APPENDIX C
RADIOLOGICAL DATA SHEETS

(Log summary, radiological data sheets NSS – 0001 through 0101 with sample location maps and confirmatory lab analyses)

N. S. SAVANNAH
SURVEY LOG

Survey No.	Date	Location	
NSS-0001	3/28/05	PORT SIDE "A" DECK STATEROOMS & OTHER ROOMS	
NSS-0002	3/28/05	PORT SIDE "A" DECK STATEROOMS & OTHER ROOMS	
NSS-0003	3/28/05	STARBOARD STATEROOMS "A" DECK	
NSS-0004	3/28/05	STARBOARD STATEROOMS "A" DECK	
NSS-0005	3/28/05	"A" DECK STARBOARD BARBER SHOP	
NSS-0006	3/28/05	STARBOARD SIDE "B" DECK CREW STATEROOMS	
NSS-0007	3/28/05	STARBOARD SIDE "B" DECK CREW & OFFICER STATEROOMS	
NSS-0008	3/28/05	"B" DECK PORT SIDE UNIVERSITY OF SOUTH CAROLINA OFFICERS	
NSS-0009	3/28/05	"B" DECK PORT SIDE CREW PANTRY	
NSS-0010	3/29/05	STATEROOM 34 PORT SIDE "A" DECK	
NSS-0011	3/29/05	"B" DECK PORT CREW. MESS ROOM & CREW. LOUNGE	
NSS-0012	3/29/05	"B" DECK PORT SIDE OFFICERS MESS	
NSS-0013	3/29/05	"B" DECK PORT SIDE STATEROOMS, OFFICE, CLEANING GEAR LOCKER	
NSS-0014	3/29/05	"B" DECK CENTER LINE ROOMS FAN ROOM CONFERENCE ROOM	
NSS-0015	3/29/05	"B" DECK CTR. LINE MAIN GALLEY	
NSS-0016	3/29/05	"B" DECK CTR LINE DINING ROOM	
NSS-0017	3/29/05	"B" DECK INBOARD PORT SIDE STEWARD LAUNDRY	
NSS-0018	3/29/05	"B" DECK CREW BARBER SHOP	
NSS-0019	3/29/05	PROMENADE DECK VERANDA & MAIN LOUNGE	
NSS-0020	3/29/05	BOAT DECK OFFICERS QTRS	
NSS-0021	3/29/05	BOAT DECK OFFICERS QTRS	
NSS-0022	3/29/05	NAVIGATION BRIDGE DECK & PILOT HOUSE	

N. S. SAVANNAH
SURVEY LOG

Survey No.	Date	Location	
NSS-0023	3/30/05	"C" Deck Crew Cabins	
NSS-0024	3/30/05	"C" Deck Machinery Loading Passage	
NSS-0025	3/30/05	"C" Deck CO^2 Room	
NSS-0026	3/30/05	"C" Deck ~~Starboard~~ Port Aft Side Rooms	
NSS-0027	3/30/05	"C" Deck ~~Port~~ Port Aft Starboard Rooms	
NSS-0028	3/30/05	Engine Room Upper Landing To Machinery Passageway	
NSS-0029	3/30/05	Engine Room Upper Level	
NSS-0030	3/30/05	"C" Deck Lockers For Breathing Gear	
NSS-0031	3/30/05	"A" Deck Bottom Drain of Exhaust Vent To Top of Mist In Front of #4 Hold Cover	
NSS-0032	3/31/05	"C" Deck Laundry & Linen Rms	
NSS-0033	3/31/05	"C" Port & Starboard Passageways	
NSS-0034	3/31/05	"C" Hallway and Laundry Entrance	
NSS-0035	3/31/05	Source Receipt	
NSS-0036	3/31/05	Navigation Deck - Emerg. Gen. Rm	
NSS-0037	3/31/05	"B" Deck Hydraulic Equipment Platform	
NSS-0038	3/31/05	"B" Deck Crew Laundry, Lighting Load Ctr. Cleaning Gear Lockers	
NSS-0039	3/31/05	Boat Deck → Promenade Deck → "A" Deck → "B" Deck → "C" Deck Machinery Casing Space	
NSS-0040	3/31/05	Navigation Deck - Boron Dump Control Rm	
NSS-0041	3/31/05	Engineering Work Station Hold #5	
NSS-0042	3/31/05	Main Engine Rm Lower Level Port Side of Shaft	
NSS-0043	3/31/05	Main Engine Rm Lower Level Starboard Side of Shaft	
NSS-0044	3/31/05	Main Shaft Alley	

N. S. SAVANNAH
SURVEY LOG

Survey No.	Date	Location	
NSS-0045	4/1/05	CONTROL ROOM FOR REACTOR	
NSS-0046	4/1/05	14' FLAT DECK STARBOARD SIDE	
NSS-0047	4/1/05	14' FLAT DECK PORT SIDE	
NSS-0048	4/1/05	"D" DECK FOOD STORES STARBOARD SIDE	
NSS-0049	4/1/05	"D" DECK SPECIAL STORES PORT SIDE	
NSS-0050	4/1/05	"A" DECK AFT HOUSE	
NSS-0051	4/1/05	"B" DECK STEAM COMPARTMENTS	
NSS-0052	4/1/05	"C" DECK EMERG. H.P. LAB	
NSS-0053	4/1/05	"C" DECK (AFT OF H.P. LAB) COMPARTMENTS	
NSS-0054	4/1/05	CARGO HOLD #4 B, C, D, HOLD DECKS	
NSS-0055	4/4/05	"A" DECK PORT SIDE FAN ROOM AND PLENUM	
NSS-0056	4/4/05	"B" DECK STATEROOM B-1, RAD WASTE STORAGE	
NSS-0057	4/4/05	14' FLAT FWD STABILIZER RM STARBOARD	
NSS-0058	4/4/05	FWD STABILIZER RM STARBOARD LOWER LEVEL AND CROSSOVER TO PORT	
NSS-0059	4/4/05	FWD STABILIZER RM PORT UPPER LEVEL	
NSS-0060	4/4/05	FWD STABILIZER RM PORT LOWER LEVEL	
NSS-0061	4/4/05	FWD WEATHER DECK HOUSES BETWEEN HATCHES 1&4	
NSS-0062	4/5/05	"B" DECK FAN ROOM	
NSS-0063	4/5/05	HOLD #4 "D" DECK STARBOARD	
NSS-0064	4/5/05	"C" DECK COLD WATER CHEM LABS UPPER LEVEL	
NSS-0065	4/5/05	HOLD DECK PORT & STARBOARD	
NSS-0066	4/5/05	HALLWAY (CROSSOVER) ON HOLD DECK	

N. S. SAVANNAH
SURVEY LOG

Survey No.	Date	Location	
NSS-0067	4/6/05	SECONDARY CONTAINMENT "B" DECK AFT OF REACTOR	
NSS-0068	4/6/05	"A" DECK HP LAB AT HOSPITAL	
NSS-0069	4/7/05	PRIMARY CONTAINMENT INSIDE HATCH CONTROLS AND PLUG	
NSS-0070	4/7/05	"D" DECK (COLD CHEM LAB)(FROM "C" DECK) RAD SAMPLING ROOM GAS ABSORBTION, EQUIP ROOM, WASTE STORAGE	
NSS-0071	4/8/05	"C" DECK SECONDARY CONTAINMENT FWD	
NSS-0072	4/8/05	"B" DECK SECONDARY CONTAINMENT	
NSS-0073	4/8/05	"A" DECK SECONDARY CONTAINMENT	
NSS-0074	4/8/05	PRIMARY CONTAINMENT AIR LOCK	
NSS-0075	4/8/05	SECONDARY CONTAINMENT "D" DECK AFT MEZANINE AND LOWER AREAS	
NSS-0076	4/8/05	SECONDARY CONTAINMENT LOWER LEVEL (HOLD DECK)	
NSS-0077	4/11/05	PRIMARY CONTAINMENT HATCH (LOWER)	
NSS-0078	4/11/05	PRIMARY CONTAINMENT ("C" DECK) 1ST LEVEL PRELIMINARY SMEARS	
NSS-0079	4/14/05	PRIMARY CONTAINMENT ("C" DECK) 1ST LEVEL FWD	
NSS-0080	4/11/05	STEAM CONDENSOR HATCH (ENGINE ROOM)	
NSS-0081	4/11/05	"D" DECK HOT CHEM. LAB AT CONTROL ROOM	
NSS-0082	4/12/05	PRIMARY CONTAINMENT 4TH LEVEL (HOLD DECK)	
NSS-0083	4/12/05	PRIMARY CONTAINMENT 1ST LEVEL ("C" DECK)	
NSS-0084	4/12/05	PRIMARY CONTAINMENT 2ND LEVEL ("D" DECK)	
NSS-0085	4/12/05	PRIMARY CONTAINMENT 3RD LEVEL (14' FLAT)	
NSS-0086	4/12/05	CHARGE PUMP ROOMS (PORT & STBD)	
NSS-0087	4/13/05	PRIMARY CONTAINMENT 1ST LEVEL ("C" DECK)	
NSS-0088	4/14/05	SECONDARY CONTAINMENT LOWER LEVEL CORE BORE LOCATIONS	

N. S. SAVANNAH
SURVEY LOG

Survey No.	Date	Location	
NSS-0089	4/14/05	"U" SHAPED STEAM GENERATORS IN PRIMARY CONT.	
NSS-0090	4/19/05	TOP OF CUPOLA STBD NITROGEN VALVE FLANGE	
NSS-0091	4/~~20~~ 19 RGW 05	PRIMARY WATER STARTUP TANK	
NSS-0092	4/~~20~~ 19 RGW 05	LEAD SAMPLE LOCATION - OUTER REACTOR WALL	
NSS-0093	4/21/05	PRIMARY CONTAINMENT - STBD STEAM GEN WOOD'N HOUSE	
NSS-0094	4/21/05	PRIMARY CONTAINMENT FWD OF REACTOR 1ST & 2ND LEVEL	
NSS-0095	4/21/05	PRIMARY CONTAINMENT PORT U TUBE STEAM GEN ACCESS COVER	
NSS-0096	4/20/05	PRIMARY CONTAINMENT STBD U TUBE STEAM GEN. INSIDE PRIMARY SHIELD	
NSS-0097	4/21/05	PRIMARY CONTAINMENT PORT U TUBE STEAM GEN. INSIDE PRIMARY SHIELD	
NSS-0098	4/22/05	PRIMARY CONTAINMENT PORT U TUBE STEAM GEN. POST JOB SURVEY	
NSS-0099	4/25/05	SURVEY OF MIETANS USED ON JOB	
NSS-0100	4/25/05	PORT STEAM DRUM SECONDARY	
NSS-0101	4/26/05	PIPE FROM NITROGEN LINE IN PRIMARY CONT.	
NSS-0102			
NSS-0103			
NSS-0104			
NSS-0105			
NSS-0106			
NSS-0107			
NSS-0108			
NSS-0109			
NSS-0110			

N. S. SAVANNAH
SURVEY LOG

Survey No.	Date	AIR SAMPLES Location	
NSS-0111	4/5/05	COLD CHEM LAB "C" DECK	
NSS-0112	4/6/05	ACCESS TO SECONDARY CONTAINMENT	
NSS-0113	4/7/05	CHARGE PUMP RM STBD.	
NSS-0114	4/8/05	AIR LOCK FOR PRIMARY CONTAINMENT	
NSS-0115	4/8/05	PRIMARY CONTAINMENT 1ST LEVEL	
NSS-0116	4/8/05	CHARGE PUMP RM STBD RECHECK	
NSS-0117	4/11/05	"C" DECK COLD CHEM LAB RECHECK	
NSS-0118	4/11/05	PRIMARY CONTAINMENT 2nd LEVEL	
NSS-0119	4/11/05	SECONDARY CONTAINMENT LOWER LEVEL	
NSS-0120	4/12/05	PRIMARY CONTAINMENT 4TH LEVEL	
NSS-0121	4/22/05	PRIMARY CONTAINMENT U TUBE STEAM GEN. ACCESS COVER OPENING.	
NSS-0122			
NSS-0123			
NSS-0124			
NSS-0125			
NSS-0126			
NSS-0127			
NSS-0128			
NSS-0129			
NSS-0130			
NSS-0131			
NSS-0132			

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0001

Date 3/28/05 Time 9:00 AM	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed K.A. Shumaker	β⁻ Factor —	Eff. 10%	
	BKG 4μR/hr	Bkg. 30 cpm	cpm

AREA PORT SIDE A DECK

COMPONENT

Room THRESHOLD - 1
DOOR KNOB - 2
BATH FLOOR - 3
AIR VENT-OVHD - 4
BATH DOOR KNOB - 5

TOILET PORCLAIN & GLACE
BEAMS 7-8 μR/hr Due
To URANIUM or THORIUM

LESS THAN BKGD

PASS. LAUNDRY
≤BKGD
< 100 cpm

STRM #2 TC
< BKGD
< 100 cpm

LADIES LOUNGE
#6
≤BKG < 100 cpm

STRM
12-15 MRM
RESTRM > BKGD
>100 CPM TOILET

STRM 12
(Chain Locked)

>100 CPM IN TOILET
12-15 MR.M
REST ROOM

STRM 14
(CHAIN LOCKED)

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	1	< BKG	1	< BKG	1	< BKG	1	< BKG
2	< BKG	2	< BKG	2	< BKG	2	< BKG	2	< BKG
3	< BKG	3	< BKG	3	< BKG	3	< BKG	3	< BKG
4	< BKG	4	< BKG	4	< BKG	4	< BKG	4	< BKG
5	< BKG	5	< BKG	5	< BKG	5	< BKG	5	< BKG

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01

SURVEY NO. NSS-0002

Date 3/28/05 Time 10:15 AM	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature [signature]	Serial No. 95499	Inst.Sn 97416	
Reviewed [signature]	β⁻ Factor	Eff. 10%	
	BKG 4 uR/h	Bkg. 30 cpm	cpm

AREA PORT SIDE A DECK

COMPONENT

ROOM THRESHOLD - 1
DOOR KNOB - 2
BATH FLOOR - 3
AIR VENT (OVHD) - 4
BATH DOOR KNOB - 5

TOILET GLAZE or PORCELAIN
READS 7-8 µR/h
DUE TO VERMICULITE OR THORIUM

~~XXX~~

REST RM >BKGD NEAR TOILET

REST ROOM AREAS >BKGD 3000 CPM
<BKGD
STRM #20

REST RM TOILET >3000 CPM 7 TO 8 µR/HR
FLOOR < 3000 CPM
< BKGD
< 3000 CPM < BKGD
STRM 26

STRM 32

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	1	< BKG	1	< BKG				
2	< BKG	2	< BKG	2	< BKG				
3	< BKG	3	< BKG	3	< BKG				
4	< BKG	4	< BKG	4	< BKG				
5	< BKG	5	< BKG	5	< BKG				

RA – RADIATION AREA
CA – CONTAMINATION AREA
ALL DOSE RATES IN µrem/hr
RCA – RADIATION CONTROL AREA
AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0003

Date 3-28-05 Time 8100	DOSE RATE	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type LUD MDI 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 42972	Inst.Sn 75806	
Reviewed Robert Brunah	β⁻ Factor 1	Eff. 10 %	
	Background 4 MR/Hr	Bkg. 40 cpm	cpm

AREA ~~PORT SIDE~~, STATE ROOMS STARBOARD & OFFICES A DECK

COMPONENT

ROOM THRU DOOR - 2"
DOOR - 3
BATH - AD - 41
BATH DOOR - 5

STR 3
FRSK <100 cpm
DR < BKGround

STR 9
FRSK < 100 cpm
DR < BKG

STR 15
FRSK 400 cpm
DR < BKG

CHIEF STEWARD
~~PURSER~~ OFFICER Room
STR
FRSK 400 cpm
DR < BKG

STR 21
FRSK < 100 cpm
DR < BKG

SMEAR RESULTS ~~N DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD
2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD
3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD
4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD
5	< BKGD	5	< BKGD	5	< BKGD	5	< BKGD	5	< BKGD

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0004

Date 3/28/05 Time	DOSE RATE	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type LUDLUM 19	Beta V Alpha	Beta Alpha
Signature Loman Scott	Serial No. 42972	Inst.Sn 75809	
Reviewed Robert Pinnal	β⁻ Factor 1	Eff. 10 %	
	Background 4 ~~MR/HR~~	Bkg. 40 cpm	cpm

AREA STAR BOARD STATE ROOMS + OFFICE A DECK

COMPONENT

STARBOARD
STAR - CLEANING ROOM
1. THRESHOLD
2. FLOOR
3. SINK
4 DOOR KNOB

1 ROOM THRESHOLD
2 DOOR KNOB
3. BATH FLOOR
4 AIR VENT OVERHEAD
5. BATH DOOR KNOB

STARBOARD
STAR LINEN LOCKER
1 DOOR KNOB
2 THRESHOLD
3. FLOOR
4 OPEN HATCH
5 VALVE HANDLES

STR 27
FRSK <100
DR < BKG

(CREW) NURSE
STR 33
FRSK <100
DR < BKG

CLEANING ROOM
FRSK 400
DR < BKG

SMEAR RESULTS ~~N DPM/100 CM²~~ ~~B = BETA/γ mRAD/HR/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD		
2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD		
3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD		
4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD		
5	< BKGD	5	< BKGD	[redacted]		5	< BKGD		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0005

Date 3/28/05 Time 1210	DOSE RATE	CONTAMINATION	
Surveyor Lomon Scott	Inst. Type Ludlum 19	Beta Y Alpha	Beta Alpha
Signature Lomon Scott	Serial No. 42972	Inst.Sn 75809	
Reviewed Ralph Rumsch	β⁻Factor ✓	Eff. 10%	
RP	BKG 4.0 MR/hr	Bkg. 40 cpm	cpm

AREA B DECKS A. DECK BARBER SHOP

COMPONENT

1 - Door Threshold
2 - Door Handle
3 - Inner Air vent
4 - outer Airvent
5 - Forward Sink
6 - Aft Sink
7 - Floor (Aft (mir)

Barber Shop
FRSK ~ 100
DM ~ BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH PAGE

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0006

Date 3/28/05 Time 1210	DOSE RATE	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 42972	Inst.Sn 75809	
Reviewed Robert E. Gunnels	β⁻ Factor ✓	Eff. 10%	
	BKG 4.0 MR/hr	Bkg. 40 cpm	cpm

AREA B DECK CREW STATROOMS STARBOARD SIDE

COMPONENT

1- Threshold
2- Door Knob
3- Bath Floor
4- Bath Knob
5- Air vent
6- Floor in front of bath

Crew

B-5
FRSK < 100
DM < BKG

Crew

B-11
FRSK < 100
DM < BKG

Crew

B-17
FRSK < 100
DM < BKG

Crew

B-23
FRSK < 100
DM < BKG

Crew

B-29
FRSK < 100
DM < BKG

SMEAR RESULTS ~~N DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD
2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD
3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD
4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD
5	< BKGD	5	< BKGD	5	< BKGD	5	< BKGD	5	< BKGD
6	< BKGD	6	< BKGD	6	< BKGD	6	< BKGD	6	< BKGD

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01

SURVEY NO. NSS-0007

Date 3/28/05 Time 1100	DOSE RATE	CONTAMINATION	
Surveyor LOGAN SCOTT	Inst. Type LUDM DICY	Beta ✓ Alpha	Beta Alpha
Signature Logan Scott	Serial No. 42972	Inst.Sn 75809	
Reviewed Kathy Lynch	β⁻ Factor	Eff. 10%	
	BKG 40 MR/hr	Bkg. 40 cpm	cpm

AREA B DECK CREW & OFFICER QUARTERS STARBOARD SIDE

COMPONENT

1 - THRESHOLD
2 - DOOR KNOBS
3 - BATH FLOOR
4 - BATH DOORKNOB
5 - AIR VENT
6 - FLOOR IN FRONT OF BATH

B-35	B-41	B-45	B-49	B-53
CREW	CREW	OFFICERS QUARTERS	OFFICERS QUARTERS	OFFICERS QUARTERS
FRSK < 100	FRSK < 100	FRSK < 100	FRSK < 100	FRSK < 100
DM < BKG	DM < BKG	DM < BKG	DM < BKG	DM < BKG

SMEAR RESULTS ~~N DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD
2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD
3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD
4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD
5	< BKGD	5	< BKGD	5	< BKGD	5	< BKGD	5	< BKGD
6	< BKGD	6	< BKGD	6	< BKGD	6	< BKGD	6	< BKGD

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

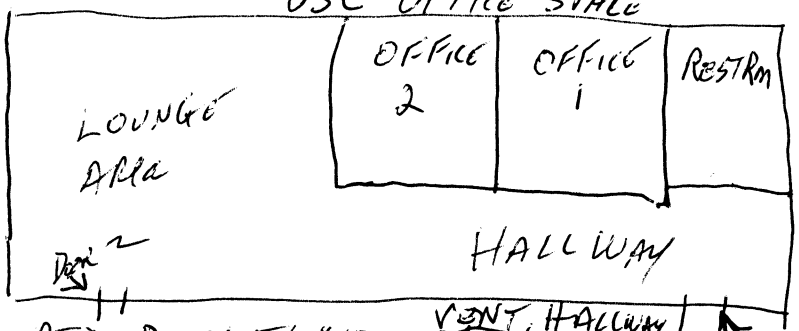
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0008

Date 3/28/05 Time 1:00 PM	DOSE RATE	CONTAMINATION	
Surveyor Caddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Caddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert Gmuh	β⁻Factor 10%	Eff. 10%	
	3K6 4uR/hr	Bkg. 30 cpm	cpm

AREA UNIVERSITY OF SOUTH CAROLINA OFFICE SPACES
B DECK PORT

COMPONENT ____



1. ~~R~~ DOOR 1 THRESHOLD
2. DOOR KNOB #1
3. FLOOR of HALLWAY
4. DECK RESTRM
5. DOOR KNOB RM
6. ~~DECK~~ [redacted] DOOR 1
7. DOOR KNOB OFFICE 1 N/A
8. DECK OFFICE 2 N/A
9. DOOR KNOB OFFICE 2 N/A
10. THRESHOLD DOOR 2 [redacted]
11. DOOR KNOB # DOOR 2
12. VENT IN LOUNGE
13. VENT OFFICE # 2
14. VENT OFFICE # 1
15. VENT RESTRM

USC OFFICE SPACES
DR < BKGD
FRISK < 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	6	< BKGD	11	< BKGD				
2	< BKGD	7	NA	12	< BKGD				
3	< BKGD	8	NA	13	< BKGD				
4	< BKGD	9	NA	14	< BKGD				
5	< BKGD	10	< BKGD	15	< BKGD				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0009

Date 3/28/05 Time 1:30 PM	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha	Beta ✓ Alpha
Signature [signature]	Serial No. 95499	Inst.Sn 97416	
Reviewed [signature]	β⁻ Factor 10%	Eff. 10%	
	BKG 4uR/hr	Bkg [redacted] cpm	30 cpm

AREA CREW PANTY B DECK PORT

COMPONENT

1- THRESHOLD
2- DOOR KNOB
3- DECK
4- VENTILATION
5 DK DRAIN

< BKGD
< 1000 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B - BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-RP0010

Date 3/29/05 Time 8:00 AM	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature [signature]	Serial No. 95499	Inst.Sn 97416	
Reviewed [signature]	β⁻ Factor ~~1.0~~ N/A	Eff. 10%	
	4 ~~M~~ R/HR BKGD	Bkg. 30 cpm	cpm

AREA STATE ROOM 34 PORT A DECK

COMPONENT

1 - THRESHOLD of DOORWAY
2 - DOORKNOB of SR DOOR
3 - VENTILATION DUCT
4. BATH ROOM DECK
5. BATH ROOM DOORKNOB

DOSE RATE - < BKGD
~~FIXED~~ COUNT RATE < 100 CPM (30-40 CPM)

SMEAR RESULTS ~~N DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG								
2	<BKG								
3	<BKG								
4	<BKG								
5	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

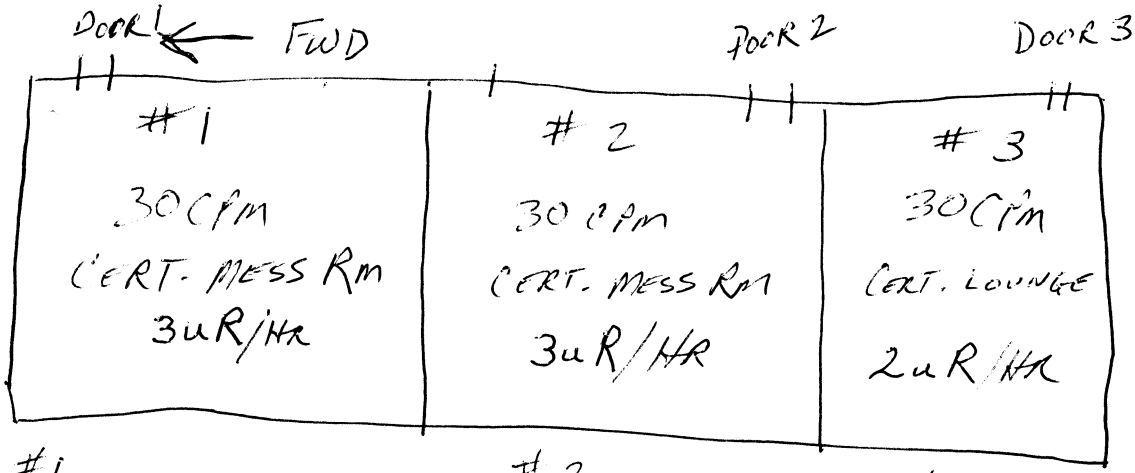
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0011

Date 3/29/63 Time 5:30 AM	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 93499	Inst.Sn [redacted]	
Reviewed [signature]	β⁻ Factor 80%	Eff. 10% 97416	
	Bkg 4 μR/hr	Bkg. 30 cpm	cpm

AREA "B" DECK CERT. MESS ROOM + CERT. LOUNGE

COMPONENT



#1
1. THRESHOLD
2. DOOR KNOB
3. VENTILATION
4. WATER FOUNTAIN

#2
1. THRESHOLD
2. DOOR KNOB
3. VENTILATION

#3
1. THRESHOLD
2. DOOR KNOB
3. VENTILATION
4 WATER FOUNTAIN

MESSRM BACKGOUND 3 uR/HR 30 CPM
MESSRM BACKGOUND 3 uR/HR 30 CPM
LOUNGE BACKGOUND 2uR/HR 30 CPM

#1 MESSRM.		#2 MESS RM		# 3 LOUNGE					
SMEAR RESULTS ~~IN DPM/100 CM²~~				~~B = BETA in mRAD/hr/100 CM²~~					
NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD				
2	< BKGD	2	< BKGD	2	< BKGD				
3	< BKGD	3	< BKGD	3	< BKGD				
4	< BKGD			4	< BKGD				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

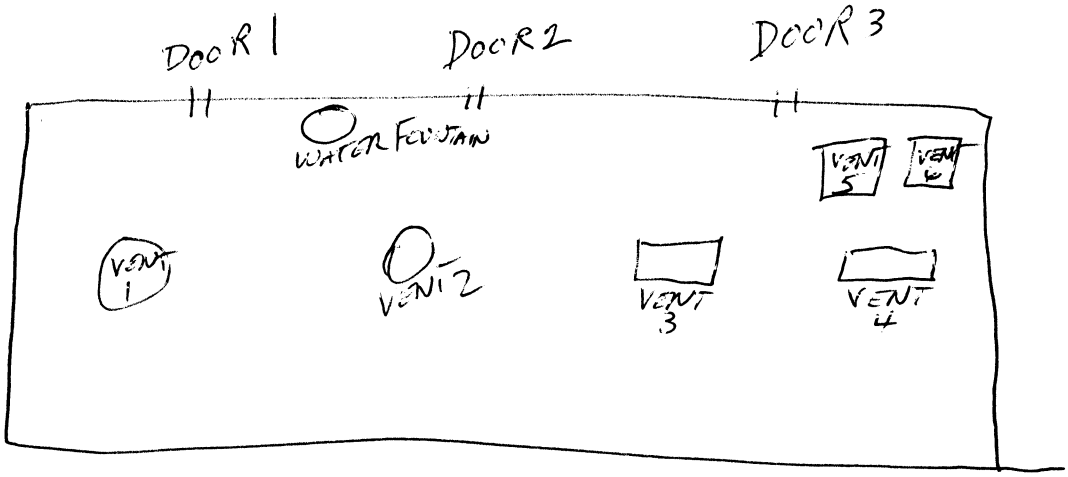
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0012

Date 3/29/05 Time 9:00AM	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed [signature]	β⁻ Factor 10%	Eff. 10%	
	BKG. 2uR/HR	Bkg. 30 cpm	cpm

AREA B DECK PORT OFFICERS MESS

COMPONENT



1 - THRESHOLD DOOR 1
2 - DOOR KNOB DOOR 1
3 - VENT 1
4 - WATER FOUNTAIN
5 - VENT 2
6. THRESHOLD DOOR 2
7 DOOR KNOB DOOR 2
8 - VENT 3
9 - VENT 4
10 - VENT-5
11. THRESHOLD DOOR 3
12. DOOR KNOB DOOR 3
13. VENT 6

DR < 2UR/HR BKGD
FRISK < 30 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD	11	< BKGD						
4	< BKGD	12	< BKGD						
5	< BKGD	13	< BKGD						
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0013

Date 3/29/05 Time 9:20	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature [signature]	Serial No. 95499	Inst.Sn 97416	
Reviewed [signature]	β⁻ Factor	Eff. 10%	
	@ 2uR/Hr	Bkg. 30 cpm	cpm

AREA B DECK PORT B-8 STATE ROOM, B14 STATE RM, B18 STATE RM CLEANING GEAR LOCKER, OFFICE

COMPONENT

1 THRESHOLD
2 DOOR KNOB
3 VENTILATION
4 DECK BATH RM
5 BATH RM DOOR KNOB

CLEANING GEAR LOCKER
1. ~~DO~~ THRESHOLD
2. DOOR KNOB
3. DECK
4. VENT

OFFICE
1. THRESHOLD
2. DOOR KNOB
3 VENT

FRISK 30 CPM DR < 3 uR/HR BKGD — STATE RM B8

FRISK < 30 CPM DR < 2 uR/HR — STATE RM B14

FRISK 30 CPM DR < 2 uR/HR — STATE ROOM B18

DR < 2 uR/HR FRISK < 30 CPM — CLEANING GR LOCKER

FRISK < 30 CPM — OFFICE NEXT TO CLEANING LOCK

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD
2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD
3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD
4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD		
5	< BKGD	5	< BKGD	5	< BKGD	5	< BKGD		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

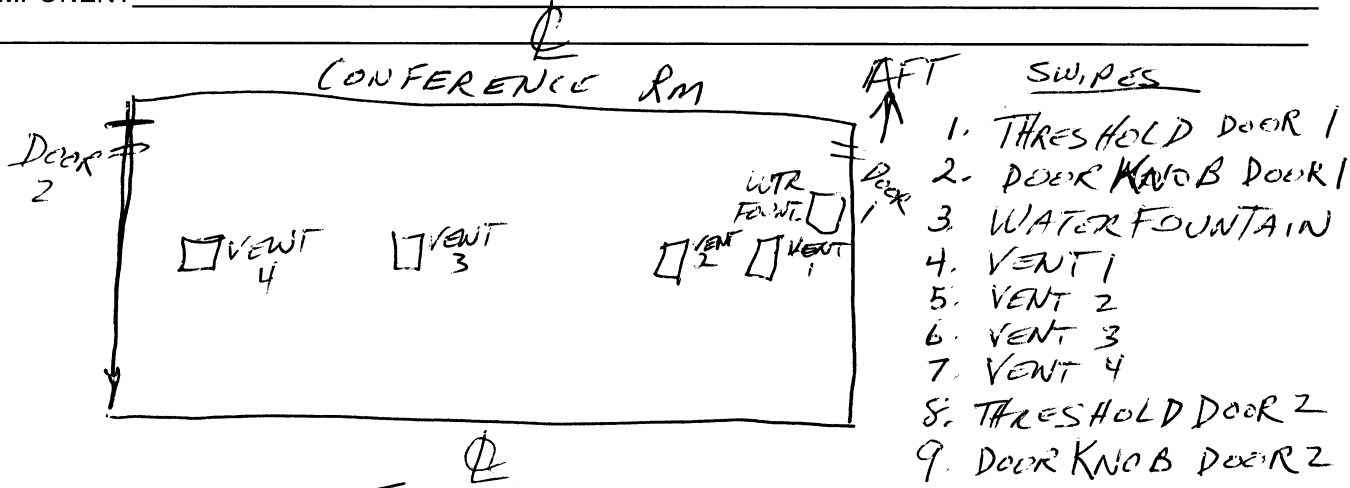
N.S. SAVANNAH
RADIOLOGICAL SURVEY

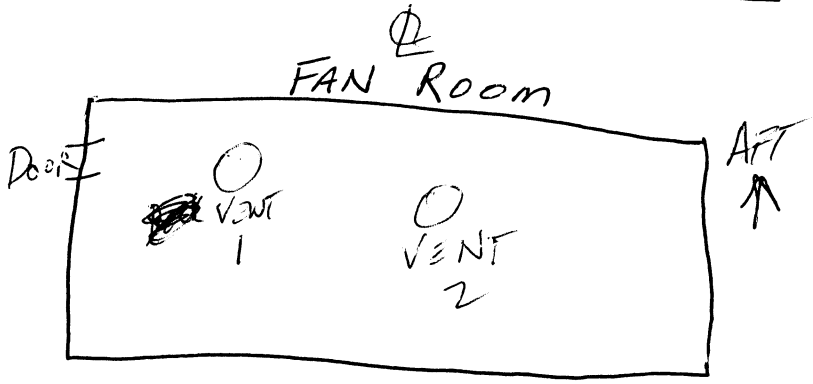
NSS-01 SURVEY NO. NSS-0014

Date 3-29-05 Time	DOSE RATE	CONTAMINATION	
Surveyor Caddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Caddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert Zimmerman	β⁻ Factor 10%	Eff. 10%	
	2uR/Hr	Bkg. 30 cpm	cpm

AREA B DECK ~~[illegible]~~ CONFERENCE Rm FAN ROOM CENTER LINE RMS

COMPONENT





30 cpm
2 uR/HR

30 cpm
2 uR/HR

CONFERENCE RM. FAN RM

SMEAR RESULTS ~~• IN DPM/100 CM²~~ ~~• B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD	9	<BKGD	1	<BKGD				
2	<BKGD			2	<BKGD				
3	<BKGD			3	<BKGD				
4	<BKGD			4	<BKGD				
5	<BKGD			5	<BKGD				
6	<BKGD								
7	<BKGD								
8	<BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0015

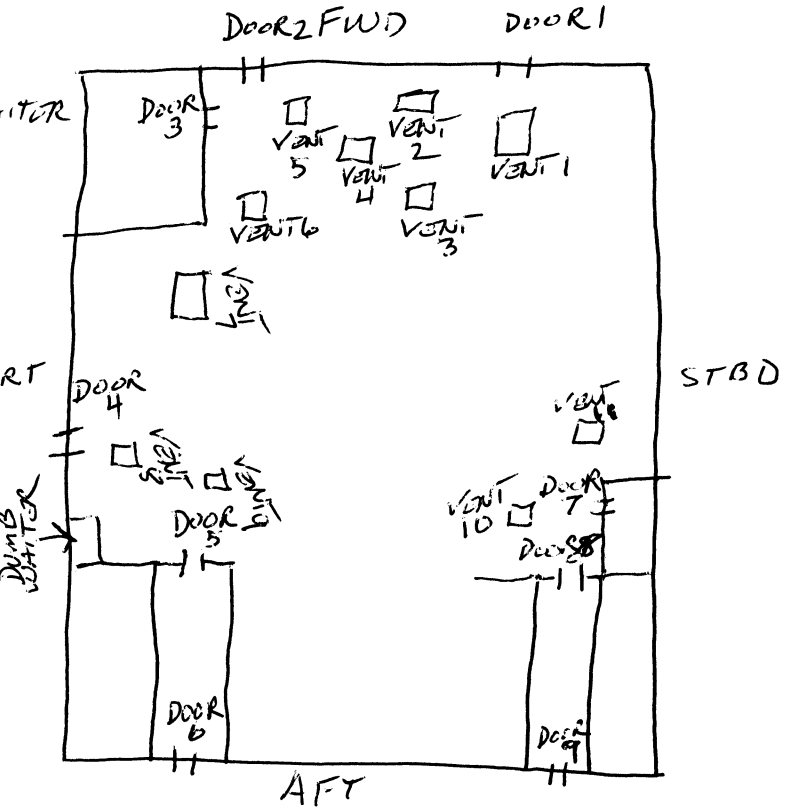
Date 3/29/05 Time [redacted]	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha	Beta Alpha
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert E. Cunnah	β⁻ Factor ~~4UR/HR~~	Eff. 10%	
	4UR/H BKG	Bkg. 30 cpm	cpm

AREA B DECK CENTER LINE MAIN GALLEY

COMPONENT

SWIPES

1. DOOR 1 THRESHOLD
2. " KNOB
3. DOOR 2 THRESHOLD
4. " KNOB
5. DOOR 3 THRESHOLD
6. " KNOB
7. DOOR 4 THRESHOLD
8. " KNOB
9. DOOR 5 THRESHOLD
10. " KNOB
11. DOOR 6 THRESHOLD
12. " KNOB
13. DOOR 7 THRESHOLD
14. " KNOB
15. DOOR 8 THRESHOLD
16. " KNOB
17. DOOR 9 THRESHOLD
18. " KNOB
19. DUMBWAITER
20. VENT 1
21. " 2
22. " 3
23. " 4
24. " 5
25. " 6 PORT
26. " 7
27. " 8
28. " 9
29. " 10
30. " 11



D.R. < BKGD
FRISK < 100 CPM FOR ENTIRE MN. GALLEY

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD	17	< BKGD	25	< BKGD		
2	< BKGD	10	< BKGD	18	< BKGD	26	< BKGD		
3	< BKGD	11	< BKGD	19	< BKGD	27	< BKGD		
4	< BKGD	12	< BKGD	20	< BKGD	28	< BKGD		
5	< BKGD	13	< BKGD	21	< BKGD	29	< BKGD		
6	< BKGD	14	< BKGD	22	< BKGD	30	< BKGD		
7	< BKGD	15	< BKGD	23	< BKGD				
8	< BKGD	16	< BKGD	24	< BKGD				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

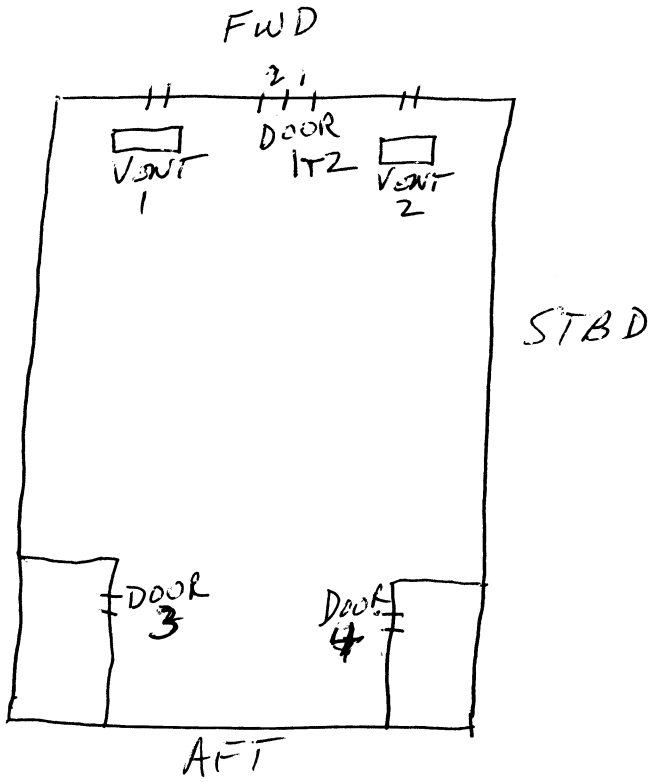
NSS-01 SURVEY NO. NSS-0016

Date 3/29/05 Time	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Ralph E. Samuels	β⁻ Factor ~~1MR/HR~~	Eff. 10%	
	4uR/H BKG	Bkg. 30 cpm	cpm

AREA B DECK CENTER LINE DINING ROOM

COMPONENT

1. DOOR 1 THRESHOLD
2. DOOR 1 KNOB
3. DOOR 2 THRESHOLD
4. " KNOB
5. DOOR 3 THRESHOLD
6. " KNOB
7. DOOR 4 THRESHOLD
8. DOOR 4 KNOB
9. VENT 1
10. VENT 2



DR < BKGD ENTIRE DINING RM

FRISKE 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0017

Date 3-24-05 Time 1355	DOSE RATE	CONTAMINATION	
Surveyor Caddock	Inst. Type Ludlum	Beta ✓ Alpha	Beta Alpha
Signature Caddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert Pennock	β Factor ~~Hot Mic~~	Eff. 10%	
	4 µR/H	Bkg. 30 cpm	cpm

AREA B Deck Inboard Portside Steward Laundry

COMPONENT

DR < BKGD
FRISK < 100 CPM

SMEAR RESULTS ~~N=DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0018

Date 3-29-05 Time 1345	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type Ludlum	Beta ✓ Alpha	Beta Alpha
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed R. W. Hannah	~~β Factor~~ BKG 4 uR/H	Eff. 10%	
		Bkg. 30 cpm	cpm

AREA B Deck CERT BARBER SHOP (CREW)

COMPONENT

3 - FLOOR
4 - DOOR KNOBS
5 - THRESHOLD

D.R. MASTER
~~FASR~~ < BKGD
FASR < 100 CPM

SMEAR RESULTS ~~N DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	NA								
2	NA								
3	< BKGD								
4	< BKGD								
5	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0019

Date 3-29-05 Time 0800-0900	DOSE RATE	CONTAMINATION	
Surveyor LOMAN Scott	Inst. Type LIUD/um	Beta V Alpha	Beta Alpha
Signature Loman Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robert Runnels	β Factor 1	Eff. 10 %	
	BKG 4.0 µR/hr	Bkg. 40 cpm	cpm

AREA Promenade Deck VERANDA & MAIN LOUNGE

COMPONENT

1 SWIMMING POOL DOOR HANDLE PORTSIDE
2 MIDDLE of DANCE FLOOR
3 CLENING ROOM LOCKER PORTSIDE THRESHOLD
4 KITCHEN (PANTRY) HAND CLEANING SINK PORTSIDE
5 MENS BATHROOM PORTSIDE HAND SINK
6 PROMENADE THRESHOLD STARBOARD
7 LADIES POWDER ROOM HAND SINK
8 Projection Room Port EXIT DOOR HANDLE
9 FAN ROOM STARBOARD FLOOR
10 FAN ROOM PORT FLOOR

FSKR - < 100
DM - < BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0020

Date 3-29-05 Time 0900	DOSE RATE	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type LudLum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robert Truman	β⁻ Factor 1	Eff. 10%	
	BKG 40 µR/hr	Bkg. 40 cpm	cpm

AREA BOAT DECK

COMPONENT

1. OFFICERS LOUNGE THRESHOLD
2 OFFICERS LOUNGE HAND SINK
3. OFFICERS LOUNGE DOOR KNOB
4. OFFICERS LOUNGE VENT
5 OFFICERS LOUNGE FLOOR

1. OFFICERS LAUNDRY FLOOR
2 OFFICERS LAUNDRY SINK

STATEROOMS (OFFICERS)
1 threshold
2 DOOR KNOB
3 BATH FLOOR
4 BATH DOOR KNOB
5 AIR VENT
6 FLOOR

OFFICERS LOUNGE
FRSK < 100cpm
DM < BKG

PORT SIDE OFFICERS LAUNDRY
FRS < 100cpm
DM < BKG

LAT ROOM BT 12
FRS < 100cpm
DM < BKG

#3 120CPM GROSS 80 NET CPM
STATE ROOM BT 8
FRSK < 100cpm
DM < BKG

CHIEF RM 1ST ENGR STATE ROOM
FRSK < 100cpm
DM < BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD
2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD
3	< BKGD			3	< BKGD	3	< BKGD	3	< BKGD
4	< BKGD			4	< BKGD	4	< BKGD	4	< BKGD
5	< BKGD			5	< BKGD	5	< BKGD	5	< BKGD
				6	< BKGD	6	< BKGD	6	< BKGD

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS - 0021

Date 3-29 Time 1010	DOSE RATE	CONTAMINATION	
Surveyor LOMAN Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robt Gunnels	β Factor ✓	Eff. 10%	
	BKG 4.0 MR/hr	Bkg. 40 cpm	cpm

AREA OFFICERS DECK (BOAT DECK)

COMPONENT

OFFICERS STATE ROOMS

1 THRESHOLD
2 DOOR KNOB
3 BATH FLOOR
4 BATH DOOR KNOB
5 AIR VENT
6 FLOOR
7 SINK

1ST ASST. ENG (2ND ENGR) BT. 4 FRSK < 100 cpm DM < BKG

FRSK < 100 cpm DM < BKG

CAPTAINS QUARTERS BT. 11 (EVEN) FRSK < 100 cpm DM < BKG

BT. 13 FRSK < 100 cpm DM < BKG

CLEANING GEAR LOCKER FRSK < 100 cpm DM < BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD	2	< BKGD
2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD	6	SKIP
3	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD	7	< BKGD
4	< BKGD	4	< BKGD	4	< BKGD	4	< BKGD		
5	< BKGD	5	< BKGD	5	< BKGD	5	< BKGD		
6	< BKGD	6	< BKGD	6	< BKGD	6	< BKGD		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0022

Date 3-29-05 Time 1300	DOSE RATE	CONTAMINATION	
Surveyor Logan Scott	Inst. Type LUDLUM 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Logan Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robert Pinnock	β⁻ Factor 1	Eff. 10%	
	BKG 4.0 µR/h	Bkg. 40 cpm	cpm

AREA NAVIGATION BRIDGE DECK

COMPONENT

1. threshold
2. DOOR KNOB
3. Bathroom floor
4. Bathroom Door KNOB
5. AIR Vent
6. Floor
7. SINK
8. ELEVATOR EQUIPTMENT platform RIGHT
9. ELEVATOR EQUIPTMENT platform Left

NOT ALL LOCATIONS TAKEN IN EACH ROOM

FRSK < 100 cpm DM < BKG BRIDGE TOILET

FRSK < 100 cpm DM < BKG CLEANING GEAR LOCKER

FRSK < 100 cpm DM < BKG NR 2

FRSK < 100 cpm DM < BKG NR 4

FRSK < 100 cpm DM < BKG ELEVATOR ROOM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	7	< BKGD	1	< BKGD	1	< BKGD	2	< BKGD
2	< BKGD	1	< BKGD	2	< BKGD	2	< BKGD	6	< BKGD
7	< BKGD	3	< BKGD	3	< BKGD	3	< BKGD	8	< BKGD
				4	< BKGD	4	< BKGD	9	< BKGD
				5	< BKGD	5	< BKGD		
				6	< BKGD	6	< BKGD		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01

SURVEY NO. NSS-0022

Date 3-29-05 Time 1300	DOSE RATE	CONTAMINATION	
Surveyor Loman Scott	Inst. Type Ludlum	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 42972	Inst. Sn 91037	
Reviewed Robert Runnels	β⁻ Factor 1	Eff. 10%	
	BKG 40 µR/hr	Bkg. 40 cpm	cpm

AREA NAVIGATION BRIDGE DECK (Pilot House)

COMPONENT

BRIDGE

1. STARBOARD threshold
2. STARBOARD DOOR KNOB
3. PORT threshold
4. PORT DOOR KNOB
5. BRIDGE CENTER FLOOR
6. BRIDGE GRAB RAIL STARBOARD SIDE FRONT GLASS.

