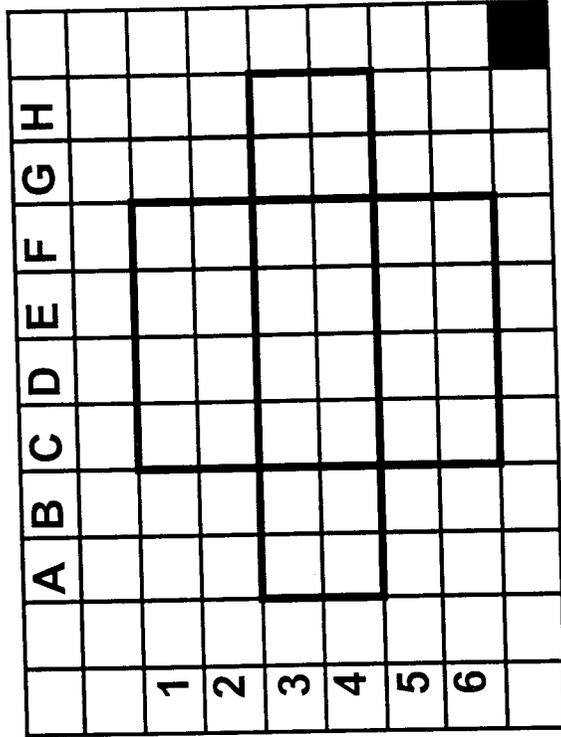
1 METER SQ.

AREA G - WOMEN'S ROOM - RM 1013 - CLASS 3



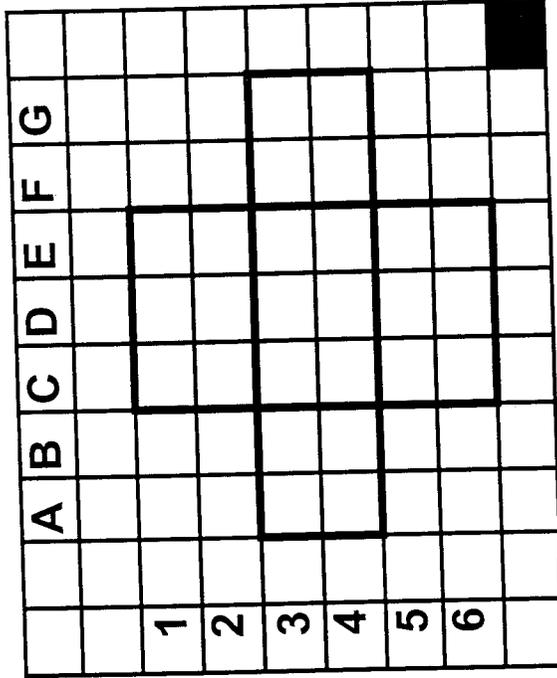
1 METER SQ.

AREA H - MEN'S ROOM - RM 1015 - CLASS 3



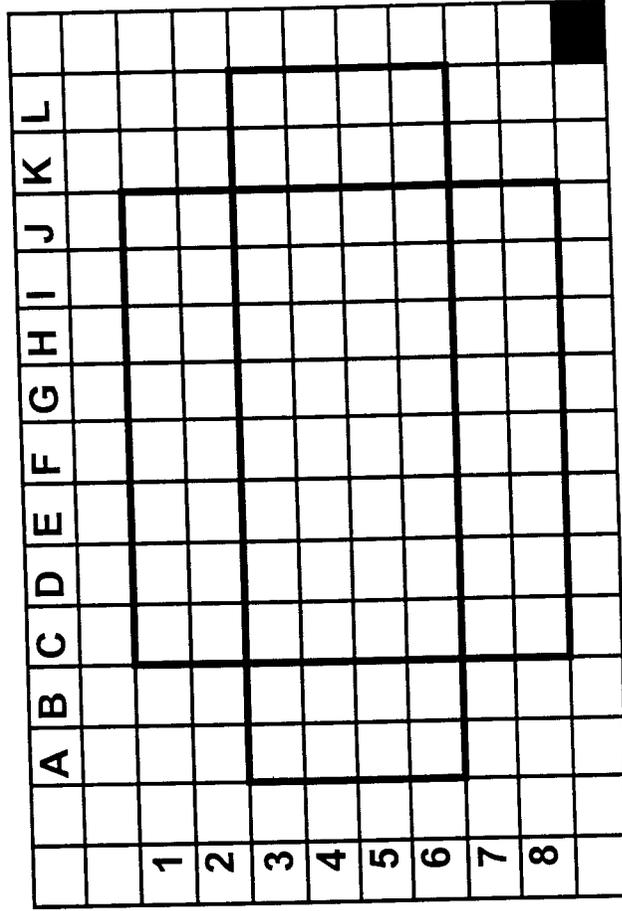
1 METER SQ.

