March 7, 2006

Docket No. 03037127
Control No. 138305

License No. 45-31125-01

MSIB
Q-9

Elizabeth Ullrich
Senior Health Physicist
Commercial and R&D Branch
Division of Nuclear Materials Safety
Mail Control No. 138305
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

SUBJECT: RADIOLOGY SERVICES OF NORTHERN VIRGINIA, RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION CONCERNING APPLICATION FOR NEW LICENSE, CONTROL NO. 138305

Dear Ms. Ullrich:

1. Enclosed you will find a facility diagram that is enlarged with dimensions indicated. Enclosed are area locations of shielding, with proximity of radiation sources to unrestricted areas, location of items regarding radiation safety for each restricted room space. Also included are the activities conducted contiguous to our facility.

2. Enclosed you will find a list of radionuclides with activity, type of container, and radiation level. The enclosed list is submitted to fulfill requirements under 10 CFR 32.72(a)(3).

We appreciate your continued diligence in our efforts to secure a NRC license for our new nuclear pharmacy.

Sincerely,

Allen C. Jones RPh, PharmD
18935 Maplewood Lane
Leesburg, Va. 20175

2006 MAR -9 AM 9:30

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138305

NMSS/RGN1 MATERIALS-002

Summary of Shielding for Maximum Doses

Ludlum Model 3 with GM probe used to take readings. 5/6/99 Hanover, Maryland
Examples of typical chemical forms and mR/hr at surface of pig. This list is not conclusive.

Drug #		Max	Drawn in	Container	Surface
Liquid Form	Procedure	Dose	Syr/Vial/Bag	Pig	mR/hr
102 Tc99m	Multi 100mCi or <	100 mCi	5cc Vial	Blue vial	0.05
	Multi >100 mCi	400 mCi	10cc Vial	Red vial	0.1
	Flood source	25 mCi	3cc syringe	Lg white pig	0.1
	All Others	80 mCi	5cc syringe	Lg white pig	0.2
103 HDP	Whole body Bone	30 mCi	3cc syringe	Sm white pig	0.4
104 PYP	Pyrophosphate	30 mCi	3 cc syringe	Sm white pig	0.4
105 MDP	Whole body Bone	30 mCi	3cc syringe	Sm white pig	0.4
	Horse	200	5cc syringe	Lg white pig	0.2
108 Glucoheptanate	All	20 mCi	3cc syringe	Sm white pig	0.2
109 DTPA	Renal	10 mCi	3cc syringe	Sm white pig	0.2
	Pulmonary Aerosol	50 mCi	5cc syringe	Lg white pig	0.1
110 Sulfur Colloid	Egg	1.5 mCi	Plastic bag	Egg Bucket	0.05
	Liver spleen study	7 mCi	3cc syringe	Sm white pig	0.15
111 MAA	Pulmonary Perfusion	10 mCi	3cc syringe	Sm white pig	0.2
117-Mag-3	Renal Scan	15 mCi	3cc syringe	Sm white pig	0.2
124 Choletec	Hepatobiliary Study	8 mCi	3cc syringe	Sm white pig	0.15
140 Heart Agent	All	45 mCi	3cc syringe	Sm white pig	2.5
301 Thallous Chloride	Stress/Rest	4 mCi	5cc syringe	Lg red pig	3.2
	Redistribution	1.5 mCi	3cc syringe	Sm red pig	1.5
305 Gallium Citrate	All	10 mCi	5cc syringe	Blue Lrg Pig	35
325 I-123 solid		0.2 mCi	Snap cap vial	Red vial	0.4
355 Indium WBC	White Blood Cell	1 mCi	5cc syringe	Lrg red pig	0.1
420 I-131 Dx Cap	All	0.70 mCi	Snap cap vial	Red vial	0.2
430 I-131 Capsule *	All	80 mCi	Snap cap vial	Cis Large	33
		200 mCi	Snap cap vial	Extra Big	60
431 I-131 Solution *	All	80 mCi	CIS vial	Cis Large	33
		200 mCi	CIS vial	Extra Big	60
511 F-18 liq	FDG	20 mCi	5 cc syringe	Gen Heart	15
511 F-18 liq	FDG	20 mCi	10 cc vial	Nordion Square	35
711 Xenon * gas	All	20	Plastic Bag	Manufacturer	0.1

sm pig = IC-008 lg pig = IC004
Blue bulk vial = Mallinkcrodt Thallium T9 Lead Container #4's- reused
Red bulk vial = Dupont Gallium Lead Container – reused
Egg Bucket = Malinkrodt I131 screw on small lead container *
Cis Large = Original I131 round lead containers reused *
Nordion Square = 4 inch square lead containers reused *
Extra Big = Malinkrodt 131 screw on large container *
Gen Heart = Dupont Generator Core with Cis pig top, lead container reused.