FRSK < 100 cpm
DM < BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

PAGE 1 OF 2

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01

SURVEY NO. NSS-0023

Date 7-30-05 Time 0830	DOSE RATE HVG 50 V	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type PURATEC	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 95499	Inst.Sn 97499	
Reviewed Robt G Renaud	~~β~~ Factor NA	Eff. 10%	
	4 µR/Hr.	Bkg. 30 cpm	cpm

AREA C-DECK CREW CABINS

COMPONENT

1. Threshold
2. Doorknob
3. Bath Floor
4. Bath Doorknob
5. Vent
6. Room Floor
7. Sink

C-1 FRSK <100 DM < BKG

C-1 / STARBOARD FRSK <100 DM < BKG

C-5 / STARBOARD FRSK <100 DM < BKG

C-3 / CLEANING GEAR LOCKER OPPOSITE C-2 FRSK <100 DM < BKG

C-2 / PORT FRSK <100 DM < BKG

C-4 / PORT (BLUE PRINT ROOM?) FRSK <100 DM < BKG

SMEAR RESULTS ~~N-DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD
2	< BKGD	2	< BKGD	6	< BKGD	2	< BKGD	2	< BKGD
3	< BKGD	3	< BKGD	7	< BKGD	3	< BKGD	3	< BKGD
4	< BKGD	4	< BKGD			4	< BKGD	4	< BKGD
5	< BKGD	5	< BKGD			5	< BKGD	5	< BKGD
6	< BKGD	6	< BKGD			6	< BKGD	6	< BKGD

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0023

Date 3-30-05 Time 1100	DOSE RATE	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type HVG50V DURATEK	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 95499	Inst.Sn 97499	
Reviewed Ralph Summah	~~β Factor~~ NA	Eff. 10%	
	4 MR/Hr	Bkg. 30 cpm	cpm

AREA C-DECK CREW CABINS

COMPONENT

1. threshold
2. DOOR KNOB
3. BATH FLOOR
4. BATH DOOR KNOB
5. VENT
6. ROOM FLOOR

FRSK < 100
DM-BKG < 10

SMEAR RESULTS ~~- IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

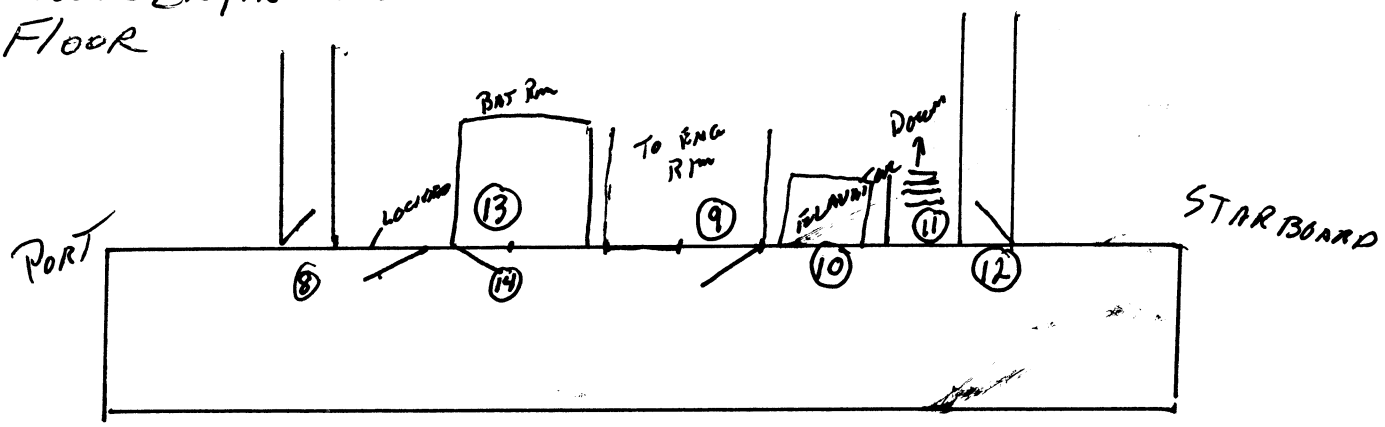
NSS-01 SURVEY NO. NSS-0024

Date 3-30-05 Time	DOSE RATE		CONTAMINATION	
Surveyor Loman Scott	Inst. Type DUCATEE AMS-5		Beta ✓ Alpha	Beta Alpha
Signature Loman Scott	Serial No. 95499		Inst.Sn 97416	
Reviewed Robert Pennock	~~β Factor~~ NA		Eff. 10 %	
	4 µR/Hr		Bkg. 30 cpm	cpm

AREA C DECK - MACHINE LOADING PASSAGE

COMPONENT

#8 PORT - MACHINE LOADING AREA (CREW) BOW
#9 FLOOR ENGINE ROOM ACCESS (PORT)
#10 ELEVATOR FLOOR
#11 FLOOR ENGINE ROOM ACCESS
#12 FLOOR



13 - FLOOR
14 - DOOR HANDLE BAT Rm

FRSK < 100
DM < BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
8	< BKGD								
9	< BKGD								
10	< BKGD								
11	< BKGD								
12	< BKGD								
13	< BKGD								
14	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

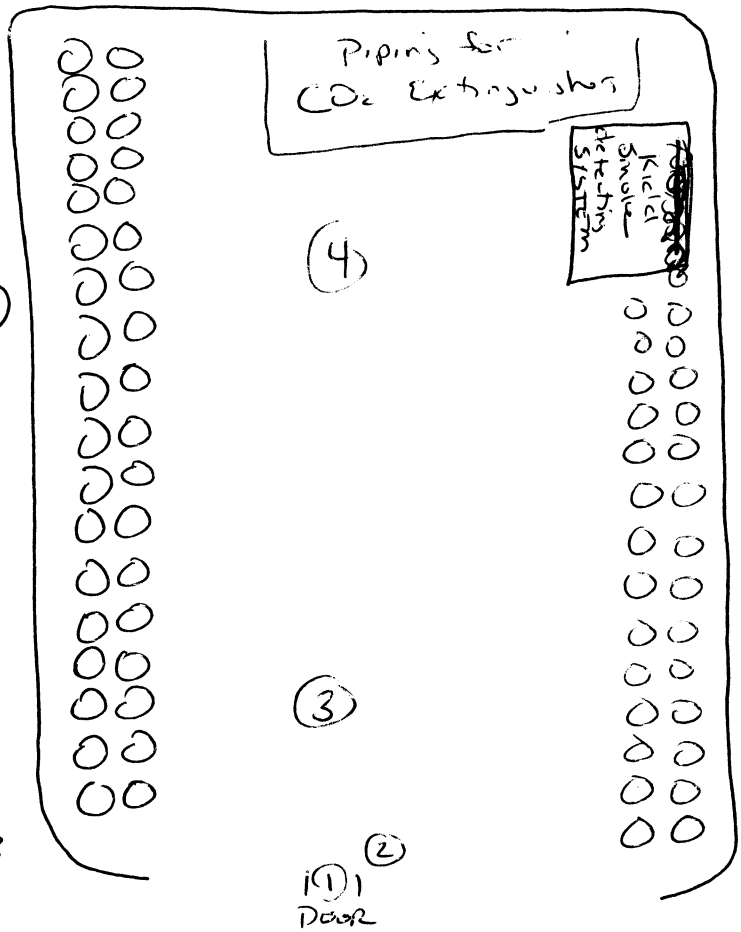
NSS-01 SURVEY NO. NSS-0025

Date 3-30-05 Time 10:45	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type Ludlum	Beta ✓ Alpha	Beta Alpha
Signature Craddock	Serial No. 95495	Inst.Sn 97416	
Reviewed Ralph E. Lennach	~~β Factor~~ 4 uR/h BKG	Eff. 10%	
		Bkg. 30 cpm	cpm

AREA C DECK STARBOARD SIDE CO2 Room (FIRE EXTINGUISHER)

COMPONENT

#1 Threshold
#2 doorknob
#3 deck (front)
#4 deck (REAR)



<BKGD DR
<100 CPM FAISR

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD								
2	<BKGD								
3	<BKGD								
4	<BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0026

Date 3-30-05 Time 10.30	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type Ludlum	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Ralph Pennock	β Factor ~~4 0.7 H~~ BS N/A	Eff. 10%	
	BKG 4 MR/hr	Bkg. 30 cpm	cpm

AREA C DECK PORT SIDE
AFT OF MACHINIE LOADING PASSAGE

COMPONENT

1. Threshold
2. Door Handle
3. Bath Floor
4. Bath Door Handle
5. Air Vent
6. Main Floor
7. sink

C 24
DR < BKGD
FRISK 100 CPM

C 18
< BKGD
< 100 CPM

TC
~~Cleaning~~
~~Gear~~
~~Locker~~
Cleaning Gear Locker
< BKGD
< 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD				
2	< BKGD	2	< BKGD	6	< BKGD				
3	< BKGD	3	< BKGD	7	< BKGD				
4	< BKGD	4	< BKGD						
5	< BKGD	5	< BKGD						
6	< BKGD	6	< BKGD						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0027

Date 3/30/05 Time 11:00	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type Ludlum	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert G Dunnah	β⁻ Factor ✓	Eff. 10%	
	BKG 4 MR	Bkg. 30 cpm	cpm

AREA C-DECK STARBOARD SIDE
AFT OF MACH LOADING PASSAGE.

COMPONENT

1. THRESHOLD
2. DOOR HANDLE
3. BATH FLOOR
4. BATH DOOR HANDLE
5. AIRVENT
6. MAIN CABIN FLOOR
7. SINK

C-13 ACCESS from PIPE Room

C-19 1 Room Aft & STBD

C-23 END OF HALL TOWARD STBD

ENTERTAINMENT MUSIC Room

DR < BKG
FMSIC < 100 cpm

< BKG
< 100 CPM

< BKG
< 100 CPM

< BKG
< 100 CPM

REP BOOD STEAM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~.

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	1	< BKGD	1	< BKGD		
2	< BKGD	2	< BKGD	2	< BKGD	2	< BKGD		
3	< BKGD	3	< BKGD	3	< BKGD	6	< BKGD		
4	< BKGD	4	< BKGD	4	< BKGD				
5	< BKGD	5	< BKGD	5	< BKGD				
6	< BKGD	6	< BKGD	6	< BKGD				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0028

Date 3-30-05 Time	DOSE RATE	CONTAMINATION	
Surveyor R Brennan / J Stoudy	Inst. Type µR meter	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature R Brennan	Serial No. 95469	Inst.Sn 91039	
Reviewed	β⁻ Factor —	Eff. 10%	
	D.R. BKG < 4 µR/hr	Bkg. < 30 cpm	cpm

AREA Engine Room Upper Landing to Machinery Passage

COMPONENT

SEE ATTACHED DRAWING

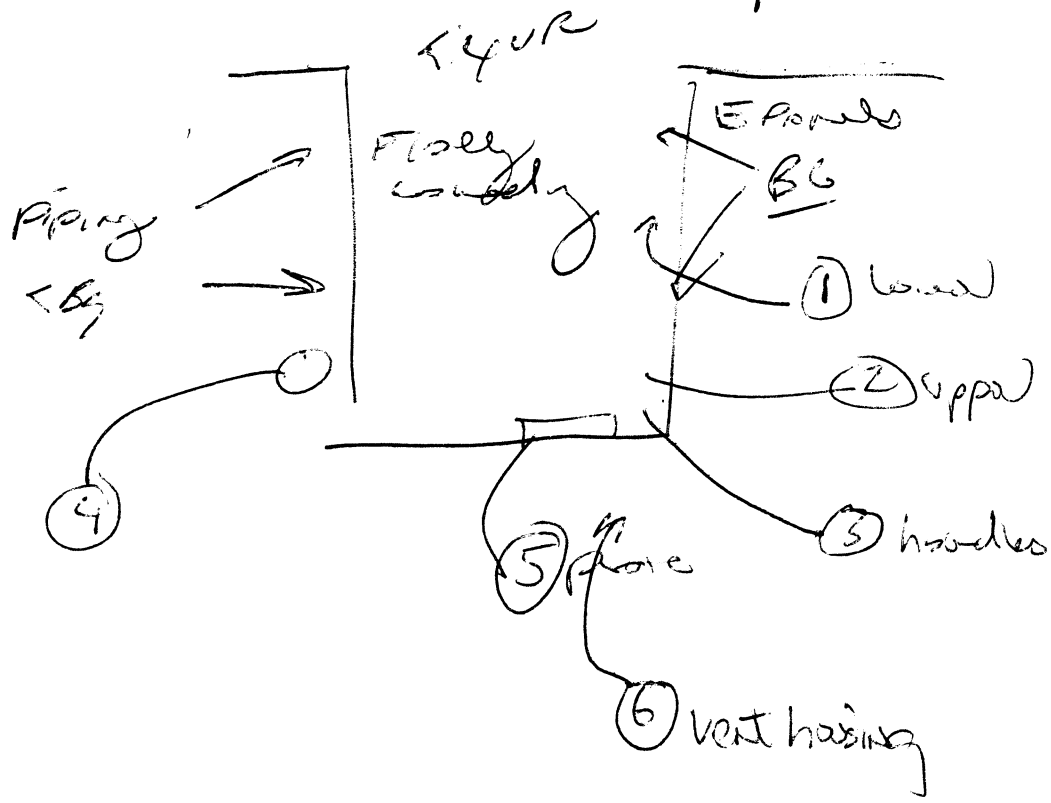
DR < BKG
Trish < BKG

SMEAR RESULTS ~~N DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM².~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG								
2	< BKG								
3	< BKG								
4	< BKG								
5	< BKG								
6	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA


Piping
(4)
(1)
(2)
(3)
(5)
(6) vent housing

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0029

Date 3-30-05 Time	DOSE RATE	CONTAMINATION	
Surveyor R Piennar / J Stoury	Inst. Type µR MATHER	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature R & C Piennar	Serial No. 95469	Inst.Sn FRISKILL 91039	
Reviewed	β⁻Factor —	Eff. ~10%	
	D.R BKG < 4 µR/hr	Bkg. < 30 cpm	cpm

AREA ENGINE ROOM UPPER LEVEL

COMPONENT

SEE ATTACHED DRAWING

DR < BKG
FRISK < BKG

SMEAR RESULTS ~~dpm/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

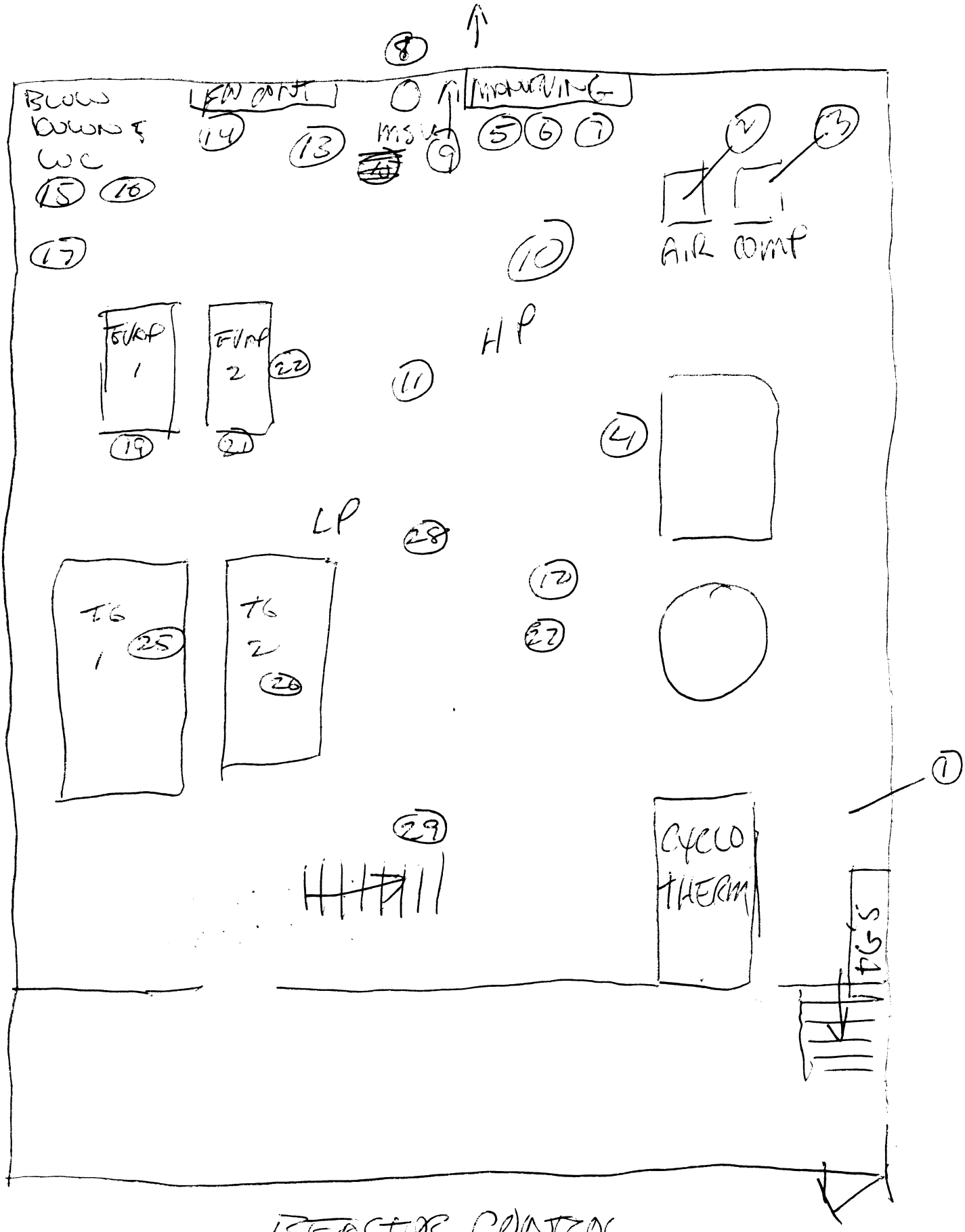
NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG	17	< BKG	25	< BKG		
2	< BKG	10	< BKG	18	< BKG	26	< BKG		
3	< BKG	11	< BKG	19	< BKG	27	< BKG		
4	< BKG	12	< BKG	20	< BKG	28	< BKG		
5	< BKG	13	< BKG	21	< BKG	29	< BKG		
6	< BKG	14	< BKG	22	< BKG				
7	< BKG	15	< BKG	23	NA				
8	< BKG	16	< BKG	24	< BKG				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

3/3/05

ENGINE ROOM - UPPER FLAT



N.S. SAVANNAH
RADIOLOGICAL SURVEY

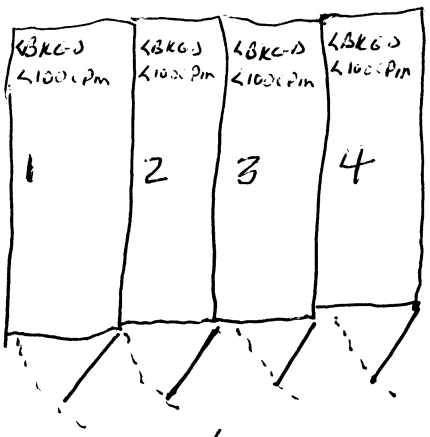
NSS-01 SURVEY NO. NSS-0030

Date 3-30-05 Time 1130	DOSE RATE	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type Ludlum	Beta ✓ Alpha	Beta Alpha
Signature Loman Scott	Serial No. 42972	Inst.Sn 97416	
Reviewed RA Gilmore	β⁻ Factor N/A	Eff. 10%	
	BKG 4uR/H	Bkg. 30 cpm	cpm

AREA C DECK HALLWAY LOCKERS FOR BREATHING APPARATUS

COMPONENT

1. DOOR HANDLE
2. INSIDE LOCKER



<BKGD DR. <100 CPM FRISK

#1 #2 #3 #4

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD	1	<BKGD	1	<BKGD	1	<BKG		
2	<BKGD	2	<BKGD	2	<BKGD	2	<BKG		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0031

Date 3-30-05 Time 9:20 AM	DOSE RATE	CONTAMINATION	
Surveyor ROBERT E PENNOCK	Inst. Type N/A	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Robert E Pennock	Serial No.	Inst.Sn 75869	
Reviewed [illegible]	β⁻ Factor	Eff. 16%	
		Bkg. 30 cpm	cpm

AREA BOTTOM DRAIN OF EXHAUST VENT TO TOP OF MAST
"A" DECK IN FRONT OF #4 HOLD COVER

COMPONENT

FRISKER < BKG

1 VALVE RETRACTOR (INSIDE)
2 VALVE PLATES
3 VALVE BODY (INSIDE)

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

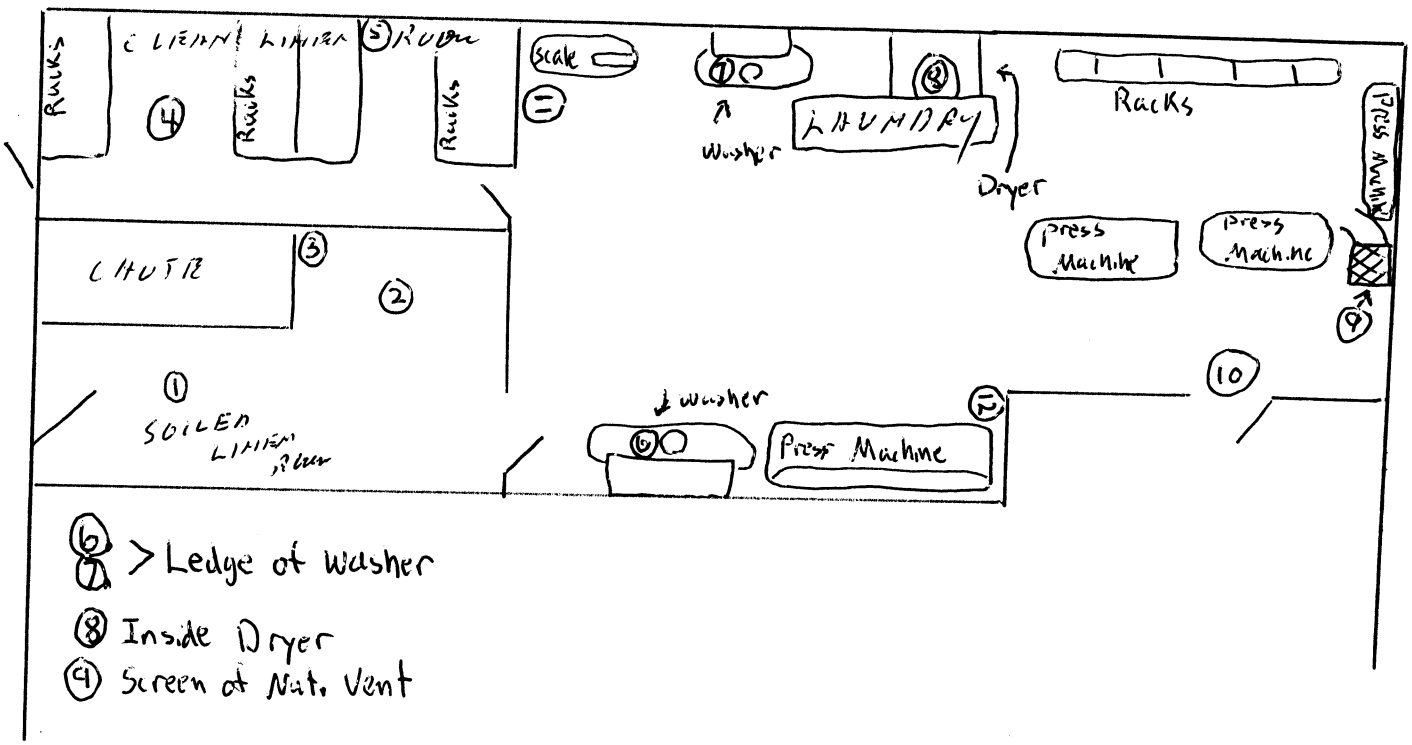
NSS-01 SURVEY NO. NSS-0032

Date 3-31-05 Time 1045	DOSE RATE	CONTAMINATION	
Surveyor Loman Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robert Pinnock	~~β Factor~~	Eff. 10%	
	BKG 4/4 RH	Bkg. 40 cpm	cpm

AREA Laundry & Linen Rooms - C Deck

COMPONENT

Port



⑥ ⑦ > Ledge of Washer
⑧ Inside Dryer
⑨ Screen of Nat. Vent

FRISK < 100 cpm
DR < 4 μR/hr

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD	11	< BKGD						
4	< BKGD	12	< BKGD						
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01

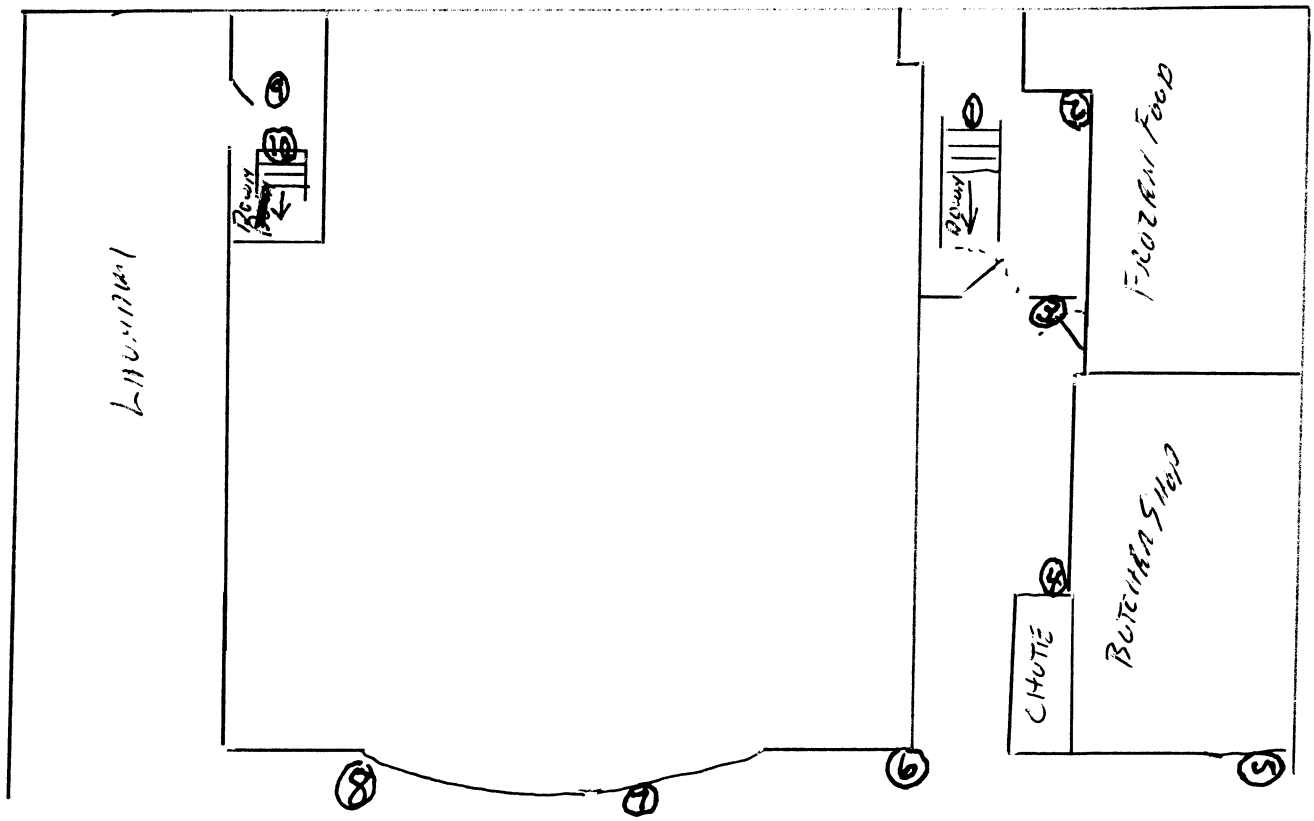
SURVEY NO. NSS-0033

Date 3-31 Time 0800	DOSE RATE	CONTAMINATION	
Surveyor Lonan Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Lonan Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Ralph Brunach	β⁻ Factor ____	Eff. 10%	
	BKG 4 uR/h	Bkg. 40 cpm	cpm

AREA C-DECK PORT & STARBOARD PASSAGEWAYS

COMPONENT

BOW



FRSR < 100 cpm
DM < 40 μR/h Port

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

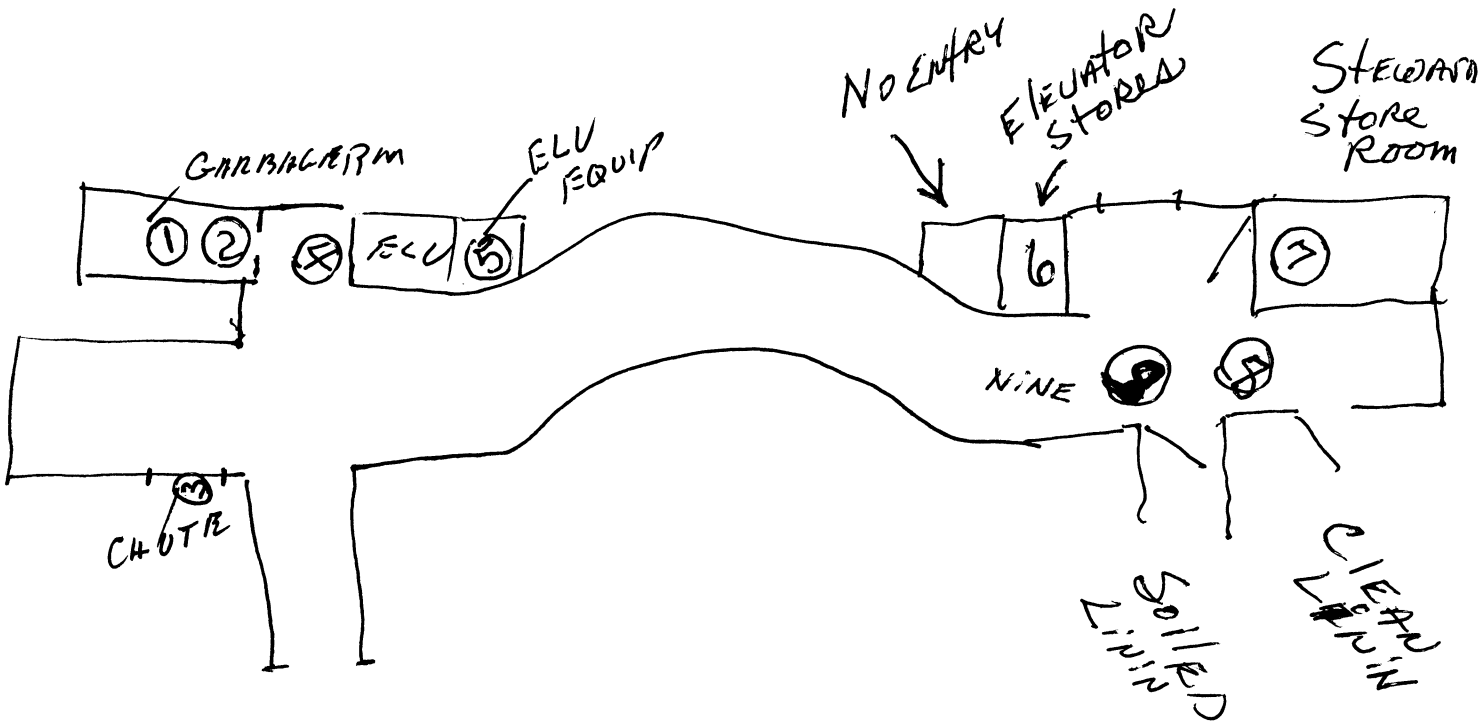
NSS-01 SURVEY NO. NSS-0034

Date 3-31-05 Time 0800	DOSE RATE	CONTAMINATION	
Surveyor Lamar Scott	Inst. Type DURATEC 44/MIN	Beta ✓ Alpha	Beta Alpha
Signature Lamar Scott	Serial No G5499	Inst.Sn G7416	
Reviewed Ralph Rimmer	~~β Factor~~	Eff. 10%	
	BKG - 4 MR/h	Bkg. 40 cpm	cpm

LMS AREA ~~D~~ DECK C — HALLWAY & LAUNDRY ENTRANCE

COMPONENT STORES LOADING PASSAGE

O = FLOOR



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM².~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0035

Date 3-31-05 Time 11:00	DOSE RATE	CONTAMINATION	
Surveyor Bob Pennock	Inst. Type μR Meter	Beta 1 Alpha ____	Beta ____ Alpha ____
Signature Robert Pennock	Serial No. 95469	Inst.Sn 91037	
Reviewed [illegible]	β Factor —	Eff. ~10%	
	BKG 2 μR/hr	Bkg. 30 cpm	cpm

AREA _____

COMPONENT Source Receipt

DR ≤ BKG

FIXED ≤ BKG

SMEARS

1 Source Cam

2 Tc 99 case

3 Th 230 case

4 Tc 99 source

5 Th 230 source

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~									
NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG								
2	< MDA								
3	< BKG								
4	< BKG								
5	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

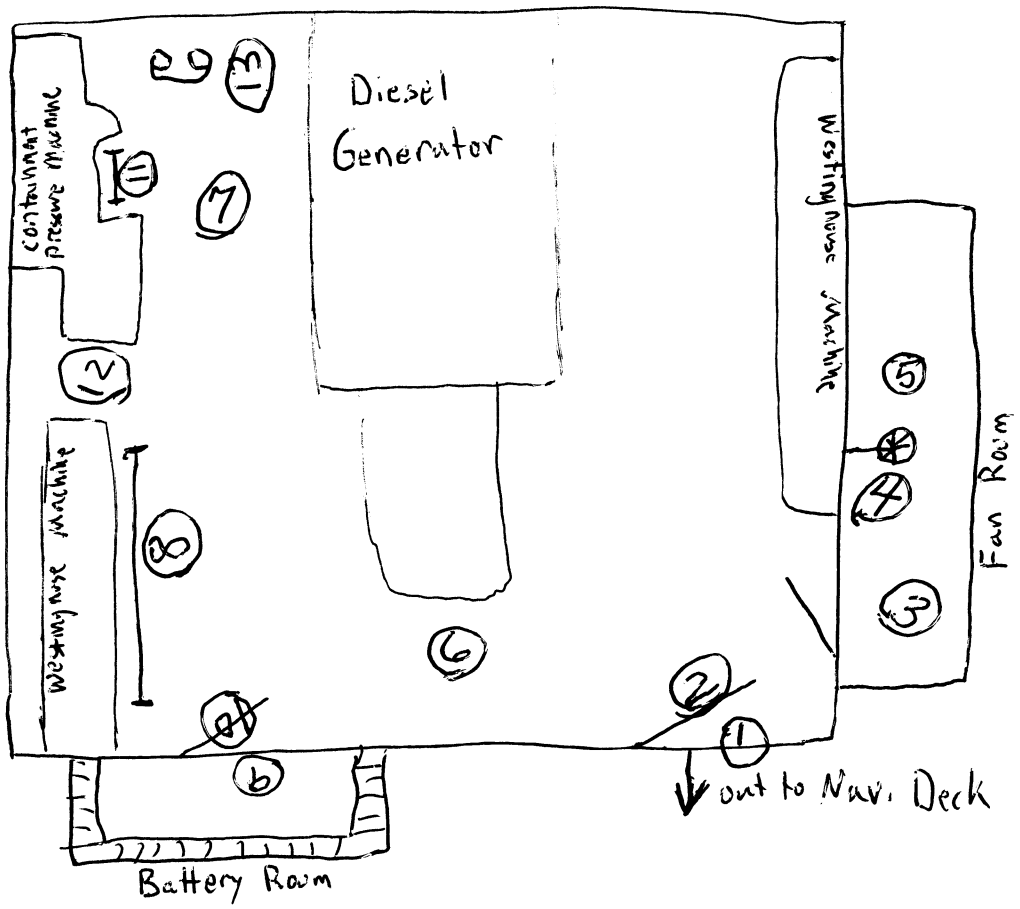
NSS-01 SURVEY NO. NSS-0036

Date 3/10/25 Time 0810	DOSE RATE	CONTAMINATION	
Surveyor Lomax Scott	Inst. Type Ludlum 19	Beta ✓ Alpha	Beta Alpha
Signature Lomax Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Ralph Lomax	~~β Factor~~ /	Eff. 10%	
	BKG/hR/hr	Bkg. 40 cpm	cpm

AREA Navigation Deck

COMPONENT Emergency Generator Room

#13 Telephone



Port

#2 Door Handle

#4 Valve Handle for circulated water from cooling coil

Grab & Bar

#10 Door Handle Batt

#11 Grab Handle Containment Pressure Machine

FRSK < 100 dpm/100 cm²
DM < 40 µR/hr

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKGD						
2	< BKG	10	< BKGD						
3	< BKG	11	< BKGD						
4	< BKG	12	< BKGD						
5	< BKG	13	< BKGD						
6	< BKG								
7	< BKG								
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

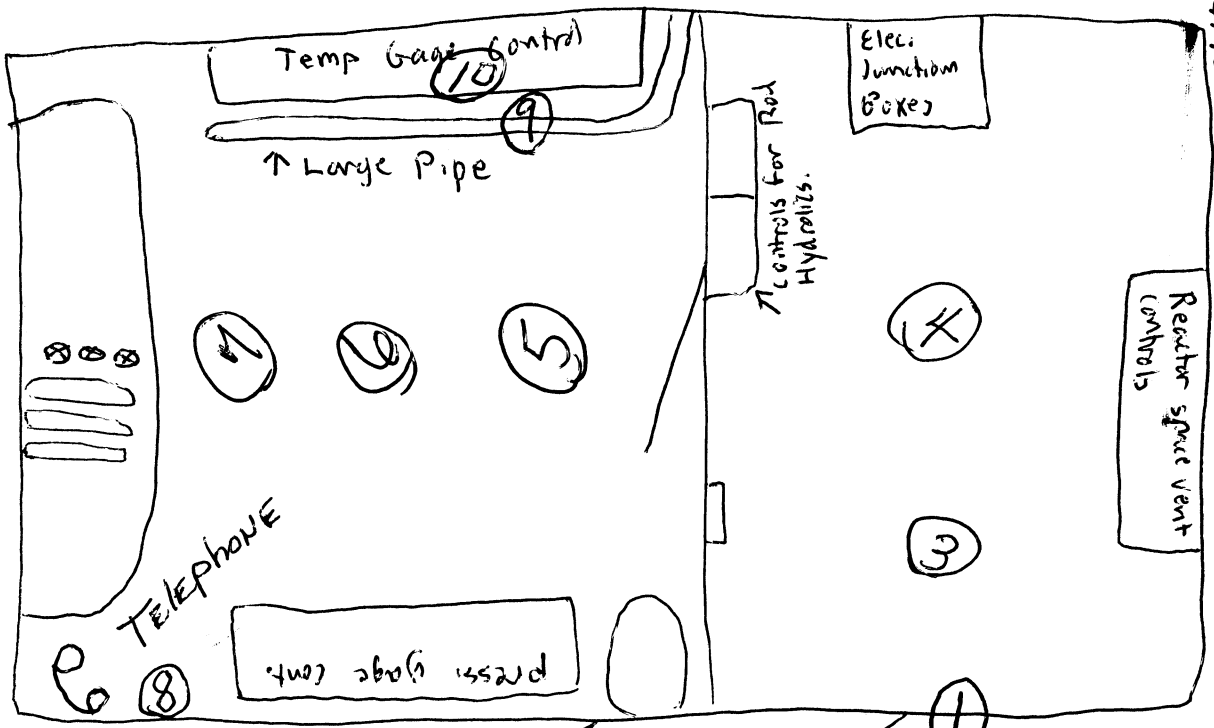
NSS-01 SURVEY NO. NSS-0037

Date 3/31/66 Time	DOSE RATE	CONTAMINATION	
Surveyor Lomax Scott	Inst. Type Ludlum 19	Beta ✓ Alpha	Beta Alpha
Signature Lomax Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Ruth Lunch	~~β Factor~~	Eff. 10%	
	BKG 4 MR/h	Bkg. 40 cpm	cpm

AREA ~~Forecas~~ ~~Lobby~~ LHS (HYDRAULIC EQUIPMENT PLATFORM)

COMPONENT B-DECK

Port



#1 THERMOID
#2 DOOR HANDLE
#8 PHONE
#9 LARGE PIPE TOP
#10 VALVE HANDLES ON TEMP GAGE

<RSK < 100 cpm
DM < 40 mR/h

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~β = BETA IN mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD	9	<BKGD						
2	<BKGD	10	<BKGD						
3	<BKGD								
4	<BKGD								
5	<BKGD								
6	<BKGD								
7	<BKGD								
8	<BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

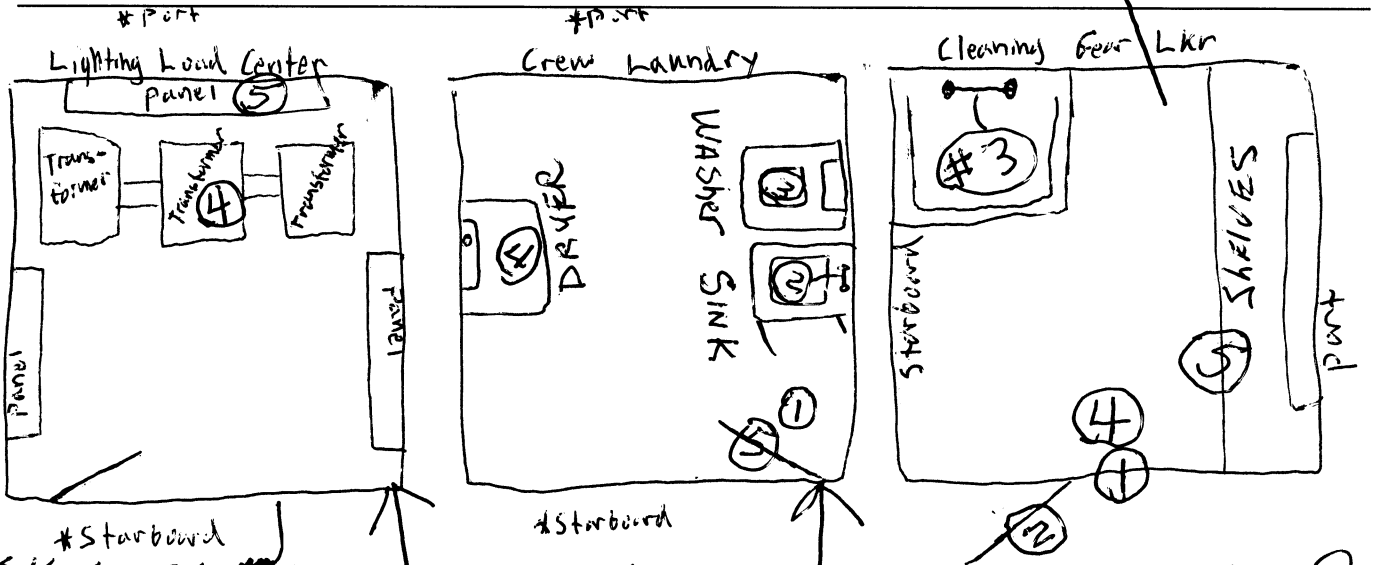
NSS-01 SURVEY NO. NSS-0038

Date 3-31-05 Time 0945	DOSE RATE	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type Ludlum 19	Beta ✓ Alpha	Beta Alpha
Signature Loman Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robert Cannah	~~β Factor~~	Eff. 10%	
	BKG 4 µR/hr	Bkg. 40 cpm	cpm

AREA B DECK

COMPONENT CREW LAUNDRY

FRSK < 100 cpm
DM < 40 µR/hr



#Starboard
FRSK < 100 cpm
DM < 40 µR/hr

#1 threshold
#2 FLOOR
#3 DOOR HANDLE
#4 TOP MIDDLE
#5 PANNEL (MAIN)

#Starboard

#1 FLOOR
#2 SINK BASIN
#3 INSIDE WASHER
#4 INSIDE DRYER
#5 DOOR KNOB
FRSK < 100 cpm
DM < 40 µR/h

#1 threshold
#2 DOOR KNOB
#3 SINK
#4 FLOOR
#5 SHELF

SMEAR RESULTS ~~IN DPM/100 CM~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD			1	<BKGD	1	<BKGD		
2	<BKGD			2	<BKGD	2	<BKGD		
3	<BKGD			3	<BKGD	3	<BKGD		
4	<BKGD			4	<BKGD	4	<BKGD		
5	<BKGD			5	<BKGD	5	<BKGD		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0039

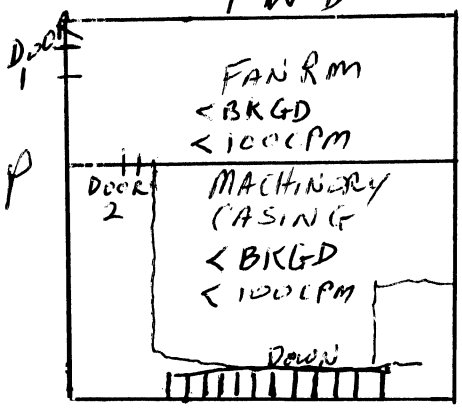
Date 3/31/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed	β^- Factor	Eff. 10%	
	2.5 ~~2.5~~ mR/HR	Bkg. 30 cpm	cpm

AREA FAN ROOM BOAT DECK

COMPONENT

< BKG
< 100 CPM

FWD



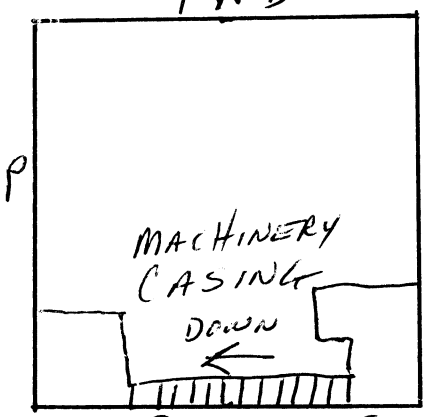
FAN RM BOAT DECK

FAN RM SWIPES

1. DOOR 1
2. DOOR 2
3. THRESHOLD 1
4. THRESHOLD 2

< BKG
< 100 CPM

FWD



PROMENADE DECK

MACHINERY CASING STAGE

1. VALVE DCV10
2. VALVE LG TOP 3RD STAGE HTR
3. 3RD STAGE VENT VALVE
4. DOOR TO BULGE DCV120
5. DCV300 VALVE
6. GRATING TOP STEPS
7. HANDRAIL

MACHINERY CASING BOAT DK.