AREA I - JANITOR'S ROOM - RM 1016 - CLASS 3



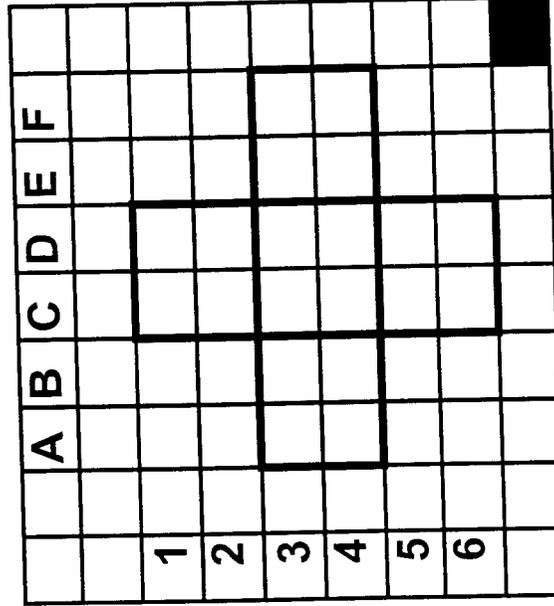
1 METER SQ.

AREA J - HP OFFICES- RM 1011 - CLASS 3



1 METER SQ.

AREA K - HP STORAGE ROOM - RM 1012 - CLASS 3



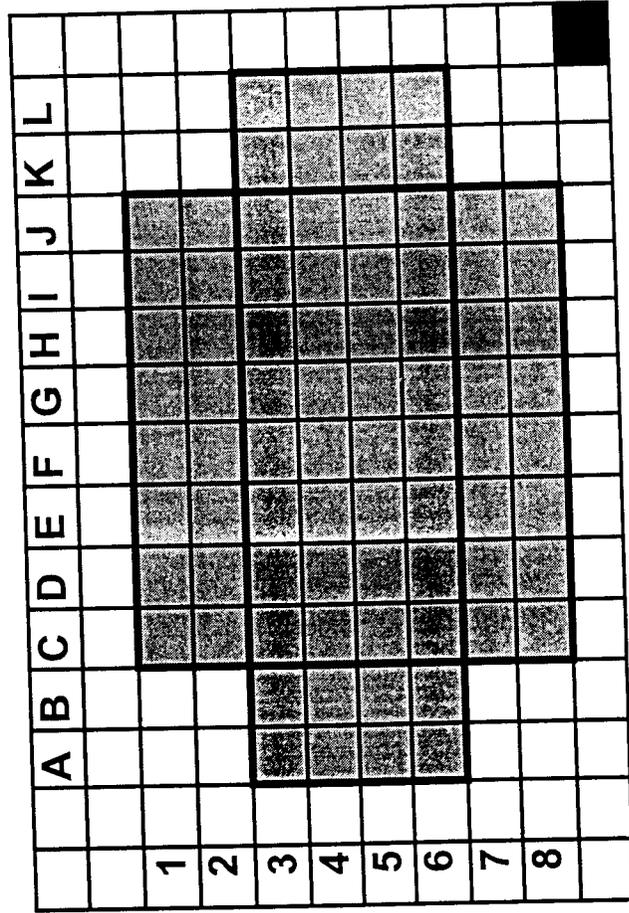
1 METER SQ.