* These therapy doses and Xenon-133 will be shipped in manufacturer's containers and shielding devices as supplied by the commercial manufacturers, or equivalent.

Lead Pig Effectiveness

Comparable dose shield evaluations from previous license application submittal

Byproduct Material	Chemical/ physical form	max. mCi per vial/ syringe (mCi)	Shield to be used for dispensing	Maximum radiation level on the syringe shield or vial (mR/hr)		
				IC-008	IC-004	Heavier than IC-004
Group I						
Iodine-131	Sodium Iodide soln/cap	3.0	**			
Iodine-125	HSA solution	2.0	IC-008 or 004	0.03	0.03	0.03
Iodine-131	O-Iodohippurate	3.0	**			
Chromium-51	Sodium Chromate	2.0	IC-008 or 004	0.03	0.03	0.03
Tc-99m	Sodium pertechnetate	500	IC-008 or 004	2.20	0.10	0.05
Iodine-131	O-Iodohippurate	0.3	IC-004		6.0	
Group II						
Iodine-131	Sodium iodide soln/cap	5.0	**			
Chromium-51	Sodium chromate soln	1.0	IC-008 or 004	0.03	0.03	0.03
Tc-99m	Sodium pertechnetate	500	IC-008 or 004	2.20	0.10	0.05
Tc-99m	Sulfur colloid	50	IC-008 or 004	0.30	0.05	0.05
Tc-99m	MAA suspension	50	IC-008 or 004	0.30	0.05	0.05
Tc-99m	Diphosphonate	200	IC-008 or 004	0.50	0.07	0.05
Tc-99m	Pyrophosphate	200	IC-008 or 004	0.50	0.07	0.05
Tc-99m	DTPA	200	IC-008 or 004	0.50	0.07	0.05
Tc-99m	Methylene diphos.	200	IC-008 or 004	0.50	0.07	0.05
Tc-99m	Gluceptate	200	IC-008 or 004	0.50	0.07	0.05

**has more shielding than IC-004 (manufacturer's shield)

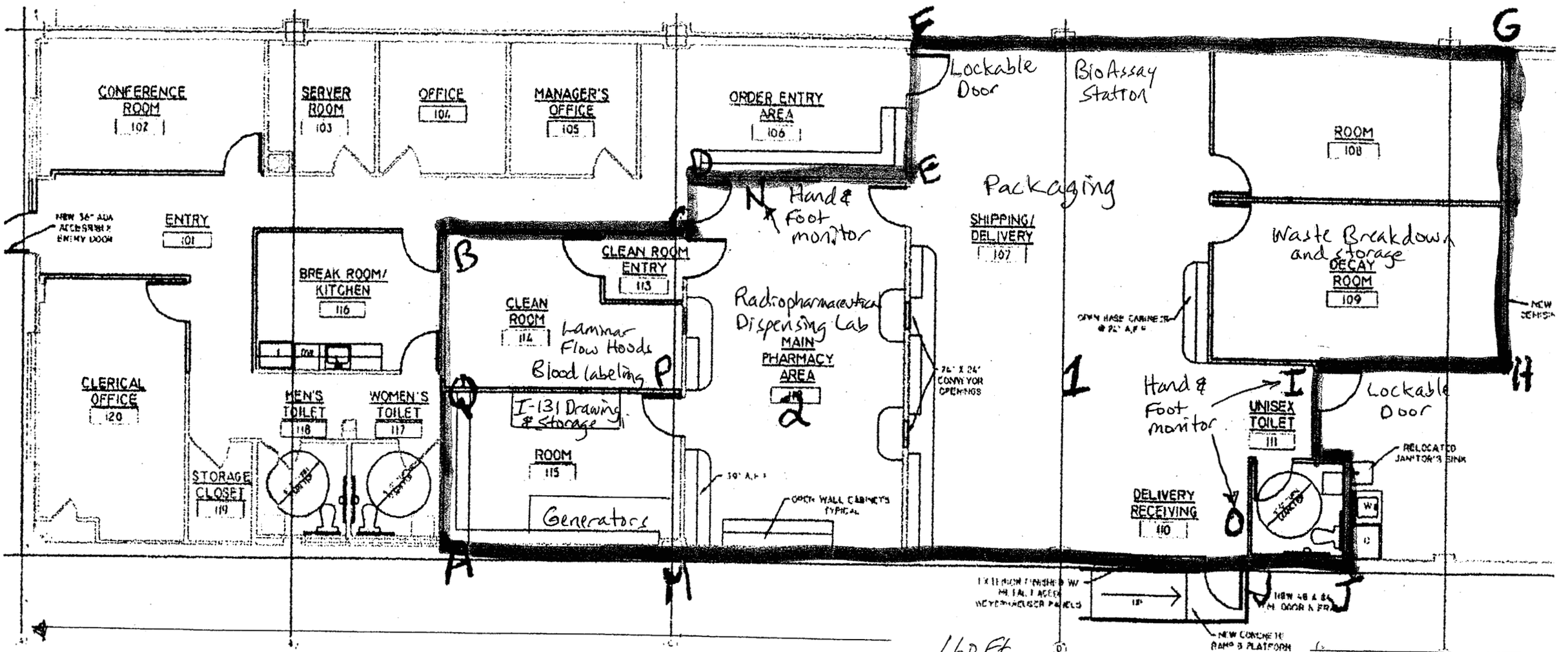
Maximum surface radiation for IC-004 screw top unit dose shield: Tc-99m, 500mCi - 0.05mR/hr