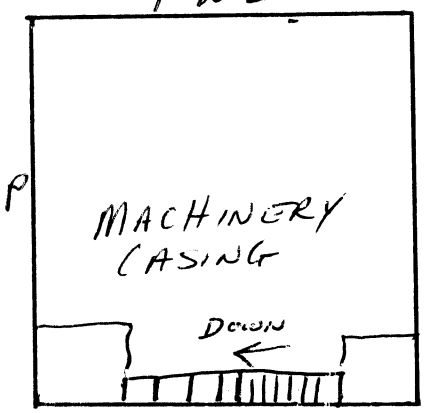
PROMENADE DECK SWIPES

8. VALVE MOV60
9. MCV11 VALVE
10. MCV12 VALVE
11. HAND HOLD OFF STAIR WAY
12. HAND HOLD ON WALL MACHINERY CASING

PROM DK

< BKG
< 100 CPM

FWD



"A" DECK

SWIPES

13. HANDRAIL BESIDE LO TK
14. " OPPOSITE LO TK
15. " BELOW LO TK
16. " OPPOSITE #13 SWIPE
17. SMALL HAND GRAB ON LO TANK

MACHINERY CASING A DECK

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	1	< BKGD	8	< BKGD	13	< BKGD		
2	< BKGD	2	< BKGD	9	< BKGD	14	< BKGD		
3	< BKGD	3	< BKGD	10	< BKGD	15	< BKGD		
4	< BKGD	4	< BKGD	11	< BKGD	16	< BKGD		
		5	< BKGD	12	< BKGD	17	< BKGD		
		6	< BKGD						
		7	< BKGD						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

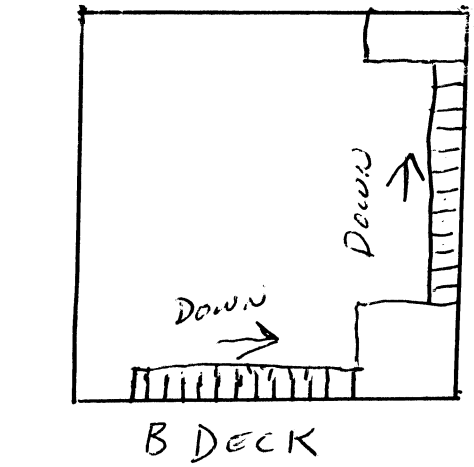
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0039

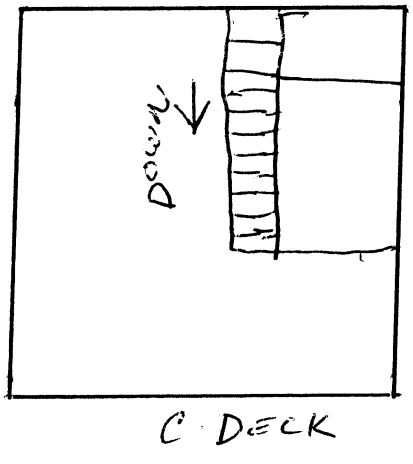
Date 3/31/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed	β⁻ Factor	Eff. 10%	
	2.5 ~~2.3~~ mR/~~HR~~	Bkg. 30 cpm	cpm

AREA B DECK TO C DECK ACCESS STAIRWELL TO BOAT DECK THRU MACHINERY CASING SPACE FROM MAIN MACHINERY RM

COMPONENT



B DECK



C DECK

SWIPES
18. TOP STEP ~~TO~~ OGRV. TK
19. 3RD STEP FROM BOTTOM OF BDK.
20. LANDING B DECK
21. ~~LO~~ LO V/V VALVE

SWIPES
22. HAND RAIL STRB
23. HAND RAIL PORT
24. BOTTOM STEP C'D''

STAIRWAY
B DECK

STAIRWAY
C DECK

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
18	<BKGD			22	<BKGD				
19	<BKGD			23	<BKGD				
20	<BKGD			24	<BKGD				
21	<BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0040

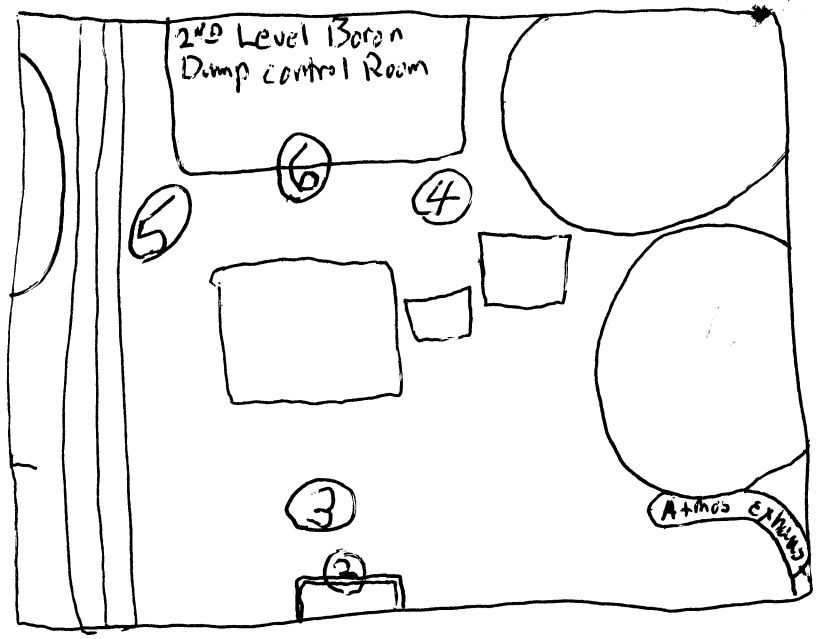
Date 3-31-05 Time 0930	DOSE RATE	CONTAMINATION	
Surveyor LOMAN SCOTT	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Loman Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robert Runnels	~~β Factor~~	Eff. 10%	
	BKG 4 MR/hr	Bkg. 40 cpm	cpm

AREA BEHIND BRIDGE

COMPONENT BORON DUMP CONTROL ROOM

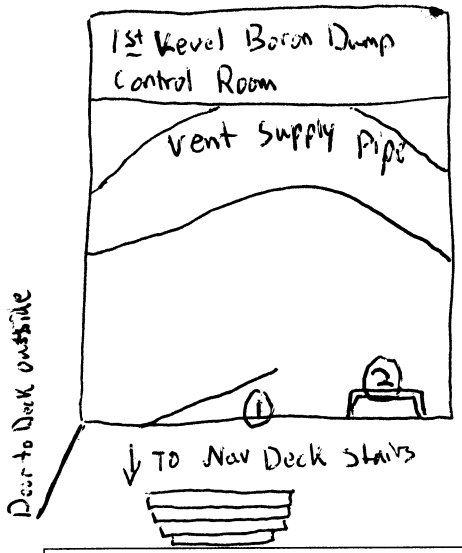
~~#1 Threshold~~ ~~FHS~~
~~#2 LADDER~~ ~~FHS~~
P

FRSK < 100
DM < 40



1. Threshold of door
2. Rung of stairs down to Second Level of control Room

#6 HONEYWELL MACHINERY CONTROLS



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

#1

NSS-01

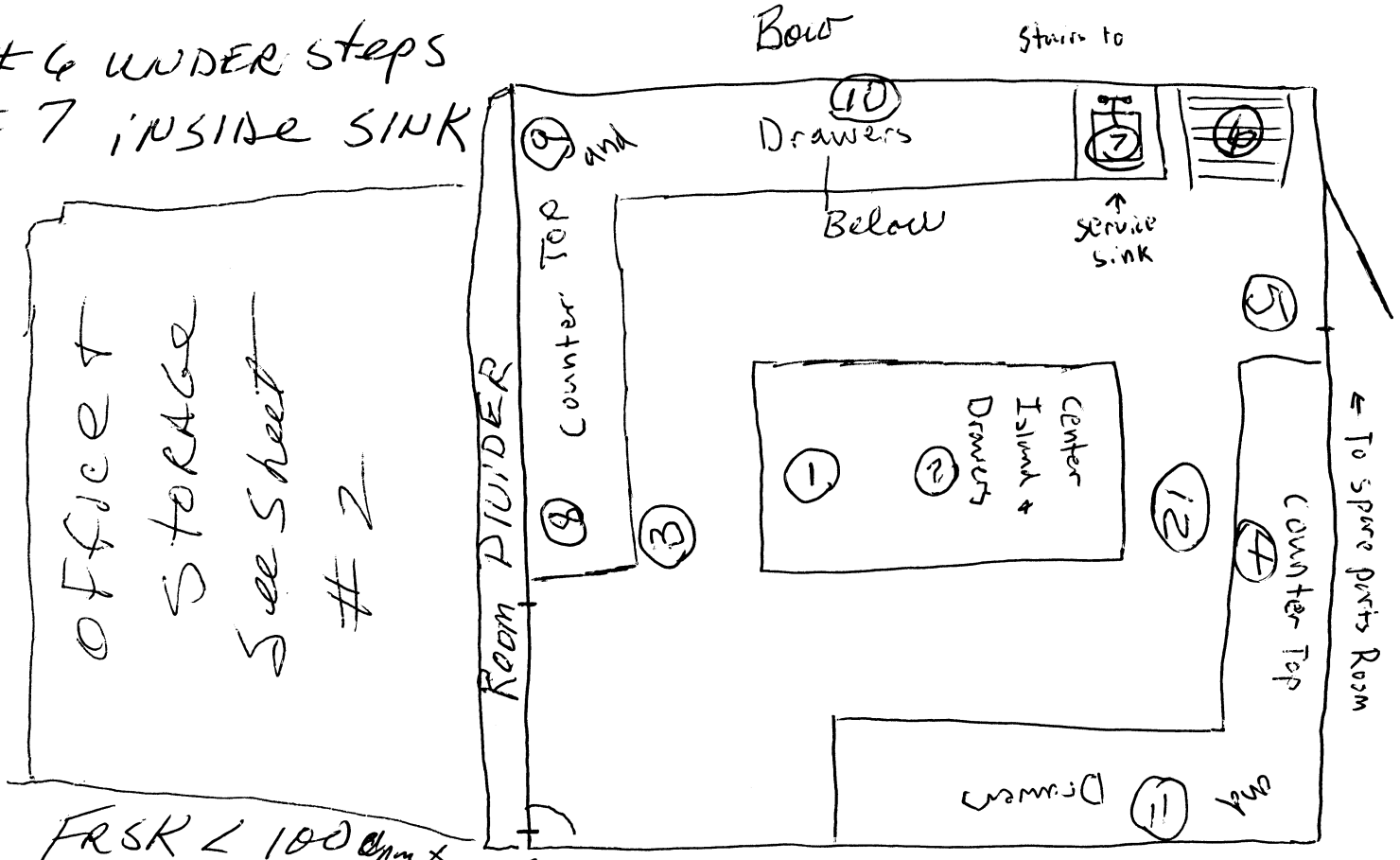
SURVEY NO. NSS-0041

Date 3/3/05 Time 1300	DOSE RATE	CONTAMINATION	
Surveyor Lemar Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Lemar Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robert Smith	~~β Factor~~	Eff. 10 %	
	BRG 1 MR/Hr	Bkg. 10 cpm	cpm

AREA HOLD #5 ENGINEERING (Workstation)

COMPONENT Workshop

#6 UNDER steps
#7 INSIDE SINK



FRSK < 100 cpm Fixed Rad
DM ≤ 1 μR/hr

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD	11	< BKGD						
4	< BKGD	12	< BKGD						
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA
CA – CONTAMINATION AREA
ALL DOSE RATES IN μrem/hr
RCA – RADIATION CONTROL AREA
AA – AIRBORNE AREA

#2

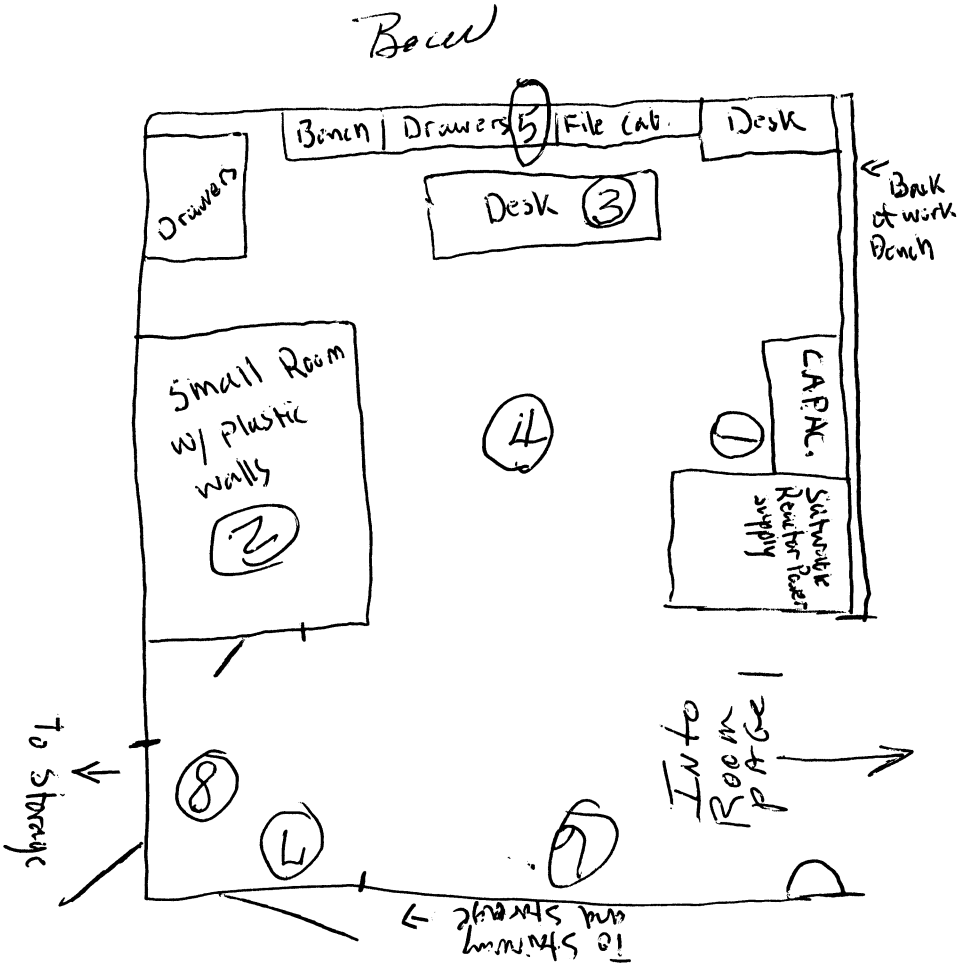
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0041

Date 3-31-05 Time 1300	DOSE RATE	CONTAMINATION	
Surveyor Lyman Scott	Inst. Type LUD/Lum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Lyman Scott	Serial No. 42972	Inst. Sn 91037	
Reviewed Robert Kennedy	~~β Factor~~	Eff. 10 %	
	BKG in MR/Hr	Bkg. 10 cpm	cpm

AREA Hold #5 Engineering (office and storage)

COMPONENT M-S ED/A EQUIPT Room



FRSK < 100 cpm
DM < 1 µR/h

SMEAR RESULTS ~~dN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

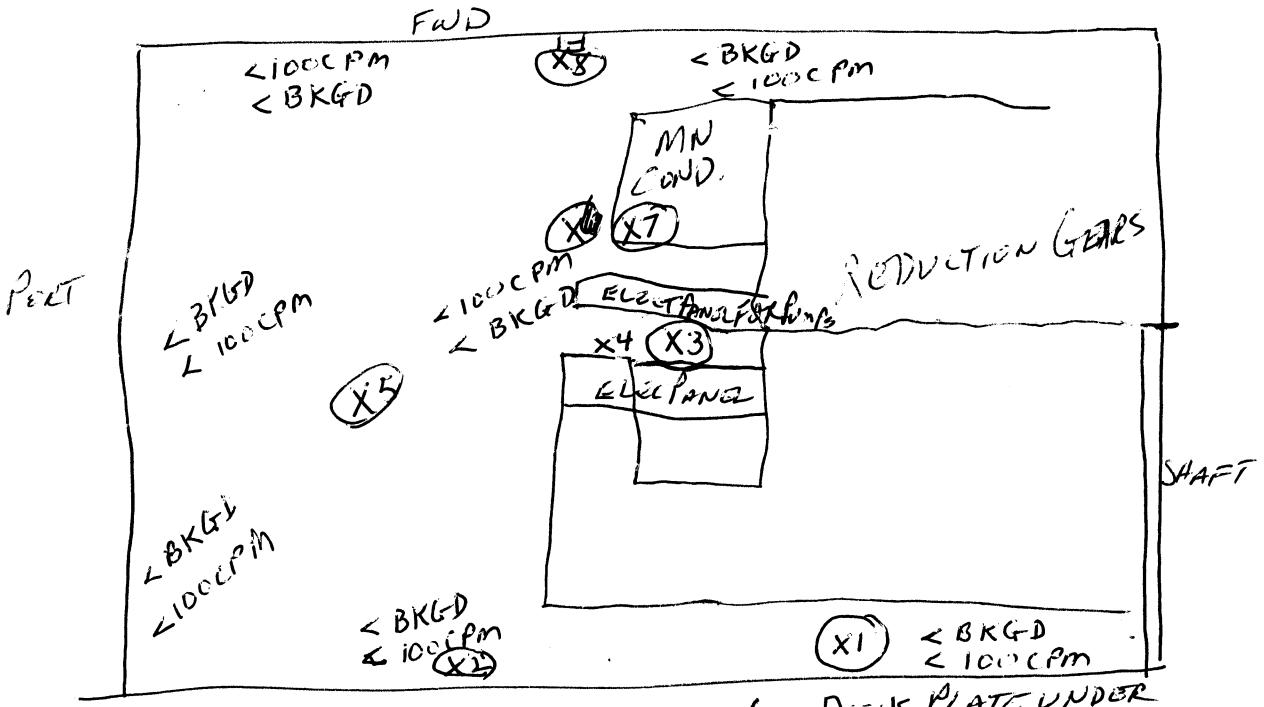
NSS-01

SURVEY NO. NSS-0042

Date 3/31/05 Time 13:00	DOSE RATE	CONTAMINATION	
Surveyor Caddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature J. Caddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Rob Tillman	β Factor	Eff. 10%	
	4mR/HR	Bkg. 30 cpm	cpm

AREA LOWER LEVEL MAIN ENGINE RM. PORT SIDE OF SHAFT

COMPONENT



SWIPE

1 DECK PLATE AFT PORT OF SHAFT
2 DECK PLATE AFT FIRE & BILGE PUMP PORTSIDE
3 DECK PLATE AFT ELECT PANELS FOR CHG PUMPS
4 HAND HOLD ON PORT FEED PUMP
5 DECK PLATE UNDER RED TAG #4
6. DECK PLATE UNDER MN CONDENSOR OPENING
7. MAN WAY OPENING MN COND.
8. DECK PLATE TOP OF STEPS TO PORT CHARGE RM

X-DENOTES SWIPE

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG								
2	<BKG								
3	<BKG								
4	<BKG								
5	<BKG								
6	<BKG								
7	<BKG								
8	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0043

Date 3/31/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed [illegible]	β⁻Factor +gnd	Eff. 10%	
	4 mR/HR	Bkg. 30 cpm	cpm

AREA LOWER LEVEL MAIN ENGINE RM STBD SIDE OF SHAFT

COMPONENT

#1 deck under new Elec box NSSavannah Hand

#2 Rail under diese/Eng start Boo #102

#3 Deck STBD side charge Pump Ent. way

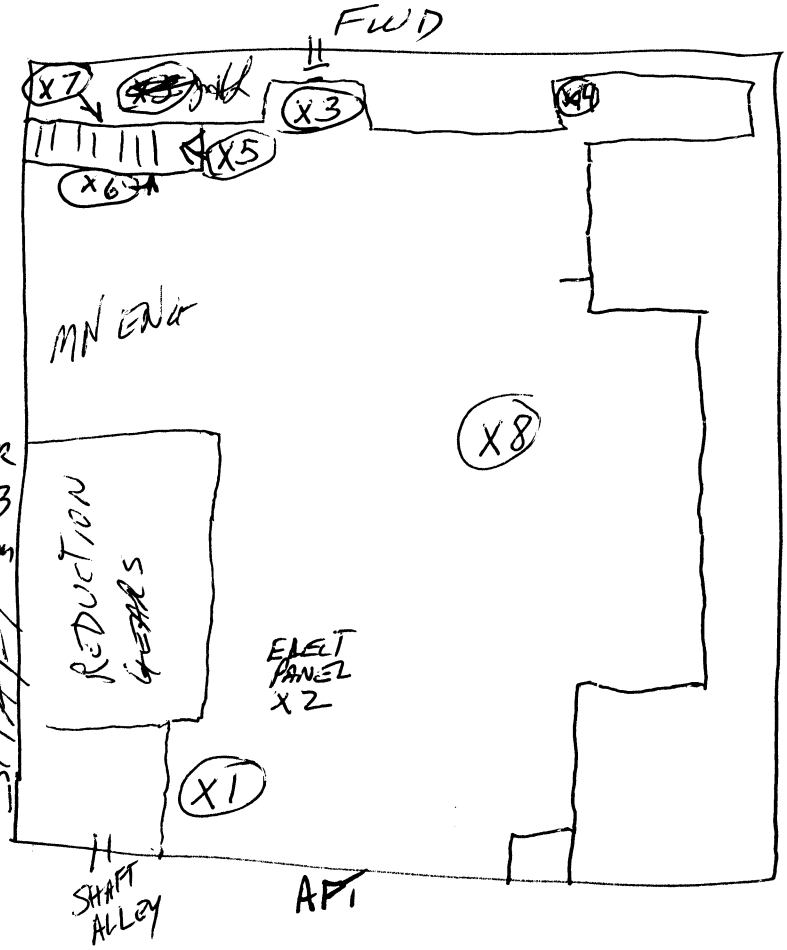
4 DECK STBD FWD UNDER POWER PANEL H-126-3

5. DECK STBD FWD BOTTOM OF LADDER

6. HAND RAIL & FWD & LADDER NEXT COND

7. HAND RAIL FWD & OPPOSITE #6

8. DECK BETWEEN DIESEL GEN.



ALL AREAS < BKGD < 1000 CPM

SMEAR RESULTS ~~N=DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG								
2	< BKG								
3	< BKG								
4	< BKG								
5	< BKG								
6	< BKG								
7	< BKG								
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

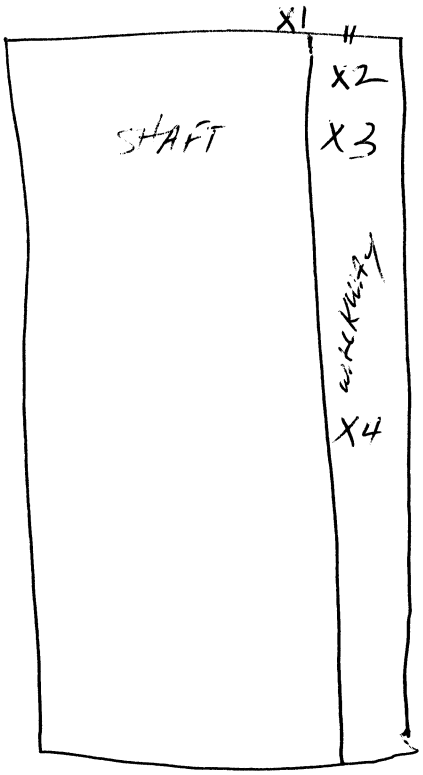
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0044

Date 3-31-05 Time	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta L Alpha	Beta Alpha
Signature	Serial No. 95499	Inst.Sn 97416	
Reviewed	β^- Factor	Eff. 10%	
	4 mR/HR	Bkg. 30 cpm	cpm

AREA SHAFT ALLY

COMPONENT



1. HAND CRANK FOR DOOR
2. HAND RAIL
3. DECK GRADING
4. DECK GRADING

ENTIRE SHAFT ALLEY
DR < BKGD
FIXED < 1000 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG								
2	< BKG								
3	< BKG								
4	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

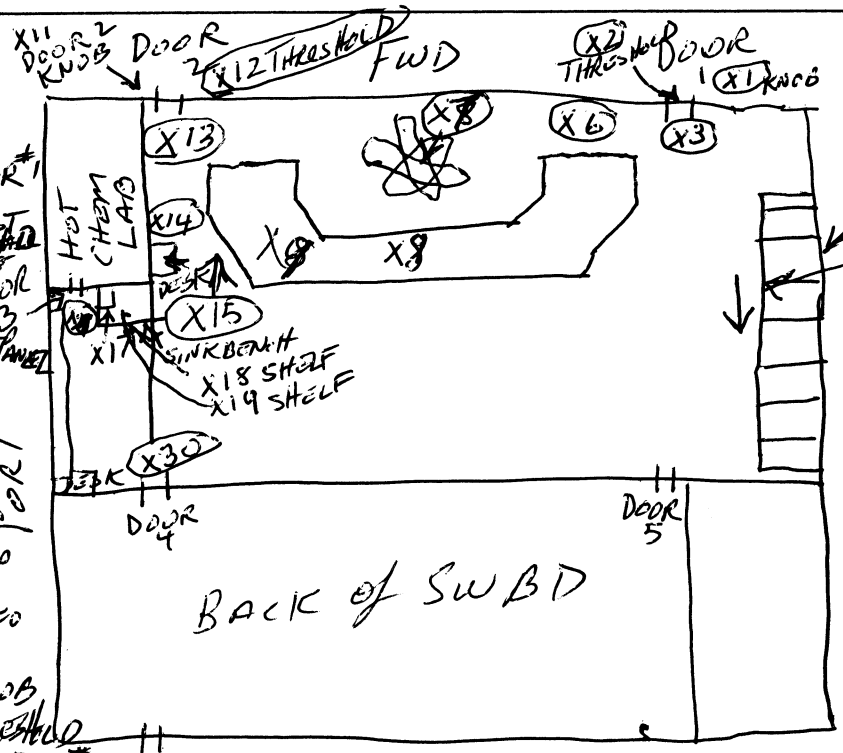
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0045

Date 4/1/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed [illegible]	β⁻Factor	Eff. 10%	
	4mR/Hr	Bkg. 30 cpm	cpm

AREA MAIN ENGINE ROOM'S CONTROL ROOM

COMPONENT



1. DOOR #1 KNOB
2. DOOR #1 THRESHOLD
3. DECK INSIDE DOOR #1
4. HANDRAIL AGAINST BHD
5. HANDRAIL OPP SIDE DOOR 3
6. DECK BESIDE SWBD PANEL
7. DECK NUC SYM.
8. HANDLE ON LEFT ROD CONT. PANEL
9. FACE OF PANEL BETWEEN ROD CONTROL & GROUP SELECTOR
10. DECK PORTSIDE OF CONTROL PANEL
11. DOOR #2 KNOB
12. DOOR #2 THRESHOLD
13. DECK INSIDE DOOR #2
14. DECK UNDER DESK
15. DECK PORT OF CONT-PANEL

ALL AREAS < BKGD
< 30 CPM

16. WORK BENCH OUTSIDE HOT CHEM LAB.
17. INSIDE SINK
18. WORK BENCH TOP SHELF
19. WORK BENCH BOTTOM SHELF
20. DOOR KNOB TO HOT CHEM LAB
21. DECK OUTSIDE HOT CHEM LAB AT DOOR
22. VENT OVER HOOD LIGHT
23. HANDLES FOR DOOR TO MIXING STATION
24. INSIDE MIXING STATION BOTTOM LEDGE
25. INSIDE MIXING STATION BOTTOM SURFACE
26. WORK BENCH STBD.
27. 2 SHELF WC CABINET
28. DESK TOP
29. DECK UNDER DESK
X-DENOTES SWIPES
30. DECK OUTSIDE DOOR BEHIND SWBD.

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG	9	<BKG	17	<BKG	25	<BKG		
2	<BKG	10	<BKG	18	<BKG	26	<BKG		
3	<BKG	11	<BKG	19	<BKG	27	<BKG		
4	<BKG	12	<BKG	20	<BKG	28	<BKG		
5	<BKG	13	<BKG	21	<BKG	29	<BKG		
6	<BKG	14	<BKG	22	<BKG	30	<BKG		
7	<BKG	15	<BKG	23	<BKG				
8	<BKG	16	<BKG	24	<BKG				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

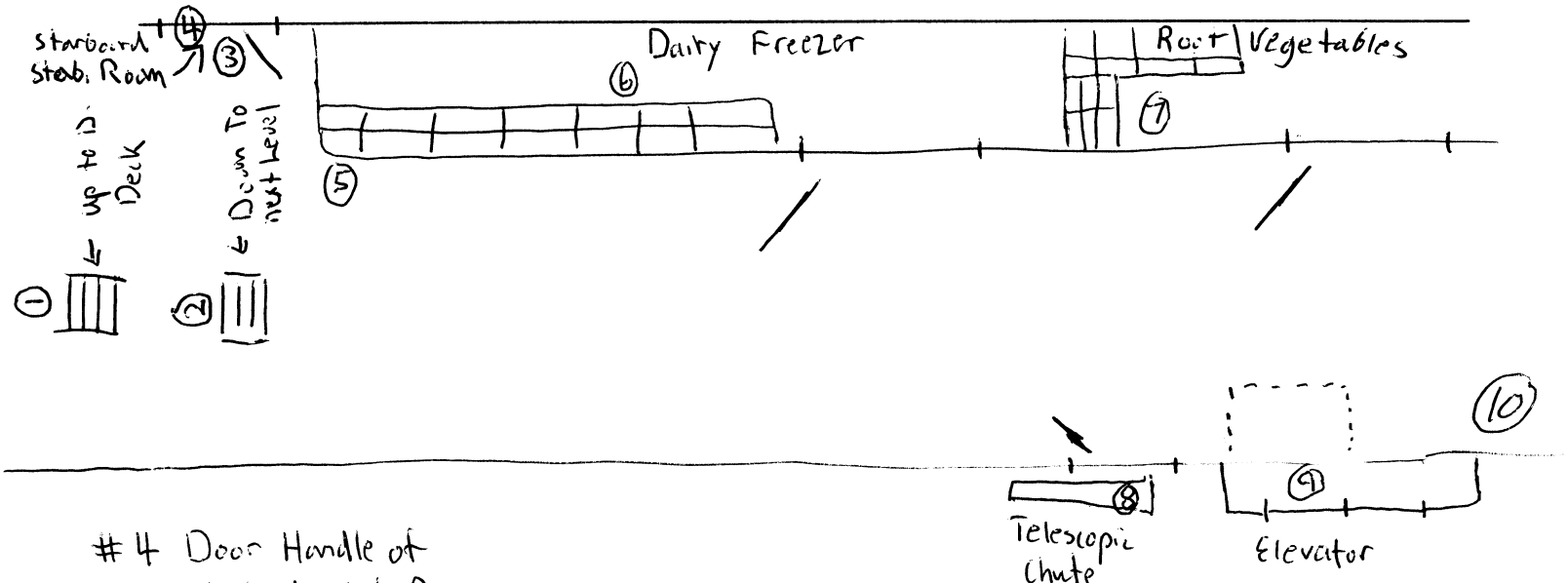
NSS-01

SURVEY NO. NSS-0046

Date 4/1/05 Time 10:00	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature	Serial No. 42472	Inst.Sn 91037	
Reviewed	β⁻ Factor ✓	Eff. 10%	
	BKG < 4 MR/Hr	Bkg. 40 cpm	cpm

AREA 14' Flat (~~Hold Deck~~ 03) Starboard Side

COMPONENT



#4 Door Handle of Starboard stab. Room

#8 Top of Chute

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B – BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD	9	<BKGD						
2	<BKGD	10	<BKGD						
3	<BKGD								
4	<BKGD								
5	<BKGD								
6	<BKGD								
7	<BKGD								
8	<BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

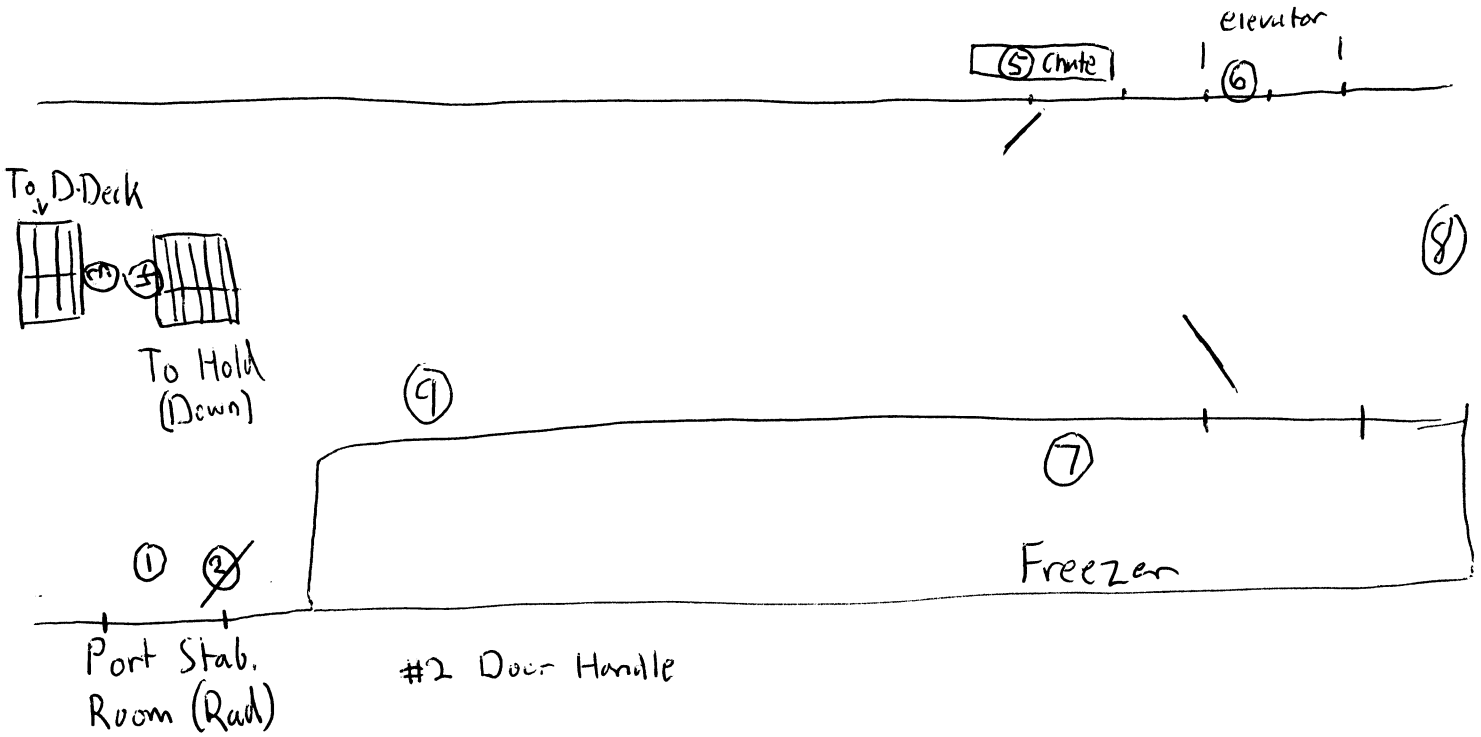
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0047

Date 4/1/05 Time 10:00	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type Iodine 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature	Serial No. 42972	Inst.Sn 91037	
Reviewed	β⁻ Factor ~	Eff. 10%	
	BKG < 4 MR/Hr	Bkg. 40 cpm	cpm

AREA 14' Flat (Port)

COMPONENT



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD					•	
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01

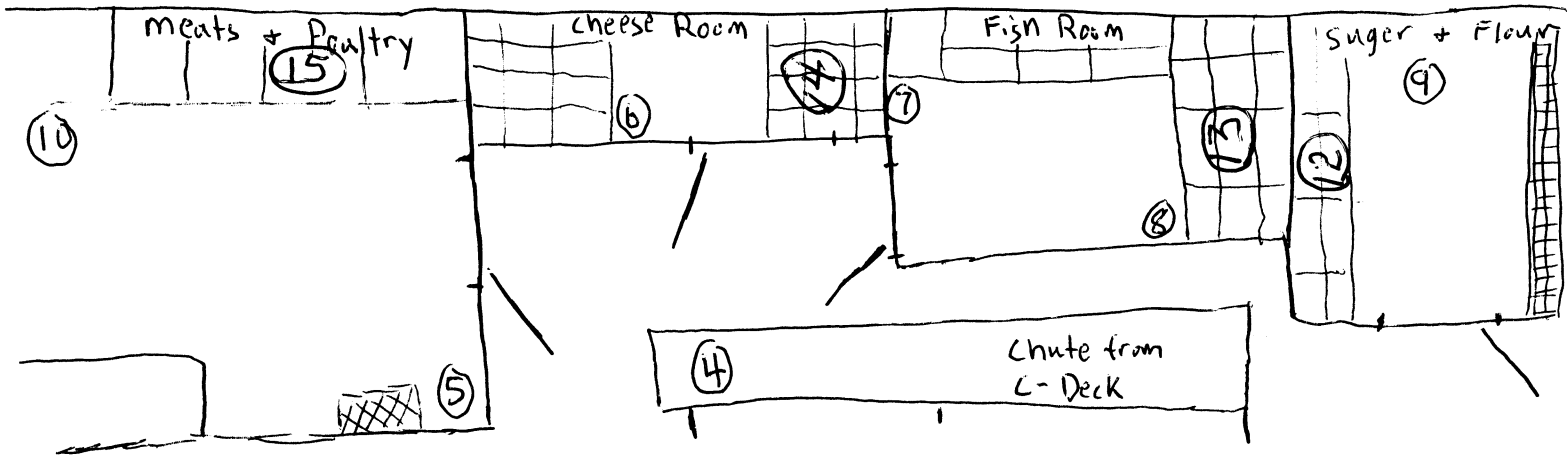
SURVEY NO. NSS-0048

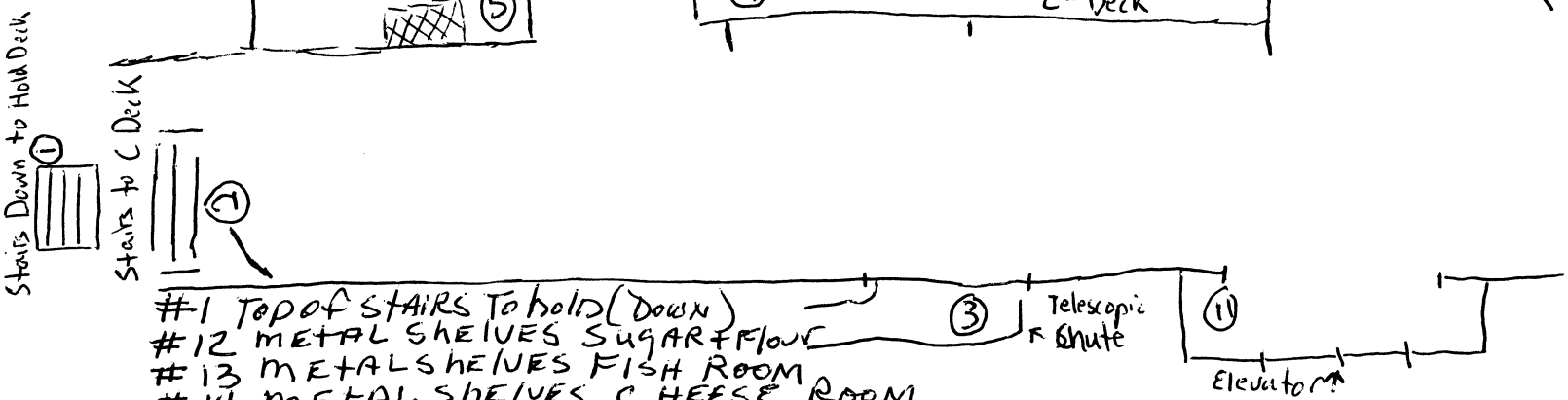
Date 4-10-05 Time 8:45	DOSE RATE	CONTAMINATION	
Surveyor Lomax Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Lomax Scott	Serial No. 42972	Inst.Sn 75809	
Reviewed Ralph Lumsden	~~β-Factor~~	Eff. 10%	
	BKG-4/hR/h	Bkg. 40 cpm	cpm

AREA D - Deck Food Stores

COMPONENT

STARBOARD SIDE





#1 Top of STAIRS To hold (DOWN)
#12 METAL SHELVES SUGAR + Flour
#13 METAL SHELVES FISH ROOM
#14 METAL SHELVES CHEESE ROOM
#15 METAL SHELVES MEAT + Poultry

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD	11	< BKGD						
4	< BKGD	12	< BKGD						
5	< BKGD	13	< BKGD						
6	< BKGD	14	< BKGD						
7	< BKGD	15	< BKGD						
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

TRSK < 100 DML BKG.

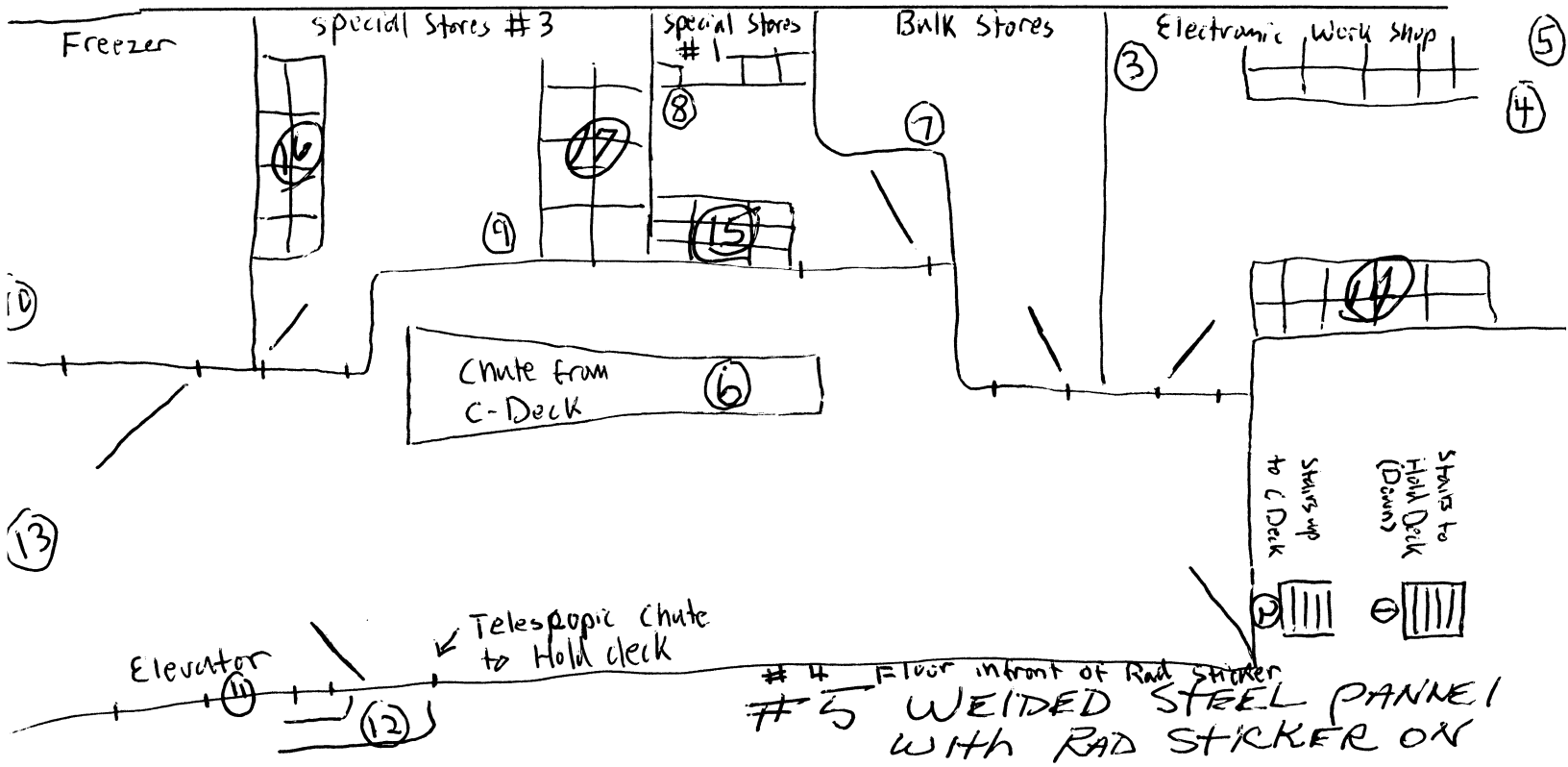
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0049

Date 4-1-05 Time 1030	DOSE RATE	CONTAMINATION	
Surveyor Lomand Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Lomand Scott	Serial No. 42972	Inst.Sn 75809	
Reviewed Robert Kinnard	~~β Factor~~	Eff. 10 %	
	BKG 4 /hR/h	Bkg. 40 cpm	cpm

AREA D-Deck Special Stores, Ect. Port

COMPONENT Port SIDE



FRSK < 1000 DM < Background

SMEAR RESULTS ~~dN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD	17	< BKGD				
2	< BKGD	10	< BKGD						
3	< BKGD	11	< BKGD						
4	< BKGD	12	< BKGD						
5	< BKGD	13	< BKGD						
6	< BKGD	14	< BKGD						
7	< BKGD	15	< BKGD						
8	< BKGD	16	< BKGD						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

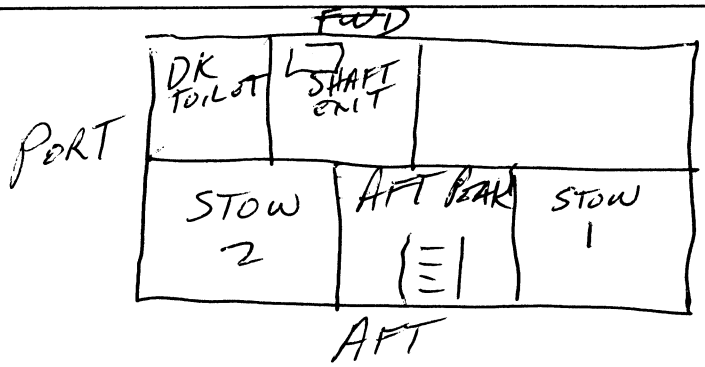
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0050

Date 4/1/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Caddell	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Caddell	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert E Kinnard	β⁻ Factor	Eff. 10%	
	4mR/HR	Bkg. 30 cpm	cpm

AREA A DECK AFT HOUSE

COMPONENT



SW POS

STOW # 1 STBD

1. OUTSIDE DOOR LATCH
2. INSIDE " " "

AFT PEAK

3 OUTSIDE DOOR LATCHES
4 INSIDE DOOR LATCHES

STOW # 2 PORT

5. OUTSIDE DOOR LATCH
6. INSIDE DOOR LATCHES

DK TOILET PORT

7. OUTSIDE DOOR LATCH
8. INSIDE DOOR LATCH

SHAFT ALLEY EXIT

9. TOP RUNG ON LADDER
10. EXIT DOOR LATCH
11 ENTER DOOR LATCH

ALL AREA IN DIA

DRL BKGD

FRISK 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD	11	< BKGD						
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
~~8~~	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

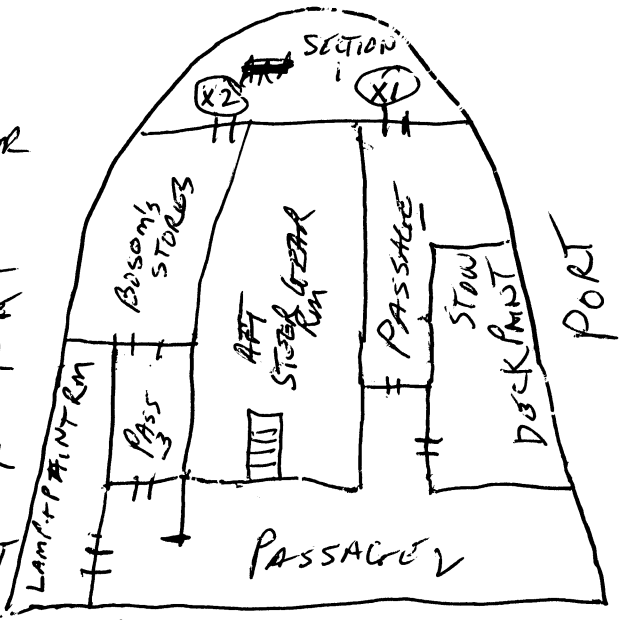
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0051

Date 4/1/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed [signature]	β Factor	Eff. 10%	
	4 MR/HR	Bkg. 30 cpm	cpm

AREA B DECK STERN COMPARTMENTS

COMPONENT



BOSUN'S STORES
15. DECK INSIDE DOOR

LAMP & PAINT RM
16. DOOR HANDLE ~~INSIDE~~ EXIT
17. DOOR HANDLE ENTER

AFT STEER GEAR RM
18. ENTER DOOR OPENER
19. EXIT DOOR KNOB
20 DECK ~~INSIDE~~ COMPT AT DOOR
21 DECK AFT STEER GEAR RM
22 STEP OVER STBD STEER GEAR RM
ALL AREAS IN DIA-
DR < BKGD
T-RISK 100 CPM

ENTIRE AREA IS IN DIA. FOR B DK
DR < BKGD
T-RISK 100 CPM

SWIPES

SECTION 1
1 DOORWAY
2 DOORWAY

PASS 1
~~3~~: ENTER DOOR KNOB
4 EXIT DOOR KNOB
5 DECK INSIDE PASS 1

PASS 2
~~8~~ DECK OUTSIDE PT. STOW.
~~9~~ HAND RAIL

DECK PAINT STORAGE
6. DOOR HANDLE ENTER
7. DOOR HANDLE EXIT

PASSAGEWAY 2
10. DECK BOTTOM of LADDER
11 PORT HAND RAIL
12 STBD HAND RAIL
13 ~~DECK~~ PASS 2 STBD
14 PASS 2 HANDRAIL STBD
~~15 B~~

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD	17	< BKGD				
2	< BKGD	10	< BKGD	18	< BKGD				
3	< BKGD	11	< BKGD	19	< BKGD				
4	< BKGD	12	< BKGD	20	< BKGD				
5	< BKGD	13	< BKGD	21	< BKGD				
6	< BKGD	14	< BKGD	22	< BKGD				
7	< BKGD	15	< BKGD						
8	< BKGD	16	< BKGD						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

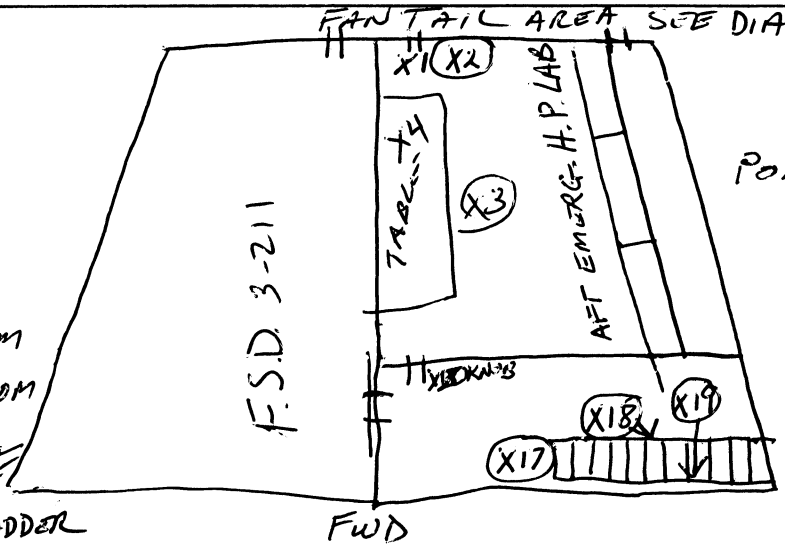
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0052

Date 4/1/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Ba CTG Inman	β⁻Factor	Eff. 10%	
	4 mR/HR	Bkg. 30 cpm	cpm

AREA STERN "C" DECK EMERG. HP LAB

COMPONENT



1. AFT INSIDE DOOR KNOB OF HP LAB
2. DK AT AFT DOOR
3. DK AT WORK TABLE
4. TABLE TOP
5. SHELF ABOVE TABLE
6. PHONE
7. VENT DUCTOWORK
8. EXH VENT
9. TABLE TOP WITH DRAWERS
10. TABLE TOP WITH SHELVES
11. DOOR KNOB
12. DECK AT DOOR
13. TOP SHELF INSIDE CABINET

SWIPES

14. 2ND SHELF FROM TOP
15. 3RD SHELF FROM TOP
16. BOTTOM SHELF
17. DECK BOTTOM of LADDER
18. HANDRAIL LADDER AFT
19. HANDRAIL LADDER FWD
20. DOOR KNOB HP EMER LAB
21. DECK OUTSIDE HP LAB DOOR
22. DOOR KNOB TO FSD 3-211
23. DECK ON PASS. OUTSIDE 3-211
24. DECK INSIDE 3-211
25. DOOR KNOB AFT IN 3-211

DIA. II

ENTIRE AREA IN DIA.