AREA M - LABORATORY 8 - RM 1018 - CLASS 3

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

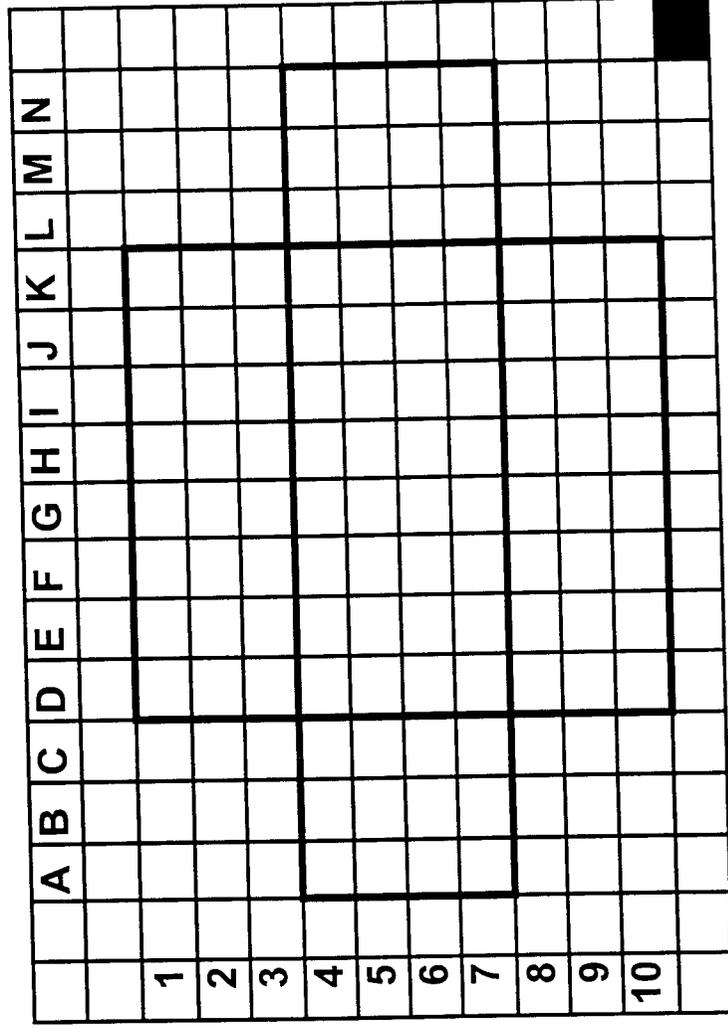
1 METER SQ.

AREA N - LABORATORY 6 - RM 1023 - CLASS 3



1 METER SQ.

AREA O - HPO LABORATORY - RM 1011A - CLASS 1



1 METER SQ.

AREA P - LABORATORY 1 - ROOM 1019 - CLASS 1

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1														
2														
3														
4														
5														
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7														
8														
9														
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13														
14														
15														
16														
17														
18														
19														
20														

1 METER SQ.

AREA Q (SECTION 2) - LABORATORY HALLWAY - CLASS 2

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

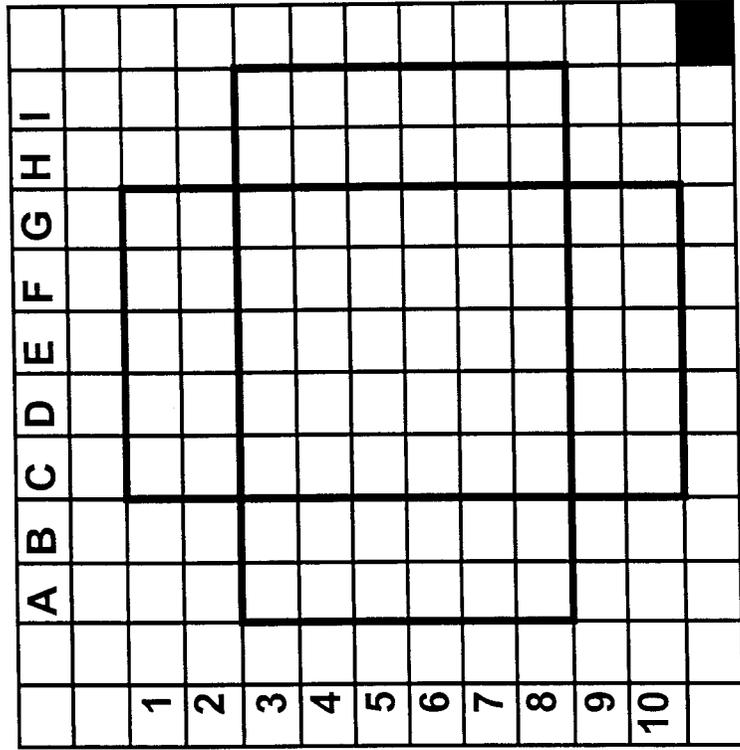
1 METER SQ.