Maximum surface radiation for IC-008 screw top unit dose shield: Tc-99m, 500mCi - 2.2mR/hr

These values were obtained with a Victoreen 491 low level survey meter.

Restricted Space

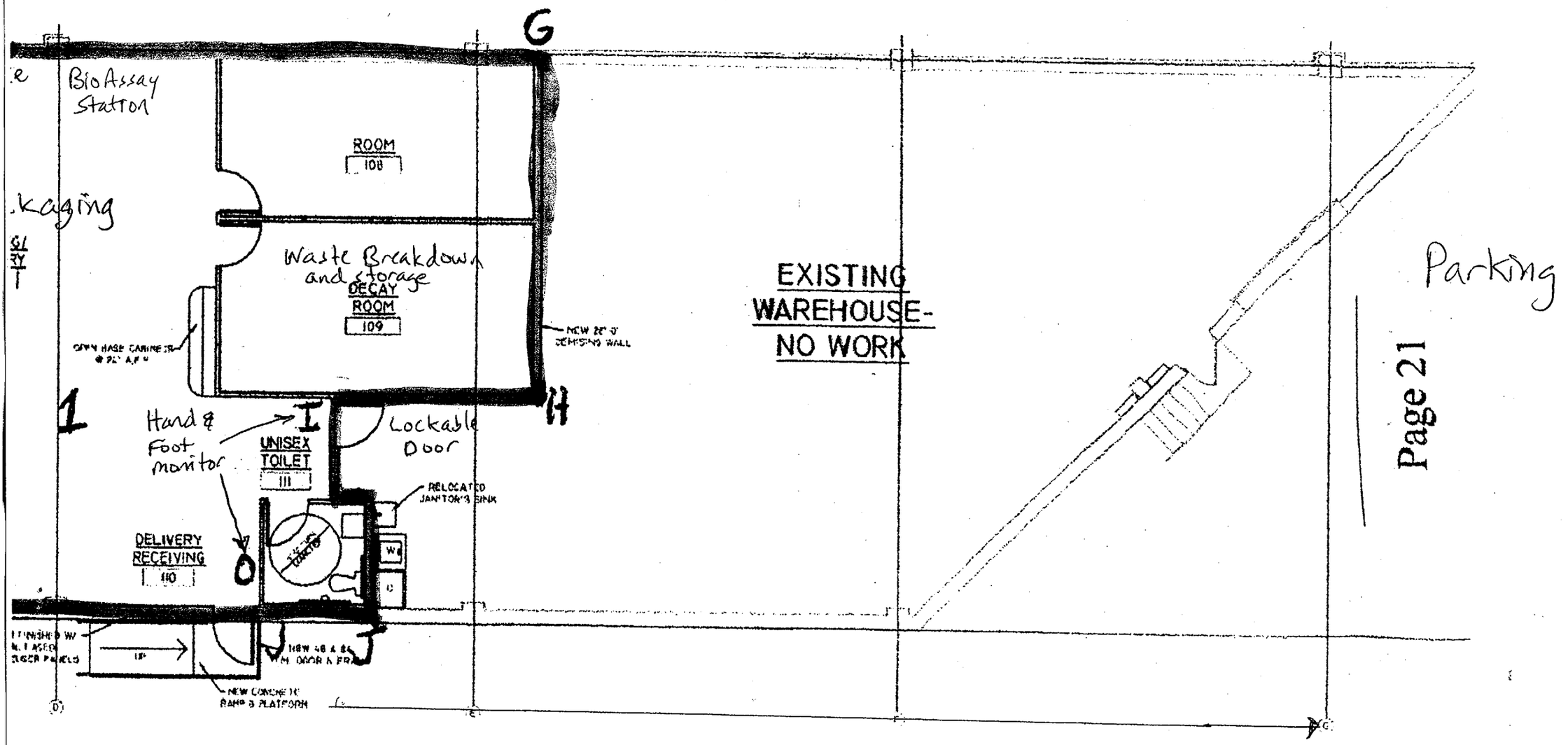
Warehouse Space



SCHEMATIC FLOOR PLAN

SCALE: 1/8" = 1'-0"

irehouse Space



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