DR < BKGD

FAISIC < 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD			9	< BKGD	17	< BKGD	25	< BKGD
2	< BKGD			10	< BKGD	18	< BKGD		
3	< BKGD			11	< BKGD	19	< BKGD		
4	< BKGD			12	< BKGD	20	< BKGD		
5	< BKGD			13	< BKGD	21	< BKGD		
6	< BKGD			14	< BKGD	22	< BKGD		
7	< BKGD			15	< BKGD	23	< BKGD		
8	< BKGD			16	< BKGD	24	< BKGD		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

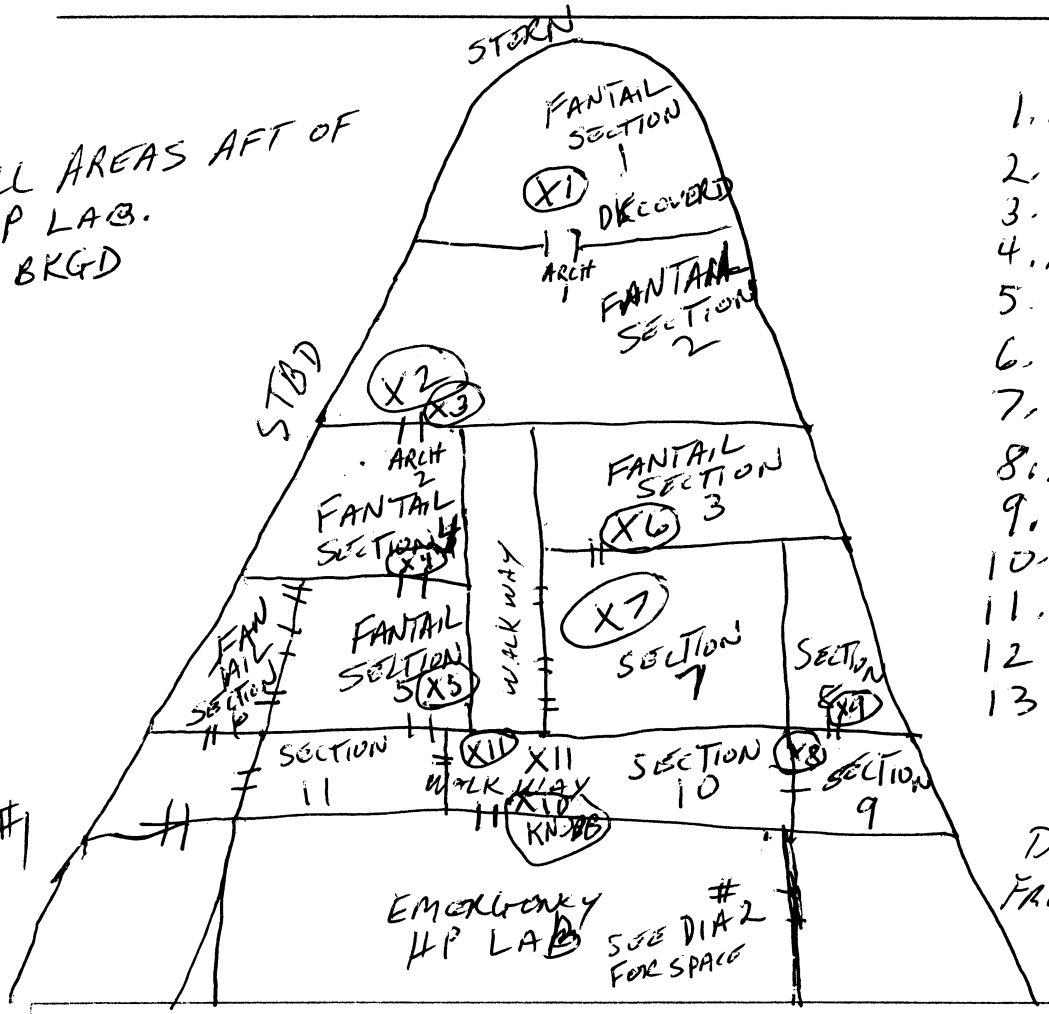
NSS-01 SURVEY NO. NSS-0053

Date 4/1/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Ralph E. Lemmon	β⁻ Factor	Eff. 10%	
	4mR/HR	Bkg. 30 cpm	cpm

AREA C DECK AFT OF EMERGENCY HP LAB

COMPONENT

ALL AREAS AFT OF HP LAB. < BKGD



SWIPES

1. BASEPLT BEAM &
2. ACCESS RING
3. STBD ACCESS RING SIDE
4. ACCESS ENTERING SECTION 2
5. DK SECTION 5
6. DK SECTION 3
7. DECK SECTION 7
8. ACCESS RING SECTION 9
9. ACCESS RING SECTION 8
10. DOOR KNOB OUTSIDE LAB
11. PASS AFT of LAB
12. DK SECTION 11
13. ACCESS RING TO SECTION 6

ENTIRE C DECK STERN AREAS
DR < BKGD
FRISK < 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD						
2	< BKGD	10	< BKGD						
3	< BKGD	11	< BKGD						
4	< BKGD	12	< BKGD						
5	< BKGD	13	< BKGD						
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

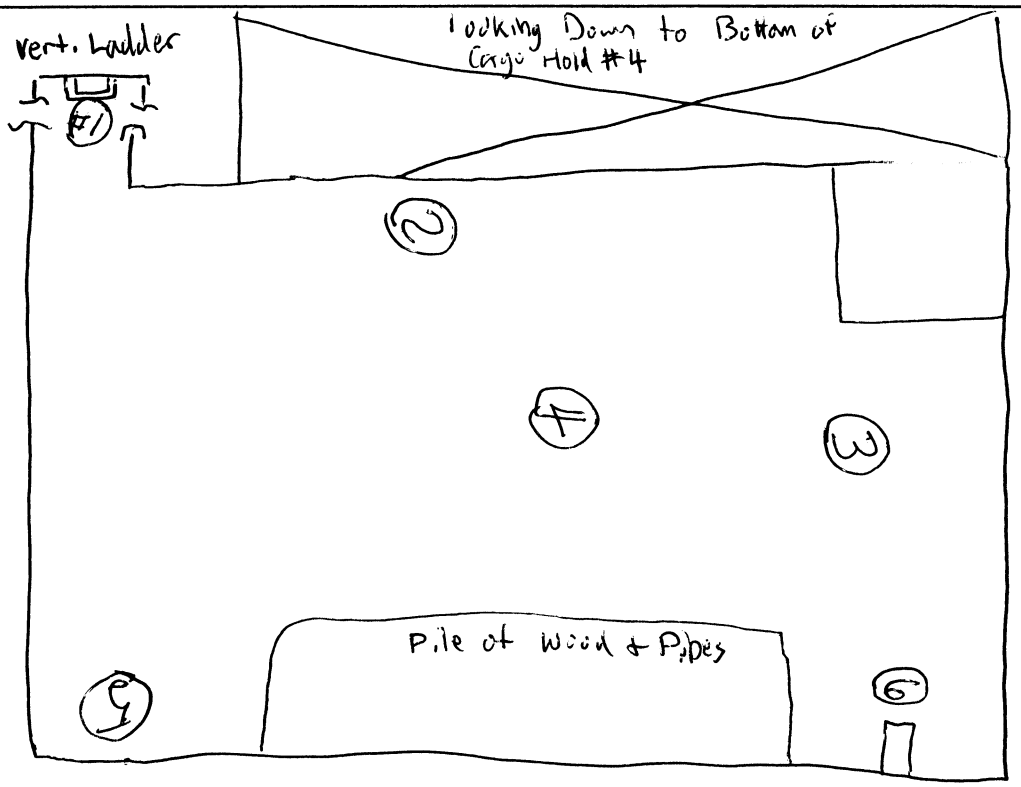
NSS-01 SURVEY NO. NSS-0054

Date 4/1/05 Time 2:00	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature	Serial No. 42972	Inst.Sn 91037	
Reviewed	β⁻ Factor /	Eff. 10%	
	BKG < 4 μR/Hr	Bkg. 40 cpm	cpm

AREA Cargo Hold #4 - 2nd from bottom (D-Deck)

COMPONENT

#6 EXHAUST VENT FOR REACTOR. FRONT



Frisk < 100cpm / DM < BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 GM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD								
2	<BKGD								
3	<BKGD								
4	<BKGD								
5	<BKGD								
6	<BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0054

Date 4/4/05 Time 9:40	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Ben J. Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed Robert E. Cusack	β⁻ Factor /	Eff. 10%	
	BKG < 4 MR/Hr	Bkg. 40 cpm	cpm

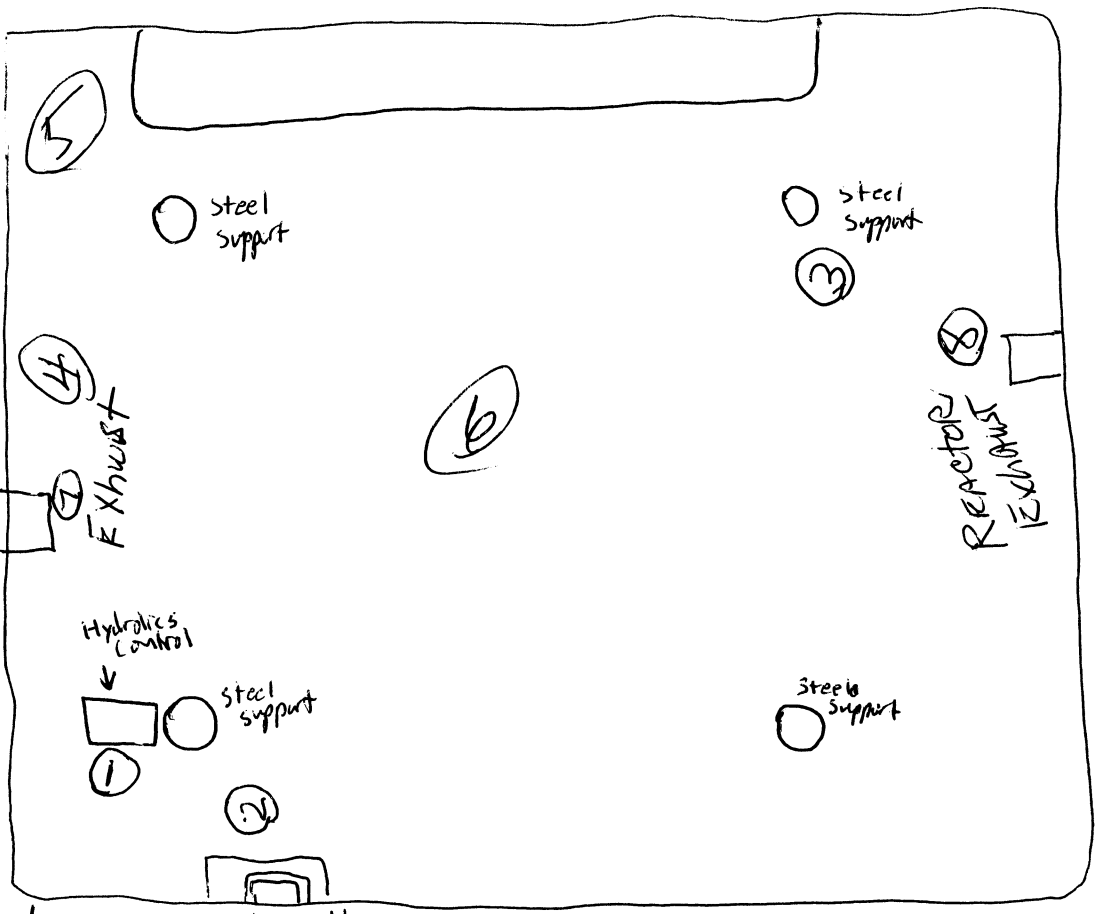
AREA Cargo Hold #4 - 3RD from bottom (C Deck)

COMPONENT

#1 HYDRO CONTROL LEAVERS

#7 ON FRONT OF EXHAUST VENT

#8 ON FRONT OF EXHAUST VENT (REACTOR)



Frisk < 100CPM / DM < BKG Vert. Ladder Fowand

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

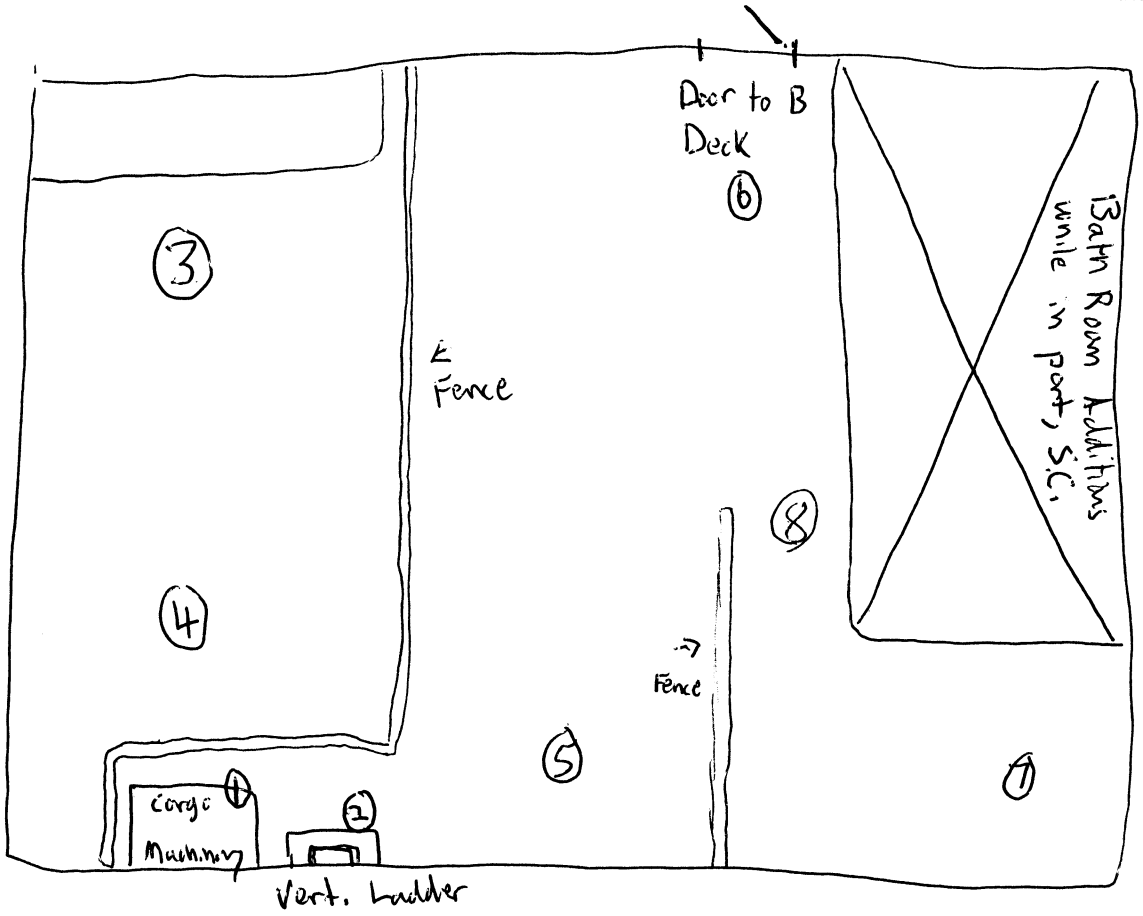
NSS-01 SURVEY NO. NSS-0054

Date 4/4/05 Time 10:00	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type Inalum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature [signature]	Serial No. 42972	Inst.Sn 91037	
Reviewed [signature]	β⁻ Factor ✓	Eff. 10%	
	BKG < 4 μR/Hr	Bkg. 40 cpm	cpm

AREA Cargo Hold #4 - B Deck

COMPONENT

#1 ON Top



Frisk < 100CPM / DM < BKG

FOWARD

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD								
2	< BKGD								
3	< BKGD								
4	< BKGD								
5	< BKGD								
6	< BKGD								
7	< BKGD								
8	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

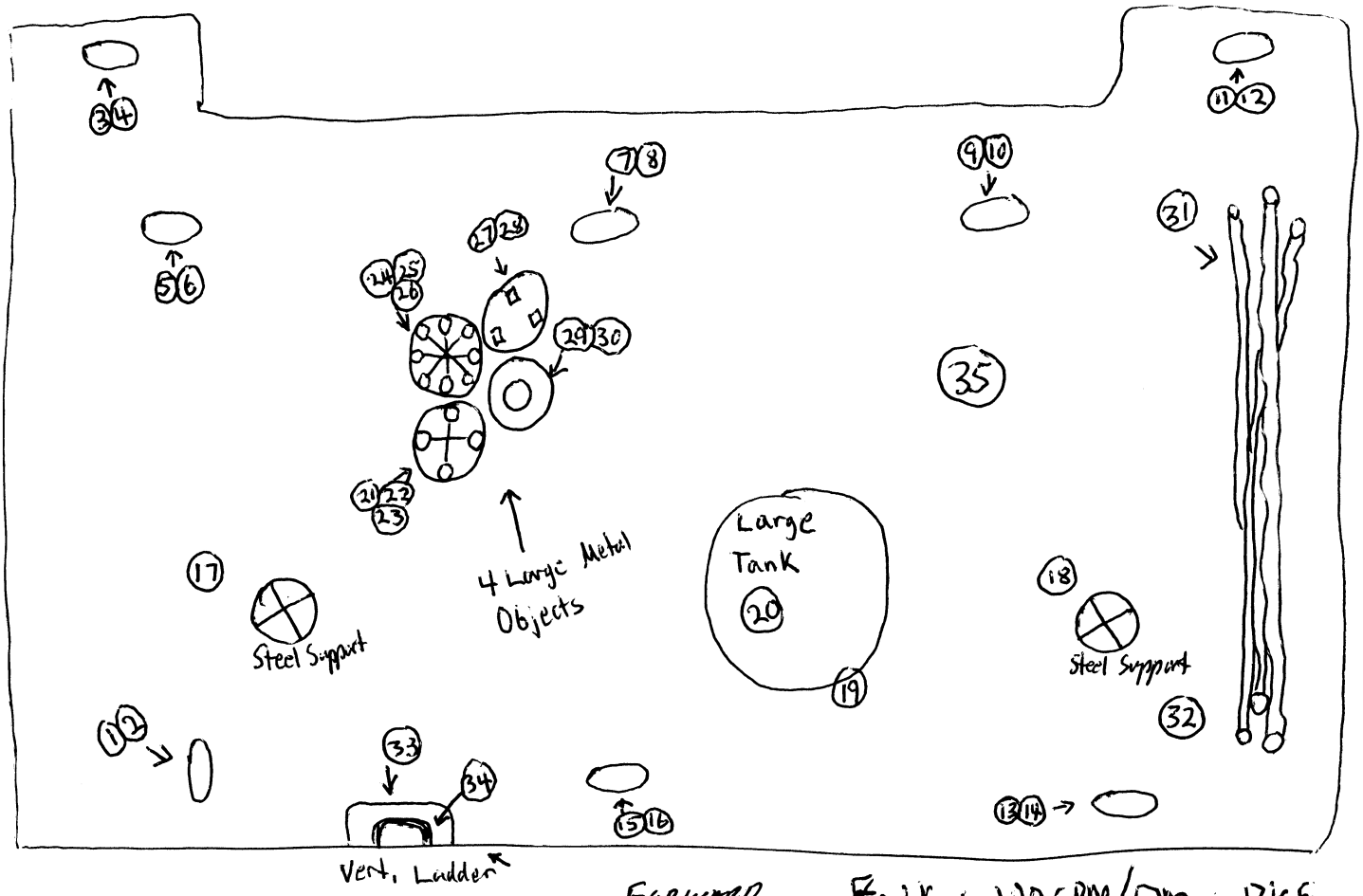
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0054

Date 4/1/05 Time 12.30	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type Ludlum M	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature	Serial No. 42972	Inst.Sn 91037	
Reviewed	β⁻ Factor ~	Eff. 10%	
	BKG < 4 MR/Hr	Bkg. 40 cpm	cpm

AREA _____

COMPONENT Cargo Hold #4 (Hold and 14' Flat Decks)



Fr. SK < 100CPM/DM & BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKGD	9	< BKGD	17	< BKGD	25	< BKGD	33	< BKGD
2	< BKGD	10	< BKGD	18	< BKGD	26	< BKGD	34	< BKGD
3	< BKGD	11	< BKGD	19	< BKGD	27	< BKGD	35	< BKGD
4	< BKGD	12	< BKGD	20	< BKGD	28	< BKGD		
5	< BKGD	13	< BKGD	21	< BKGD	29	< BKGD		
6	< BKGD	14	< BKGD	22	< BKGD	30	< BKGD		
7	< BKGD	15	< BKGD	23	< BKGD	31	< BKGD		
8	< BKGD	16	< BKGD	24	< BKGD	32	< BKGD		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0054 CONTINUED

Date 4-1-05 Time	DOSE RATE	CONTAMINATION	
Surveyor	Inst. Type	Beta____ Alpha____	Beta____Alpha____
Signature	Serial No.	Inst.Sn	
Reviewed	β^-Factor	Eff.	
		Bkg. cpm	cpm

AREA Cargo Hold #4 (Hold + 14' Flat Deck)

COMPONENT DESCRIPTIONS

#1 Top of Hatch
#2 Inside of Hatch
#3 " "
#4 " "
#5 " "
#6 " "
#7 " "
#8 " "
#9 " "
#10 " "
#11 " "
#12 " "
#13 " "
#14 " "
#15 " "
#16 " "

#17 Side of Steel Support
#18 Side of Steel Support
#19 Side of Large Tank
#20 Valve on Bottom of Tank
#21 Top Lip of Object
#22 Metal on inside
#23 Bottom
#24 Side
#25 Spindles
#26 Inside
#27 Top
#28 Side
#29 Side
#30 Top
#31 Inside Discarded Flex. pipe
#32 Other End "
#33 Floor outside Ladder
#34 Floor inside Ladder
#35 Floor Smear

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1		9		17		25		33	
2		10		18		26		34	
3		11		19		27		35	
4		12		20		28			
5		13		21		29			
6		14		22		30			
7		15		23		31			
8		16		24		32			

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

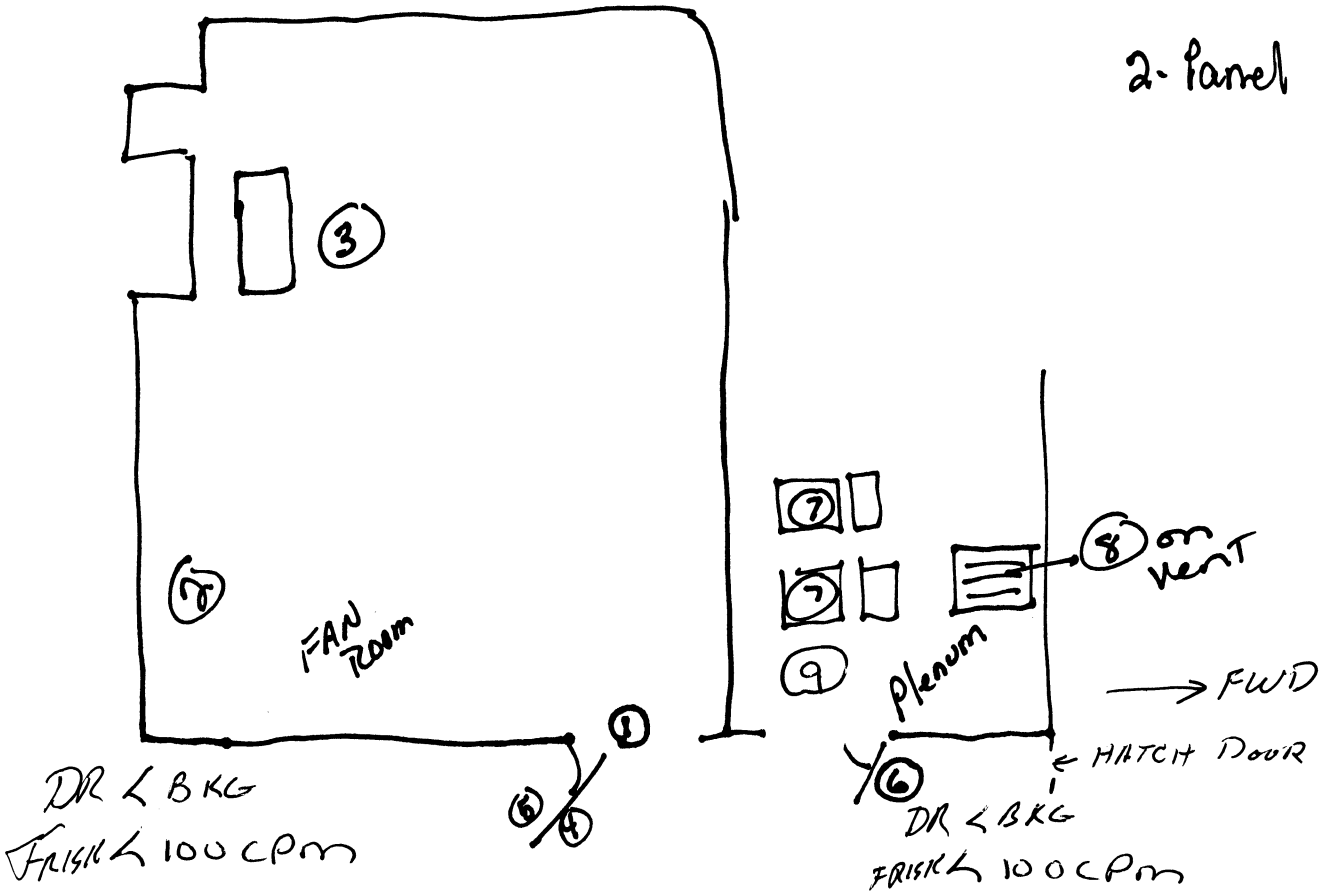
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0055

Date 4-4-05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type Ludlum	Beta ✓ Alpha	Beta Alpha
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert G Russell	β Factor	Eff. 10%	
	4uR/Hr	Bkg. 30 cpm	cpm

AREA Aft deck FAN Rm & Plenum Port side

COMPONENT



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKGD						
2	< BKG								
3	< BKG								
4	< BKG								
5	< BKG								
6	< BKG								
7	< BKG								
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

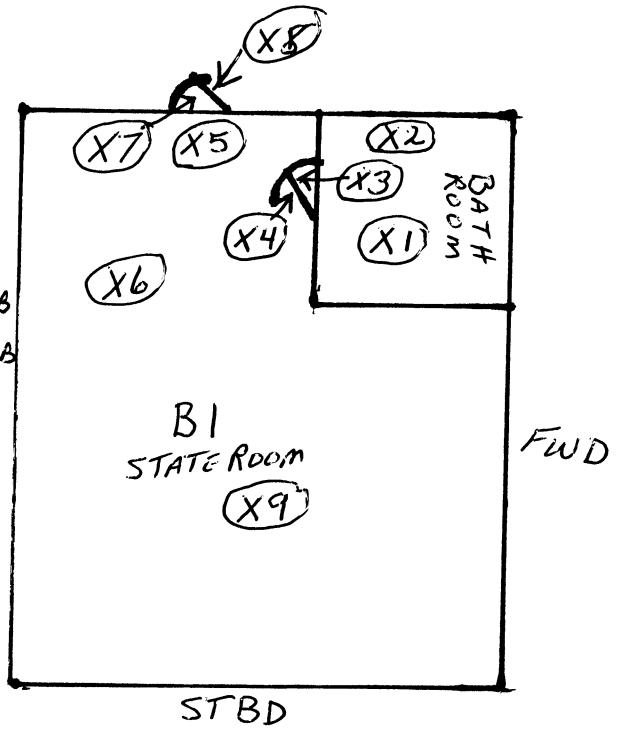
NSS-01 SURVEY NO. NSS-0056

Date 4/4/05 Time	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature [signature]	Serial No. 95499	Inst.Sn 97416	
Reviewed [signature]	β⁻ Factor	Eff. 10%	
	4 μR/HR/hr	Bkg. 30 cpm	cpm

AREA B-1 STATE ROOM AND BATH "B" DECK STBD

COMPONENT WASTE STORAGE ROOM FOR RADWASTE

1. DECK BATH RM
2. BATH VENT
3. BATH EXIT DOOR KNOB
4. BATH ENTER DOOR KNOB
5. STATE ROOM VENT
6. STATE ROOM DECK
7. EXIT STATEROOM DOORKNOB
8. ENTER STATEROOM DOORKNOB
9. STATE ROOM DECK NEXT TO BARRELS



ALL AREAS IN DIAGRAM
< BKGD
< 100 CPM

SMEAR RESULTS ~~N=DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG						
2	< BKG								
3	< BKG								
4	< BKG								
5	< BKG								
6	< BKG								
7	< BKG								
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01

SURVEY NO. NSS-0057

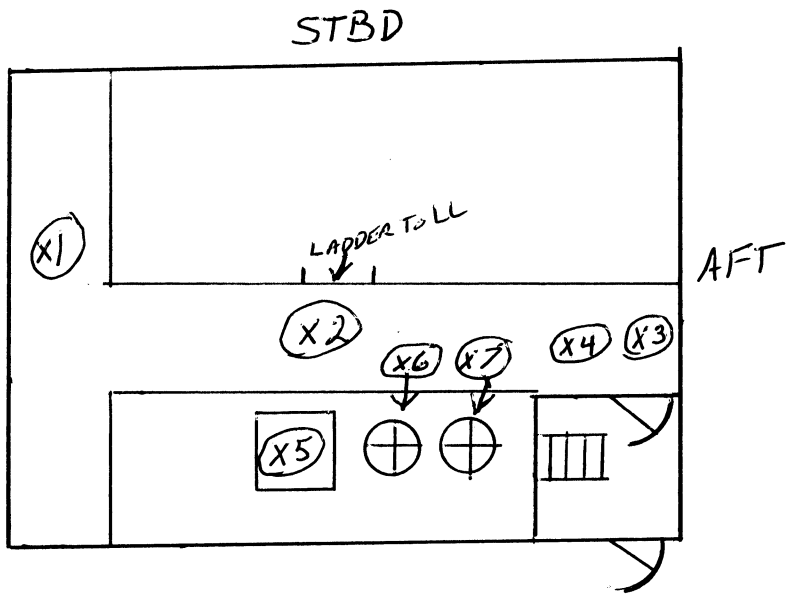
Date 4/4/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Ralph E. Lamoreaux	β⁻ Factor	Eff. 10%	
	4uR/HR	Bkg. 30 cpm	cpm

AREA FWD STBD STABLIZER RM. 14 FOOT FLAT

COMPONENT

SWIPES

1. DECK FWD WALK WAY
2. DECK AT LADDER TO LL
3. LIGHT SWITCH AFT BHD
4. DECK AT LIGHT SWITCH
5. DECK OF GRATING FWD OF VALVES
6. FWD LARGE VALVE
7. AFT LARGE VALVE



ALL AREAS IN DIAGRAM
DR < BKGD
FRISK 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG								
2	< BKG								
3	< BKG								
4	< BKG								
5	< BKG								
6	< BKG								
7	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0058

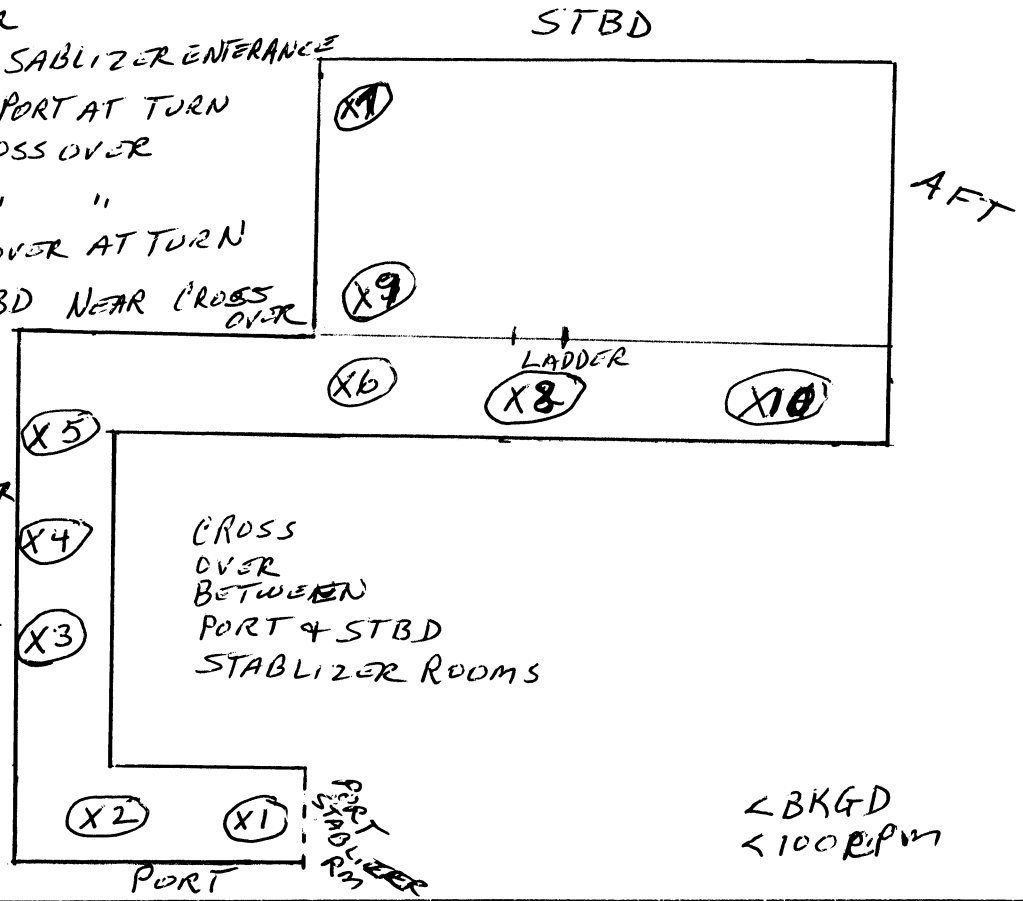
Date 4/4/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert E Lennah	β⁻ Factor	Eff. 10%	
	4uR/HR	Bkg. 30 cpm	cpm

AREA FWD STBD STABLIZER RM AND CROSS OVER LOWER LEVEL HOLD DECK

COMPONENT

SWIPES

1. DECK ~~STBD~~ PH CROSSOVER AT PORT SABLIZER ENTERANCE
2. DECK ~~STBD~~ CROSSOVER PORT AT TURN
3. DECK PORT o/℄ CROSS OVER
4. DECK STBD o/℄ " "
5. DECK STBD CROSSOVER AT TURN
6. BILGE AREA STBD NEAR CROSS OVER
7. ~~TANK~~ TANK TOP FWD STBD
8. WALKWAY BOTTOM LADDER
9. FWD DECK TANK TOP AT CROSS OVER OPENING
10. WALKWAY DECK AFT



<BKGD
<100 RPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG	9	<BKG						
2	<BKG	10	<BKG						
3	<BKG								
4	<BKG								
5	<BKG								
6	<BKG								
7	<BKG								
8	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

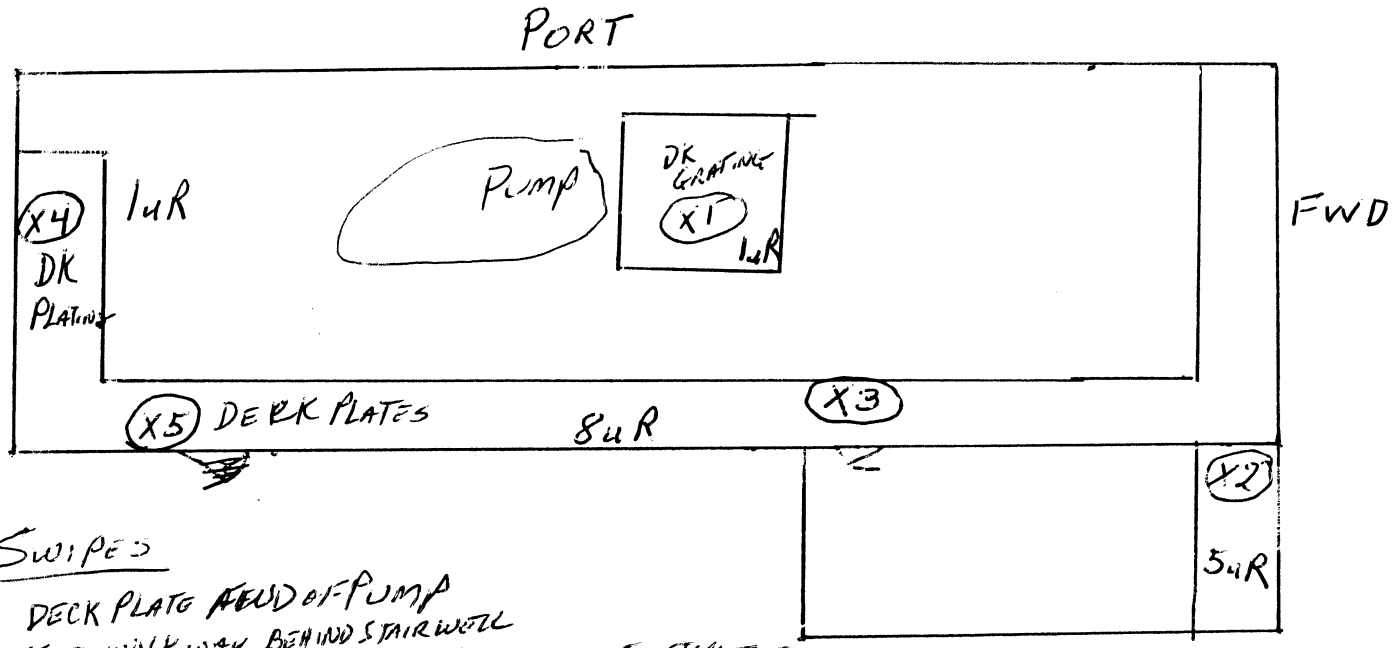
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0059

Date 4/4/05 Time	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature [signature]	Serial No. 95449	Inst.Sn 97416	
Reviewed [signature]	β⁻Factor	Eff. 10%	
	4uR/HR	Bkg. 30 cpm	cpm

AREA PORT FWD STABLIZER ROOM UPPER LEVEL
14 FLAT

COMPONENT



SWIPES

1. DECK PLATE AFWD OF PUMP
2. FWD WALKWAY BEHIND STAIRWELL
3. WALK WAY INSIDE DOOR ACCESS TO STABLIZER
4. AFT DECK PLATING OUTBD.
5. AFT DECK AT LL LADDER

DR <BKG
FRISK <100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG								
2	<BKG								
3	<BKG								
4	<BKG								
5	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0060

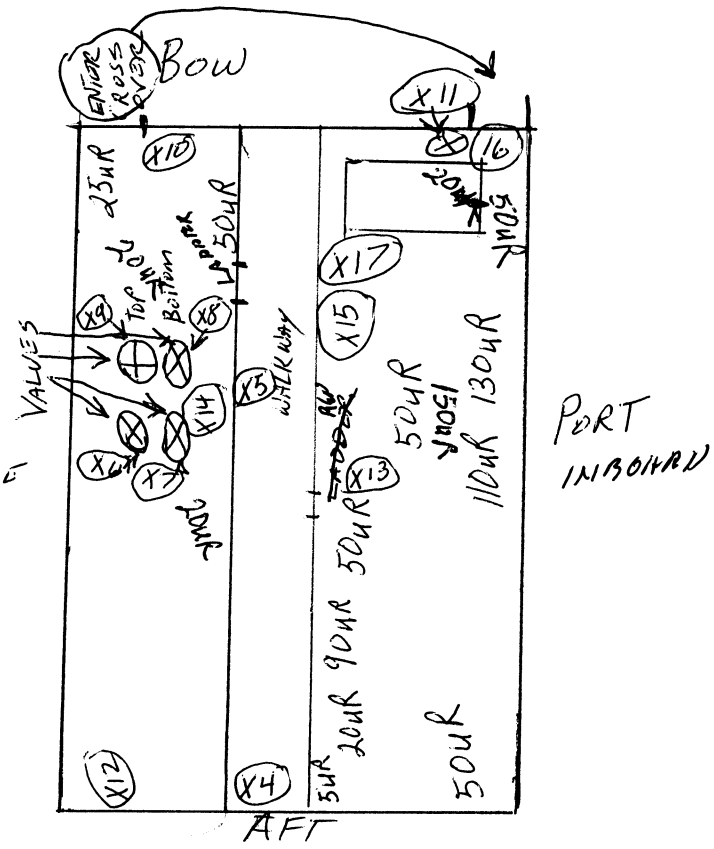
Date 4/4/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert Shumaker	β⁻Factor	Eff. 10%	
	4uR/HR	Bkg. 30 cpm	cpm

AREA PORT FWD STABLIZER ROOM LOWER LEVEL

COMPONENT

SWIPES

1. UL
2. UL
3. UL
4. DECK PLATES AFT END
5. DECK AT 4 LARGE VALVES
6. AFT TOP LARGE VALVE FLANGE + GLAND SEAL
7. AFT BOTTOM " " " " "
8. BOTTOM FWD " " " " "
9. TOP FWD " " " " "
10. TANK TOP SURFACE FWD AT CROSS OVER ENTERANCE
11. INBOARD PORT VALVE FLANGE+GLAND SEAL
12. DECK AFT PORT OUTBOARD
13. DECK TANK TOP INBOARD OF LADDER
14. DECK BETWEEN 4 LARGE VALVES
15. DECK BELOW WALKWAY INBOARD
16. DECK BELOW AIR OPERATE VALVE
17. FWD DECK AREA



No FRISK DATA

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
4	< BKGD	12	< BKGD						
5	< BKGD	13	< BKGD						
6	< BKGD	14	< BKGD						
7	< BKGD	15	< BKGD						
8	< BKGD	16	< BKGD						
9	< BKGD	17	< BKGD						
10	< BKGD								
11	< BKGD								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

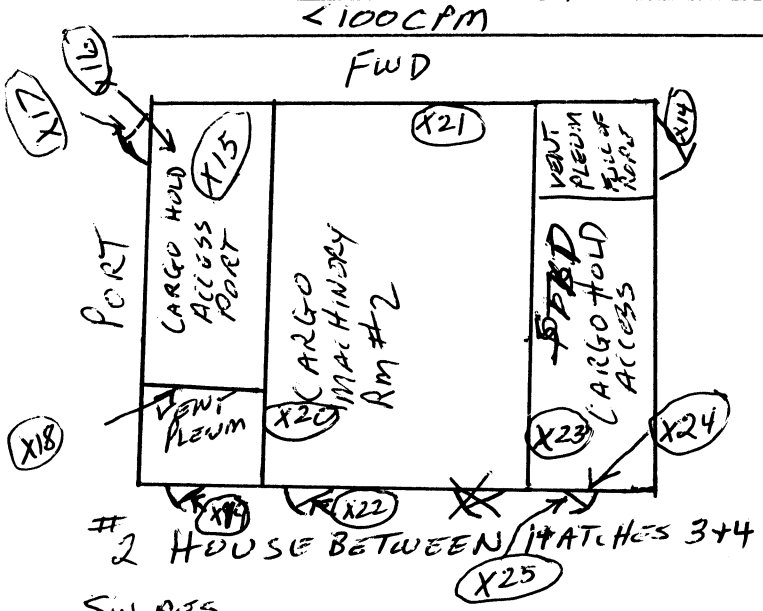
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0061

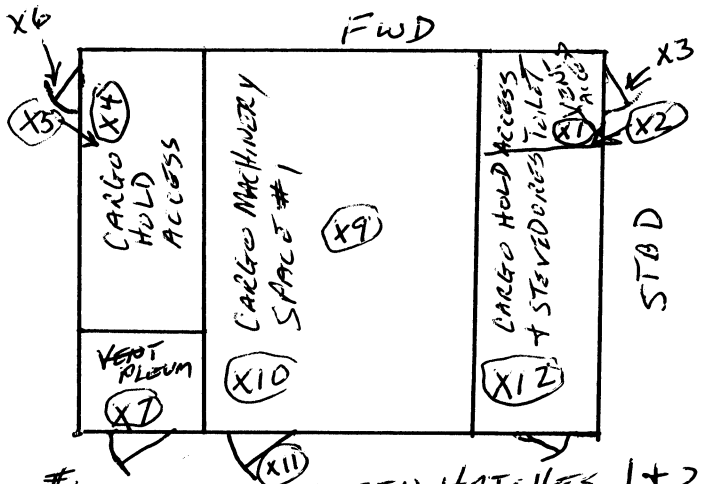
Date 4/5/05 Time 08:30	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Ralph T. Runnels	β⁻ Factor	Eff. 10%	
	4mR/HR BKG	Bkg. 30 cpm	cpm

AREA FWD WEATHER DECK HOUSES BETWEEN HATCHES 1 & 4

COMPONENT ALL AREAS SHOWN ON DIAGRAMS ARE <BKGD & <100CPM



#2 HOUSE BETWEEN HATCHES 3+4



#1 HOUSE BETWEEN HATCHES 1+2

SWIPES

1. #1 House STBD Vent Trunk Deck
2. Supply Vent Switches
3. Access Door Handles
4. #1 House Cargo Hold Access Deck
5. #1 House " " " Light Switch
6. #1 House " " " Door Handles
7. #1 House Port Vent Access DK
8. #1 House Port " " Door Handles

SWIPES

9. Fwd Vent Cargo Mach'y Sp #1
10. Cargo Mach'y Sp #1 DK
11. Cargo Mach'y Sp #1 Door Handles
12. Stevedore Toilet DK
13. Stevedore Toilet Door Handles
14. #2 House Cargo Vent Rm Door Handles STBD
15. #2 House Port Cargo ~~Vent~~ Access Deck
16. " " " " Light Switch
17. " " " " Door Handles
18. #2 House Port Vent Plenum. Vent Switch
19. " " " " Door Handles

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD	9	<BKGD	17	<BKGD	20	<BKGD		
2	<BKGD	10	<BKGD	18	<BKGD				
3	<BKGD	11	<BKGD	19	<BKGD				
4	<BKGD	12	<BKGD	21	<BKGD				
5	<BKGD	13	<BKGD	22	<BKGD				
6	<BKGD	14	<BKGD	23	<BKGD				
7	<BKGD	15	<BKGD	24	<BKGD				
8	<BKGD	16	<BKGD	25	<BKGD				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

(OVER)

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0061

Date 4/4/03 Time 0830	DOSE RATE	CONTAMINATION	
Surveyor	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature	Serial No. 95499	Inst.Sn 97416	
Reviewed	β⁻Factor	Eff. 10 %	
	4mR/hr BKGD	Bkg. 30 cpm	cpm

AREA FWD WEATHER DECK HOUSES BETWEEN HATCHES 1 AND 4

COMPONENT ALL AREAS SHOWN ON DIAGRAMS ARE < BKGD AND < 100 CPM

CONTINUATION OF PAGE 1

SWIPES

20. #2 HOUSE CARGO MACHINERY SP. #2 DECK
21. " " " " " VENT
22. " " " " " DOOR LATCH
23. #2 HOUSE CARGO HOLD ACCESS HAND HOLD
24. " " " " DOOR LATCH EXIT
25. " " " " " " ENTERANCE

Page 2 of 2

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

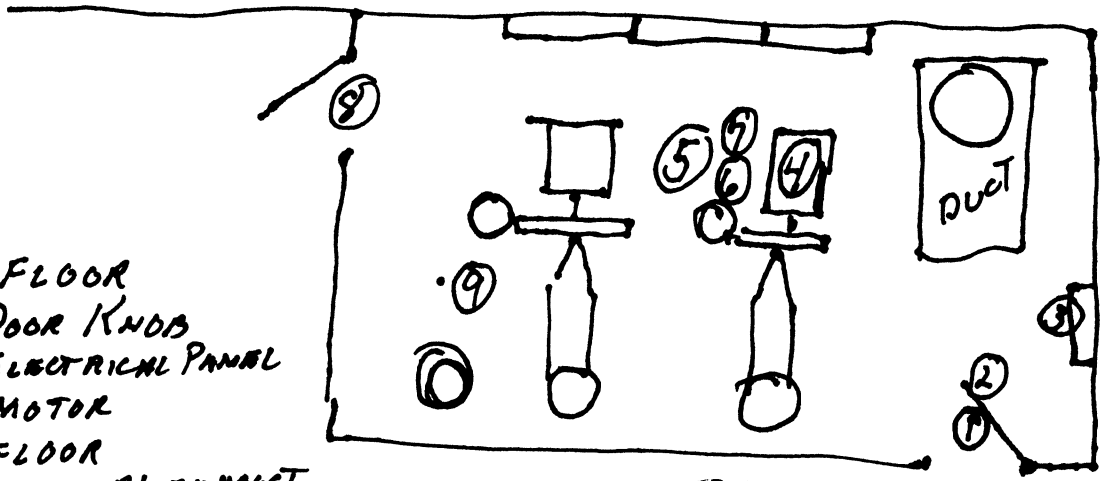
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0062

Date 4-5-05 Time 9:30	DOSE RATE	CONTAMINATION	
Surveyor Craddock	Inst. Type LUDLUM	Beta ✓ Alpha	Beta Alpha
Signature A Craddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Ralph E Pinnock	β⁻ Factor	Eff. 10%	
	4uR/HR BKG	Bkg. 30 cpm	cpm

AREA B DECK FAN ROOM TO COLD CHEMS LAB

COMPONENT



FWD

1 - FLOOR
2 - DOOR KNOB
3 - ELECTRICAL PANEL
4 - MOTOR
5 - FLOOR
6 - FAN RS-P1 EXHAUST VALVE (HEAD HIGH)
7 - EXHAUST BYPASS VALVE HEAD HIGH
8 - THRESHOLD

DR ∠ BG
FRISK ∠ 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG						
2	< BKG	~~10~~	BKG						
3	< BKG								
4	< BKG								
5	< BKG								
6	< BKG								
7	< BKG								
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

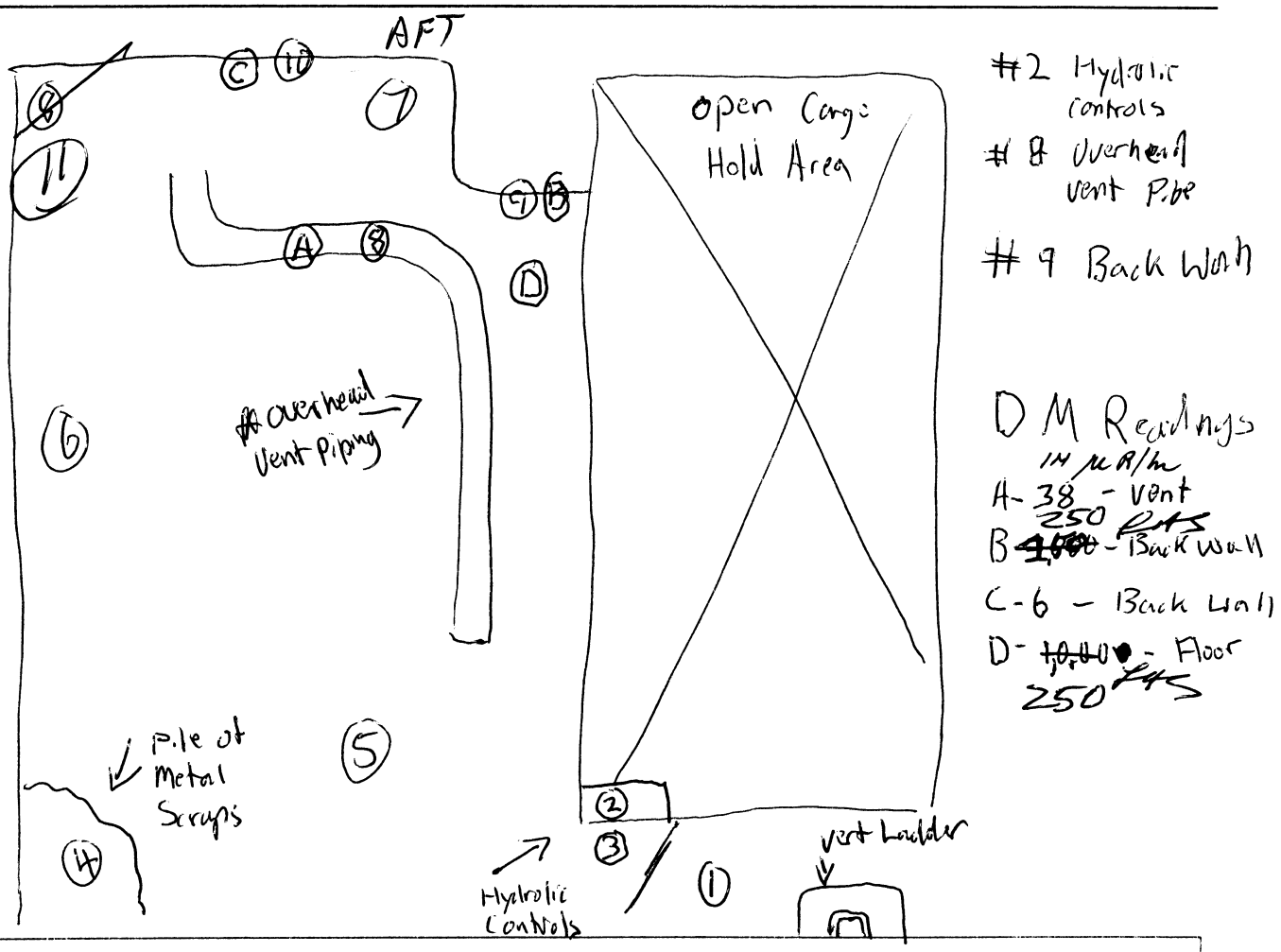
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0063

Date 4/30/05 Time 1315	DOSE RATE	CONTAMINATION	
Surveyor Lomax Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Lomax Scott	Serial No. 42972	Inst.Sn 91037	
Reviewed [signature]	~~B Factor~~	Eff. 10%	
	BKG 4 hr/h	Bkg. 40 cpm	cpm