AREA R - PREP LABORATORY - RM 1011B - CLASS 1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1														
2														
3														
4														
5														
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7														
8														
9														
10														
11														
12														
13														
14														

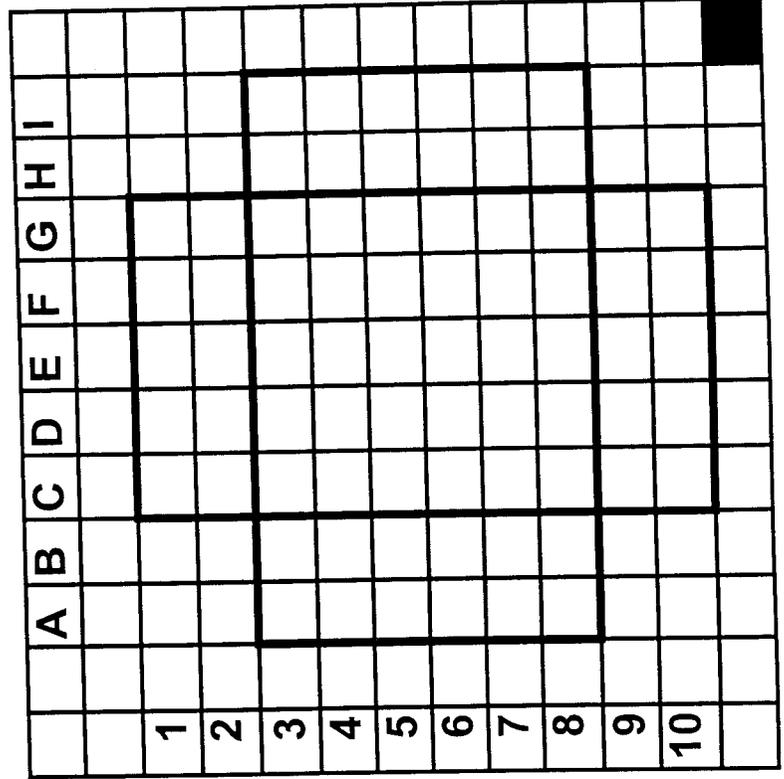
1 METER SQ.

AREA S, LABORATORY 3 - ROOM 1021 - CLASS 3

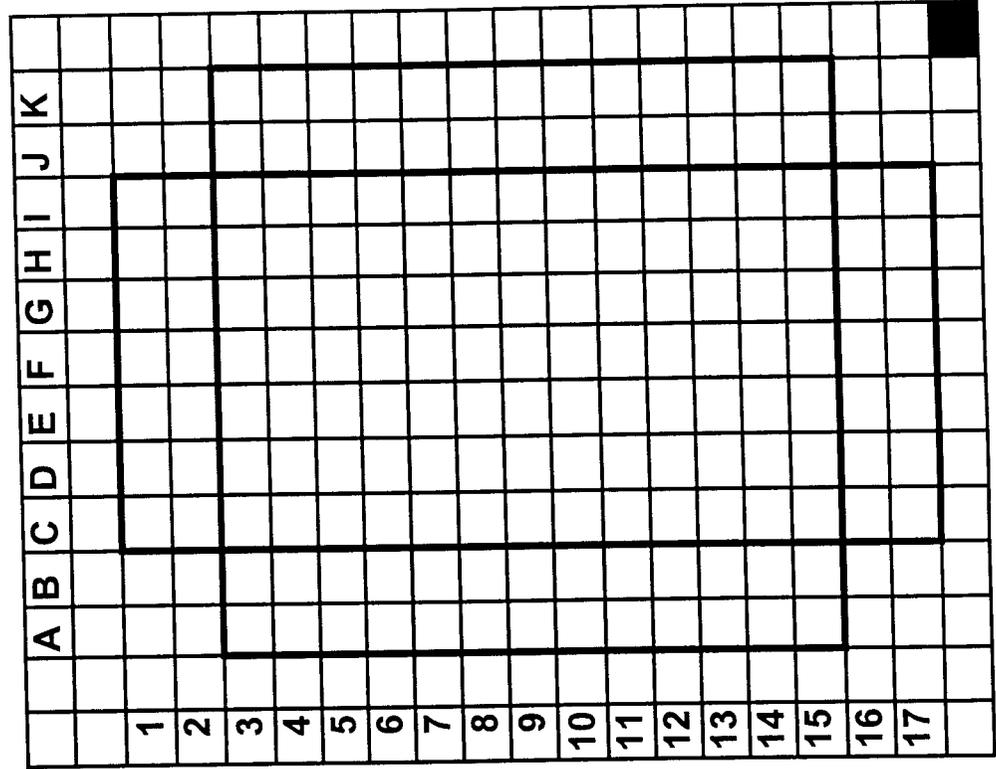


1 METER SQ.

AREA T, LABORATORY 4 - ROOM 1022 - CLASS 3

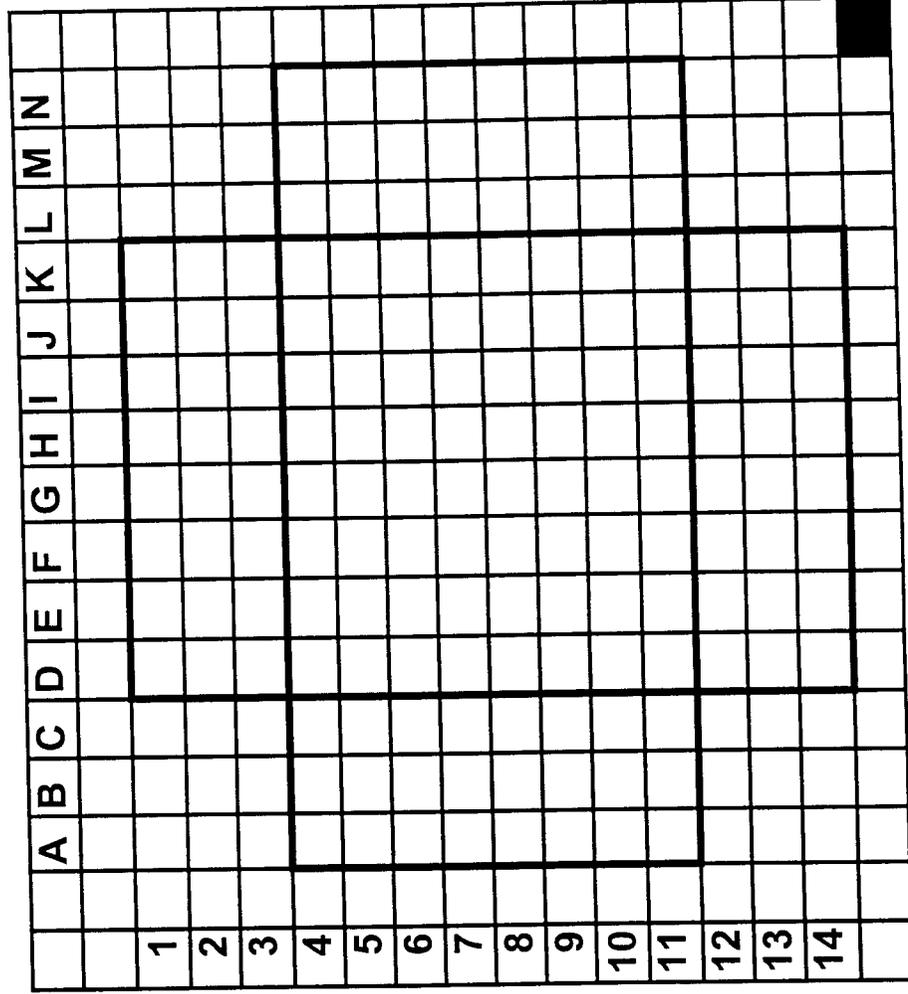