AREA Hold #4 D Deck (Starboard)

COMPONENT



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG						
2	< BKG	10	< BKG						
3	< BKG	11	< BKG						
4	< BKG								
5	< BKG								
6	< BKG								
7	< BKG								
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

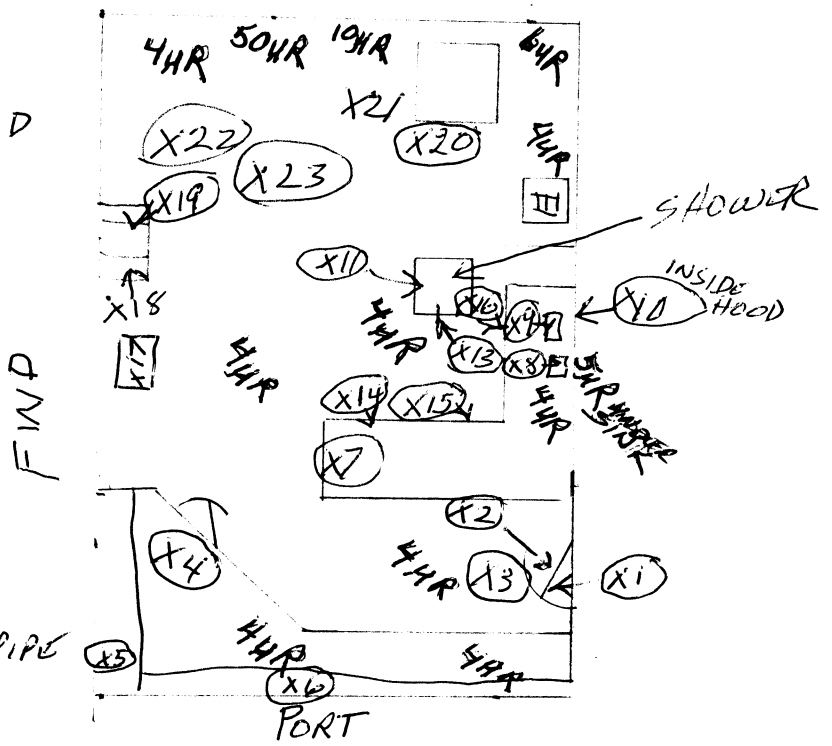
NSS-01 SURVEY NO. NSS-0064

Date 4/5/05 Time 09:00	DOSE RATE	CONTAMINATION	
Surveyor	Inst. Type LUDLUM	Beta ✓ Alpha	Beta Alpha
Signature Caddock	Serial No. 95499	Inst.Sn 97416	
Reviewed Caddock	β⁻Factor	Eff. 10 %	
Ralph E. Smith	4uR/HR BKG	Bkg. 30 cpm	cpm

AREA UPPER LEVEL "C" DECK COLD WATER CHEMICAL LABORATORY RADIATION MONITORING ROOM FWD

COMPONENT

1. ENTER DOOR LATCH
2. EXIT DOOR LATCH
3. DECK INSIDE DOOR
4. DECK INSIDE STORAGE
5. POLY 5 GAL BOTTLE FULL OF FLUID
6. PORT SHELF 4TH FROM BOTTOM
7. DRAIN TABLE FWD PORT END
8. DRAIN TABLE AT 1ST SINK INSIDE
9. SINK UNDER HOOD SINK
10. INSIDE HOOD OVER SINK
11. SHOWER HANDLE
12. SHOWER DECK
13. SHOWER DOOR WAY
14. 1ST SHELF FROM TOP FWD PORT TABLE
15. 2ND " " " " "
16. DK INSIDE SINK CABINET UNDER DRAIN PIPE
17. EXH VENT OVERHEAD
18. CROSS OVER STEP PORT ℄
19. CROSS OVER STEP STBD ℄



(Page 1 of 2)

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG	17	< BKG				
2	< BKG	10	< BKG	18	< BKG				
3	< BKG	11	< BKG	19	< BKG				
4	< BKG	12	< BKG	20	< BKG				
5	< BKG	13	< BKG	21	< BKG				
6	< BKG	14	< BKG	22	< BKG				
7	< BKG	15	< BKG	23	< BKG				
8	< BKG	16	< BKG	2'					

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0064

Date 4/5/05 Time 0900	DOSE RATE	CONTAMINATION	
Surveyor	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature	Serial No. 95499	Inst.Sn 97416	
Reviewed	β^- Factor	Eff. 10%	
		Bkg. 30 cpm	cpm

AREA UPPER LEVEL "C" DECK COLD WATER CHEMICAL LABORATORY RADIATION MON. TORING ROOM

COMPONENT

CONT' FROM PAGE 1

SWIPES

20. TOP OF LEAD BRICKS UNDER ITEM COVERED WITH LEAD
21. DECK IN FRONT OF ITEM LISTED ABOVE
22. DECK BESIDE RC VENT
23. INSIDE ORANGE VENT DUCT IN OVER HEAD

PAGE 2 of 2

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~β - BETA IN mRAD/HR/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

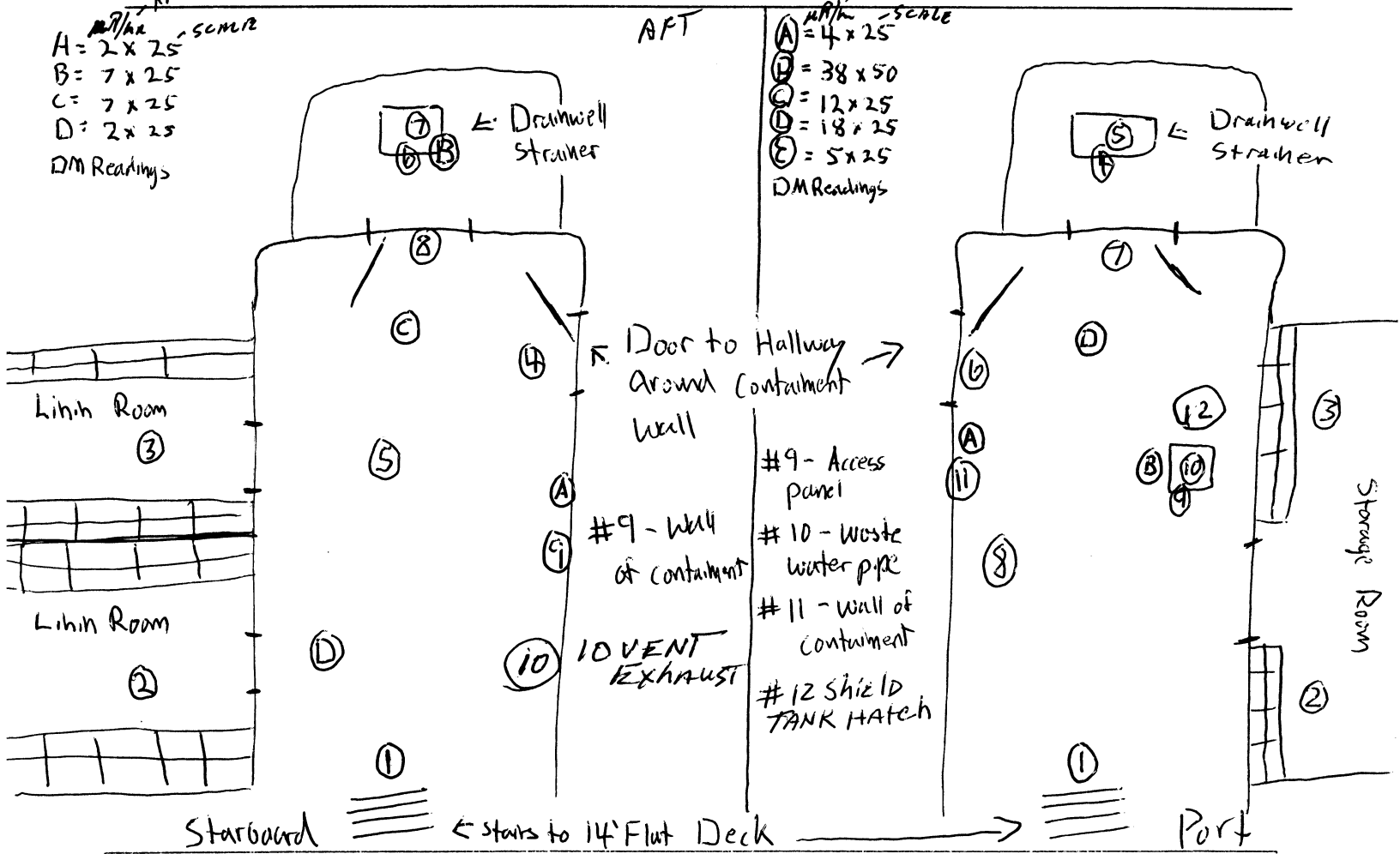
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0065

Date 4-5-05 Time 1100	DOSE RATE	CONTAMINATION	
Surveyor Lonnie Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Lonnie Scott	Serial No. 42972	Inst.Sn 90137	
Reviewed By W Cunningham	~~β Factor~~	Eff. 10% 10	
	4 MR/hr	Bkg. 4 cpm	cpm

AREA Hold Deck Starboard & Port

COMPONENT



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG	9	<BKG			1	<BKG	9	<BKG
2	<BKG	10	<BKG			2	<BKG	10	<BKG
3	<BKG					3	<BKG	11	<BKG
4	<BKG					4	<BKG	12	<BKG
5	<BKG					5	<BKG		
6	<BKG					6	<BKG		
7	<BKG					7	<BKG		
8	<BKG					8	<BKG		

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

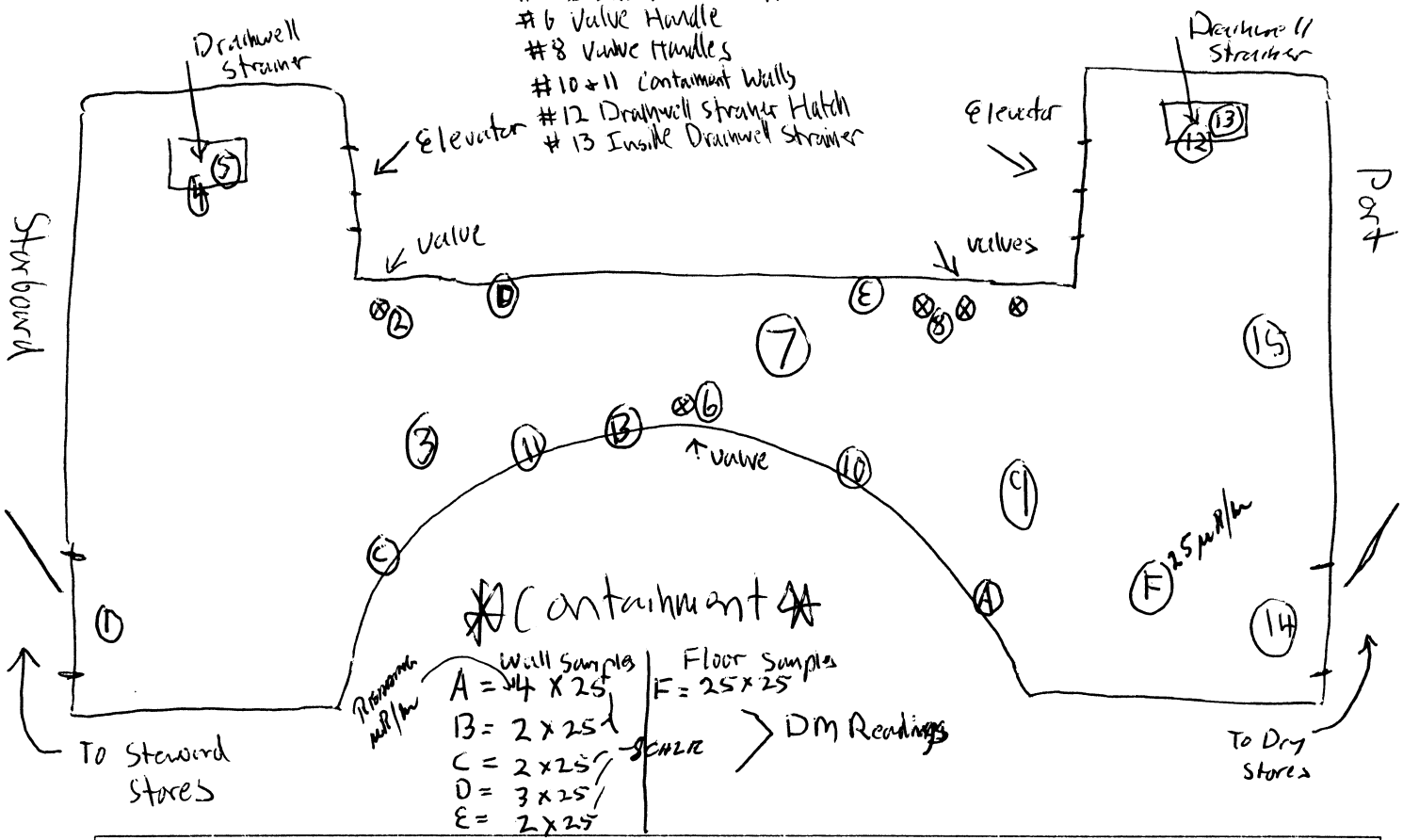
NSS-01 SURVEY NO. NSS-0066

Date 4-5-05 Time 1100	DOSE RATE	CONTAMINATION	
Surveyor Lemuel Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Lemuel Scott	Serial No. 42978	Inst.Sn 90137	
Reviewed [illegible]	~~β-Factor~~	Eff. 10%	
	4 MR/hr	Bkg 4 cpm	cpm

AREA Hallway Inbetween Port + Starboard on Hold Deck (Around Containment)

COMPONENT ____

#2 Valve Handle
#4 Drainwell Strainer Hatch
#5 Inside Drainwell Strainer
#6 Valve Handle
#8 Valve Handles
#10 & 11 Containment Walls
#12 Drainwell Strainer Hatch
#13 Inside Drainwell Strainer



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG						
2	< BKG	10	< BKG						
3	< BKG	11	< BKG						
4	< BKG	12	< BKG						
5	< BKG	13	< BKG						
6	< BKG	14	< BKG						
7		15	< BKG						
8									

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

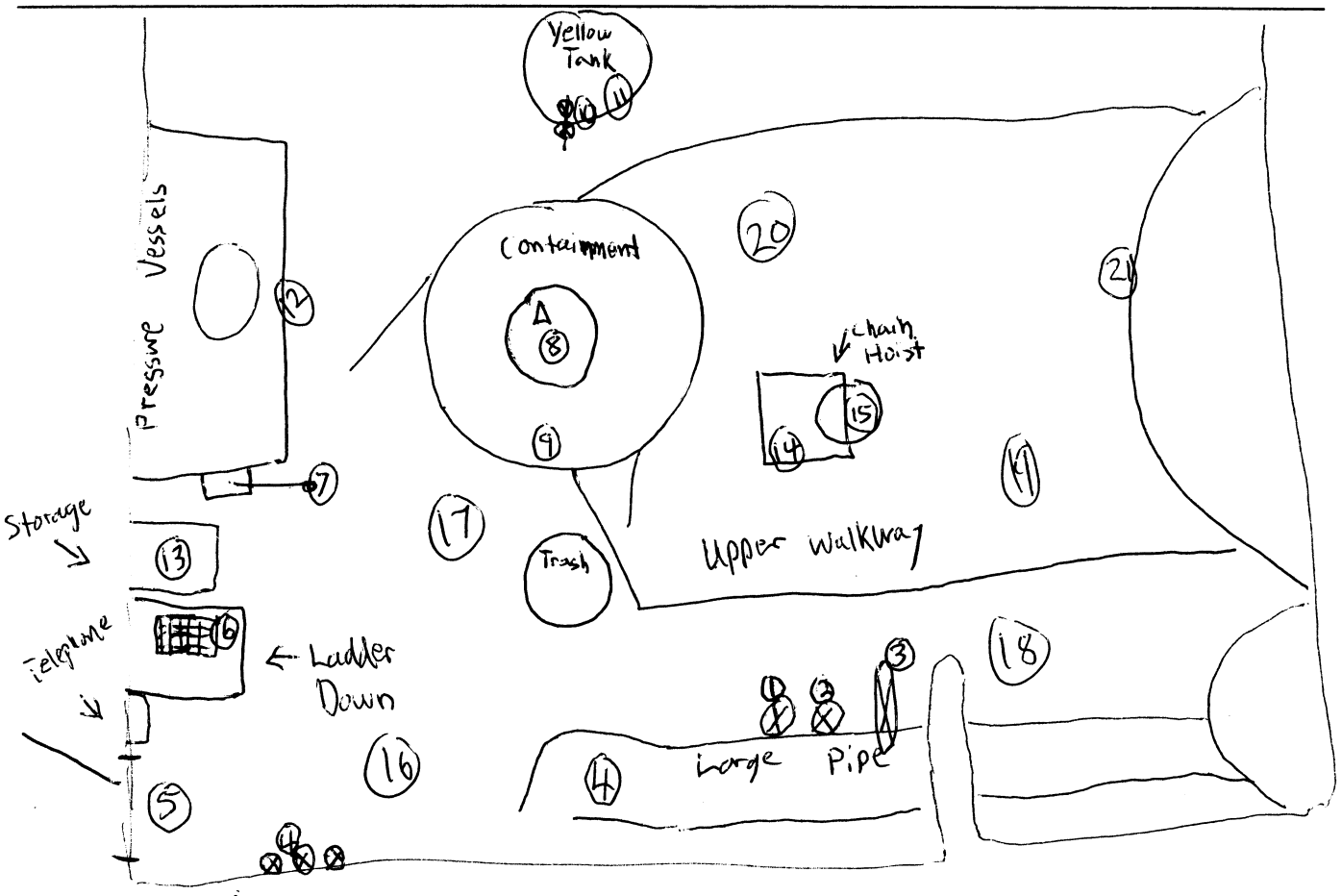
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0067

Date 4/6/05 Time 1:00	DOSE RATE	CONTAMINATION	
Surveyor Jerry Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Jerry Scott	Serial No. 95-499	Inst.Sn 42972	
Reviewed Robert W Hannah	β⁻Factor ✓	Eff. 10%	
	BKG 4 MR/Hr	Bkg. 40 [redacted] cpm	cpm

AREA Secondary ~~Main~~ Containment - B Deck AFT OF REACTOR

COMPONENT



DR < BKG / < 100 CPM FRISK

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG	17	< BKG				
2	< BKG	10	< BKG	18	< BKG				
3	< BKG	11	< BKG	19	< BKG				
4	< BKG	12	< BKG	20	< BKG				
5	< BKG	13	< BKG	21	< BKG				
6	< BKG	14	< BKG						
7	< BKG	15	< BKG						
8	< BKG	16	< BKG						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0067

Date Time	DOSE RATE	CONTAMINATION	
Surveyor	Inst. Type	Beta____ Alpha____	Beta____ Alpha____
Signature	Serial No.	Inst.Sn	
Reviewed	β^- Factor	Eff.	
		Bkg. cpm	cpm

AREA ~~Secondary Main~~ Containment - B Deck Aft of Reactor

COMPONENT

#1 + #2 - Valve Controls
#3 - Large Valve Control
#4 - Side of Large Pipe
#6 - Ladder Down
#7 - Handle for Pressure Vessel
#8 - Removable Steel Cover
#9 - Containment Housing
#10 - Valve controls
#11 - Side of Large Yellow Tank
#12 - Side of Pressure Vessel
#13 - Top of Storage Cab.
#14 - Chain on Chain Hoist
#15 - Main Part of Chain Hoist
#21 Side of Reactor

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0068

Date 4/6/05 Time 10:00	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type Ludlum 19	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert Bernoff	β⁻ Factor /	Eff. 10%	
	BKG 2 MR/H	Bkg. 40 cpm	cpm

AREA HP Lab - 4 Deck

COMPONENT

#2 - #~~30~~ 10 - Upper Cabinets

#13 - Top of Scaler

#14 - Counter infront of Scaler

#16 - Top of Scaler

#17 - Counter in front of Scaler

#20 - Inside Reg. Sink
#21 " "
#22 - Inside Hot Sink
#23 - Top of Drain inside Hot Sink
#24 - Outside of trap of Hot Sink

#32 - #38 - Lower Cabinets & Shelves
#40 - Air Vent
#41 - "

DM Readings

- 4 MR above Hot Sink
- 5 MR inside Hot Sink

CPM Readings

- 350 inside Hot sink
- Rest of the Room < 100 CPM

* Smear No. 22 and 23 had activity levels above background ~~but below MDA (minimum detectable activity) 160 dpm~~. RK

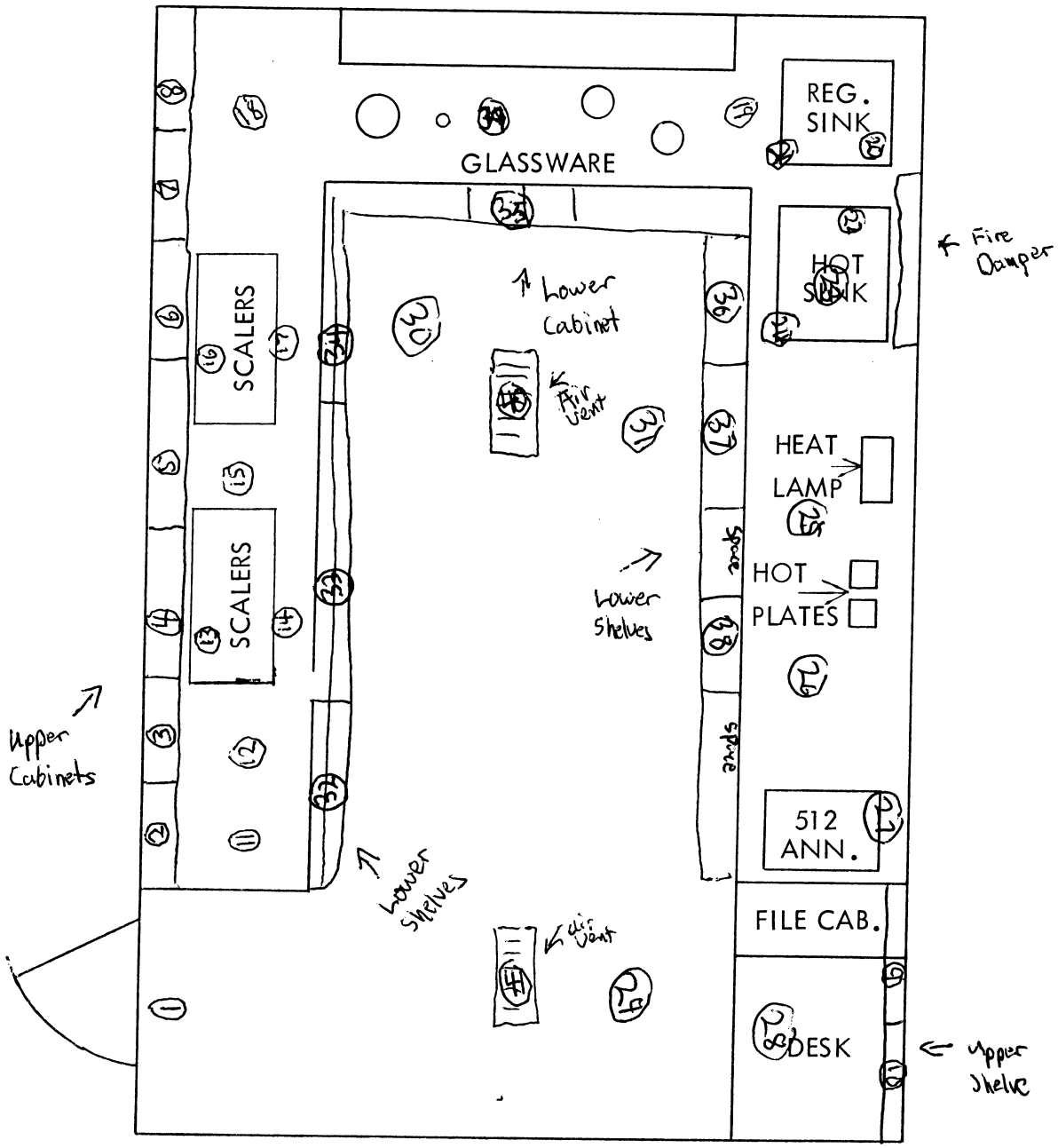
Smear #23 ~~1410~~ 1221 dpm/100cm² counter #2
Smear #22 ~~600~~ 646 dpm/100cm² counter #1

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG	17	< BKG	25	< BKG	33	< BKG
2	< BKG	10	< BKG	18	< BKG	26	< BKG	34	< BKG
3	< BKG	11	< BKG	19	< BKG	27	< BKG	35	< BKG
4	< BKG	12	< BKG	20	< BKG	28	< BKG	36	< BKG
5	< BKG	13	< BKG	21	< BKG	29	< BKG	37	< BKG
6	< BKG	14	< BKG	22 *	~~< BKG~~ 100	30	< BKG	38	< BKG
7	< BKG	15	< BKG	23 *	148	31	< BKG	39	< BKG
8	< BKG	16	< BKG	24	< BKG	32	< BKG	40	< BKG
								41	< BKG

RA - RADIATION AREA CA - CONTAMINATION AREA ALL DOSE RATES IN µrem/h

RCA - RADIATION CONTROL AREA AA - AIRBORNE AREA


REG. SINK
GLASSWARE
HOT SINK
Fire Damper
Lower Cabinet
Air Vent
SCALERS
SCALERS
HEAT LAMP
HOT PLATES
Lower Shelves
Upper Cabinets
512 ANN.
FILE CAB.
Lower Shelves
Air Vent
DESK
Upper Shelve

N.S. SAVANNAH

RADIOLOGICAL SURVEY

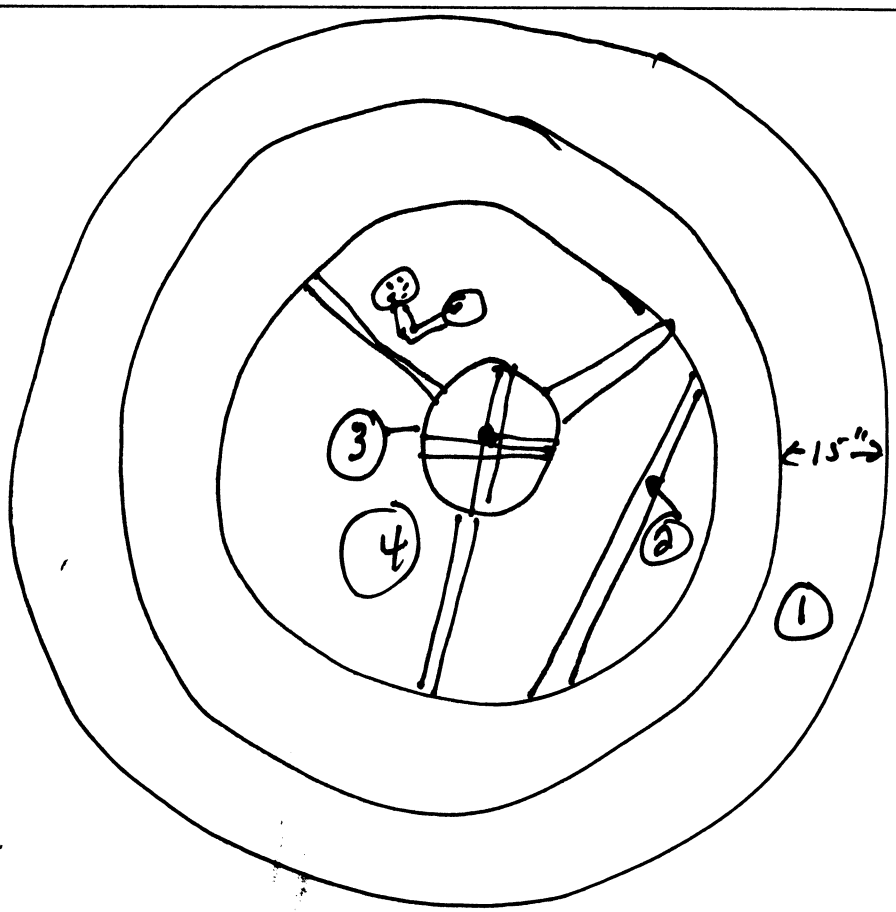
NSS-01 SURVEY NO. NSS-0069

Date 4-7-05 Time 900	DOSE RATE		CONTAMINATION	
Surveyor Logan Scott	Inst. Type Ludlum 19		Beta V Alpha	Beta Alpha
Signature Logan Scott	Serial No. 35469		Inst.Sn 75809	
Reviewed Robert Runnels	~~B~~ Factor 2 uR/h		Eff. 10 %	
	~~CPM L 100~~		Bkg. 30 cpm	cpm

AREA CONTAINMENT VESSEL, PLUG & INSIDE HATCH CONTROLS

COMPONENT

1 - inside plug wall
2 - hand handle
3 - wheel
4 - under wheel
5 - on guage



15 uRh @ guage

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG								
2	< BKG								
3	< BKG								
4	< BKG								
5	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN urem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0070

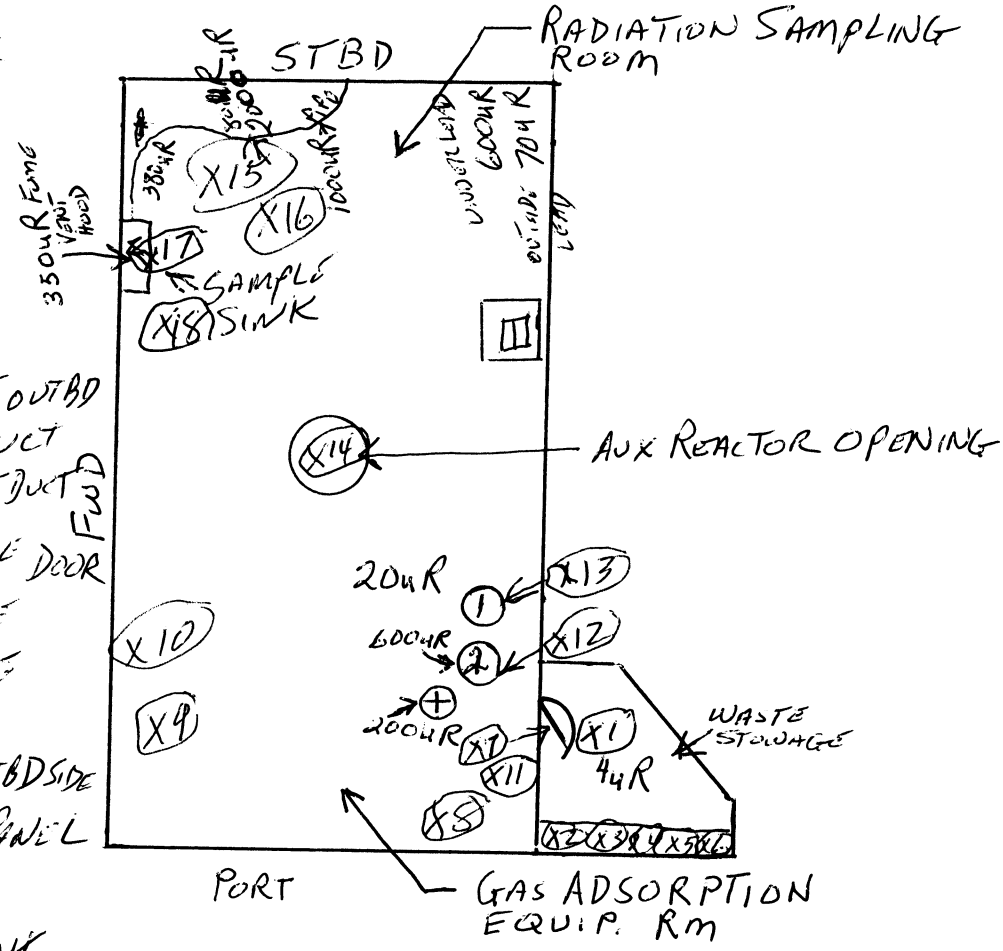
Date 4-7-05 Time	DOSE RATE	CONTAMINATION	
Surveyor JAMES H. LOVEDAHL	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature James H. Lovedahl	Serial No. 95499	Inst.Sn 97416	
Reviewed Ralph E. Pennock	β⁻ Factor	Eff. 10%	
	4uR/HR	Bkg. 30 cpm	cpm

AREA LOWER LEVEL "D" DECK RADIATION SAMPLING RM, GAS ADSORPTION EQUIP. RM., WASTE STOWAGE RM

COMPONENT ACCESS THROUGH "C" DECK, COLD WATER CHEMISTRY LAB

SWIPES

1. INSIDE WASTE STORAGE DECK
2. TOP SHELF " "
3. 2ND SHELF " "
4. 3RD " "
5. 4TH " "
6. BOTTOM " "
7. ENTER DOOR KNOB
8. DK RADIATION SAMPL. RM PORT OUTBD
9. INSIDE HANGING VENT DUCT
10. INSIDE OPPOSITE END VENT DUCT
11. DK AT WASTE STORAGE DOOR
12. FILTER #1 FANS FOR FANGE
13. FILTER #1 CANISTER FLANGE
14. TOP of AUX REACTOR PLUG
15. ELECT SWITCH PANEL STBD SIDE
16. DECK UNDER SWITCH PANEL
17. INSIDE SAMPL. SINK
18. DECK AT SAMPLE SINK



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG	17	* [redacted] 427				
2	< BKG	10	< BKG	18	< BKG				
3	< BKG	11	< BKG						
4	< BKG	12	< BKG						
5	< BKG	13	< BKG						
6	< BKG	14	< BKG						
7	< BKG	15	< BKG						
8	< BKG	16	< BKG						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN urem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

	cts	cpm	Bkg cpm	Eff.	dis/~~cm~~100 cm²
* [redacted]	427	854	42	20.9%	3904 d/~~cm~~

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0071

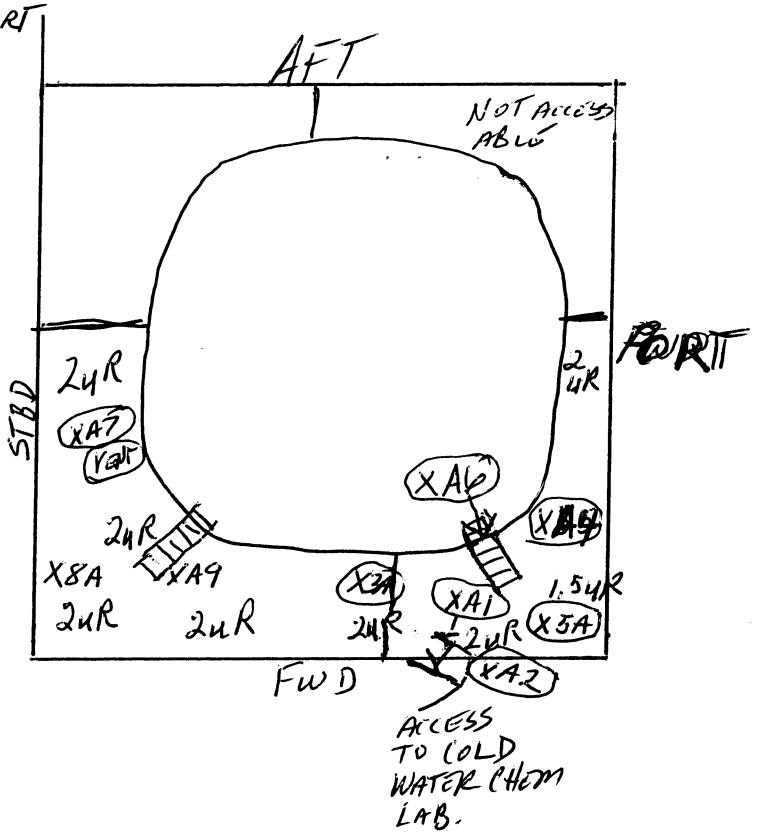
Date 4/8/05 Time	DOSE RATE	CONTAMINATION	
Surveyor JAMES H. LOVEDAHL	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature James H. Lovedahl	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert Runnals	β⁻ Factor	Eff. 10%	
	4uR/HR	Bkg. 30 cpm	cpm

AREA "C" DECK LEVEL UNDER UPPER LEVEL OF SECONDARY CONTAINMENT

COMPONENT

SWIPES

A1. DOOR HANDLE TO COLD WTR CHEM LAB PORT
A2. DECK AT ACCESS DOOR
A3. HAND RAIL AT DOOR
A4. REACTOR COOLING VALVE FLANGE PORT
A5. DECK FWD PORT
A6. PORT FWD LADDER
A7. VENT OPENING
A8. VENT MOTOR
A9. STBD FWD LADDER



No Swipes

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
A1	<BKG	A9	<BKG						
A2	<BKG								
A3	<BKG								
A4	<BKG								
A5	<BKG								
A6	<BKG								
A7	<BKG								
A8	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

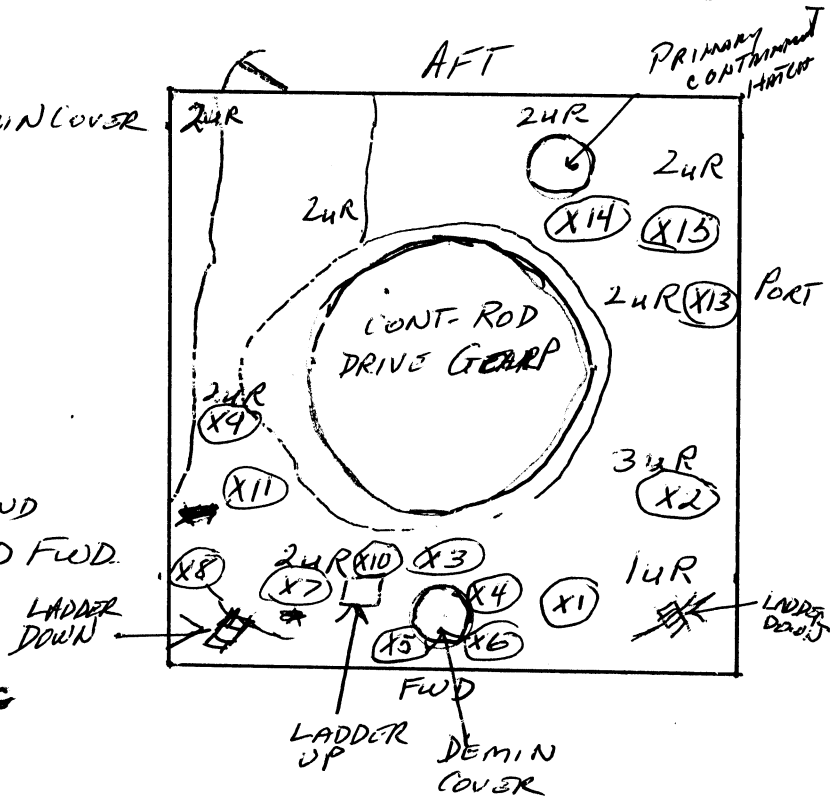
NSS-01 SURVEY NO. NSS-0072

Date 4-8-05 Time	DOSE RATE	CONTAMINATION	
Surveyor JAMES H. LOVEDAHL	Inst. Type LUDLUM	Beta ✓ Alpha	Beta Alpha
Signature James H. Lovedahl	Serial No. 95499	Inst.Sn 97416	
Reviewed Robert T. Bernard	β⁻ Factor	Eff. 10%	
	4uR/HR	Bkg. 30 cpm	cpm

AREA "B" DECK UPPER LEVEL SECONDARY CONTAINMENT Area

COMPONENT

1. FWD PORT DECK AT LADDER
2. FWD PORT DECK UNDER VENT
3. OVHD CHAIN FALL CLAMP HANDLE OVER DEMIN COVER
4. AFT CHAIN ON CHAIN FALL
5. FWD CHAIN ON CHAIN FALL
6. TOP OF DEMIN. COVER
7. ~~FWD~~ VERT LADDER TO A DECK
8. DECK AT STBD LL LADDER FWD.
9. DECK STBD OF CRDC
10. ~~VERT~~ UP FWD LADDER
11. FWD. INLET/OUTLET VALVE FLANGE + GLAND
12. REACTOR SPACE VENT DAMPER STBD FWD.
13. PORT ELIMITOR RU VALVE
14. PORT AFT DECK TO LL
15. VENT DUCT OPENING PORT OF CRDG



NO FRISKING

SMEAR RESULTS ~~A = DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG						
2	< BKG	10	< BKG						
3	< BKG	11	< BKG						
4	< BKG	12	< BKG						
5	< BKG	13	< BKG						
6	< BKG	14	< BKG						
7	< BKG	15	< BKG						
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0073

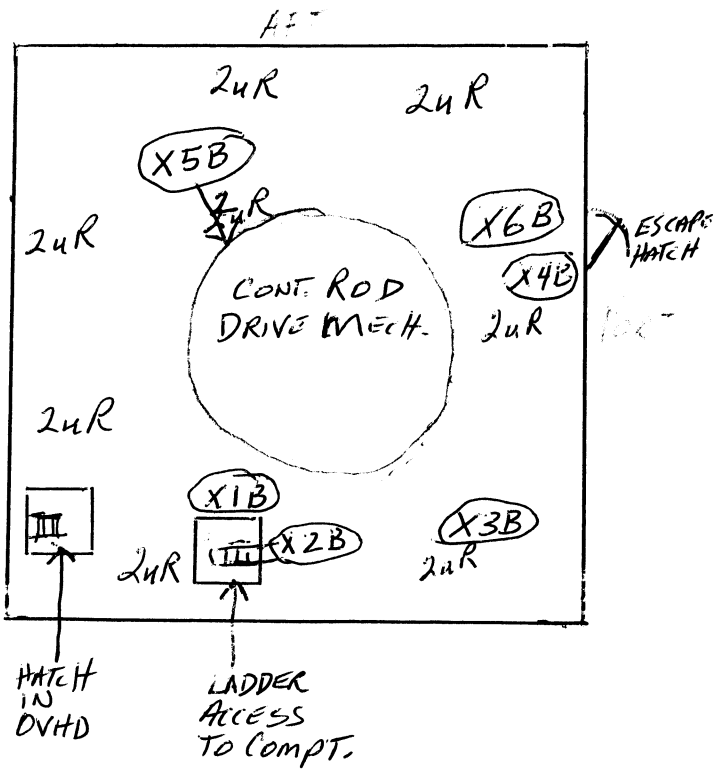
Date 4/8/05 Time	DOSE RATE	CONTAMINATION	
Surveyor JAMES H. LOVEDAHL	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature James H. Lovedahl	Serial No. 95499	Inst.Sn 97416	
Reviewed	β⁻ Factor	Eff. 10%	
	4uR/HR	Bkg. 30 cpm	cpm

AREA "A" DECK ABOVE SECONDARY CONTAINMENT

COMPONENT

SWIPES

1B. RAIL ON FWD ~~STBD~~ SHD ACCESS LADDER
2B. DECK AT ACCESS LADDER
3B. ESCAPE HATCH HANDLE
4B. DECK AT ESCAPE HATCH
5B. RING GASKET SEAL ON CRDM
6B. VENT DUCK ON ~~STBD~~ SHD PORT AT HATCH



FRISK < 100 CPM

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1B	< BKG								
2B	< BKG								
3B	< BKG								
4B	< BKG								
5B	< BKG								
6B	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

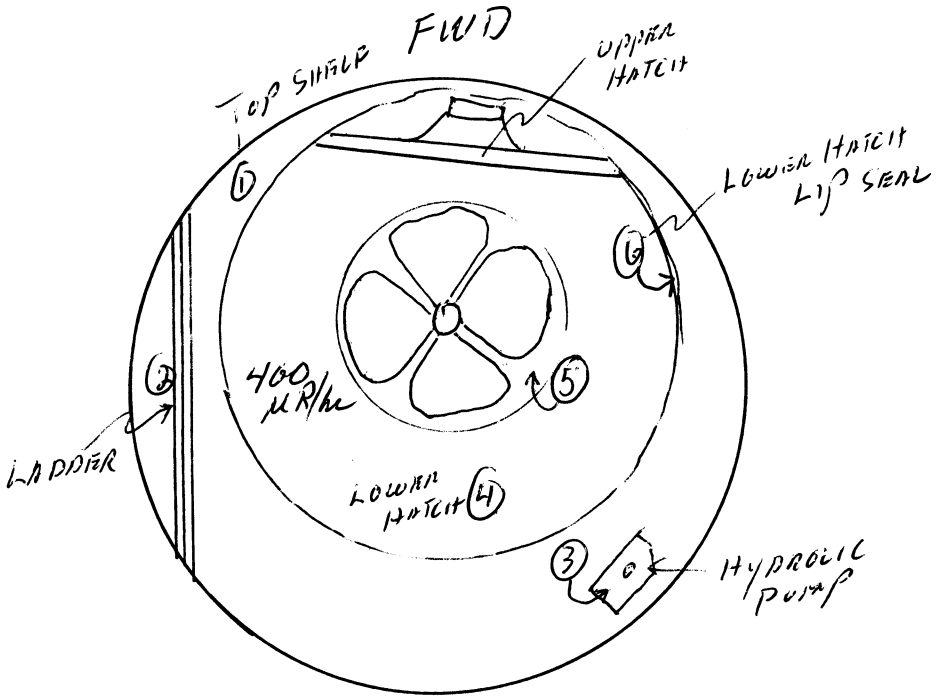
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0074

Date 4-8-05 Time 1:00 PM	DOSE RATE	CONTAMINATION	
Surveyor CRADDOCK	Inst. Type Ludlum MR	Beta ✓ Alpha	Beta Alpha
Signature [signature]	Serial No. 95499	Inst.Sn 97416	
Reviewed [signature]	β Factor	Eff. 10%	
	BKG 4μR/hr	Bkg. 30 cpm	cpm

AREA PRIMARY CONTAINMENT AIR LOCK

COMPONENT



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~β - BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	~BKG								
2	< BKG								
3	< BKG								
4	< BKG								
5	< BKG								
6	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

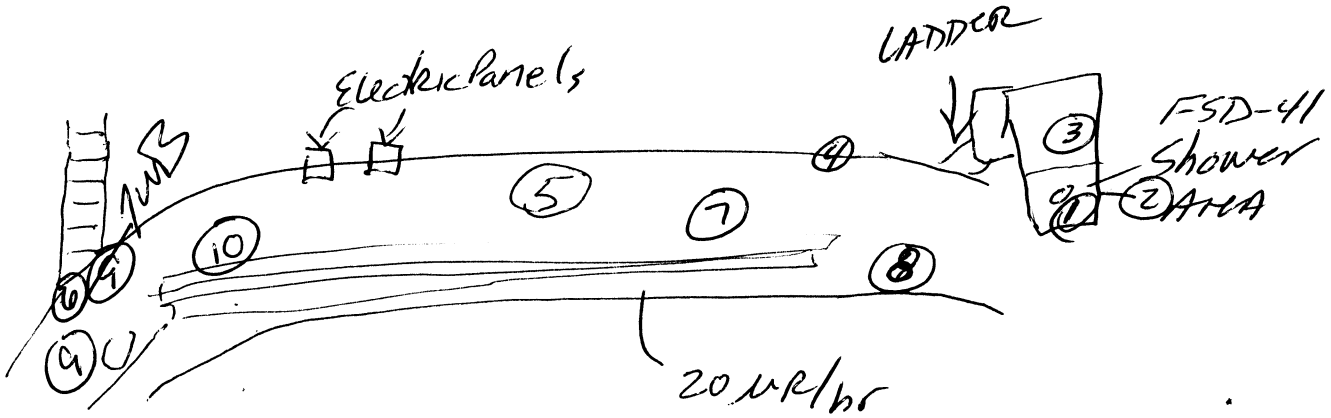
NSS-01 SURVEY NO NSS-0075

Date 4-8-05 Time 1300	DOSE RATE	CONTAMINATION	
Surveyor Scott / Bowen	Inst. Type LUD/Ion 19	Beta____ Alpha____	Beta____ Alpha____
Signature Roman Scott	Serial No. 42972	Inst.Sn	
Reviewed Robert Runnels RAS	~~B Factor BKG×100~~	Eff. NA	
	2 MR/h	Bkg. cpm	cpm

AREA Secondary Cont. AFT - Mezzine & Lower area (main level)

COMPONENT

GENERAL AREA DOSE RATE 3-5 MR/hr



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG	9	<BKG						
2	<BKG	10	<BKG						
3	<BKG								
4	<BKG								
5	<BKG								
6	<BKG								
7	<BKG								
8	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

DURATEC 28991 TELETECTOR

N.S. SAVANNAH
RADIOLOGICAL SURVEY

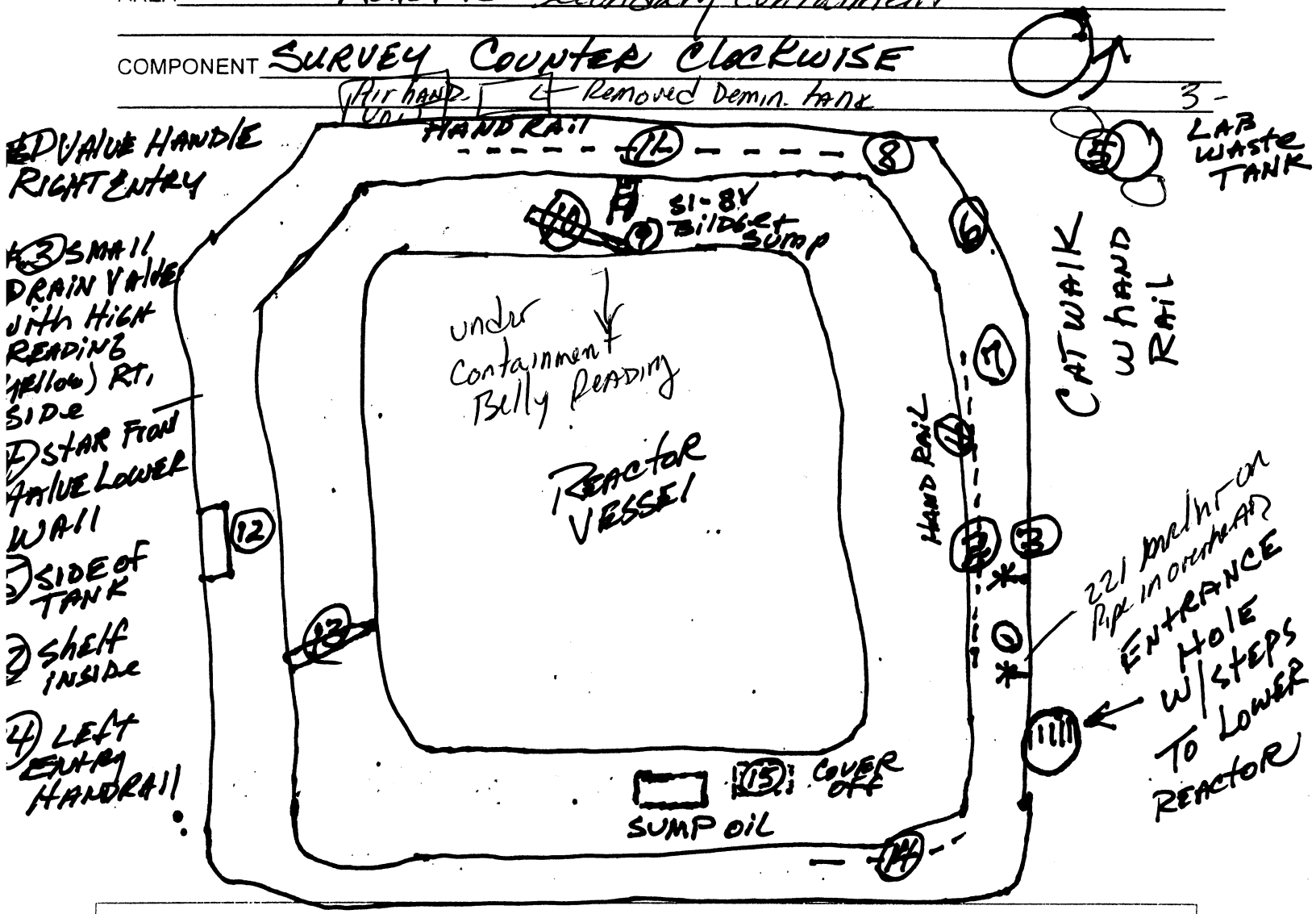
NSS-01 BOWERS SURVEY NO. NSS-0076

Date 4-8-05 Time 1400	DOSE RATE	CONTAMINATION	
Surveyor ~~SCOTT BOOREN~~	Inst. Type LUD/Nm 19	Beta ✓ Alpha	Beta Alpha
Signature Lomar Scay	Serial No. 42972	Inst.Sn	
Reviewed Robert G Pinnard	β⁻Factor	Eff.	
	BKG < ~~100~~ LUR/hr	Bkg. cpm	cpm

AREA LOWER REACTOR Secondary Containment

COMPONENT SURVEY COUNTER CLOCKWISE

Air hand ← Removed Demin. tank



SMEAR RESULTS ~~dpm/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9*	< BKG						
2	< BKG	10	< BKG						
3	< BKG	11*	< BKG						
4	< BKG	12	< BKG						
5	< BKG	13	< BKG						
6	< BKG	14	< BKG						
7	< BKG	15	< BKG						
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

* 10 min. count for Alpha

N.S. SAVANNAH
RADIOLOGICAL SURVEY

ALSO USED DURATEC 2899 TELETECTOR

NSS-01

SURVEY NO. NSS-00076

Date 4-805 Time 1400	DOSE RATE	CONTAMINATION	
Surveyor SCOTT-BOWDEN	Inst. Type LUD/6112	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature Susan Scott	Serial No. 42972	Inst. Sn	
Reviewed Robert Simonds	~~β Factor~~	Eff.	
	BKG-LI ~~mR/hr~~	Bkg. cpm	cpm

AREA SURVEY NOTES

COMPONENT LOWER CONTAINMENT AREA

221 mR/hr DRAIN VALVE RIGHT ENTRY MARKED

HEAD LEVEL - 1.4 1.6 MR/hr

1-3 TANKS 400 - 600 ~~MR~~ MR/hr (LAB WASTE TANKS)

STAR FRONT HALF - 400 - 500 MR/hr (Gen. AREA)

LHD WASTE TANK - 600 MR/hr (#2 TANK)

400 MR/hr STAR - FORWARD PRIMARY ON Relief Valve

FORWARD READING UNDER (Containment Vessel) 130-150 MR/hr

PORT AFT ~~GENERATOR~~ 60-80 AFT Gen. AREA - 60 MR/hr

PENETRATION #56 (WALL on PORT SIDE) - 80 MR/hr

PORT SIDE Gen. AREA - 60 - 80 MR/hr

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

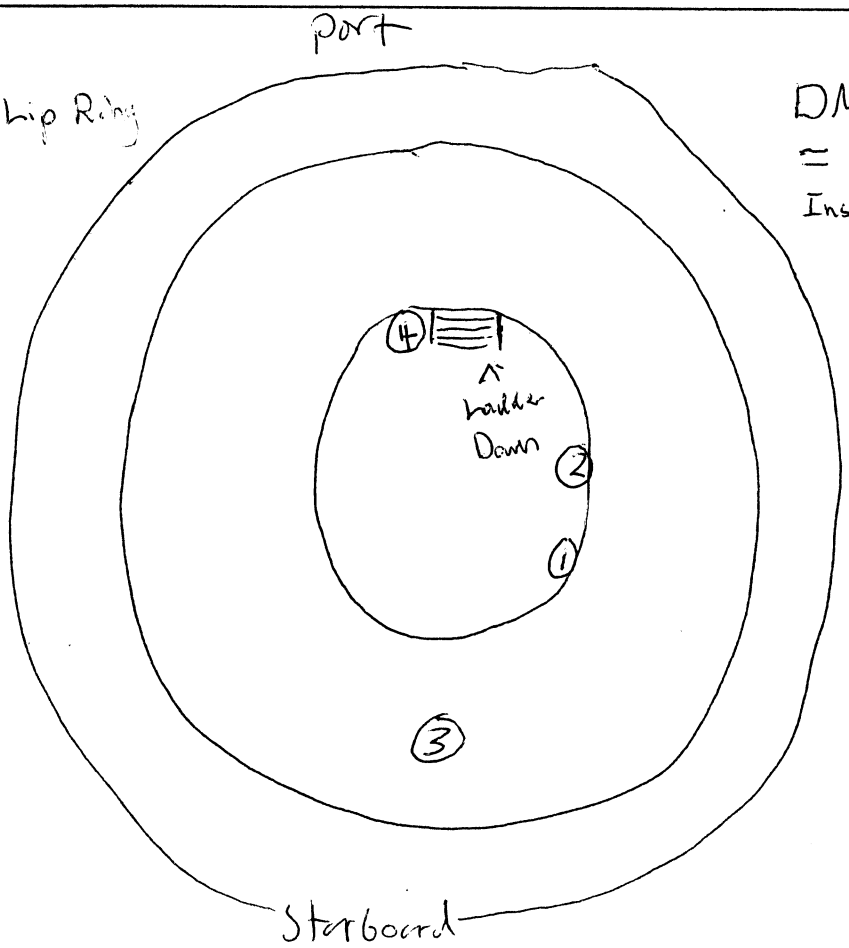
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0077

Date 4/1/05 Time 8:45	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type Ludlum 14	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature	Serial No. 95499	Inst. Sn 97416	
Reviewed Robert E Lunsford	β⁻ Factor ✓	Eff. 10%	
		Bkg. 30 cpm	cpm

AREA Primary Cont. Hatch (Lower) - Upper hatch to Primary containment - Lower hatch STILL SEALED AT THIS POINT.