AREA U - LABORATORY 5 - ROOM 1024 - CLASS 2



1 METER SQ.

AREA V - VAULT - RM 1011C - CLASS 1



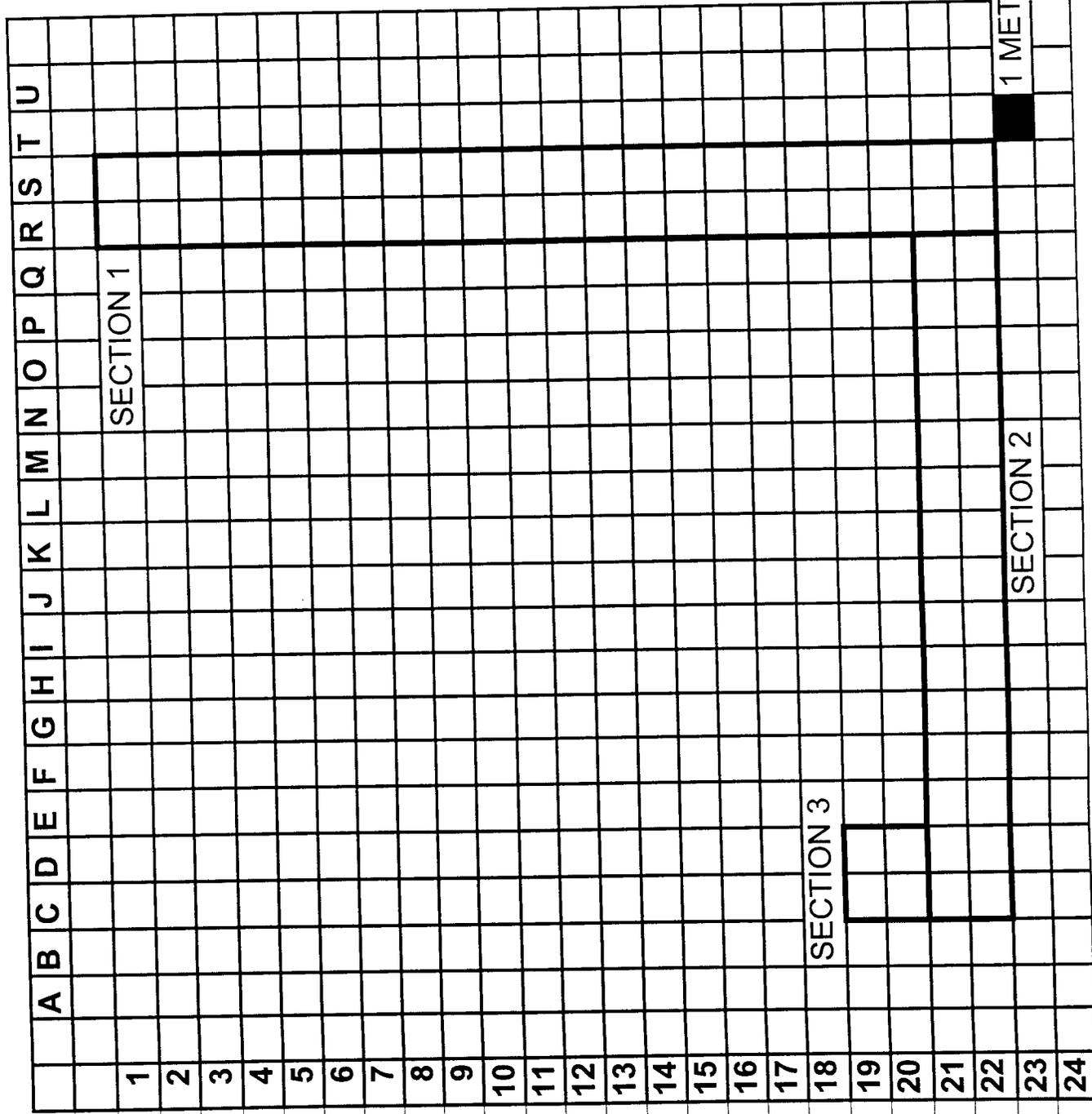
1 METER SQ.

AREA W - LABORATORY 2 - ROOM 1020 - CLASS 2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
1																							
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

1 METER SQ.

**AREA Y - SECTION LAYOUT - OUNDRY DE LOADING DOCK -
NON IMPACT AREA**



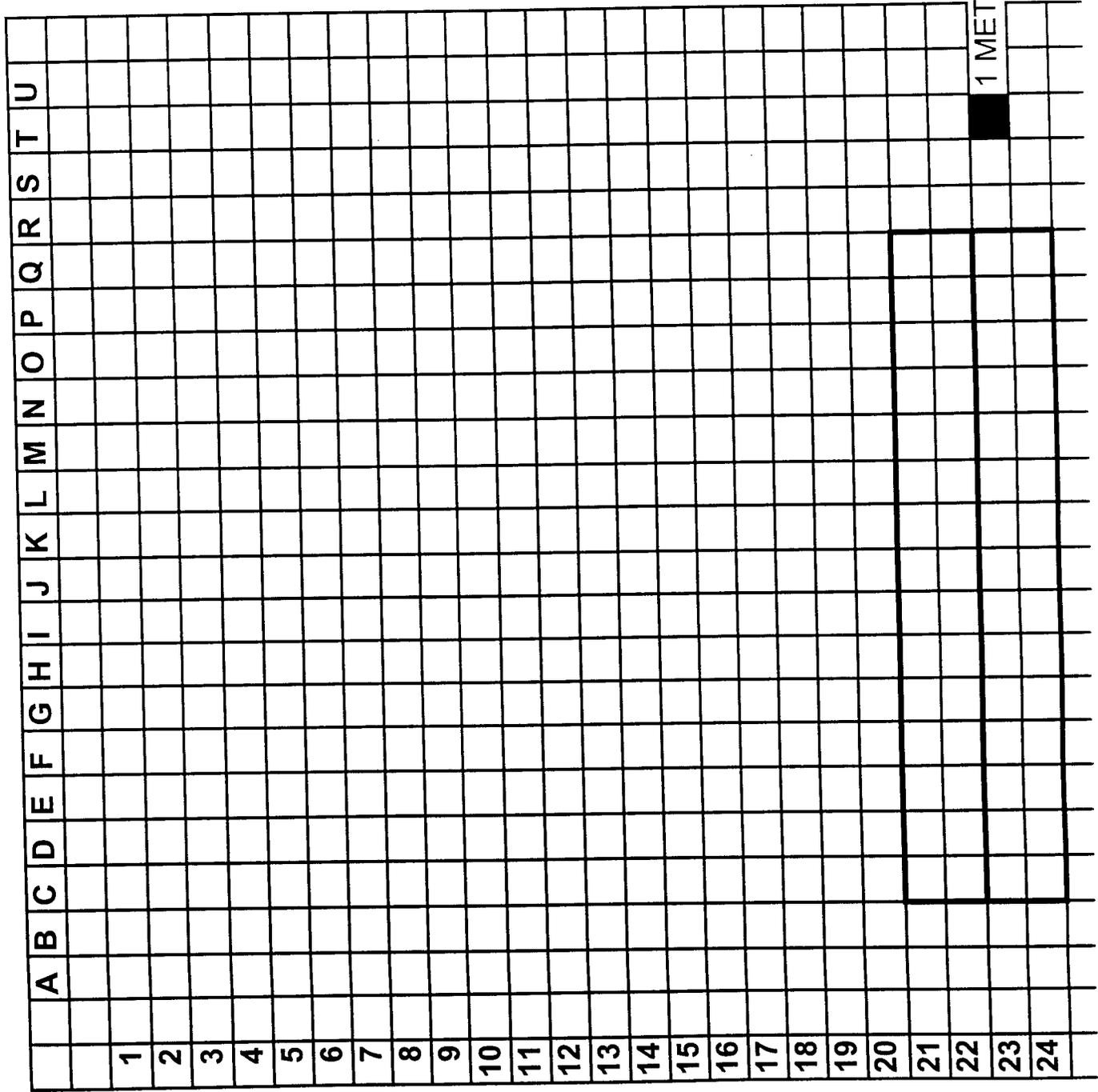
1 METER SQ.