COMPONENT



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG								
2	< BKG								
3	< BKG								
4	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0078

Date 4/11/05 Time	DOSE RATE	CONTAMINATION	
Surveyor J. Bowen	Inst. Type	Beta____ Alpha____	Beta____Alpha____
Signature J.W.B.	Serial No.	Inst.Sn	
Reviewed	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA PRIMARY CONTAINMENT 1ST LEVEL (Preliminary)

COMPONENT

Upon 1st Entry - General Location Smears - No MAP - Perform Rough Assessment - Detail survey will follow.

JWB

#11 250dpm
#15 96dpm — < 1000dpm/100cm²

SMEAR RESULTS ~~N = DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKGD	9	<BKG						
2	<BKGD	10	<BKG						
3	<BKGD	11	47 cts						
4	<BKG	12	<BKG						
5	<BKG	13	<BKG						
6	<BKG	14	<BKG						
7	<BKG	15	~~<BKG~~ 31cts						
8	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-6079

Date 4-14-05 Time 9 AM	DOSE RATE	CONTAMINATION	
Surveyor R. ST PENNOCK	Inst. Type N/A	Beta____ Alpha____	Beta____Alpha____
Signature R. St Pennock	Serial No.	Inst.Sn (See Below)	
Reviewed [illegible]	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA PRIMARY CONTAINMENT 1ST LEVEL FORWARD

COMPONENT RB SURROUNDING SUSPECT AREAS From Survey Number:

Counter # 1 102001
Beff 25.2%
2 160019
Beff 20.8%

1X - TOP OF PRESSURIZER

1 LARGE VALVES OFF OF PRESS. LINE TO REACTOR
2 MEDIUM SIZE VALVES TO RT OF PRESSURIZER
3 CONTAMINATED VALVING ON FLOOR
4 SS LINES & VALVES TO RT OF PRESS.
5 FLOOR
6 PRESSURIZER LINES LEFT OF PRESS.

1B - PRESSURIZER AT PIPE 6 TO RT OF TOP
2B - " PIPE 2 RT OF PRES.
3B FLOOR RT OF CONTAMINATED AREA
4B " LT OF " "
5B " LT OF PRESSURIZER

XRAD

Sample #	Counter	gross counts	gross cpm	BKG cpm	Net cpm	dpm / 100 cm²
1X	2	52	104	42	62	298
3	1	50	100	37	63	250
4	2	68	136	42	94	452
5	1	171	342	37	305	1210

Smear #5
1-hour Count
α activity =
2.8 dpm/100cm²
Smear #4
< MDA

4-14 Smear # 5 (Floor) α = 77, B = 23067 Smear #4 (ss lines) α = 19, B = 6701

10 minute
2:01

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1X	52 (2*)	1A	< BKG	9A	< BKG	1B	< BKG		
1	< BKG	2A	< BKG	10A	< BKG ** JMS	2B	< BKG		
2	< BKG	3A	< BKG			3B	< BKG		
3	50 (1)	4A	< BKG			4B	< BKG		
4	68 (2)	5A	< BKG			5B	< BKG		
5	171 (1)	6A	< BKG ** JMS						
6	< BKG	7A	< BKG						
XRAD		8A	< BKG						

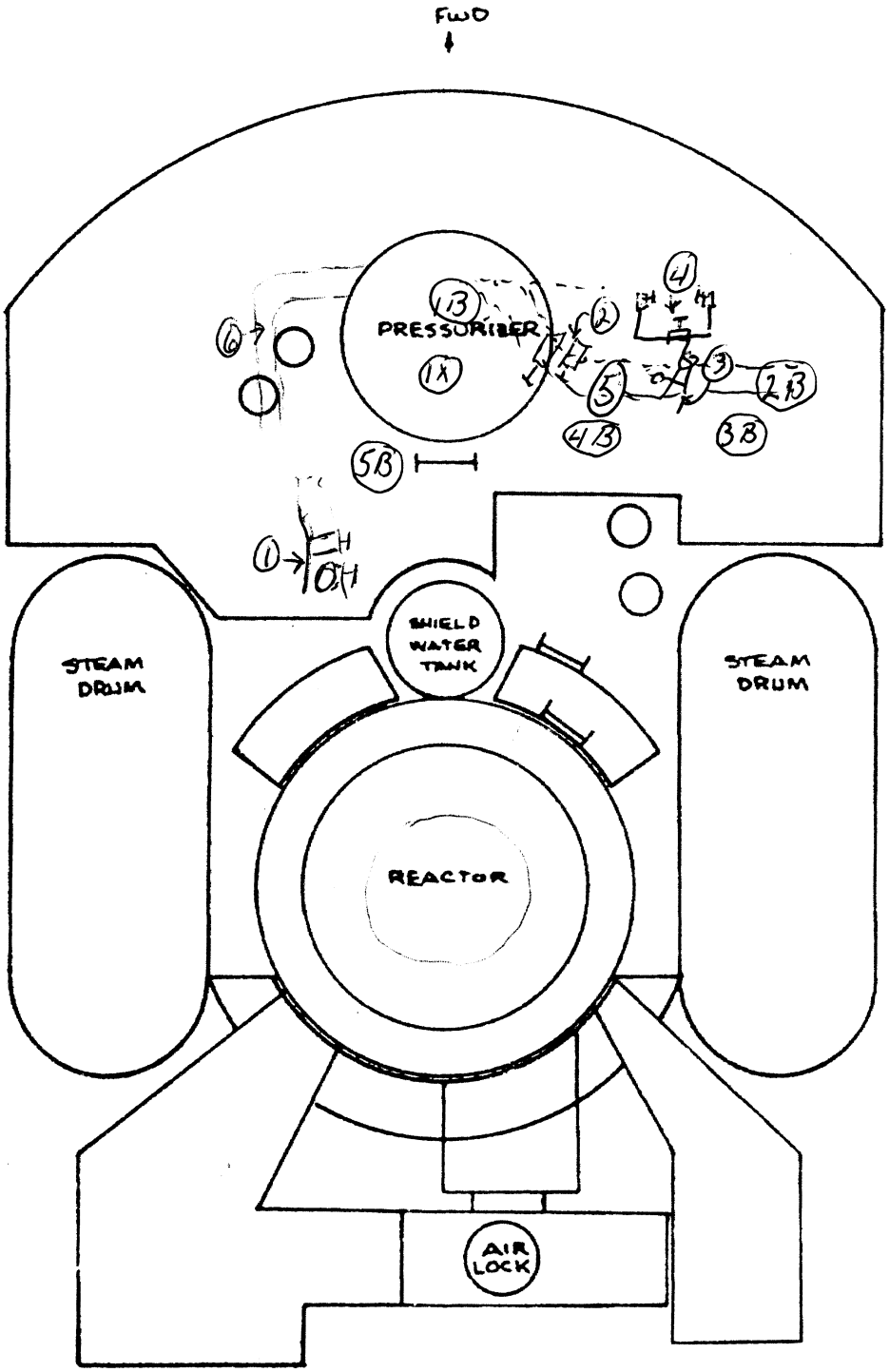
RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA ** - See U-tube smear data JMS

* Instrument (Counter) # 1

Inst. Type:	Ser. No.:
Probe:	Cal. Date:

CONTAINMENT VESSEL
1ST LEVEL



CONTAINMENT VESSEL

N.S. SAVANNAH
RADIOLOGICAL SURVEY

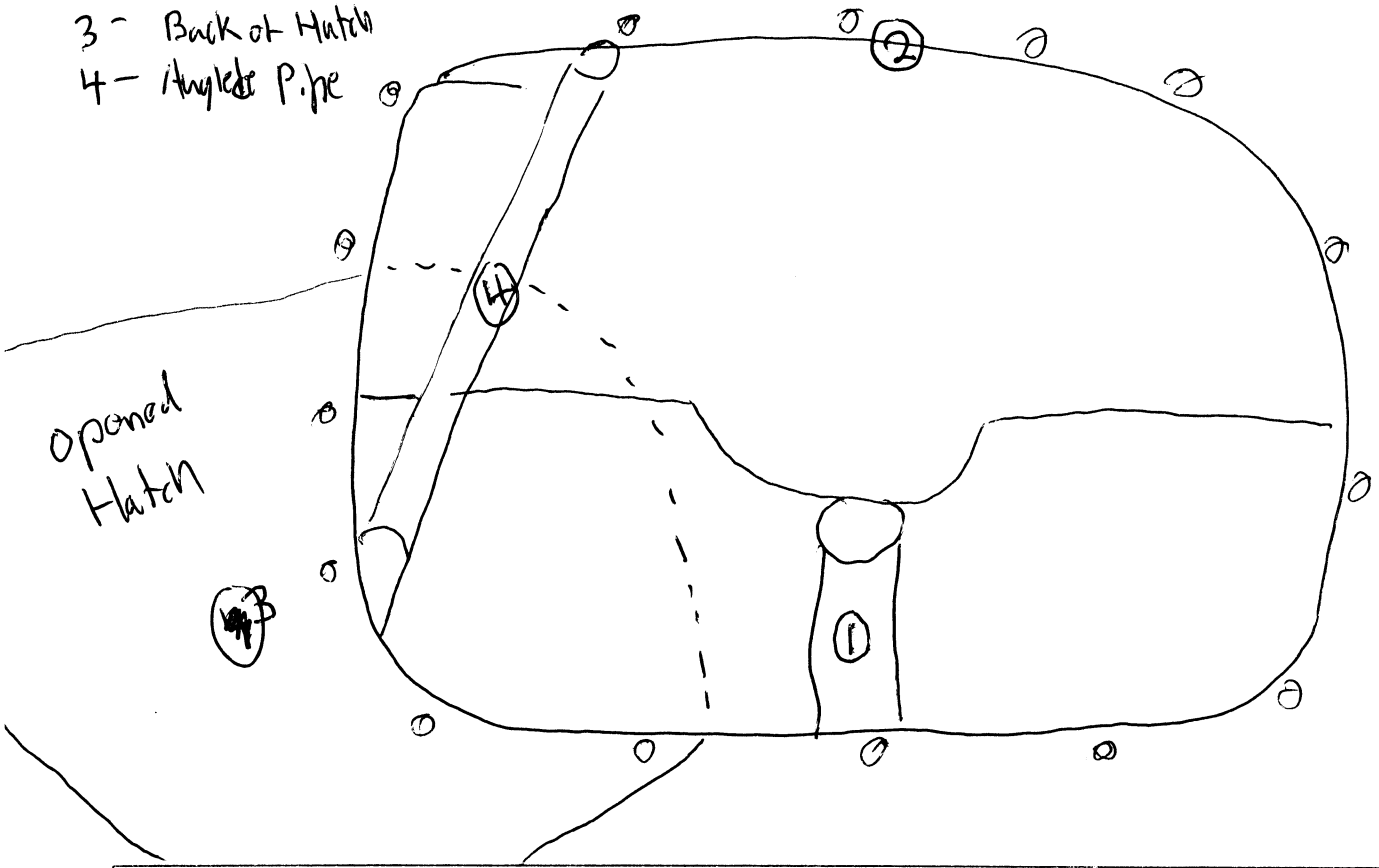
NSS-01 SURVEY NO. NSS-0080

Date 04/06/05 Time 2:00	DOSE RATE	CONTAMINATION	
Surveyor Ben Scott	Inst. Type	Beta____ Alpha____	Beta____Alpha____
Signature	Serial No. N/A	Inst.Sn N/A	
Reviewed	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA Steam Cond. Hatch (Engine Room)

COMPONENT

1 - Cross Pipe
2 - Hatch Wall
3 - Back of Hatch
4 - Unlabeled Pipe



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG								
2	<BKG								
3	<BKG								
4	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0081

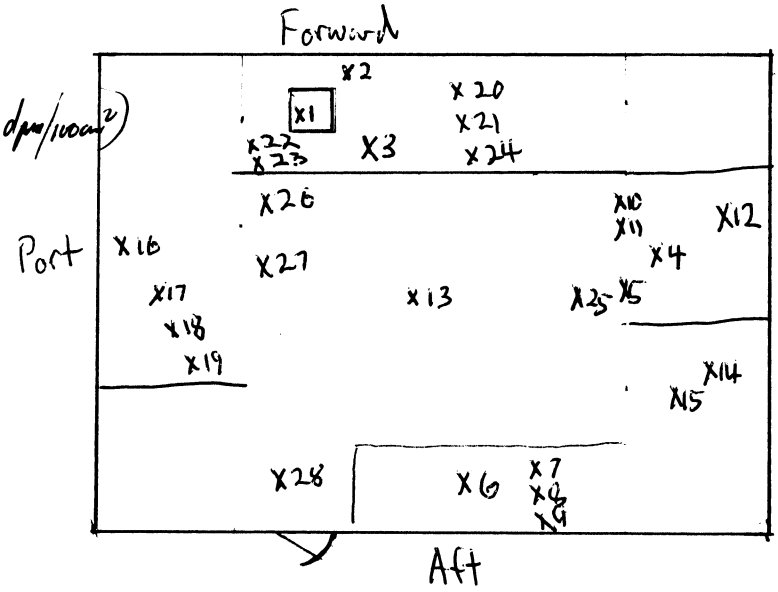
Date 4/11/05 Time 1100 AM	DOSE RATE	CONTAMINATION	
Surveyor JAMES LOVEDAHL	Inst. Type LUDLUM	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature James Lovedahl	Serial No. 95469	Inst.Sn 97416	
Reviewed Robert Elmore	β⁻Factor	Eff. 10%	
	~~3 MR~~ 3 uR/hr	Bkg. 30 cpm	cpm

AREA "D" DECK HOT CHEM LAB AT CONTROL ROOM

COMPONENT Seal # 7603

SWIPES

#1 Sink
#2 Inside Collection tank (waste) (369 dpm/100cm²)
#3 Top of countertop
#4 Inside Hood
#5 Outside Hood Door
#6 Aft countertop
#7 1st Shelf inside Aft Countertop
#8 2ND Shelf inside Aft countertop
#9 Bottom Shelf "
#10 Top Shelf under Hood
#11 Bottom " "
#12 Hood Vent
#13 Overhead Vent
#14 Shelf Aft of Hood (top)
#15 " "(Bottom)
#16 Port Top Shelf
#17 Port Top of Cabinet
#18 Middle Shelf Portside



#19 Bottom Shelf Port
#20 Top Shelf Forward
#21 Middle Shelf Forward
#22 Drain under sample sink
#23 Bottom shelf under sink — (316 dpm/100 cm²)
#24 Bottom Shelf Forward
#25 Floor in front of Hood
#26 Floor in front of Sample Sink
#27 Deck Drain
#28 Floor in front of Door
#29 Light Switch
#30 Inside Door knob

DM Readings < BKG

SMEAR RESULTS ~~IN DPM/100 CM²~~ IN cpm .5m B = ~~BETA IN mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG	17	< BKG	25	< BKG		
2	65 cts	10	< BKG	18	< BKG	26	< BKG		
3	< BKG	11	< BKG	19	< BKG	27	< BKG		
4	< BKG	12	< BKG	20	< BKG	28	< BKG		
5	< BKG	13	< BKG	21	< BKG	29	< BKG		
6	< BKG	14	< BKG	22	< BKG	30	< BKG		
7	< BKG	15	< BKG	23	57 cts				
8	< BKG	16	< BKG	24	< BKG				

RA – RADIATION AREA
CA – CONTAMINATION AREA
ALL DOSE RATES IN µrem/hr
RCA – RADIATION CONTROL AREA
AA – AIRBORNE AREA

Smear #	ct	cpm	Bkgd	Net cts	dpm/100 cm²
2	65	130	37	93	369
23	57	114	42	72	286

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0082

Date 4-12-05 Time 1000	DOSE RATE	CONTAMINATION	
Surveyor Bowen Scott	Inst. Type Telx	Beta____ Alpha____	Beta____Alpha____
Signature [signature]	Serial No. Detector	Inst.Sn	
Reviewed [signature]	β⁻Factor 28991	Eff.	
		Bkg. cpm	cpm

AREA Primary FS

COMPONENT Containment Vessel 3RD LEVEL 4th

SEE DRAWING.

* Smears from Containment - 1st LVL Aft. Data moved to appropriate survey

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1A	<BKG	~~9A~~	~~<BKG~~ *	6	<BKG				
2A	<BKG	10A	<BKG	7	<BKG				
3A	<BKG			8	<BKG				
4A	<BKG	1	<BKG	9	<BKG				
~~5A~~	<BKG	2	<BKG	10	<BKG				
6A	<BKG	3	<BKG						
7A	~~<BKG~~ *	4	<BKG						
8A	<BKG	5	<BKG						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

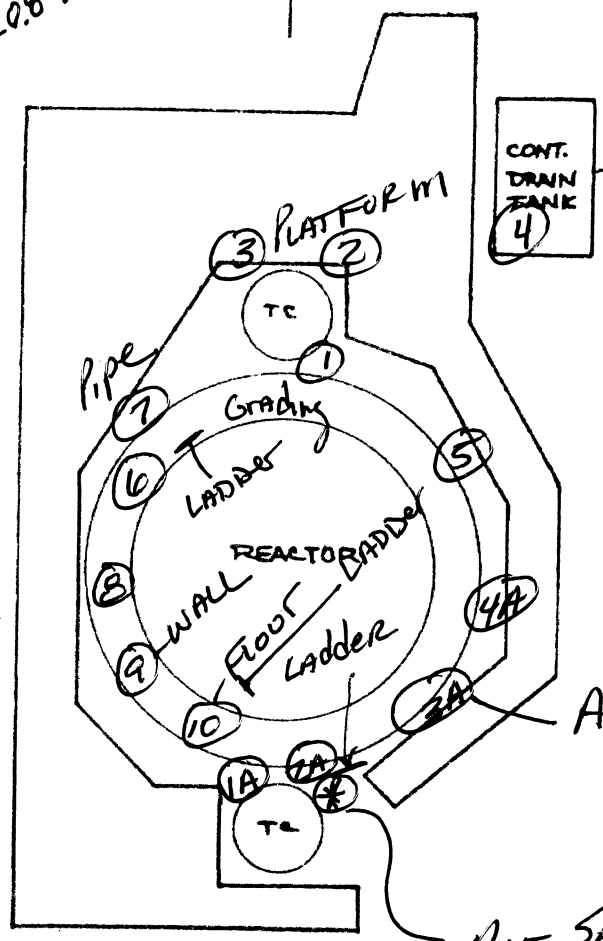
RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

CONTAINMENT VESSEL
4th LEVEL

Gen. Area - 4th Level 1-3 mr/hr

FWD

O2 Level is 20.4 to 20.8%



~~TSC-ND-127~~

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0083

Date 4-12-05 Time 1000	DOSE RATE	CONTAMINATION	
Surveyor Bowen Scott	Inst. Type TELE	Beta____ Alpha____	Beta____Alpha____
Signature B.W.S.	Serial No. Detector	Inst.Sn N/A	
Reviewed Robert Kennedy	β⁻Factor 28991	Eff.	
		Bkg. cpm	cpm

AREA Containment Vessel / 1st Level / Primary

COMPONENT

SEE ATTACHED DRAWING

μR/hr METER SN 95469

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

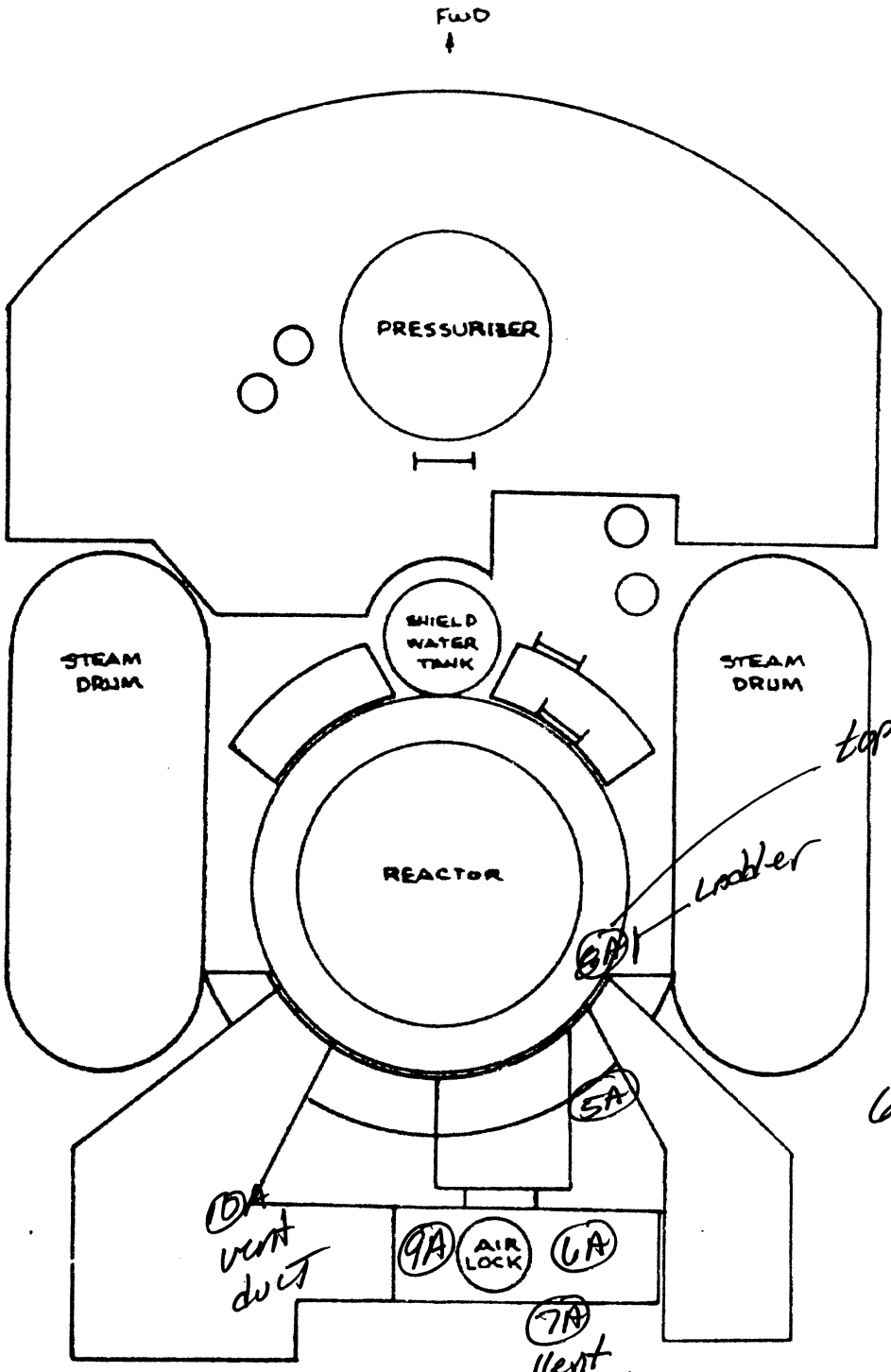
NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
5A	< BKG								
6A	< BKG								
7A	< BKG								
8A	< BKG								
9A	< BKG								
10A	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

Probe:	Cal. Date:

CONTAINMENT VESSEL
1ST LEVEL



Gen. Area
600 - 800 μr/hr

~~CONTAINMENT VESSEL~~
~~3RD LEVEL~~

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0084

Date 4-12-05 Time 1000 Hrs	DOSE RATE	CONTAMINATION	
Surveyor JOWEN SCOTT	Inst. Type tele detector	Beta____ Alpha____	Beta____Alpha____
Signature Jowen Scott	Serial No. 28991	Inst.Sn	
Reviewed Robert E Kennedy	β⁻ Factor	Eff.	
		Bkg. cpm	cpm

AREA Primary Containment - 2nd Level

COMPONENT

SEE ATTACHED DRAWING

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

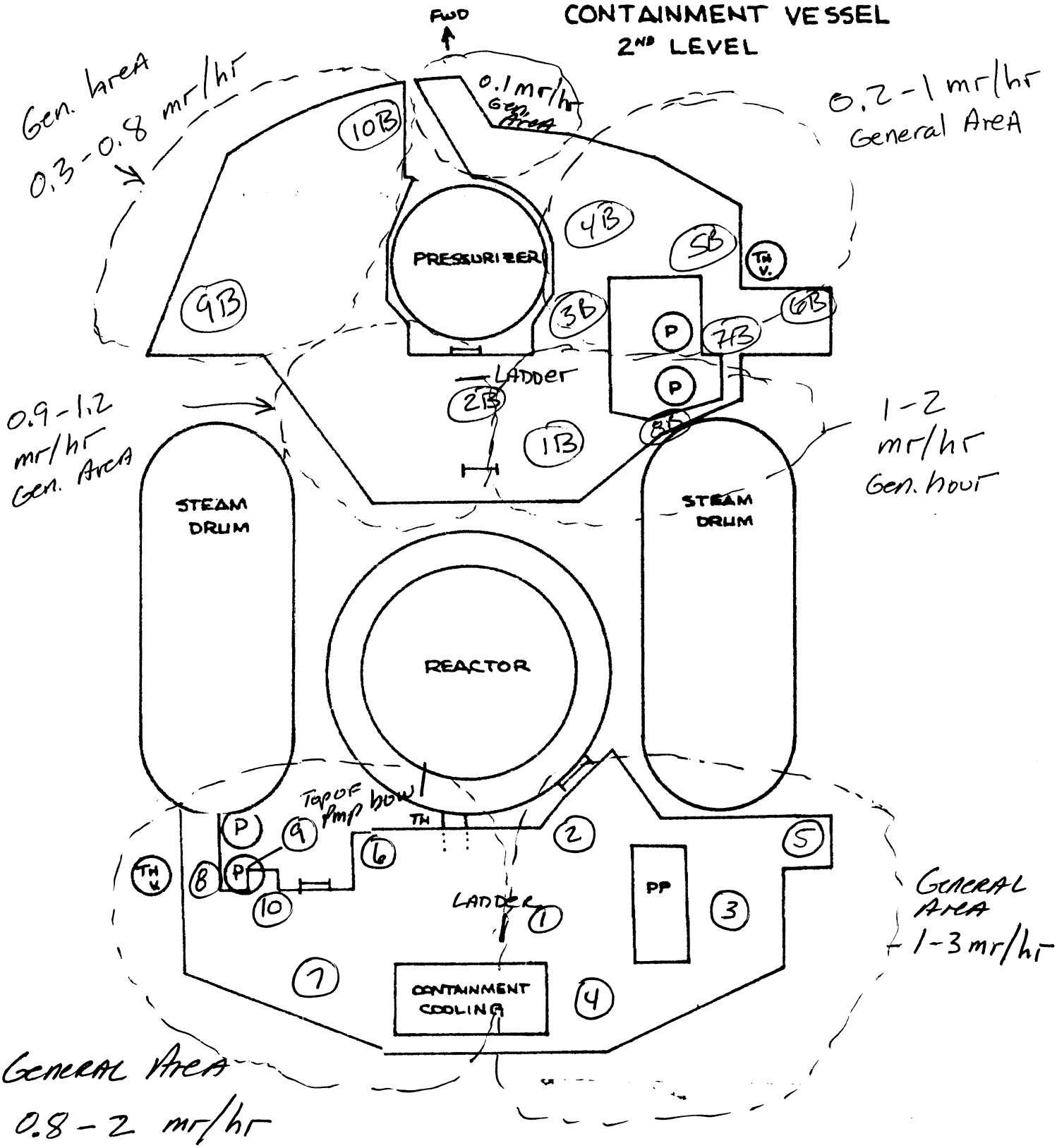
NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG	~~1~~ 1B	< BKG	9B	< BKG		
2	< BKG	10	< BKG	2B	< BKG	10B	< BKG		
3	< BKG			3B	< BKG				
4	< BKG			4B	< BKG				
5	< BKG			5B	< BKG				
6	< BKG			6B	< BKG				
7	< BKG			7B	< BKG				
8	< BKG			8B	< BKG				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

Containment Vessel Survey

Scaler:	Bgr: c/m
Eff.: %	Eff. Date:



N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0095

Date 4-12 Time 1000	DOSE RATE	CONTAMINATION	
Surveyor Bowen, Scott	Inst. Type TELEPECTOR	Beta ___ Alpha ___	Beta ___ Alpha ___
Signature [signature]	Serial No. Detector	Inst.Sn	
Reviewed Rulit Kumar	~~β-Factor~~ 28991	Eff.	
		Bkg. cpm	cpm

AREA Primary Containment

COMPONENT 3rd Level Vessel Containment

SEE ATTACHED MAP

SMEARS
10A = 273 dpm/100cm²
7 = 269 dpm/100cm²

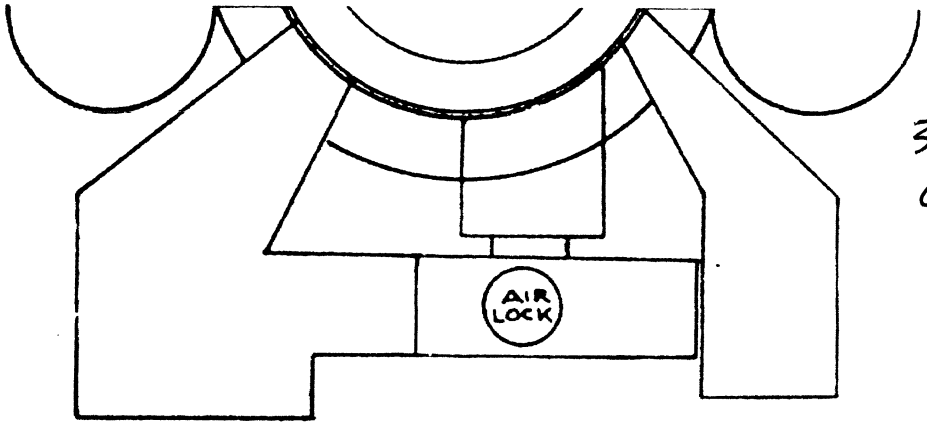
SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1A	< BKG	9A	< BKG	1	< BKG	9	< BKG		
2A	< BKG	10A	*53 ct (106 cpm)	2	< BKG	10	< BKG		
3A	< BKG			3	< BKG				
4A	< BKG			4	< BKG				
5A	< BKG			5	< BKG				
6A	< BKG			6	< BKG				
7A	< BKG			7	*49 (98 cpm)				
8A	< BKG			8	< BKG				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

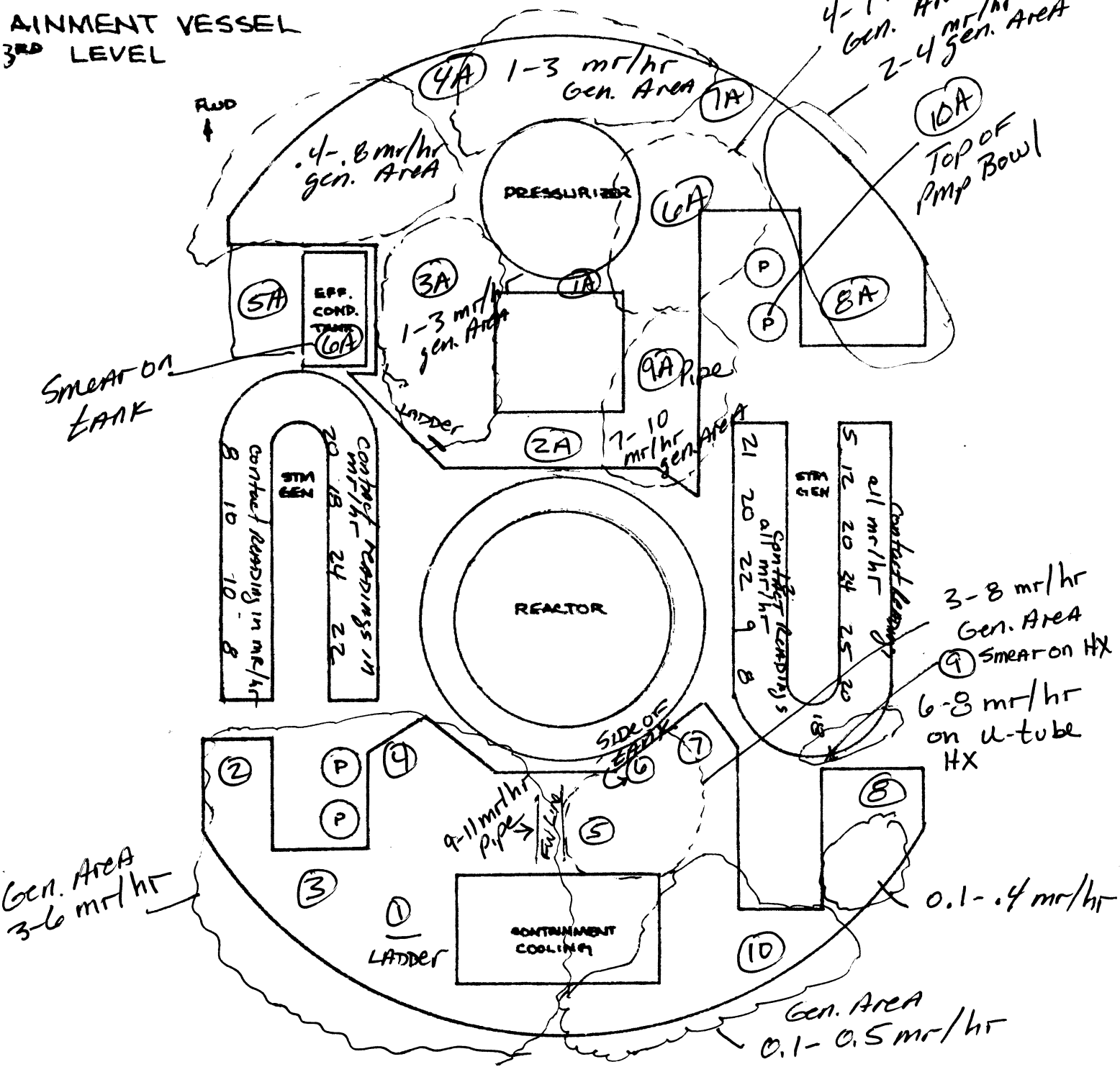
RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

* 5 smears 10A & 7 retained



3rd Level Containment

AINMENT VESSEL
3RD LEVEL



N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0088 #6

Date 4/12/05 Time	DOSE RATE	CONTAMINATION	
Surveyor Bon Scott	Inst. Type 42972	Beta ✓ Alpha ____	Beta ____ Alpha ____
Signature [signature]	Serial No. Ludlum 19	Inst.Sn 91037	
Reviewed [signature]	β Factor ✓	Eff. 10%	
	BKG 4 MR/H	Bkg. 40 cpm	✓ cpm

AREA Charge Pumps 1-3

COMPONENT

Charge Pump #2 STBD.

#1 Floor
#2 Top of Catch Tank
#3 Floor
#4 Controls for Sump Pump (Aft)
#5 Large Valve (Pump SL-P1 Suct. SL-1V)
#6 Large Machine (Worthington)
#7 Controls for Sump Pump (Forward)
#8 Large Metal Bell with Large Bolts
#9 Controls for Waste Dilution Pump
#10 Floor
#11 Floor
#12 Flow Gages

* inp against Charge Pump - D. Meter was 180 MR/H / FSKR was 280CPM

Charge Pump # 1 & 3 Port.

#1 Floor
2 Primary Gate Valve Control
3 main feed H2o Control
4 floor
5 floor
6 walkway deck @ motor
7 - Floor btw motors
8 - floor btw chg. pumps
9 top of Elec Motor chg Pump #3
10 Housing btw Elec motor & chg Pump
11 charge Pump #3
12 top of Elec Motor chg Pump #1
13 Housing btw motor & chg Pump #1
14 chg Pump #1
15 - Catch tank
16 - Main feed Pump controls. #2
17 Main feed pump control #1

* inp against Charge Pumps - D Meter was around 180 MR/H / FSKR was 280 CPM

STB Chg Pump Rm

< BKG / FSKR < 100CPM (General)

Port chg Room Pump

< BKG / FSKR < 100CPM (General)

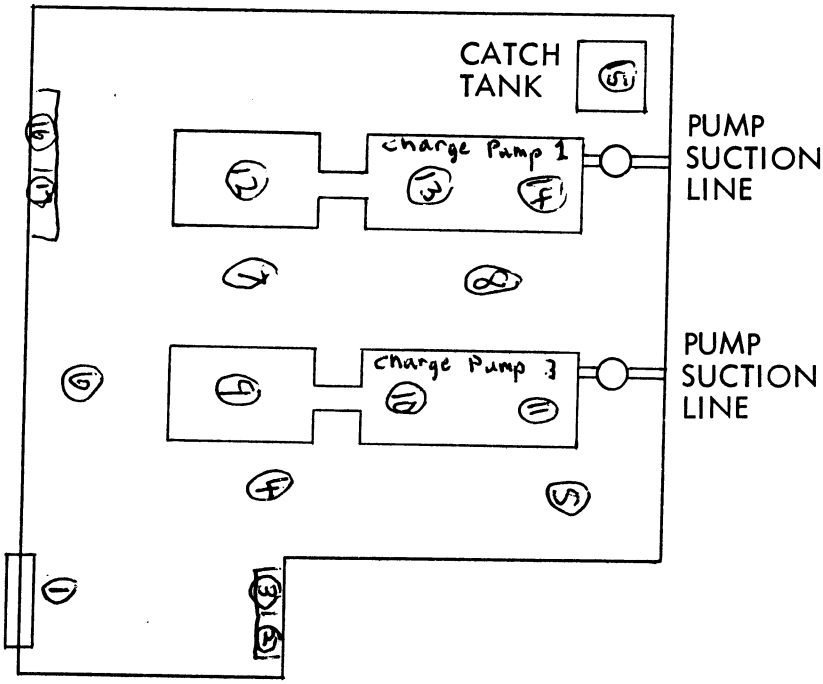
SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B - BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG			1	< BKG	9	< BKG
2	< BKG	10	< BKG			2	< BKG	10	< BKG
3	< BKG	11	< BKG			3	< BKG	11	< BKG
4	< BKG	12	< BKG			4	< BKG	12	< BKG
5	< BKG					5	< BKG	13	< BKG
6	< BKG					6	< BKG	14	< BKG
7	< BKG					7	< BKG	15	< BKG
8	< BKG					8	< BKG	16	< BKG
								17	< BKG

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

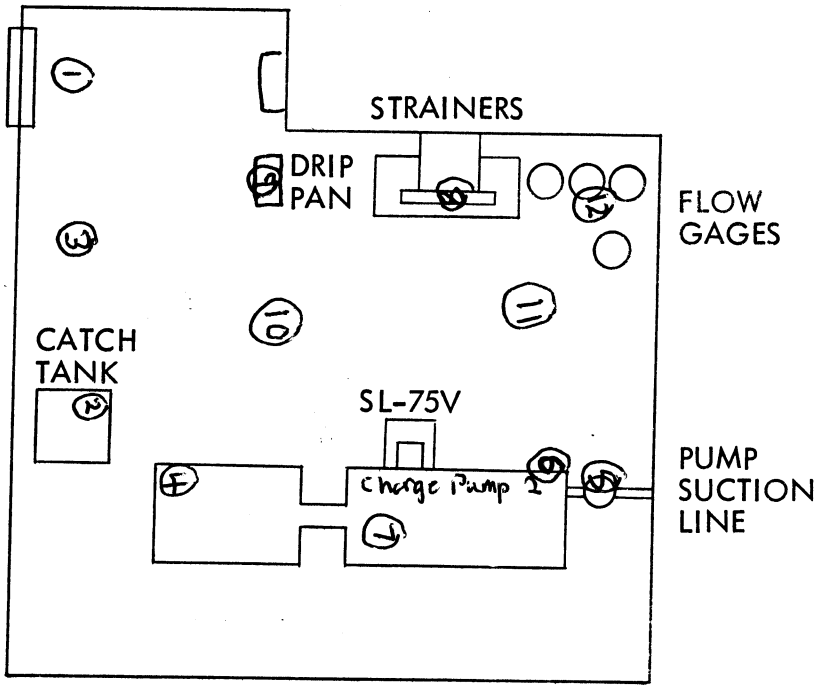
RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

PORT
CHARGE PUMP



FORWARD

STBD
CHARGE PUMP



N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0087

Date 4-13-04 Time 9:15 AM	DOSE RATE	CONTAMINATION	
Surveyor Robt Pennock	Inst. Type μ Ranger	Beta____ Alpha____	Beta____ Alpha____
Signature Robt Pennock	Serial No. 95469	Inst.Sn N/A (see Below)	
Reviewed K Blackwell	β Factor	Eff.	
	BKG 2 μR/hr	Bkg. cpm	cpm

AREA Primary Containment - 1st Level
Outer Reactor & Forward

Contamination
~~COMPONENT~~ Ludlum 2929 #2 SN 160019 E1=F .208
INST BKG 42 cpm 30 sec counts

SEE ATTACHED DRAWING

TELETECTOR
2899/

RECOUNT For Alpha
4-14-05
10 min count (ctr #2)

			dpm/100cm²
6	α = 2 ct (0.2 cpm)	β = 1838 (184)	683
6A	α = 2 ct (0.2 cpm)	β = 1153 (115)	351
8A	α = 1 ct (0.1 cpm)	β = 1140 (114)	346
9A	α = 1 ct (0.1 cpm)	β = 2061 (206)	788

All count Rates < MDA
< 3.81 dpm

4 = 173 dpm/100 cm²
6 = 615 dpm/100 cm²
6A = 490 dpm/100 cm²
8A = 327 dpm/100 cm²
9A = 884 dpm/100 cm²
10A = 106 dpm/100 cm²

Gross Counts/30 sec

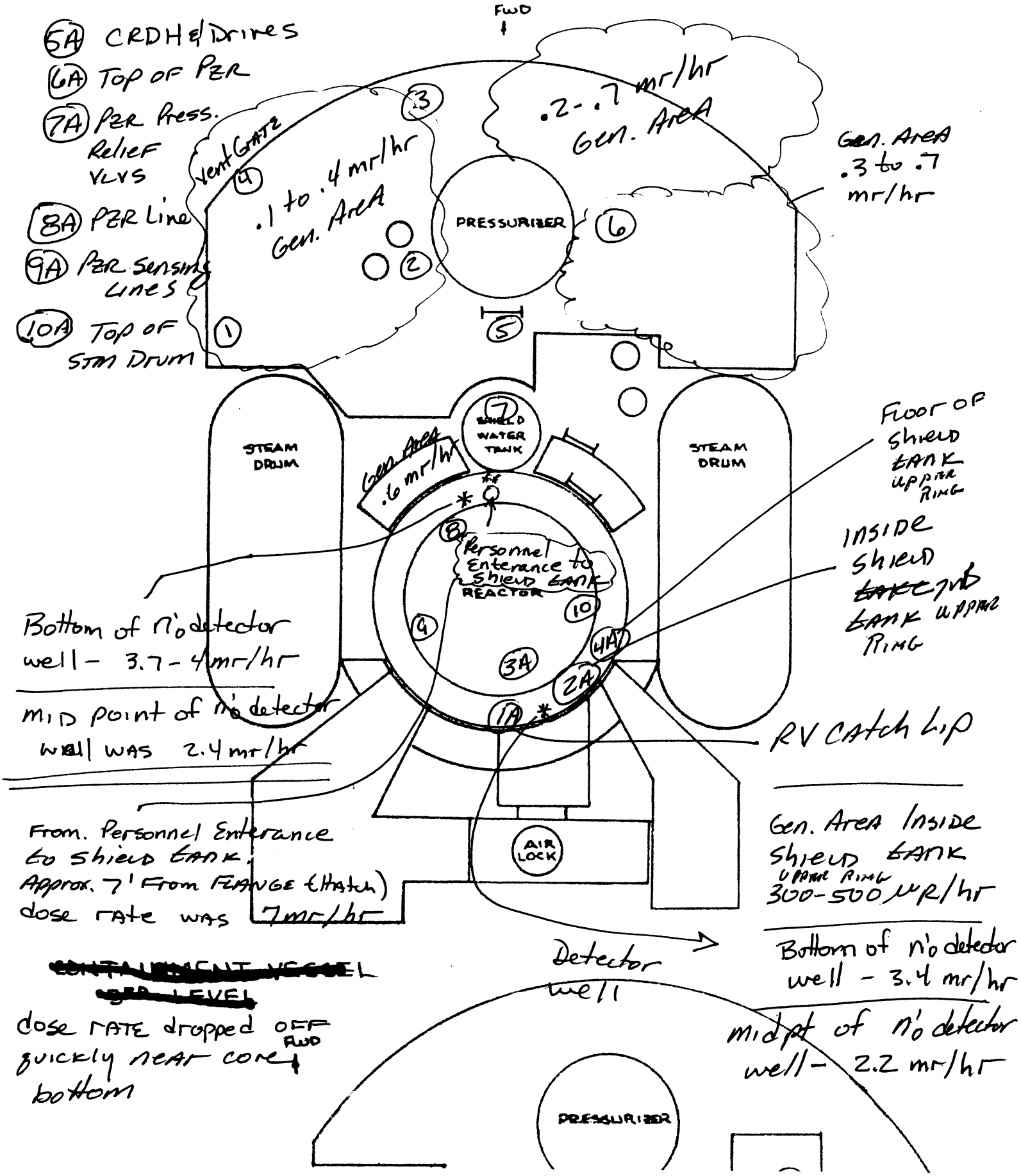
SMEAR RESULTS ~~IN DPM/100 CM² BKG cpm~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG	1A	< BKG	9A	113		
2	< BKG	10	< BKG	2A	< BKG	10A	32		
3	< BKG			3A	< BKG				
4	39			4A	< BKG				
5	< BKG			5A	< BKG				
6	85			6A	72				
7	< BKG			7A	< BKG				
8	< BKG			8A	55				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

CONTAINMENT VESSEL
1ST LEVEL



N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0088

Date 4-14-65 Time 9:30 AM	DOSE RATE	CONTAMINATION	
Surveyor ROBT E PENNOCK	Inst. Type TELETRACTOR	Beta____ Alpha____	Beta____Alpha____
Signature Robt E Pennock	Serial No. 28991	Inst.Sn	
Reviewed [illegible]	β⁻Factor	Eff.	
	BKG < .1 mR/h	Bkg. cpm	cpm

AREA SECONDARY CONTAINMENT LOWER LEVEL

COMPONENT DOSE RATE THROUGHOUT LOWER LEVEL OF SECONDARY VARIES FROM .5 mR/h TO ~20 mR/h GENERAL AREA. HOT SPOTS OF ~ 250 mR/h ON CONTACT WITH PIPING (YELLOW) ON STARBOARD SIDE WAS FOUND.

1B - CORE BORE SAMPLE SITE #1 PORT SIDE
2B - " " " " #3 PORT SIDE
3B - " " " " #4 AFT
4B - " " " " #2 PORT SIDE

1 - " " " " #5 STARBOARD SIDE
2 - " " " " #6 FOWARD
3 - " " " " #6 FLOOR

Sample 3 (Counter #2) gross cts 32 | gross cpm 64 | BKG cpm 42 | Net cpm 22 | dpm/100cm² 106

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1B	< BKG	1	< BKG						
2B	< BKG	2	< BKG						
3B	< BKG	3	32						
4B	< BKG	4	Not taken						
		5	Not taken						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr
RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0089

Date 4-14-05 Time 10:00	DOSE RATE	CONTAMINATION	
Surveyor JOHN BOWIEM/BOB PENNOCK	Inst. Type TELIETECTOR	Beta____ Alpha____	Beta____Alpha____
Signature Robert Pennock	Serial No. 28991	Inst.Sn See Below	
Reviewed KBlair	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA U SHIELD STEAM GENERATORS IN PRIMARY CONTAINMENT

~~COMPONENT~~ Smears Counted w/ Lud 2929 (#1) SN: 102001 (#2) SN: 160019

SEE ATTACHED DRAWING

STBD BOARD STEAM GEN. DOSE RATE BETWEEN DOOR & COAMING 24 mR/hr MAX
PORT " " " " " " " 35 mR/hr MAX

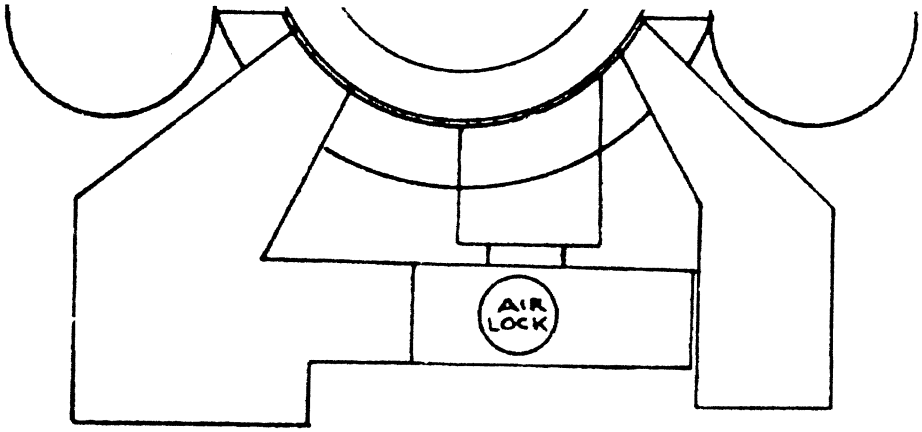
Smear No.	Counter	gross counts	gross cpm	BKG cpm	Net cpm	dpm / 100cm²
1	(2)	52	104	42	62	298
6	(1)	49	98	37	61	242
7	(2)	87	174	42	132	635
8	(1)	64	128	37	91	361
9	(2)	38	76	42	34	163
10	(1)	60	120	37	83	329

SMEAR RESULTS ~~IN DPM/100 CM²~~ Gross Counts/30 Seconds ~~β - BETA in mRAD/hr/100 CM²~~

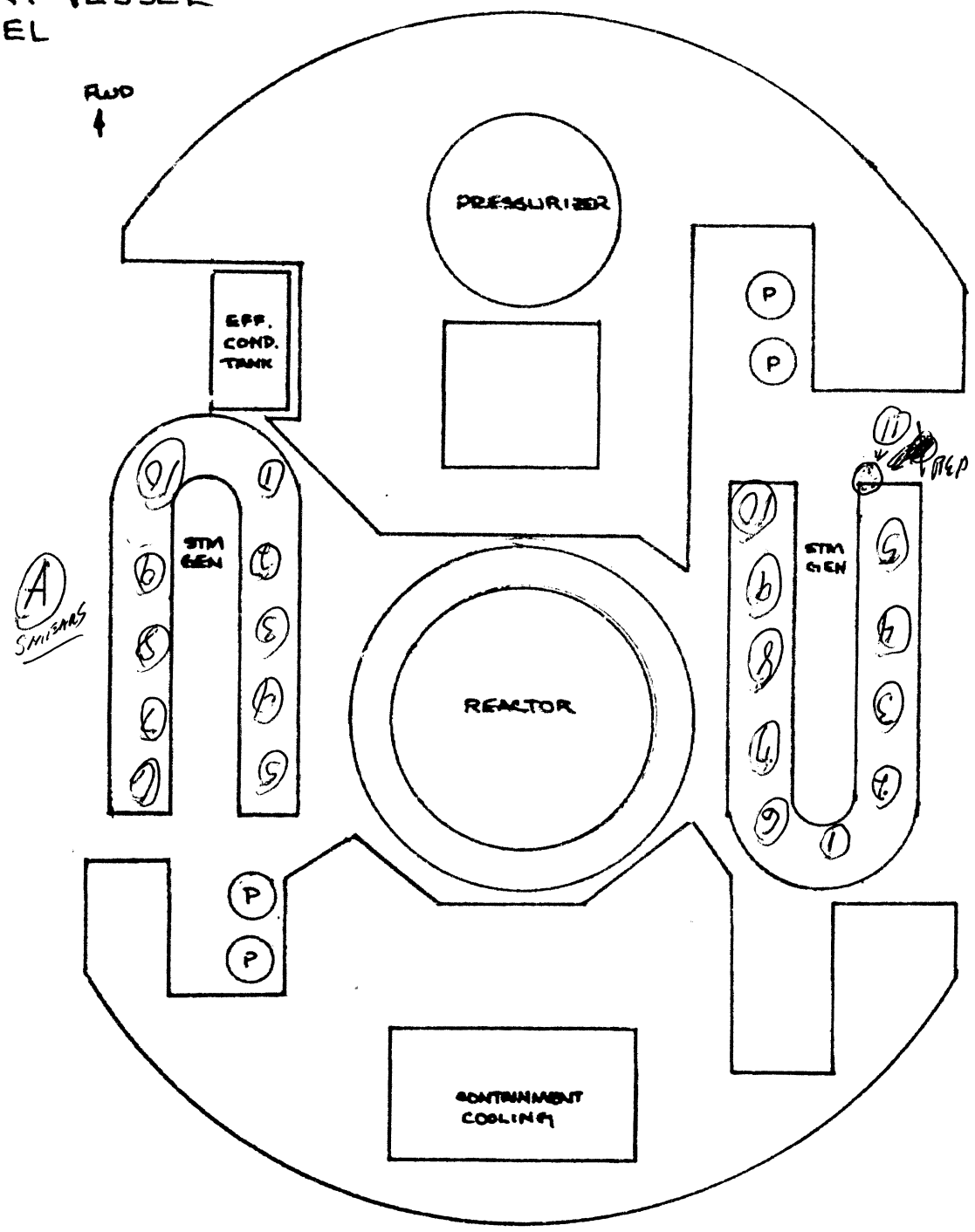
NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	52 (2)	9	38 (2)	A 1	<BKG	A9	<BKG		
2	<BKG	10	60 (1)	A 2	<BKG	A 10	<BKG		
3	<BKG	~~11~~	~~<BKG~~ RR	A 3	<BKG				
4	<BKG	11	<BKG	A 4	<BKG				
5	<BKG			A 5	<BKG				
6	49 (1)			A6	<BKG				
7	87 (2)			A7	<BKG				
8	64 (1)			A8	<BKG				

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA



INMENT VESSEL
LEVEL



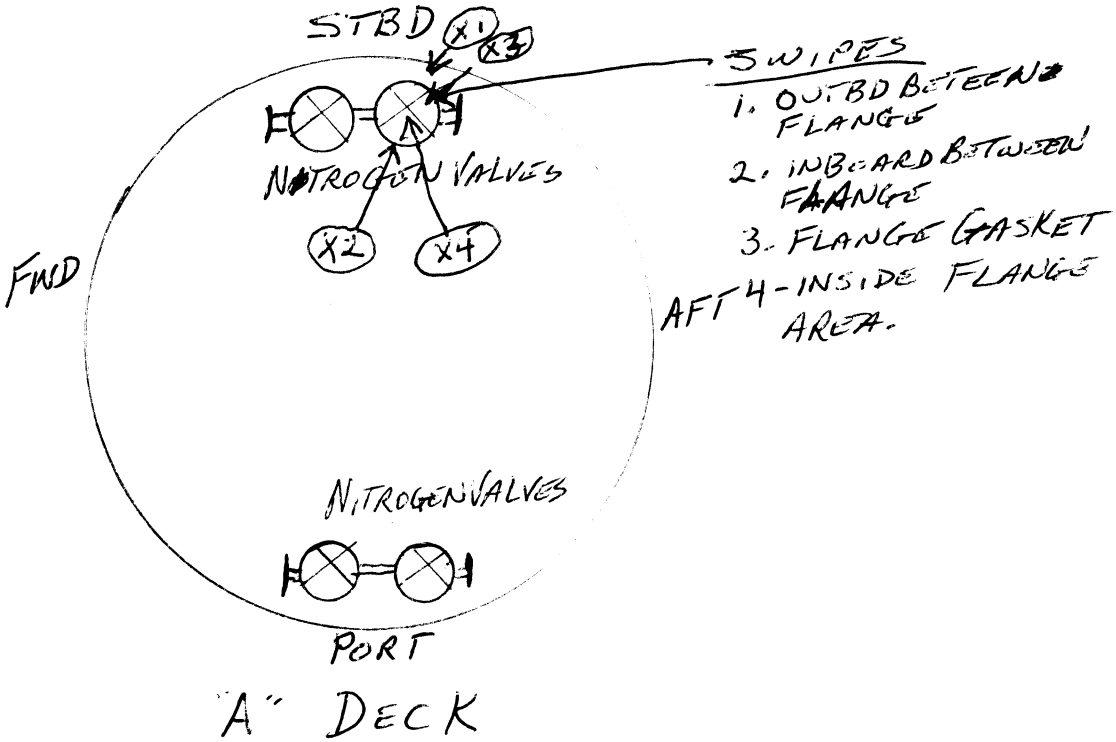
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0090

Date 4/19/05 Time 10:30 AM	DOSE RATE	CONTAMINATION	
Surveyor JAMES LOVEDAHL	Inst. Type N/A	Beta____ Alpha____	Beta____ Alpha____
Signature James Lovedahl	Serial No.	Inst.Sn N/A	
Reviewed Robert Maynard	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA TOP OF CUPOLA STBD NITROGEN VALVE FLANGE

COMPONENT



"A" DECK

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG-D								
2	< BKGD								
3	< BKGD								
4	< BKG-D								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0091

Date 4/9/05 Time 14:00	DOSE RATE	CONTAMINATION	
Surveyor J. Bowen	Inst. Type N/A	Beta____ Alpha____	Beta____Alpha____
Signature J.W.B.	Serial No. N/A	Inst.Sn N/A	
Reviewed Robert E. Runnels	β⁻ Factor N/A	Eff.	
		Bkg. cpm	cpm

AREA SMEAR samples FROM INSIDE surfaces of PRIMARY WATER SHIELD TANK

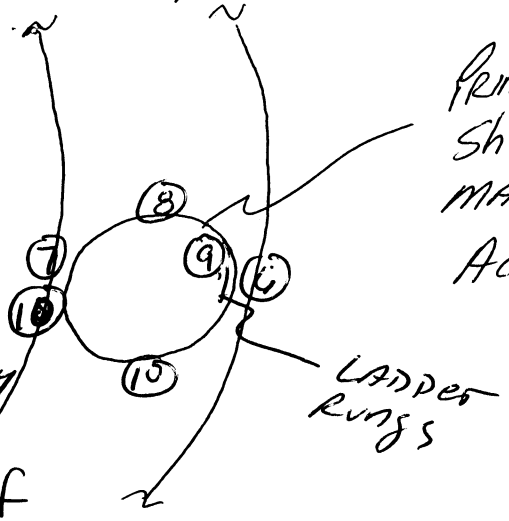
COMPONENT PRIMARY WATER SHIELD TANK

SMEAR # ALL samples were taken INSIDE the PRIMARY WATER SHIELD TANK.

6- Outer Wall

7- Inner WALL

8- Top of TANK - Both SIDES OF manhole ACCESSWAY



PRIMARY WATER SHIELD TANK manhole cover / ACCESSWAY

9. Top surfaces of 2 LADDER RUNGS

10. Top of INNER WALL.

Survey Personnel did not enter the PRIMARY WATER SHIELD TANK.

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
6	< BKG								
7	< BKG								
8	< BKG								
9	< BKG								
10	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

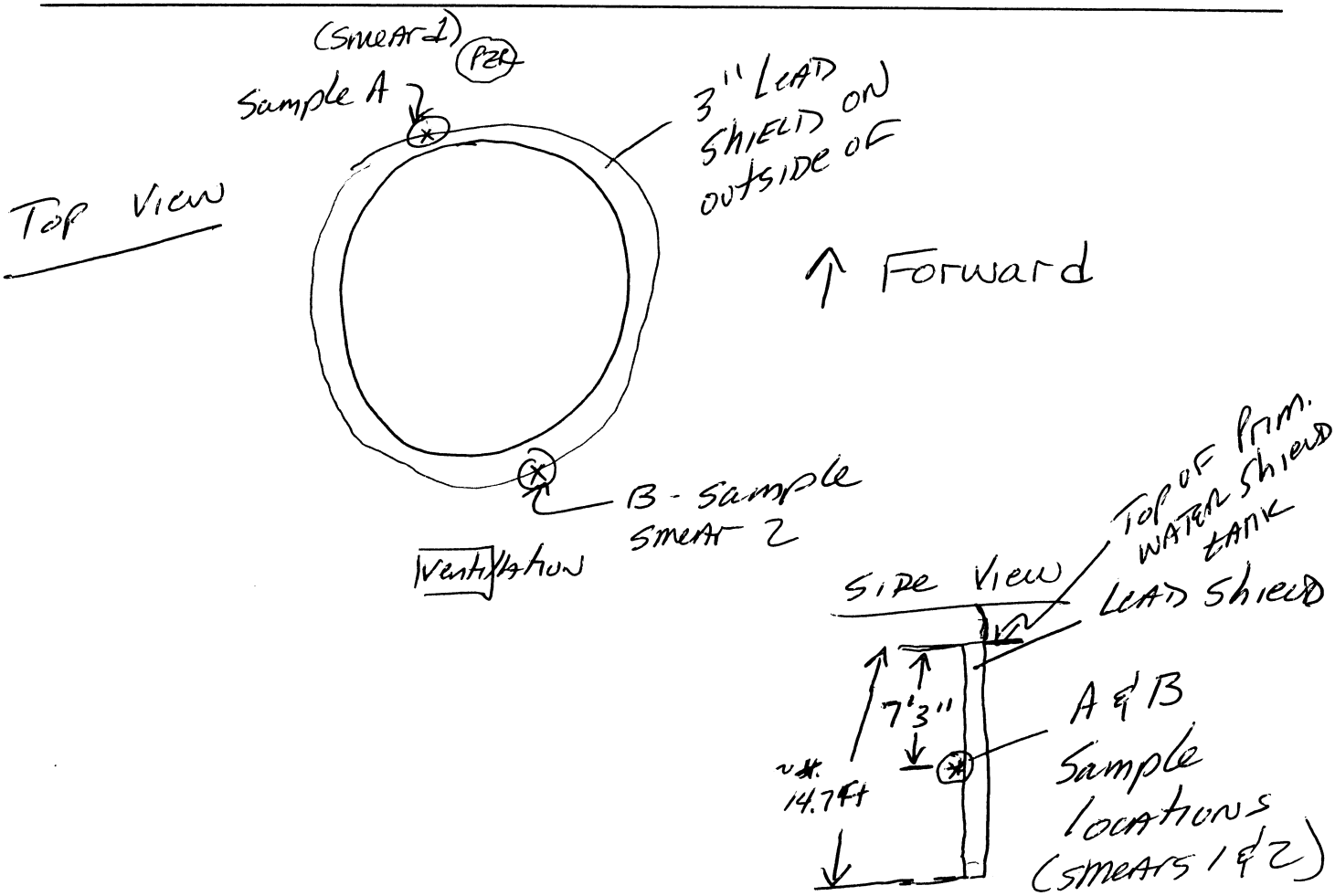
N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0092

Date 4/19/05 Time 14:00	DOSE RATE	CONTAMINATION	
Surveyor T. Bowen	Inst. Type NA	Beta____ Alpha____	Beta____ Alpha____
Signature T. W. B.	Serial No.	Inst.Sn NA	
Reviewed Robert Bennett	β⁻ Factor	Eff.	
		Bkg. cpm	cpm

AREA SMEAR OF locations for LEAD samples

COMPONENT



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	<BKG								
2	<BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

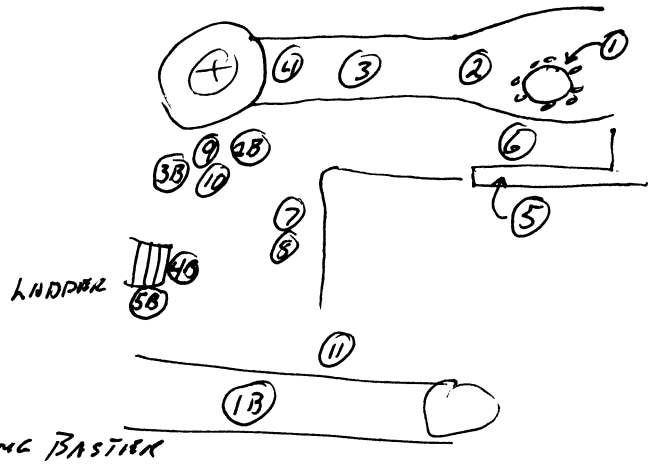
NSS-01 SURVEY NO. NSS-0093

Date 4-21-05 Time	DOSE RATE	CONTAMINATION	
Surveyor ROBT E PENNOCK	Inst. Type N/A	Beta____ Alpha____	Beta____Alpha____
Signature R.E. Pennock	Serial No.	Inst.Sn N/A	
Reviewed M Mullone	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA PRIMARY CONTAINMENT FWD - STBD VTUBE STEAM GEN. HOT LEG WORK AREA

COMPONENT

1- SS PLUG & RIM
2- HOT LEG PLENUM
3 - " " NEXT TO PLENUM
4 - HOT LEG NEXT TO VALVE
5 - BRACE BY ACCESS PORT
6 - FLOOR BELOW WORK AREA
7 - YELLOW FLASHLIGHT
8 - BLACK FLASHLIGHT
9 - END OF WOODEN ROLLER
10 - BOTH SCREW DRIVERS
11 - OUT SIDE OF BAG CONTAINING BASTIER
1B - HOT LEG SAMPLER, TOP
2B - YELLOW HAMMER
3B ~~BOTTOM~~ BKG NUTS & BOLTS
4B BOTTOM 2 RUNGS OF LADDER
5B RUNGS 6 & 6 OF LADDER



ACTIVITY

1 = 1066 dpm
2 = 154 dpm
4 = 135 dpm
5 = 471 dpm
7 = 250 dpm
8 = 125 dpm

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	32 cts	9	BKG	1B	< BKG				
2	37 cts	10	BKG	2B	< BKG				
3	< BKG	11	BKG	3B	< BKG				
4	35 cts			4B	< BKG				
5	70 cts			5B	< BKG				
6	< BKG								
7	47 CTS								
8	34 CTS								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

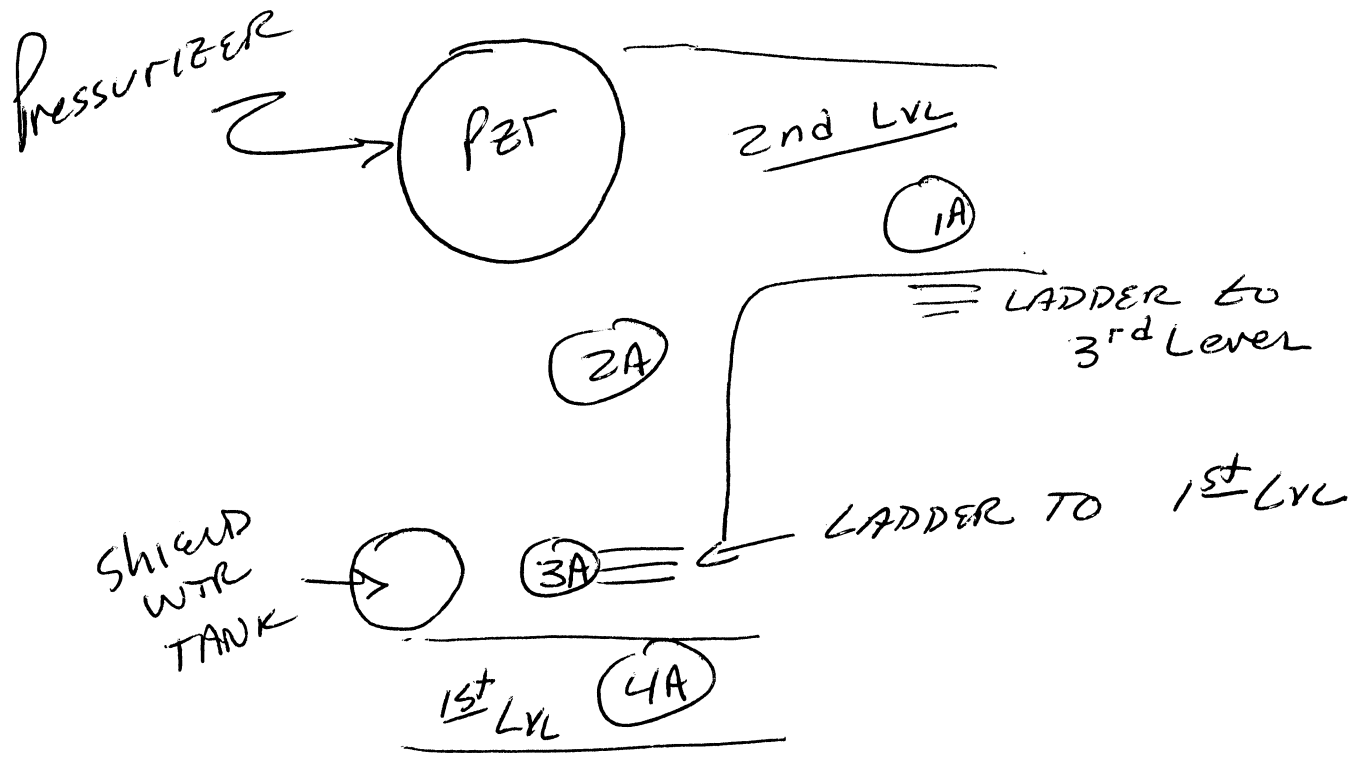
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-6094

Date 4/21/05 Time 0900	DOSE RATE	CONTAMINATION	
Surveyor J. Bowen	Inst. Type N/A	Beta N/A Alpha ____	Beta ____ Alpha ____
Signature	Serial No.	Inst.Sn	
Reviewed Robert E. Annah	β⁻ Factor	Eff.	
		Bkg. cpm	cpm

AREA Forward 1st & 2nd LVL - Primary Containment

COMPONENT



SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1A	< BKG								
2A	< BKG								
3A	< BKG								
4A	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

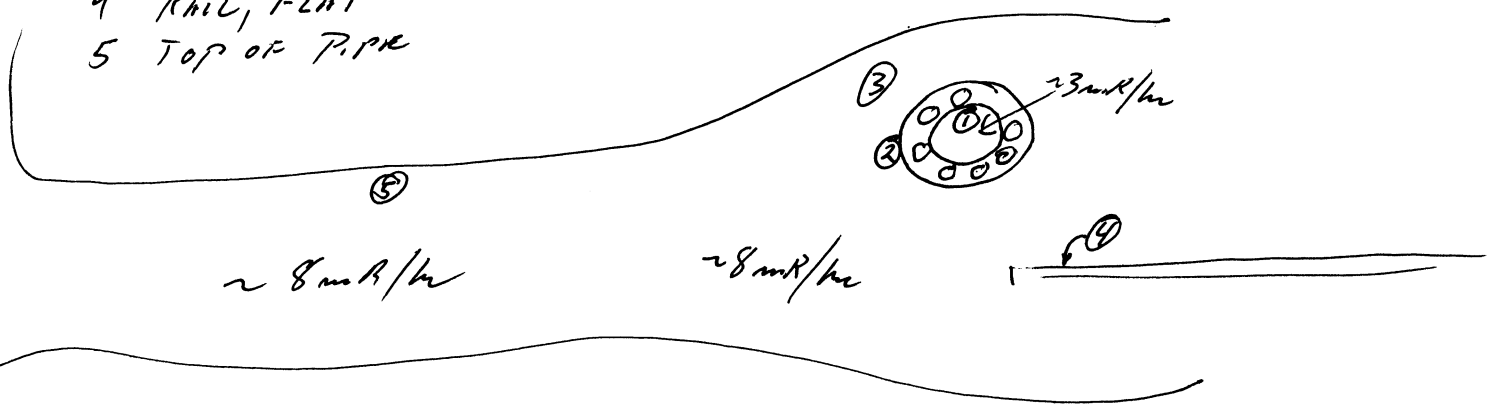
NSS-01 SURVEY NO. NSS -0095

Date 4-21-05 Time 1:00 PM	DOSE RATE	CONTAMINATION	
Surveyor Robt E Pennock	Inst. Type TELEPROBE	Beta____ Alpha____	Beta____Alpha____
Signature Ralph E Pennock	Serial No. 78991	Inst.Sn	
Reviewed M Hamilton	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA Primary Containment Pond Upper Steam Gen Access Cover

COMPONENT

1 - Cover & Nuts
2 - Cover Gap
3 Plenum Outside Surface
4 Rail, Flat
5 Top of Pipe



1. 67 dpm/100cm²
3. 356 dpm/100cm²

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	N O.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	28								
2	< BKG								
3	58								
4	< BKG								
5	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

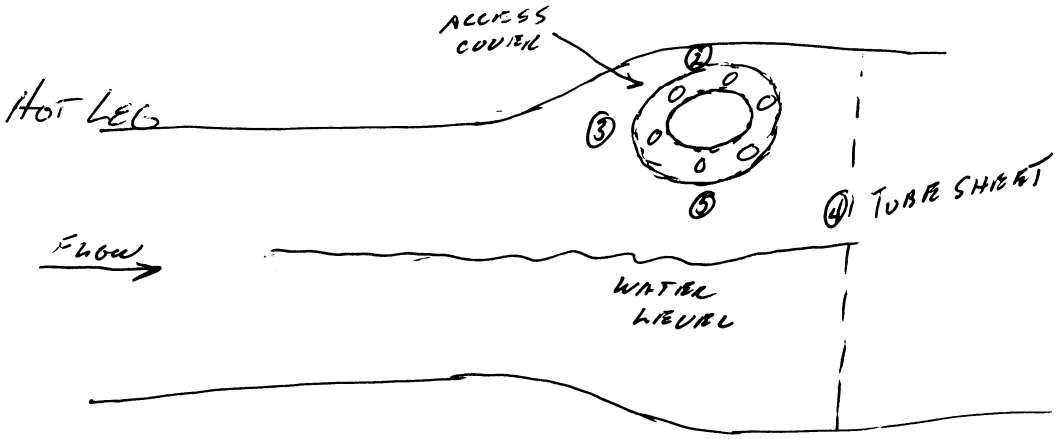
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0096

Date 4-20-05 Time 1:30	DOSE RATE	CONTAMINATION	
Surveyor JOHN BOWEN	Inst. Type TELETECTOR	Beta____ Alpha____	Beta____Alpha____
Signature	Serial No.	Inst.Sn	
Reviewed	β⁻Factor	Eff.	
	BKG .3 mR/hr	Bkg. cpm	cpm

AREA PRIMARY CONTAINMENT - STBD STEAM GEN. PRIMARY SYSTEM PLENUM

COMPONENT



32 mR/hr OUTSIDE INNER COVER SEAL
45 mR/hr AT OPENING PLANE
275 mR/hr 2 ft INSIDE OPENING
525 mR/hr AT TUBE SHEET

1 INNER LIP-INSIDE
2 INSIDE PLENUM TOP
3 " " SUCTION SIDE
4 TUBE SHEET
5 BOTTOM

Dpm/100cm²

1B - 10,211
2B - 14,798
3B - 13,183
4B - 166,730
5B - 51,682

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B = BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1B	1683								
2B	1560								
3B	1392								
4B	17,361								
5B	5396								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0097

Date 4-21-05 Time 1:45 PM	DOSE RATE	CONTAMINATION	
Surveyor JOHN BOWEN	Inst. Type TELETECTOR	Beta____ Alpha____	Beta____Alpha____
Signature	Serial No. 28991	Inst.Sn N/A	
Reviewed	β Factor	Eff.	
	1-2 MR/hr BKG	Bkg. cpm	cpm

AREA

COMPONENT PORT SIDE MID DRUM (HEAT EXCHANGER) HOT leg PRIMARY SIDE

1- INSIDE TOP OF PLENUM
2- INSIDE AFT OF ACCESS
3- " FWD OF "
4- PLENUM TUBE SHEET
5- INSIDE SURFACE OF SS COVER FOR ACCESS OPENING

dpm/100 cm²

1. 22000
2. 6096
3. 4144
4. 378,673
5. 7654

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B – BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	2309								
2	655								
3	452								
4	39403								
5	817								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

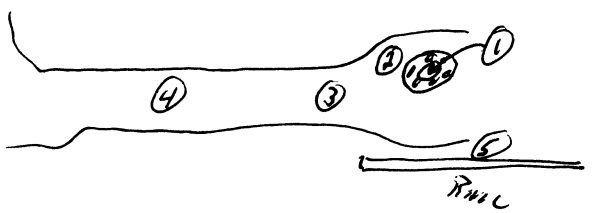
NSS-01 SURVEY NO. NSS-0098

Date 4-22-05 Time 9:00AM	DOSE RATE	CONTAMINATION	
Surveyor ROBERT E PENNOCK	Inst. Type N/A	Beta____ Alpha____	Beta____Alpha____
Signature R E Pennock	Serial No.	Inst.Sn N/A	
Reviewed	β^- Factor	Eff.	
		Bkg. cpm	cpm

AREA PRIMARY CONTAINMENT PORT V TUBE STEAM GRM ACCESS PORT, POST JOB SURVEY

COMPONENT

1B YELLOW HANDLE
2B SLUG WRENCH 2"
3B SLUG WRENCH 2¼"
4B SOCKET & RATCHET
5B PIPE WRENCH



	dpm/100 cm²
2.	231
5.	135

* SMEAR COUNTED CONTAMINATED / CLEARED

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B – BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	1B	3 < BKG						
2	45	2B	35 < BKG						
3	< BKG	3B	3 < BKG						
4	< BKG	4B	3 < BKG						
5	35	5B	3 < BKG						
			* CLEARED						

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0099

Date 4-25-05 Time 11:15 PM	DOSE RATE	CONTAMINATION	
Surveyor ROBT E PENNINGTON	Inst. Type N/A	Beta____ Alpha____	Beta____Alpha____
Signature Robt E Pennington	Serial No.	Inst.Sn N/A	
Reviewed [illegible]	β⁻ Factor	Eff.	
		Bkg. cpm	cpm

AREA MICRO R METERS & FRISKERS

COMPONENT

μR METERS
1 - 95499
2 - 42972
3 95469

FRISKERS
4 - 75809
5 - 91037
12 - 97416
8 - 94954

ALPHA METER
6 - 19776
7 - 127385 PROBE

TELETRACTOR 28991
9 - PROBE
10 EXTENSION
11 BODY

2929s
13 - 102001 WITH PROBES
14 - 160019

CM #2

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~B - BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG						
2	< BKG	10	< BKG						
3	< BKG	11	< BKG						
4	< BKG	12	< BKG						
5	< BKG	13	< BKG						
6	< BKG	14	< BKG						
7	< BKG								
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

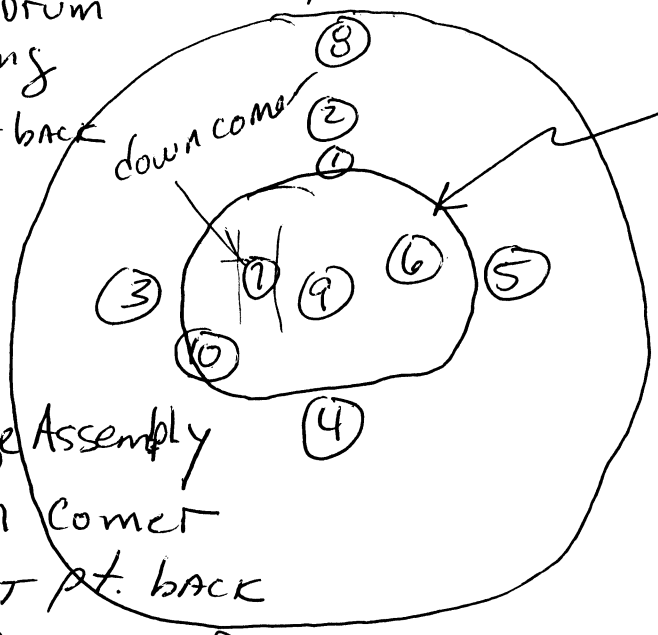
NSS-01 SURVEY NO. NSS-0160

Date 4/25/05 Time	DOSE RATE	CONTAMINATION	
Surveyor J. Bowen	Inst. Type μR Meter	Beta____ Alpha____	Beta____ Alpha____
Signature	Serial No. 95469	Inst.Sn N/A	
Reviewed Robert Kinnah	β⁻ Factor	Eff.	
	BKG 3 μR/hr	Bkg. cpm	cpm

AREA PORT Steam Drum

COMPONENT PORT Steam Generator (Steam Drum) Secondary Side

(1) Top of STM Drum near opening
(2) Top - Further back
(3) Left Side
(4) Bottom
(5) Right Side
(6) Inside - Hinge Assembly
(7) Left Down Comer
(8) Top - Furthest pt. back
(9) Inside surface of Plug
(10) Inside - on Plug mating surface.



PORT STEAM DRUM ACCESS COVER

ALL SMEARS are from INSIDE PORT STEAM DRUM

DR INSIDE 60-80 μR/hr

DR OUTSIDE 460-500 μR/hr

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~β - BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG	9	< BKG						
2	< BKG	10	< BKG						
3	< BKG								
4	< BKG								
5	< BKG								
6	< BKG								
7	< BKG								
8	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0101

Date 4-26-05 Time 8 AM	DOSE RATE	CONTAMINATION	
Surveyor ROBERT E RAYMOND	Inst. Type N/A	Beta____ Alpha____	Beta____Alpha____
Signature [signature]	Serial No.	Inst.Sn N/A	
Reviewed [signature]	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA PIPE FROM NITROGEN LINE

COMPONENT

SMEAR RESULTS ~~IN DPM/100 CM²~~ B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS
1	< BKG								
2	< BKG								

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0111

Date 4-5-05 Time	~~DOSE RATE~~ AIR SAMPLER	CONTAMINATION	
Surveyor Robert K Pennock	Inst. Type Rm ECO	Beta____ Alpha____	Beta____ Alpha____
Signature Robert K Pennock	Serial No. 08641	Inst.Sn N/A	
Reviewed Richard Rancilone	β⁻ Factor —	Eff.	
M Mancuso		Bkg. cpm	cpm

AREA Cold Chem Lab

10 Cu FT Sampler

COMPONENT Counting on 2929 Simpson Counting #2 30 min Count SN 160019

4-6-05 10 Min Count β 1357 counts 135.7 ~~4.5~~ cpm ~~BKG HBW~~

α 9 counts 0.9 ~~0.3~~ MDA cpm ~~BKG HBW~~

4-6-05 30 Min Count α 6 (0.2 cpm)

β 1320 (44 cpm)

MM 4/6/05

4-12-05 10 min count

α 5 0.5 cpm < LLD (17 gross counts) (2 DAC)

β 398 40 cpm < LLD (506 gross counts) (< 25% DAC)

MDA for 10 ft³ sample

α $\frac{1.19 \text{ net cpm}}{0.312} = \frac{3.81 \text{ dpm}}{2.22E6} = 1.72E^{-6} \mu Ci$

β⁻ $\frac{8.45 \text{ net cpm}}{.208} = \frac{40.625 \text{ dpm}}{2.22E^{6}} = 1.83E^{-5} \mu Ci$

$\frac{1.72E^{-6} \mu Ci}{10(28.32)1000} = 6.07E^{-12} \mu Ci/cc$ (~2 DAC)

$\frac{1.83E^{-5} \mu Ci}{10(28.32)1000} = 6.46E^{-11} \mu Ci/cc$ (< 25% DAC)

Sample Repeated w/ Larger Volume – See Sample # NSS-0117

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 AIR SAMPLE SURVEY NO. NSS-0112

Date 4-6-05 Time 10:58	~~DOSE RATE~~ AIR	CONTAMINATION	
Surveyor ROBERT PENNOCK	Inst. Type RADIECO	Beta____ Alpha____	Beta____Alpha____
Signature Robert Pennock	Serial No. 0864	Inst.Sn NA	
Reviewed Richard Ranellone	β^-Factor —	Eff.	
M D Mendoza		Bkg. cpm	cpm

AREA ACCESS TO SECONDARY CONTAINMENT

COMPONENT RADON EXPECTED, MULTIPLE COUNTS TO BE TAKEN COUNTED ON LUDLUM 2929 #2 SN 160019

VOLUME 100 FT^3
TIME OF SAMPLE 1:04:27 MINUTES (64 MINUTES)

1ST COUNT - 1MIN - β 362 . α 141 30 MIN OR MORE BETWEEN COUNTS
2ND COUNT - 1MIN - β 245 . α 80
3RD COUNT - 1MIN - β 105 α 30
4TH COUNT - 1MIN - β 62 α 11

4/7/05 5th count - 30min - β 1429 (48cpm) α 33 (1.1cpm) < MDA ($3.97E^{-13}$ uCi/cc) α
6th count - 60min - β 2748 (46cpm) α 63 (1.1cpm) (.525 net) < MDA α
4/8/05 7th count - 60min - β 2495 (42cpm) α 82 (1.4cpm) (counter change) ##
β^- Activity < MDA ($3.4E^{-12}$ uCi/cc)

4-11-05 RECOUNT (#2)
30 min β 1311 (44cpm) α 3 (0.1 cpm) < MDA ($3.6E^{-13}$ uCi/cc) α
10 min β 454 (45.4cpm) α 6 (0.6 cpm)

SMEAR RESULTS IN DPM/100 CM^2 B = BETA in mRAD/hr/100 CM^2

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr
RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

Recounts of Air Sample for α activity
Initial entry to Secondary Containment
Sample Taken 4-6-05 / 1050

$100\ ft^3 = 2.832\ E^6\ cc$

Initial One-Minute Count (α) 141 cpm

6th Count — 4-7-05 60 min 63 counts → 0.525 net cpm
Counter #2
< MDA ($3.36E^{-13}$ uCi/ml)

7th Count — 4-8-05 60 min 82 counts → 1.04 net cpm
Counter #1

$$\frac{1.04}{0.336} = 3.1\ dpm \times \frac{1\ uC.}{2.22E^6} = 1.397\ E^{-6}\ uC.$$

$$\frac{1.397\ E^{-6}}{2.832\ E^6} = 4.93\ E^{-13}\ uCi/cc \quad (<25\%\ DAC)$$

β^- Activity

7th Count — 4-8-05 60 min 2495/60 = 41.58 cpm Gross
Bkg = 42.15 cpm

Sample < MDA ($3.4\ E^{-12}$ uCi/cc)
LLD for 60 min count = 2673 gross counts = $3.4\ E^{-12}$ uCi/cc
(for 100 ft^3 Sample)

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0113

Date 4-7-05 Time 12:45	~~DOSE RATE~~ Air Sample	CONTAMINATION	
Surveyor ROBT E PIENNOCK	Inst. Type RADECO Air Sample	Beta____ Alpha____	Beta____Alpha____
Signature Robt E Piennock	Serial No. 864	Inst.Sn	
Reviewed [illegible]	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA CHARGE PUMP ROOM STAR BOARD

COMPONENT 60 cu FT COUNTER # 2 S/N 160019

Gross counts

1:30 10 MIN COUNT α 905 (905 cpm)
β 2837 (284 cpm)

Sample Repeated with larger Air Volume - See Survey # NSS-0116

8:50 30 MIN COUNT α 81 (2.7 cpm)
β 1496 (49.9 cpm)

4-12-05 (Ctr #1)

8:36 10 min count α 2ct 0.2 cpm < LLD (13 gross counts) 0.26 DAC
β 400 40 cpm < LLD (474 gross counts) < 25% DAC

MDA for 60 ft³ sample

α $\frac{0.997 \text{ net cpm}}{.336} = \frac{2.967 \text{ dpm}}{2.22E^6} = 1.336E^{-6}$ uCi

β- $\frac{8.2 \text{ net cpm}}{.252} = \frac{32.54 \text{ dpm}}{2.22E^6} = 1.466E^{-5}$ uCi

$\frac{1.336E^{-6} \text{ uCi}}{60(28.32)/1000} = 7.87E^{-13}$ uCi/cc (26% DAC)

$\frac{1.466E^{-5} \text{ uCi}}{60(28.32)/1000} = 8.63E^{-12}$ uCi/cc (< 25% DAC)

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0114

Date 4-8-05 Time 8:30 AM	DOSE RATE	CONTAMINATION	
Surveyor ROBERT H PENHOUN	Inst. Type AIR SAMPLER RADECO	Beta____ Alpha____	Beta____Alpha____
Signature Robert H Penhoun	Serial No. 865	Inst.Sn	
Reviewed [illegible]	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA AIR LOCK FOR PRIMARY CONTAINMENT

COMPONENT 100 FT³ SAMPLER

GROSS COUNTS

10:31 1ST COUNT - 30 MIN. α 4667 (156 cpm)
β 13,4105 (447 cpm)

11:05 2nd Count - 30 min α 2683 (89)
β 7868 (262)

12:14 3rd count - 30 min α 793 (26)
β 3250 (108)

14:06 4th count - 10 min α 78 (7.8)
β 670 (67)

4-11-05 Counter #1
12:23 30 min Count α 20 (0.34 net cpm) < MDA (< 2.99E⁻¹³ µCi/cc) < 0.1 DAC
β 1257 (2.7 net cpm) < MDA (< 3.8 E⁻¹² µCi/cc) < 0.1 DAC

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr
RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

Initial Entry AIR Sample
Airlock for Primary Containment
α-Decay Analysis
Sample taken 4-8-05 @ 0830

Initial Count (#1)

10:31 30 min count α 4667 — 155.24 cpm net
14:06 10 min count α 78 — 7.48 cpm net

Recount

12:23 4-11-05 (counter #1) α 20 — 0.34 cpm net
30 minute count

< MDA ($2.99 E^{-13}$ uCi/cc)

Calculation:

20 count/30 min = 0.667
Bkg = 0.325 cpm .667 - .325 = 0.342 net cpm

$$\frac{0.342}{\text{eff. } 0.336} = 1.017 \text{ dpm} \times \frac{1 \text{ uCi}}{2.22E^{6} \text{ dpm}} = 4.58 E^{-7} \text{ uCi}$$

$$100 \text{ cuft Sample} = 28.32 \frac{l}{ft^3} \times 100 ft^3 \times \frac{1000 ml}{l} = 2.832E^{6} cc$$

$$\frac{4.58E^{-7} \text{ uCi}}{2.832E^{6} cc} = 1.62E^{-13} \text{ uCi/cc} \quad (< MDA)$$

β^- Calculation

1257/30 = 41.9 - 39.2 = 2.7 net cpm
MDA for 30 min Count = 1357 Gross Counts ($3.8 E^{-12}$ uCi/cc)
Count is < MDA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-80115

Date 4/-8-05 Time 2:00 PM	~~DOSE RATE~~ AIR SAMPLE	CONTAMINATION	
Surveyor R E PENNOCK	Inst. Type RADIECO	Beta____ Alpha____	Beta____Alpha____
Signature R E Pennock	Serial No. ~~1465~~ 865	Inst.Sn	
Reviewed [illegible]	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA PRIMARY CONTAINMENT 1ST LEVEL

COMPONENT 100 CU FT COUNTER #2

4/11/05 COUNTER #2
858 DPM 10 MIN COUNT α 6 COUNTS (.6 cpm.) β 456 cts (46 cpm)

4/12/05 counter #2
8:54 AM 10 min count
α 0 cts 0 cpm < MDA (6.07 E⁻¹³ µCi/cc)
β-γ 436 44 cpm < MDA (6.53 E⁻¹² µCi/cc)

< 25% DAC

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0116

Date 4-8-05 Time	~~DOSE RATE~~ AIR SAMPLE	CONTAMINATION	
Surveyor R E PENNOCK	Inst. Type RADECO	Beta____ Alpha____	Beta____ Alpha____
Signature R E Pennock	Serial No. 804	Inst.Sn	
Reviewed [illegible]	β⁻ Factor	Eff.	
		Bkg. cpm	cpm

AREA CHARGE Pump Room STBD BOARD

COMPONENT 277 Cu FT 2hr 59 min

4-8-05
8:46AM 30 MIN COUNT CTR #1 (SN102601)
α 308 (10.3cpm) β 1870 (62.3cpm)

10:13AM 2 hr Count α 1102 (9.2cpm) β 7201 (60cpm)

4-11-05 10 min ct α 1 ct β 436 ct

4-12-05 10 min ct α 3 ct (3cpm) β 411 (41cpm) < LLD α 17 Gross β 506 Gross
counter #2

MDA for 277 cuft Sample

α $\frac{1.19 \text{ cpm net}}{0.312} = \frac{3.81 \text{ dpm}}{2.22E6} = 1.72E^{-6}$ uCi

β^- $\frac{8.45 \text{ net cpm}}{0.208} = \frac{40,625 \text{ dpm}}{2.22E^6} = 1.83E^{-5}$ uCi

$\frac{1.72E^{-6}}{277(28.32)1000} = 2.19E^{-13}$ uCi/cc (< 0.1 DAC)

$\frac{1.83E^{-5}}{277(28.32)1000} = 2.33E^{-12}$ uCi/cc (< 0.1 DAC)

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 AIR SAMPLE SURVEY NO. NSS-0117

Date 4/11/05 Time	DOSE RATE RADECO	CONTAMINATION	
Surveyor JAMES LOVEDAHL	Inst. Type AIR SAMPLER	Beta____ Alpha____	Beta____Alpha____
Signature James Lovedahl	Serial No. 864	Inst.Sn	
Reviewed [illegible]	β⁻Factor	Eff.	
	100 FT³ – 1 HR	Bkg. cpm	cpm

AREA "C" DECK – COLD WATER CHEM LAB 1:10 PM

COMPONENT

4-12-05 9:10 10 min count #1

α = 21 cts 2.1 cpm

β = 404 40 cpm

9:35 10 min count #1

α = 12 cts 1.2 cpm

β = 412 41 cpm

11:19 10 MIN min count

α = 9 0.9 cpm < LLD (13 counts) < MDA $4.7E^{-13}$ uC/cc

β = 444 44 cpm < LLD (474 counts) < MDA $5.2E^{-12}$ uC/cc

< 25% DAC

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH
RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0118

Date 4-11-05 Time 12:00 PM	~~DOSE RATE~~ AIR SAMPLE	CONTAMINATION	
Surveyor Robt Pennock	Inst. Type RM14CO	Beta____ Alpha____	Beta____ Alpha____
Signature Robert Pennock	Serial No. 865	Inst.Sn	
Reviewed [illegible]	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA Primary Containment 2nd level

COMPONENT 100 cu FT

4-11-05
2:11-10 min Count α 1120 cts (112 cpm) β 2345 (255 cpm)

4-12-05
8:51 10 min count α 13 (1.3 cpm) β 393 (39 cpm)

10:03 30 min count
#2 α 36 (1.2 cpm) β 1192 (40 cpm)

30 MIN LLD α = 39 gross counts Act. < $3.97 E^{-13}$ uc/cc
30 MIN LLD β = 1452 gross counts Act. < $4.79 E^{-12}$ uc/cc
(< 25% DAC)

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr
RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 SURVEY NO. NSS-0119

Date 4-11-05 Time 9:30AM	~~DOSE RATE~~ AIR SAMPLER	CONTAMINATION	
Surveyor ROBT PIEMMACK	Inst. Type RM20BCO	Beta____ Alpha____	Beta____Alpha____
Signature Robert Piemmack	Serial No. 864	Inst.Sn	
Reviewed [illegible]	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA SECONDARY CONTAINMENT LOWER LEVEL

COMPONENT 100 CU FT

4-11-05 COUNTER #2

12:16 10 MIN CT α 309 CTS (31 cpm) β 1153 CTS (115 cpm)

4-12-05

8:41 10 MIN CT α 9 CTS (.9 cpm) β 419 CTS (41.9 cpm)

α 10 MIN COUNT LLD = ~~15~~ 17 counts gross = $6.07E^{-13}$ μCi/cc (< 25% DAC)

β⁻ 10 min count LLD = 506 gross counts = $6.53E^{-12}$ μCi/cc

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 AIR SAMPLE SURVEY NO. NSS-0120

Date 4-12-05 Time 9:10 AM	~~DOSE RATE~~	CONTAMINATION	
Surveyor ROBERT PENNOCK	Inst. Type RADECO	Beta____ Alpha____	Beta____Alpha____
Signature ROBERT PENNOCK	Serial No. 864	Inst.Sn	
Reviewed [signature]	β⁻Factor	Eff.	
		Bkg. cpm	cpm

AREA PRIMARY CONTAINMENT 4TH LEVEL (LOWEST LEVEL)

COMPONENT 100 FT³

COUNTER #1 SN 102001

4-12-05

11:03 1ST COUNT 10 min CT α 1393 (139 cpm) β 3186 (319 cpm)

2ND COUNT 30 MIN CT α 70 (2.3 cpm) β 256 (8.5 cpm)

4-13-05

9:13 30 MIN COUNT α 56 (1.9 cpm) β 1308 (44 cpm)

12:08 60 MIN COUNT α 83 (1.4 cpm) β 2540 (42 cpm)

4-14-05

9:21 30 min count α 27 (0.9 cpm) β 1212 (40 cpm)

< MDA ($2.9E^{-13}$ μCi/cc) < MDA ($3.8E^{-12}$ μCi/cc)

(< .1 DAC

SMEAR RESULTS IN DPM/100 CM² B = BETA in mRAD/hr/100 CM²

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN μrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

N.S. SAVANNAH

RADIOLOGICAL SURVEY

NSS-01 Air Sampling SURVEY NO. NSS 0121

Date 4-21-05 Time	~~DOSE~~ RATE	CONTAMINATION	
Surveyor Robert E Pennock	Inst. Type Radeco	Beta____ Alpha____	Beta____Alpha____
Signature Robert E Pennock	Serial No. 864	Inst.Sn N/A	
Reviewed JAW	β Factor	Eff.	
		Bkg. cpm	cpm

AREA Primary Containment at Port V Tube Steam Gen. Access Cover During Removal & of Cover and Sampling of System.