**AREA Y - (SECTION 1) - WALKWAY, STAIRS & WALLS
NON IMPACT AREA**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	
1																						
2																						
3																						
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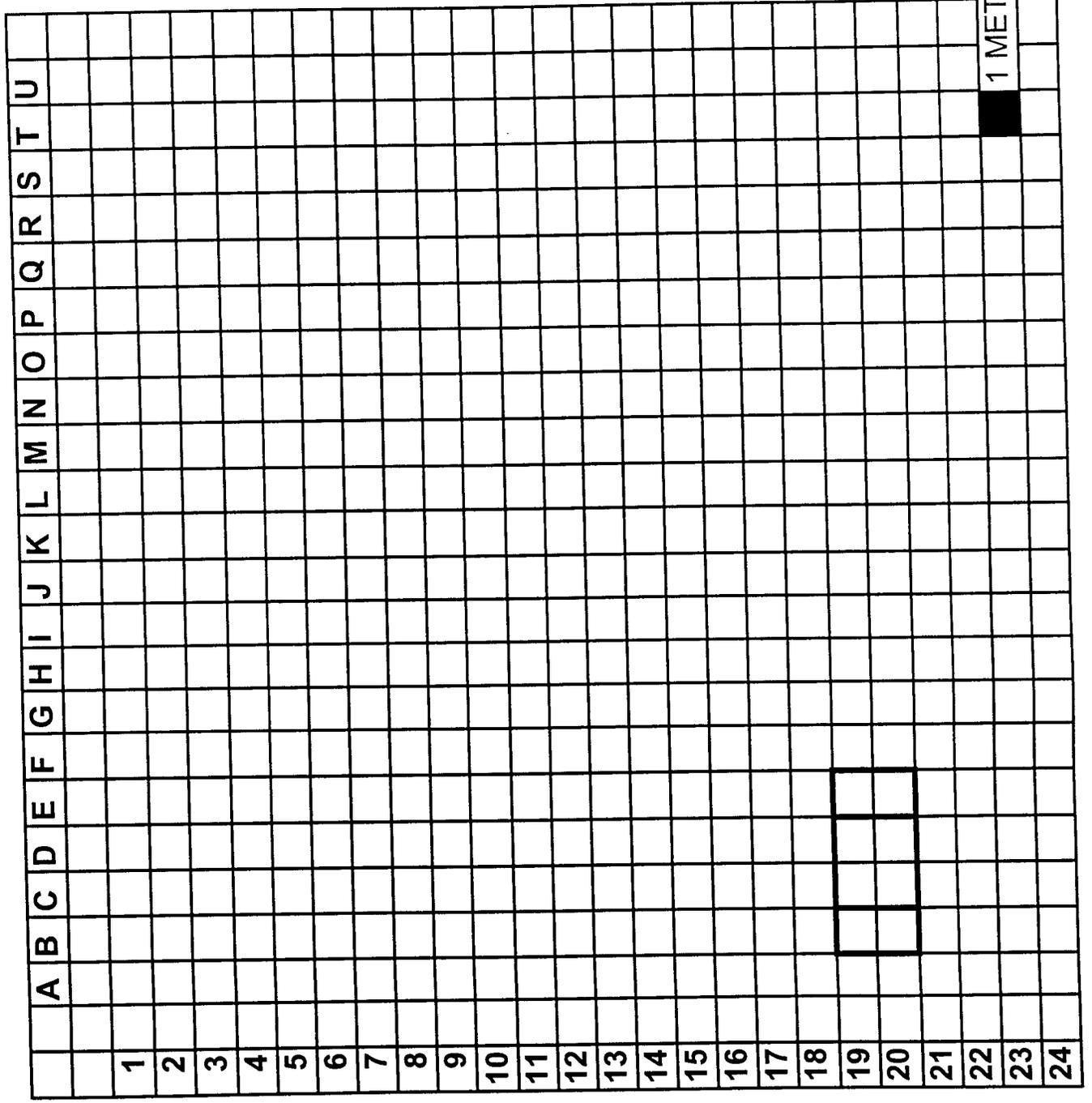
1 METER SQ.

AREA Y - (SECTION 2) - WALKWAY WALLS
NON IMPACT AREA



1 METER SQ.

AREA Y - (SECTION 3) - STAIRS & LIFTS -
NON IMPACT AREA



1 METER SQ.

AREA AA - SECTION FLOOR LAYOUT - ADJACENT HALLWAY NON - IMPACT AREA