COMPONENT 100 CuFT

4-21-05 10 min ct Ctr # 1
(2:21)

α = 3961 (396 cpm) β-γ = 9643 (964 cpm)

4-22-05 10 min ct Ctr # 1
(8:42)

α = 29 (2.9 cpm) β-γ = 445 (49 cpm)

9:23 30 min ct Ctr # 1

α = 108 (3.6 cpm) β-γ = 1372 (46 cpm)

1:51 30 min ct Ctr # 1

α = 72 (2.4 cpm) β-γ = 1286 (42.9 cpm)

4-25-05 30 min ct 8:48 Ctr # 1

α = 9 (0.3 cpm) β-γ = 1270 (42.3 cpm)

SMEAR RESULTS ~~IN DPM/100 CM²~~ ~~β – BETA in mRAD/hr/100 CM²~~

NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS	NO.	RESULTS

RA – RADIATION AREA CA – CONTAMINATION AREA ALL DOSE RATES IN µrem/hr

RCA – RADIATION CONTROL AREA AA – AIRBORNE AREA

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

WPIA001 WPI

Client SDG: 135938 GEL Work Order: 135938

The Qualifiers in this report are defined as follows:

** Indicates the analyte is a surrogate compound.
< Result is less than amount reported.
> Result is greater than amount reported.
B Target analyte was detected in the sample as well as the associated blank.
BD Results below the MDC or low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value.
P The response between the confirmation and the primary columns is >40% Different.
R Sample results are rejected.
U Target analyte was analyzed for but not detected above the MDL or LOD.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
Y QC Samples were not spiked with this compound.
Z Paint Filter qualifier: Particulates passed through the filter. No free liquids were observed.
h Sample preparation or preservation holding time exceeded.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.
** Indicates the analyte is a surrogate compound.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Metal Sample #6
Sample ID: 135938001
Matrix: Misc Solid
Collect Date: 21-APR-05 09:10
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	-0.11	+/-2.32	3.83	0.800	pCi/g		AKB	05/18/05	1814	423794	1
Americium-241	U	-2.31	+/-2.86	3.80	0.200	pCi/g						
Antimony-124	U	0.424	+/-0.838	1.35	0.100	pCi/g						
Antimony-125	U	1.12	+/-1.60	2.59	0.200	pCi/g						
Barium-133	U	-0.333	+/-0.886	1.16	0.100	pCi/g						
Barium-140	U	2.94	+/-8.46	13.5	0.500	pCi/g						
Beryllium-7	U	1.15	+/-6.97	11.0	0.700	pCi/g						
Bismuth-212	U	0.351	+/-4.91	7.80	0.500	pCi/g						
Bismuth-214	U	1.06	+/-1.35	2.20	0.200	pCi/g						
Cerium-139	U	0.0914	+/-0.541	0.776	0.050	pCi/g						
Cerium-141	U	0.366	+/-1.30	1.87	0.100	pCi/g						
Cerium-144	U	-1.18	+/-3.31	4.63	0.500	pCi/g						
Cesium-134	U	0.524	+/-0.709	1.22	0.100	pCi/g						
Cesium-136	U	1.76	+/-3.15	5.35	0.300	pCi/g						
Cesium-137	U	0.199	+/-0.628	1.01	0.100	pCi/g						
Chromium-51	U	-3.09	+/-8.76	13.3	0.600	pCi/g						
Cobalt-56	U	-0.238	+/-0.744	1.21	0.100	pCi/g						
Cobalt-57	U	-0.0225	+/-0.429	0.605	0.050	pCi/g						
Cobalt-58	U	0.158	+/-0.745	1.25	0.100	pCi/g						
Cobalt-60	U	0.659	+/-1.18	1.41	0.100	pCi/g						
Europium-152	U	1.02	+/-1.61	2.56	0.200	pCi/g						
Europium-154	U	-1.41	+/-1.96	3.05	0.500	pCi/g						
Europium-155	U	-0.24	+/-1.70	2.38	0.500	pCi/g						
Iridium-192	U	0.050	+/-0.681	1.05	0.100	pCi/g						
Iron-59	U	1.54	+/-1.77	3.15	0.300	pCi/g						
Lead-210	U	101	+/-81.0	113	4.00	pCi/g						
Lead-212	UUI	0.00	+/-2.03	1.41	0.100	pCi/g						
Lead-214	U	1.71	+/-1.63	2.05	0.100	pCi/g						
Manganese-54	U	0.308	+/-0.631	1.08	0.100	pCi/g						
Mercury-203	U	0.549	+/-0.858	1.34	0.100	pCi/g						
Neodymium-147	U	5.35	+/-20.7	33.0	1000	pCi/g						
Neptunium-239	U	-2.36	+/-3.16	4.32	2.00	pCi/g						
Niobium-94	U	0.0352	+/-0.600	0.947	1.00	pCi/g						
Niobium-95	U	0.132	+/-0.921	1.54	0.050	pCi/g						
Potassium-40	U	6.62	+/-7.14	13.0	1.00	pCi/g						
Promethium-144	U	-0.236	+/-0.759	0.996	0.080	pCi/g						
Promethium-146	U	-0.0625	+/-0.773	1.20	1.00	pCi/g						
Radium-228	U	-0.11	+/-2.32	3.83	0.500	pCi/g						

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Metal Sample #6 Project: WPIA00105
Sample ID: 135938001 Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	4.16	+/-9.19	9.00	0.800	pCi/g					
Silver-110m	U	-0.0321	+/-0.616	0.968	0.080	pCi/g					
Sodium-22	U	-0.502	+/-0.704	1.10	0.080	pCi/g					
Thallium-208	U	0.453	+/-1.02	1.16	0.080	pCi/g					
Thorium-230	U	1.06	+/-1.35	2.20	1.00	pCi/g					
Thorium-234	U	20.6	+/-36.0	33.3	5.00	pCi/g					
Tin-113	U	-0.452	+/-0.835	1.26	0.100	pCi/g					
Uranium-235	U	1.26	+/-3.34	4.80	0.500	pCi/g					
Uranium-238	U	20.6	+/-36.0	28.3	1.00	pCi/g					
Yttrium-88	U	0.743	+/-0.764	1.50	0.100	pCi/g					
Zinc-65	U	-1.14	+/-1.45	2.25	0.300	pCi/g					
Zirconium-95	U	0.223	+/-1.33	2.23	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha	U	-0.0666	+/-0.961	1.82	4.00	pCi/g		SXE1 05/24/05	2034	423849	2
Beta	U	0.197	+/-1.52	2.63	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Replacement
PAGES
JWB 6/10/2005

Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: June 6, 2005

Client Sample ID: Metal Sample #11
Sample ID: 135938002
Matrix: Misc Solid
Collect Date: 22-APR-05 08:32
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	ND	+/-2.77	4.92	0.800	pCi/g		AKB	05/18/05	1814	423794	1
Americium-241	U	ND	+/-2.95	4.02	0.200	pCi/g						
Antimony-124	U	ND	+/-1.00	1.59	0.100	pCi/g						
Antimony-125	U	ND	+/-2.06	3.38	0.200	pCi/g						
Barium-133	U	ND	+/-1.07	1.38	0.100	pCi/g						
Barium-140	U	ND	+/-10.6	16.4	0.500	pCi/g						
Beryllium-7	U	ND	+/-8.21	12.6	0.700	pCi/g						
Bismuth-212	U	ND	+/-6.40	10.1	0.500	pCi/g						
Bismuth-214	U	ND	+/-3.06	2.41	0.200	pCi/g						
Cerium-139	U	ND	+/-0.784	0.972	0.050	pCi/g						
Cerium-141	U	ND	+/-1.78	2.50	0.100	pCi/g						
Cerium-144	U	ND	+/-4.55	6.33	0.500	pCi/g						
Cesium-134	U	ND	+/-0.818	1.41	0.100	pCi/g						
Cesium-136	U	ND	+/-3.70	6.16	0.300	pCi/g						
Cesium-137	U	ND	+/-0.754	1.19	0.100	pCi/g						
Chromium-51	U	ND	+/-12.1	16.5	0.600	pCi/g						
Cobalt-56	U	ND	+/-0.946	1.63	0.100	pCi/g						
Cobalt-57	U	ND	+/-0.555	0.782	0.050	pCi/g						
Cobalt-58	U	ND	+/-0.863	1.38	0.100	pCi/g						
Cobalt-60	U	ND	+/-0.788	1.36	0.100	pCi/g						
Europium-152	U	ND	+/-2.11	3.41	0.200	pCi/g						
Europium-154	U	ND	+/-2.19	3.72	0.500	pCi/g						
Europium-155	U	ND	+/-2.22	3.13	0.500	pCi/g						
Iridium-192	U	ND	+/-0.825	1.26	0.100	pCi/g						
Iron-59	U	ND	+/-1.90	3.37	0.300	pCi/g						
Lead-210	U	ND	+/-136	99.3	4.00	pCi/g						
Lead-212	UUI	ND	+/-2.94	2.29	0.100	pCi/g						
Lead-214	UUI	ND	+/-3.39	2.78	0.100	pCi/g						
Manganese-54	U	ND	+/-0.743	1.24	0.100	pCi/g						
Mercury-203	U	ND	+/-1.06	1.63	0.100	pCi/g						
Neodymium-147	U	ND	+/-23.3	38.3	1000	pCi/g						
Neptunium-239	U	ND	+/-3.89	5.50	2.00	pCi/g						
Niobium-94	U	ND	+/-0.723	1.15	1.00	pCi/g						
Niobium-95	U	ND	+/-1.24	2.02	0.050	pCi/g						
Potassium-40	U	ND	+/-16.8	13.4	1.00	pCi/g						
Promethium-144	U	ND	+/-0.766	1.22	0.080	pCi/g						
Promethium-146	U	ND	+/-0.975	1.59	1.00	pCi/g						
Radium-228	U	ND	+/-2.77	4.92	0.500	pCi/g						

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Certificate of Analysis

Replacement Pages JWB 6/10/2005

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: June 6, 2005

Client Sample ID: Metal Sample #11
Sample ID: 135938002

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	ND	+/-7.36	11.8	0.800	pCi/g					
Silver-110m	U	ND	+/-0.765	1.19	0.080	pCi/g					
Sodium-22	U	ND	+/-0.787	1.34	0.080	pCi/g					
Thallium-208	U	ND	+/-1.47	1.47	0.080	pCi/g					
Thorium-230	U	ND	+/-3.06	2.41	1.00	pCi/g					
Thorium-234	U	ND	+/-47.4	41.5	5.00	pCi/g					
Tin-113	U	ND	+/-1.06	1.62	0.100	pCi/g					
Uranium-235	U	ND	+/-4.63	6.65	0.500	pCi/g					
Uranium-238	U	ND	+/-47.4	34.4	1.00	pCi/g					
Yttrium-88	U	ND	+/-0.779	1.44	0.100	pCi/g					
Zinc-65	U	ND	+/-1.75	2.87	0.300	pCi/g					
Zirconium-95	UUI	ND	+/-2.58	2.70	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha	U	ND	+/-1.18	1.90	4.00	pCi/g		SXE1 05/24/05	2034	423849	2
Beta		3.40	+/-1.82	2.90	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

Notes:
The Qualifiers in this report are defined as follows :

** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
BD Results below the MDC or low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value.
U Target analyte was analyzed for but not detected above the MDL or LOD.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis except where prohibited by the analytical procedure.

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Replacement Pages jwb 6/10/2005

Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: June 6, 2005

Client Sample ID: Metal Sample #11
Sample ID: 135938002

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Jake Crook.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Metal Sample #13
Sample ID: 135938003
Matrix: Misc Solid
Collect Date: 25-APR-05 11:18
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	UUI	0.00	+/-0.766	0.688	0.800	pCi/g		AKB	05/18/05	1815	423794	1
Americium-241	U	-0.0281	+/-0.294	0.425	0.200	pCi/g						
Antimony-124	U	0.137	+/-0.125	0.207	0.100	pCi/g						
Antimony-125	U	-0.118	+/-0.256	0.384	0.200	pCi/g						
Barium-133	U	-0.0266	+/-0.131	0.174	0.100	pCi/g						
Barium-140	U	1.40	+/-1.10	1.71	0.500	pCi/g						
Beryllium-7	U	0.223	+/-0.942	1.46	0.700	pCi/g						
Bismuth-212	U	0.0178	+/-0.711	1.14	0.500	pCi/g						
Bismuth-214	U	0.230	+/-0.204	0.338	0.200	pCi/g						
Cerium-139	UUI	0.00	+/-0.168	0.123	0.050	pCi/g						
Cerium-141	U	0.0681	+/-0.212	0.308	0.100	pCi/g						
Cerium-144	U	0.0462	+/-0.579	0.839	0.500	pCi/g						
Cesium-134	U	0.023	+/-0.107	0.172	0.100	pCi/g						
Cesium-136	U	0.327	+/-0.930	0.712	0.300	pCi/g						
Cesium-137	U	0.111	+/-0.124	0.133	0.100	pCi/g						
Chromium-51	U	-0.864	+/-1.27	1.91	0.600	pCi/g						
Cobalt-56	U	0.00107	+/-0.117	0.186	0.100	pCi/g						
Cobalt-57	U	0.00287	+/-0.0698	0.101	0.050	pCi/g						
Cobalt-58	U	-0.0358	+/-0.116	0.181	0.100	pCi/g						
Cobalt-60	UUI	0.00	+/-0.175	0.326	0.100	pCi/g						
Europium-152	U	0.0685	+/-0.257	0.398	0.200	pCi/g						
Europium-154	U	0.0749	+/-0.259	0.439	0.500	pCi/g						
Europium-155	U	0.336	+/-0.275	0.412	0.500	pCi/g						
Iridium-192	U	0.0706	+/-0.103	0.162	0.100	pCi/g						
Iron-59	U	0.0663	+/-0.257	0.431	0.300	pCi/g						
Lead-210	U	6.12	+/-11.9	8.19	4.00	pCi/g						
Lead-212	U	0.0252	+/-0.334	0.229	0.100	pCi/g						
Lead-214	U	0.122	+/-0.305	0.322	0.100	pCi/g						
Manganese-54	U	0.0141	+/-0.0958	0.154	0.100	pCi/g						
Mercury-203	U	0.143	+/-0.243	0.189	0.100	pCi/g						
Neodymium-147	U	2.14	+/-2.35	3.91	1000	pCi/g						
Neptunium-239	U	-0.136	+/-0.502	0.721	2.00	pCi/g						
Niobium-94	U	-0.0547	+/-0.109	0.145	1.00	pCi/g						
Niobium-95	U	0.0943	+/-0.143	0.235	0.050	pCi/g						
Potassium-40		2.97	+/-1.22	2.11	1.00	pCi/g						
Promethium-144	U	0.0712	+/-0.109	0.157	0.080	pCi/g						
Promethium-146	U	0.013	+/-0.117	0.180	1.00	pCi/g						
Radium-228	UUI	0.00	+/-0.766	0.688	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Metal Sample #13 Project: WPIA00105
Sample ID: 135938003 Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	-0.773	+/-0.890	1.36	0.800	pCi/g					
Silver-110m	U	-0.0862	+/-0.0887	0.135	0.080	pCi/g					
Sodium-22	U	0.031	+/-0.0929	0.158	0.080	pCi/g					
Thallium-208	U	0.0396	+/-0.198	0.180	0.080	pCi/g					
Thorium-230	U	0.230	+/-0.204	0.338	1.00	pCi/g					
Thorium-234	U	1.23	+/-4.96	3.62	5.00	pCi/g					
Tin-113	U	0.0411	+/-0.123	0.191	0.100	pCi/g					
Uranium-235	U	0.656	+/-0.605	0.887	0.500	pCi/g					
Uranium-238	U	1.23	+/-4.96	3.62	1.00	pCi/g					
Yttrium-88	U	0.0335	+/-0.0965	0.172	0.100	pCi/g					
Zinc-65	U	0.00536	+/-0.213	0.353	0.300	pCi/g					
Zirconium-95	U	-0.0248	+/-0.196	0.311	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha	U	-1.02	+/-1.05	2.76	4.00	pCi/g		SXE1 05/24/05	1940	423849	2
Beta	U	-0.385	+/-1.27	2.68	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Metal Sample #12A
Sample ID: 135938004
Matrix: Misc Solid
Collect Date: 25-APR-05 11:12
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	0.184	+/-0.0996	0.188	0.800	pCi/g		AKB	05/18/05	1815	423794	1
Americium-241	U	0.0141	+/-0.170	0.277	0.200	pCi/g						
Antimony-124	U	0.00315	+/-0.0325	0.0548	0.100	pCi/g						
Antimony-125	U	0.00982	+/-0.0661	0.113	0.200	pCi/g						
Barium-133	U	0.0246	+/-0.035	0.052	0.100	pCi/g						
Barium-140	U	0.178	+/-0.295	0.515	0.500	pCi/g						
Beryllium-7	U	0.0244	+/-0.261	0.444	0.700	pCi/g						
Bismuth-212	U	0.0865	+/-0.197	0.341	0.500	pCi/g						
Bismuth-214	U	0.0445	+/-0.119	0.112	0.200	pCi/g						
Cerium-139	U	-0.0074	+/-0.0217	0.0342	0.050	pCi/g						
Cerium-141	U	-0.0247	+/-0.0513	0.0807	0.100	pCi/g						
Cerium-144	U	0.0415	+/-0.143	0.233	0.500	pCi/g						
Cesium-134	U	0.00758	+/-0.0289	0.0494	0.100	pCi/g						
Cesium-136	U	0.00842	+/-0.108	0.183	0.300	pCi/g						
Cesium-137	UUI	0.00	+/-0.0304	0.0582	0.100	pCi/g						
Chromium-51	U	0.0269	+/-0.366	0.581	0.600	pCi/g						
Cobalt-56	U	-0.00736	+/-0.039	0.0557	0.100	pCi/g						
Cobalt-57	U	-0.00324	+/-0.0178	0.0285	0.050	pCi/g						
Cobalt-58	U	0.00275	+/-0.0291	0.0493	0.100	pCi/g						
Cobalt-60	U	0.0198	+/-0.046	0.0582	0.100	pCi/g						
Europium-152	U	-0.00816	+/-0.0725	0.114	0.200	pCi/g						
Europium-154	U	-0.00194	+/-0.069	0.122	0.500	pCi/g						
Europium-155	U	0.00157	+/-0.0742	0.120	0.500	pCi/g						
Iridium-192	U	-0.0101	+/-0.0299	0.0465	0.100	pCi/g						
Iron-59	U	0.0446	+/-0.0613	0.115	0.300	pCi/g						
Lead-210	U	5.94	+/-8.67	12.3	4.00	pCi/g						
Lead-212	U	0.0258	+/-0.0828	0.0645	0.100	pCi/g						
Lead-214	U	0.0494	+/-0.100	0.101	0.100	pCi/g						
Manganese-54	U	0.0124	+/-0.0269	0.0465	0.100	pCi/g						
Mercury-203	U	0.0192	+/-0.0347	0.0564	0.100	pCi/g						
Neodymium-147	U	-0.0276	+/-0.668	1.13	1000	pCi/g						
Neptunium-239	U	-0.00098	+/-0.136	0.219	2.00	pCi/g						
Niobium-94	U	0.00408	+/-0.0244	0.0413	1.00	pCi/g						
Niobium-95	U	-0.0127	+/-0.0367	0.060	0.050	pCi/g						
Potassium-40	U	0.364	+/-0.523	0.513	1.00	pCi/g						
Promethium-144	U	0.0158	+/-0.0268	0.0464	0.080	pCi/g						
Promethium-146	U	0.00377	+/-0.0321	0.0546	1.00	pCi/g						
Radium-228	U	0.184	+/-0.0996	0.188	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Metal Sample #12A
Sample ID: 135938004

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	0.0796	+/-0.241	0.413	0.800	pCi/g					
Silver-110m	U	-0.0279	+/-0.0261	0.0406	0.080	pCi/g					
Sodium-22	U	-0.000697	+/-0.0248	0.044	0.080	pCi/g					
Thallium-208	U	0.0194	+/-0.0286	0.0498	0.080	pCi/g					
Thorium-230	U	0.0444	+/-0.119	0.0854	1.00	pCi/g					
Thorium-234	U	1.70	+/-1.31	2.22	5.00	pCi/g					
Tin-113	U	0.000478	+/-0.0371	0.0585	0.100	pCi/g					
Uranium-235	U	0.130	+/-0.146	0.242	0.500	pCi/g					
Uranium-238	U	1.70	+/-1.31	2.22	1.00	pCi/g					
Yttrium-88	U	0.0149	+/-0.0336	0.062	0.100	pCi/g					
Zinc-65	U	-0.0385	+/-0.0541	0.0897	0.300	pCi/g					
Zirconium-95	U	-0.00402	+/-0.0528	0.0883	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha	U	-0.424	+/-1.02	2.42	4.00	pCi/g		SXE1 05/24/05	1940	423849	2
Beta	U	-0.815	+/-1.02	2.27	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

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Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #8
Sample ID: 135938005
Matrix: Misc Solid
Collect Date: 22-APR-05 09:16
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	UUI	0.00	+/-1.59	2.86	0.800	pCi/g		AKB	05/18/05	1900	423794	1
Americium-241	U	-0.993	+/-2.25	2.66	0.200	pCi/g						
Antimony-124	U	0.473	+/-0.824	0.901	0.100	pCi/g						
Antimony-125	U	-1.27	+/-1.74	2.49	0.200	pCi/g						
Barium-133	U	-0.0767	+/-0.744	1.09	0.100	pCi/g						
Barium-140	U	-3.03	+/-6.86	10.6	0.500	pCi/g						
Beryllium-7	U	1.77	+/-6.68	10.7	0.700	pCi/g						
Bismuth-212	U	3.68	+/-3.06	5.27	0.500	pCi/g						
Bismuth-214	U	0.706	+/-1.84	1.41	0.200	pCi/g						
Cerium-139	U	-0.285	+/-0.425	0.615	0.050	pCi/g						
Cerium-141	U	0.604	+/-1.15	1.50	0.100	pCi/g						
Cerium-144	U	-0.452	+/-2.70	3.95	0.500	pCi/g						
Cesium-134	U	0.533	+/-0.410	0.720	0.100	pCi/g						
Cesium-136	U	-0.87	+/-1.89	2.93	0.300	pCi/g						
Cesium-137		164	+/-10.6	0.706	0.100	pCi/g						
Chromium-51	U	0.428	+/-8.02	11.9	0.600	pCi/g						
Cobalt-56	U	0.0301	+/-0.478	0.774	0.100	pCi/g						
Cobalt-57	U	-0.0183	+/-0.329	0.482	0.050	pCi/g						
Cobalt-58	U	-0.261	+/-0.455	0.704	0.100	pCi/g						
Cobalt-60		2.61	+/-0.856	0.628	0.100	pCi/g						
Europium-152	U	-0.654	+/-1.60	2.33	0.200	pCi/g						
Europium-154	U	0.215	+/-1.12	1.73	0.500	pCi/g						
Europium-155	U	-0.186	+/-1.28	1.87	0.500	pCi/g						
Iridium-192	U	-0.147	+/-0.622	0.913	0.100	pCi/g						
Iron-59	U	-0.506	+/-1.30	1.85	0.300	pCi/g						
Lead-210	U	58.2	+/-63.2	78.2	4.00	pCi/g						
Lead-212		1.81	+/-1.60	1.27	0.100	pCi/g						
Lead-214	U	1.04	+/-1.19	1.81	0.100	pCi/g						
Manganese-54	U	0.200	+/-0.422	0.595	0.100	pCi/g						
Mercury-203	U	0.806	+/-0.789	1.03	0.100	pCi/g						
Neodymium-147	U	9.65	+/-17.0	27.6	1000	pCi/g						
Neptunium-239	U	1.16	+/-2.35	3.49	2.00	pCi/g						
Niobium-94	U	0.143	+/-0.327	0.544	1.00	pCi/g						
Niobium-95	U	-0.0514	+/-0.593	0.953	0.050	pCi/g						
Potassium-40	UUI	0.00	+/-4.98	9.70	1.00	pCi/g						
Promethium-144	U	0.0638	+/-0.415	0.596	0.080	pCi/g						
Promethium-146	U	0.324	+/-0.951	1.34	1.00	pCi/g						
Radium-228	UUI	0.00	+/-1.59	2.86	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
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Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #8
Sample ID: 135938005

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	1.24	+/-4.08	6.63	0.800	pCi/g					
Silver-110m	U	0.267	+/-0.561	0.810	0.080	pCi/g					
Sodium-22	U	0.0757	+/-0.401	0.621	0.080	pCi/g					
Thallium-208	U	0.459	+/-0.507	0.837	0.080	pCi/g					
Thorium-230	U	0.706	+/-1.84	1.69	1.00	pCi/g					
Thorium-234	UUI	0.00	+/-19.2	23.5	5.00	pCi/g					
Tin-113	U	-0.384	+/-0.825	1.20	0.100	pCi/g					
Uranium-235	U	1.58	+/-3.02	4.00	0.500	pCi/g					
Uranium-238	UUI	0.00	+/-19.2	23.5	1.00	pCi/g					
Yttrium-88	U	0.276	+/-0.435	0.821	0.100	pCi/g					
Zinc-65	U	-0.319	+/-0.793	1.32	0.300	pCi/g					
Zirconium-95	U	0.860	+/-0.778	1.35	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha		4.23	+/-2.43	3.84	4.00	pCi/g		SXE1 05/24/05	1940	423849	2
Beta		160	+/-5.45	1.87	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #14
Sample ID: 135938006
Matrix: Misc Solid
Collect Date: 22-APR-05 09:48
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	0.197	+/-0.922	1.43	0.800	pCi/g		AKB	05/18/05	1902	423794	1
Americium-241	U	0.130	+/-0.685	0.918	0.200	pCi/g						
Antimony-124	U	-0.0715	+/-0.196	0.306	0.100	pCi/g						
Antimony-125	U	-0.173	+/-0.370	0.580	0.200	pCi/g						
Barium-133	U	-0.0401	+/-0.160	0.252	0.100	pCi/g						
Barium-140	U	1.92	+/-2.19	3.35	0.500	pCi/g						
Beryllium-7	U	-0.727	+/-1.55	2.43	0.700	pCi/g						
Bismuth-212	U	0.154	+/-1.58	2.29	0.500	pCi/g						
Bismuth-214	U	0.269	+/-0.305	0.485	0.200	pCi/g						
Cerium-139	U	0.0405	+/-0.0979	0.147	0.050	pCi/g						
Cerium-141	U	0.270	+/-0.240	0.362	0.100	pCi/g						
Cerium-144	U	0.349	+/-0.750	0.939	0.500	pCi/g						
Cesium-134	U	-0.0179	+/-0.232	0.359	0.100	pCi/g						
Cesium-136	U	0.0843	+/-1.23	2.01	0.300	pCi/g						
Cesium-137		2.58	+/-0.370	0.286	0.100	pCi/g						
Chromium-51	U	0.389	+/-1.96	2.90	0.600	pCi/g						
Cobalt-56	U	0.0497	+/-0.269	0.418	0.100	pCi/g						
Cobalt-57	U	-0.0208	+/-0.0899	0.119	0.050	pCi/g						
Cobalt-58	U	-0.0932	+/-0.260	0.400	0.100	pCi/g						
Cobalt-60		109	+/-6.61	0.195	0.100	pCi/g						
Europium-152	U	0.404	+/-0.546	0.570	0.200	pCi/g						
Europium-154	U	0.011	+/-0.340	0.559	0.500	pCi/g						
Europium-155	U	-0.144	+/-0.354	0.469	0.500	pCi/g						
Iridium-192	U	-0.0602	+/-0.153	0.225	0.100	pCi/g						
Iron-59	U	0.0374	+/-0.692	1.12	0.300	pCi/g						
Lead-210	U	28.5	+/-25.9	34.8	4.00	pCi/g						
Lead-212	U	0.0179	+/-0.284	0.312	0.100	pCi/g						
Lead-214	U	0.188	+/-0.260	0.415	0.100	pCi/g						
Manganese-54	U	0.0674	+/-0.225	0.351	0.100	pCi/g						
Mercury-203	U	0.177	+/-0.180	0.270	0.100	pCi/g						
Neodymium-147	U	2.11	+/-4.98	7.89	1000	pCi/g						
Neptunium-239	U	-0.299	+/-0.649	0.858	2.00	pCi/g						
Niobium-94	U	-0.107	+/-0.164	0.252	1.00	pCi/g						
Niobium-95	U	0.297	+/-0.311	0.491	0.050	pCi/g						
Potassium-40		2.76	+/-1.51	1.44	1.00	pCi/g						
Promethium-144	U	-0.0367	+/-0.171	0.265	0.080	pCi/g						
Promethium-146	U	-0.0595	+/-0.177	0.278	1.00	pCi/g						
Radium-228	U	0.197	+/-0.922	1.43	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #14
Sample ID: 135938006

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	1.03	+/-1.52	2.40	0.800	pCi/g					
Silver-110m	U	0.0449	+/-0.197	0.271	0.080	pCi/g					
Sodium-22	U	0.00206	+/-0.122	0.201	0.080	pCi/g					
Thallium-208	U	0.0994	+/-0.161	0.256	0.080	pCi/g					
Thorium-230	U	0.269	+/-0.305	0.485	1.00	pCi/g					
Thorium-234	U	2.12	+/-5.19	6.97	5.00	pCi/g					
Tin-113	U	0.136	+/-0.183	0.293	0.100	pCi/g					
Uranium-235	U	0.270	+/-0.634	0.948	0.500	pCi/g					
Uranium-238	U	2.12	+/-5.19	6.97	1.00	pCi/g					
Yttrium-88	U	0.0483	+/-0.0995	0.179	0.100	pCi/g					
Zinc-65	U	0.400	+/-0.545	0.893	0.300	pCi/g					
Zirconium-95	U	-0.0509	+/-0.428	0.665	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha		11.9	+/-3.17	2.54	4.00	pCi/g		SXE1 05/24/05	1940	423849	2
Beta		135	+/-5.18	2.25	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

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Company : WPI
Address : 11 S. 12th Street
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #19
Sample ID: 135938007
Matrix: Misc Solid
Collect Date: 22-APR-05 10:07
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	1.49	+/-2.01	3.08	0.800	pCi/g		AKB	05/18/05	1903	423794	1
Americium-241	U	-0.203	+/-0.538	0.718	0.200	pCi/g						
Antimony-124	U	-0.421	+/-0.602	0.876	0.100	pCi/g						
Antimony-125	U	0.116	+/-1.30	1.99	0.200	pCi/g						
Barium-133	U	0.854	+/-0.742	0.897	0.100	pCi/g						
Barium-140	U	1.25	+/-6.66	10.3	0.500	pCi/g						
Beryllium-7	U	-1.07	+/-5.69	8.58	0.700	pCi/g						
Bismuth-212	U	-1.14	+/-3.76	6.05	0.500	pCi/g						
Bismuth-214	U	0.584	+/-1.47	1.64	0.200	pCi/g						
Cerium-139	U	0.0314	+/-0.294	0.449	0.050	pCi/g						
Cerium-141	U	0.696	+/-0.844	1.19	0.100	pCi/g						
Cerium-144	U	1.17	+/-2.06	2.89	0.500	pCi/g						
Cesium-134	U	0.0305	+/-0.554	0.910	0.100	pCi/g						
Cesium-136	U	0.0629	+/-2.57	4.22	0.300	pCi/g						
Cesium-137		51.0	+/-1.98	0.807	0.100	pCi/g						
Chromium-51	U	1.85	+/-6.03	9.32	0.600	pCi/g						
Cobalt-56	U	-0.338	+/-0.585	0.923	0.100	pCi/g						
Cobalt-57	U	0.0908	+/-0.252	0.350	0.050	pCi/g						
Cobalt-58	U	0.296	+/-0.558	0.950	0.100	pCi/g						
Cobalt-60		11.6	+/-1.28	0.850	0.100	pCi/g						
Europium-152	U	0.0469	+/-1.34	1.83	0.200	pCi/g						
Europium-154	U	0.180	+/-1.34	2.24	0.500	pCi/g						
Europium-155	U	-0.565	+/-0.964	1.29	0.500	pCi/g						
Iridium-192	U	0.0807	+/-0.474	0.728	0.100	pCi/g						
Iron-59	U	0.497	+/-1.39	2.34	0.300	pCi/g						
Lead-210	U	2.46	+/-11.0	5.79	4.00	pCi/g						
Lead-212	U	0.140	+/-1.02	0.881	0.100	pCi/g						
Lead-214	U	0.870	+/-1.46	1.41	0.100	pCi/g						
Manganese-54	U	-0.0286	+/-0.506	0.825	0.100	pCi/g						
Mercury-203	U	0.618	+/-0.537	0.856	0.100	pCi/g						
Neodymium-147	U	13.4	+/-15.8	25.3	1000	pCi/g						
Neptunium-239	U	0.716	+/-1.83	2.55	2.00	pCi/g						
Niobium-94	U	-0.137	+/-0.429	0.691	1.00	pCi/g						
Niobium-95	U	0.323	+/-0.750	1.26	0.050	pCi/g						
Potassium-40	U	3.47	+/-8.76	6.87	1.00	pCi/g						
Promethium-144	U	0.192	+/-0.453	0.760	0.080	pCi/g						
Promethium-146	U	0.608	+/-0.690	1.09	1.00	pCi/g						
Radium-228	U	1.49	+/-2.01	3.08	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #19
Sample ID: 135938007

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	-1.25	+/-4.06	6.57	0.800	pCi/g					
Silver-110m	U	-3.98	+/-0.654	0.763	0.080	pCi/g					
Sodium-22	U	0.0694	+/-0.482	0.807	0.080	pCi/g					
Thallium-208	UUI	0.00	+/-1.04	0.932	0.080	pCi/g					
Thorium-230	U	0.584	+/-1.47	1.41	1.00	pCi/g					
Thorium-234	U	3.80	+/-12.1	11.7	5.00	pCi/g					
Tin-113	U	-0.0137	+/-0.621	0.947	0.100	pCi/g					
Uranium-235	UUI	0.00	+/-2.20	3.18	0.500	pCi/g					
Uranium-238	U	3.80	+/-12.1	7.00	1.00	pCi/g					
Yttrium-88	U	0.0243	+/-0.457	0.831	0.100	pCi/g					
Zinc-65	U	0.681	+/-1.13	1.93	0.300	pCi/g					
Zirconium-95	U	-0.529	+/-1.07	1.70	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha		3.25	+/-2.10	2.71	4.00	pCi/g		SXE1 05/24/05	1940	423849	2
Beta		69.1	+/-3.76	2.37	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

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Company : WPI
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #27
Sample ID: 135938008
Matrix: Misc Solid
Collect Date: 22-APR-05 10:28
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	2.16	+/-3.29	5.56	0.800	pCi/g		AKB	05/18/05	1906	423794	1
Americium-241	U	3.21	+/-3.52	4.69	0.200	pCi/g						
Antimony-124	U	0.302	+/-1.19	1.64	0.100	pCi/g						
Antimony-125	U	-2.6	+/-3.04	4.53	0.200	pCi/g						
Barium-133	U	-0.952	+/-1.26	1.88	0.100	pCi/g						
Barium-140	U	9.99	+/-14.5	20.3	0.500	pCi/g						
Beryllium-7	U	2.94	+/-12.8	19.7	0.700	pCi/g						
Bismuth-212	U	2.78	+/-6.27	10.0	0.500	pCi/g						
Bismuth-214	U	2.36	+/-3.52	2.83	0.200	pCi/g						
Cerium-139	U	-0.708	+/-0.787	1.07	0.050	pCi/g						
Cerium-141	U	0.0367	+/-1.87	2.59	0.100	pCi/g						
Cerium-144	U	-4.6	+/-4.90	6.60	0.500	pCi/g						
Cesium-134	U	0.0825	+/-0.928	1.45	0.100	pCi/g						
Cesium-136	U	0.864	+/-4.41	7.37	0.300	pCi/g						
Cesium-137		342	+/-5.67	1.38	0.100	pCi/g						
Chromium-51	U	1.73	+/-13.9	21.2	0.600	pCi/g						
Cobalt-56	U	0.399	+/-1.06	1.68	0.100	pCi/g						
Cobalt-57	U	0.824	+/-0.996	0.846	0.050	pCi/g						
Cobalt-58	U	0.429	+/-1.03	1.65	0.100	pCi/g						
Cobalt-60		84.6	+/-3.74	1.00	0.100	pCi/g						
Europium-152	U	-0.226	+/-2.81	4.26	0.200	pCi/g						
Europium-154	U	0.768	+/-1.78	2.81	0.500	pCi/g						
Europium-155	U	1.12	+/-2.36	3.28	0.500	pCi/g						
Iridium-192	U	0.0901	+/-1.08	1.64	0.100	pCi/g						
Iron-59	U	0.585	+/-2.37	3.97	0.300	pCi/g						
Lead-210	U	-49.9	+/-105	122	4.00	pCi/g						
Lead-212	U	1.54	+/-1.49	2.29	0.100	pCi/g						
Lead-214	U	1.17	+/-2.05	3.16	0.100	pCi/g						
Manganese-54	U	0.285	+/-0.848	1.35	0.100	pCi/g						
Mercury-203	U	1.11	+/-1.26	1.94	0.100	pCi/g						
Neodymium-147	U	-21.6	+/-31.7	47.6	1000	pCi/g						
Neptunium-239	U	0.740	+/-4.51	6.22	2.00	pCi/g						
Niobium-94	U	0.0713	+/-0.710	1.11	1.00	pCi/g						
Niobium-95	U	1.15	+/-1.19	1.97	0.050	pCi/g						
Potassium-40	UUI	0.00	+/-6.91	13.5	1.00	pCi/g						
Promethium-144	U	-0.0423	+/-0.735	1.14	0.080	pCi/g						
Promethium-146	U	-0.61	+/-1.56	2.36	1.00	pCi/g						
Radium-228	U	2.16	+/-3.29	5.56	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #27
Sample ID: 135938008

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	-3.49	+/-8.16	12.4	0.800	pCi/g					
Silver-110m	UUI	0.00	+/-1.55	2.91	0.080	pCi/g					
Sodium-22	U	0.277	+/-0.641	1.01	0.080	pCi/g					
Thallium-208	U	1.35	+/-1.29	1.40	0.080	pCi/g					
Thorium-230	U	2.36	+/-3.52	2.83	1.00	pCi/g					
Thorium-234	U	22.2	+/-29.8	36.7	5.00	pCi/g					
Tin-113	U	-0.311	+/-1.45	2.20	0.100	pCi/g					
Uranium-235	U	3.27	+/-5.48	6.88	0.500	pCi/g					
Uranium-238	U	22.2	+/-29.8	36.7	1.00	pCi/g					
Yttrium-88	U	0.211	+/-0.658	1.20	0.100	pCi/g					
Zinc-65	U	-0.929	+/-1.93	3.10	0.300	pCi/g					
Zirconium-95	U	0.425	+/-1.74	2.76	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha		3.71	+/-2.87	2.38	4.00	pCi/g		SXE1 05/24/05	1940	423849	2
Beta		480	+/-9.44	2.02	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #2
Sample ID: 135938009
Matrix: Misc Solid
Collect Date: 20-APR-05 08:27
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	5.02	+/-5.42	7.72	0.800	pCi/g		AKB	05/19/05	1224	423794	1
Americium-241	U	-5.89	+/-8.21	9.74	0.200	pCi/g						
Antimony-124	U	0.789	+/-1.31	2.29	0.100	pCi/g						
Antimony-125	U	-0.685	+/-2.58	3.94	0.200	pCi/g						
Barium-133	U	-0.776	+/-1.72	2.20	0.100	pCi/g						
Barium-140	U	6.18	+/-16.4	26.6	0.500	pCi/g						
Beryllium-7	U	-6.13	+/-11.4	17.0	0.700	pCi/g						
Bismuth-212	U	3.43	+/-6.88	12.4	0.500	pCi/g						
Bismuth-214	U	0.556	+/-3.00	3.92	0.200	pCi/g						
Cerium-139	U	0.193	+/-0.936	1.41	0.050	pCi/g						
Cerium-141	U	-0.062	+/-2.50	3.69	0.100	pCi/g						
Cerium-144	U	2.23	+/-6.73	8.93	0.500	pCi/g						
Cesium-134	U	0.0677	+/-1.03	1.78	0.100	pCi/g						
Cesium-136	U	0.0964	+/-5.53	9.68	0.300	pCi/g						
Cesium-137	U	1.16	+/-1.59	1.80	0.100	pCi/g						
Chromium-51	U	-5.59	+/-15.7	23.4	0.600	pCi/g						
Cobalt-56	U	-0.185	+/-1.22	2.05	0.100	pCi/g						
Cobalt-57	U	0.300	+/-0.773	1.16	0.050	pCi/g						
Cobalt-58	U	1.38	+/-1.00	1.93	0.100	pCi/g						
Cobalt-60		8.62	+/-2.13	1.71	0.100	pCi/g						
Europium-152	U	0.754	+/-3.40	4.68	0.200	pCi/g						
Europium-154	U	0.167	+/-2.50	4.55	0.500	pCi/g						
Europium-155	U	-1.66	+/-3.22	4.56	0.500	pCi/g						
Iridium-192	U	-0.0439	+/-1.16	1.78	0.100	pCi/g						
Iron-59	U	0.820	+/-2.69	4.90	0.300	pCi/g						
Lead-210	U	234	+/-308	400	4.00	pCi/g						
Lead-212	U	1.06	+/-1.89	2.92	0.100	pCi/g						
Lead-214	U	2.74	+/-2.44	3.99	0.100	pCi/g						
Manganese-54	U	0.161	+/-0.939	1.65	0.100	pCi/g						
Mercury-203	U	-0.52	+/-1.55	2.30	0.100	pCi/g						
Neodymium-147	U	-5.18	+/-44.4	68.9	1000	pCi/g						
Neptunium-239	U	-0.324	+/-5.89	8.59	2.00	pCi/g						
Niobium-94	U	-0.248	+/-0.960	1.57	1.00	pCi/g						
Niobium-95	U	0.322	+/-1.59	2.76	0.050	pCi/g						
Potassium-40	U	0.764	+/-16.8	17.5	1.00	pCi/g						
Promethium-144	U	-0.0639	+/-1.15	1.66	0.080	pCi/g						
Promethium-146	U	0.956	+/-1.25	2.10	1.00	pCi/g						
Radium-228	U	5.02	+/-5.42	7.72	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #2 Project: WPIA00105
Sample ID: 135938009 Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	-0.617	+/-8.55	14.3	0.800	pCi/g					
Silver-110m	U	-0.0199	+/-1.09	1.60	0.080	pCi/g					
Sodium-22	U	0.0567	+/-0.901	1.64	0.080	pCi/g					
Thallium-208	U	1.49	+/-1.18	2.13	0.080	pCi/g					
Thorium-230	U	0.556	+/-3.00	3.92	1.00	pCi/g					
Thorium-234	U	56.5	+/-60.3	78.9	5.00	pCi/g					
Tin-113	U	-0.88	+/-1.43	2.10	0.100	pCi/g					
Uranium-235	U	4.13	+/-6.28	9.49	0.500	pCi/g					
Uranium-238	U	56.5	+/-60.3	78.9	1.00	pCi/g					
Yttrium-88	U	0.377	+/-0.979	2.08	0.100	pCi/g					
Zinc-65	U	0.0904	+/-2.17	3.80	0.300	pCi/g					
Zirconium-95	U	0.575	+/-2.14	3.75	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha	U	0.293	+/-1.31	2.66	4.00	pCi/g		SXE1 05/24/05	1940	423849	2
Beta		11.0	+/-1.81	2.32	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #1
Sample ID: 135938010
Matrix: Misc Solid
Collect Date: 20-APR-05 10:00
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	UUI	0.00	+/-2.31	2.47	0.800	pCi/g		AKB	05/19/05	1226	423794	1
Americium-241	U	-0.184	+/-1.15	1.11	0.200	pCi/g						
Antimony-124	U	0.177	+/-0.501	0.835	0.100	pCi/g						
Antimony-125	U	-0.451	+/-0.961	1.48	0.200	pCi/g						
Barium-133	U	0.108	+/-0.554	0.782	0.100	pCi/g						
Barium-140	U	-0.90	+/-6.55	10.4	0.500	pCi/g						
Beryllium-7	U	-0.856	+/-3.78	5.99	0.700	pCi/g						
Bismuth-212	U	3.32	+/-4.02	4.60	0.500	pCi/g						
Bismuth-214	U	1.36	+/-0.895	1.58	0.200	pCi/g						
Cerium-139	U	-0.12	+/-0.358	0.444	0.050	pCi/g						
Cerium-141	U	0.818	+/-0.861	1.29	0.100	pCi/g						
Cerium-144	U	-1.13	+/-2.15	2.96	0.500	pCi/g						
Cesium-134	U	0.113	+/-0.442	0.780	0.100	pCi/g						
Cesium-136	U	-2.03	+/-2.14	3.26	0.300	pCi/g						
Cesium-137	U	0.0559	+/-0.783	0.664	0.100	pCi/g						
Chromium-51	U	1.18	+/-5.70	9.10	0.600	pCi/g						
Cobalt-56	U	-0.0373	+/-0.474	0.813	0.100	pCi/g						
Cobalt-57	U	-0.184	+/-0.267	0.365	0.050	pCi/g						
Cobalt-58	U	0.225	+/-0.429	0.792	0.100	pCi/g						
Cobalt-60	U	0.108	+/-0.384	0.717	0.100	pCi/g						
Europium-152	U	0.461	+/-1.03	1.67	0.200	pCi/g						
Europium-154	U	0.495	+/-1.10	2.08	0.500	pCi/g						
Europium-155	U	0.199	+/-0.978	1.40	0.500	pCi/g						
Iridium-192	U	-0.168	+/-0.437	0.670	0.100	pCi/g						
Iron-59	U	-0.152	+/-1.04	1.79	0.300	pCi/g						
Lead-210	U	13.7	+/-10.6	14.1	4.00	pCi/g						
Lead-212	UUI	0.00	+/-1.38	0.874	0.100	pCi/g						
Lead-214	U	0.251	+/-1.32	1.37	0.100	pCi/g						
Manganese-54	U	-0.138	+/-0.361	0.602	0.100	pCi/g						
Mercury-203	U	0.530	+/-1.21	0.762	0.100	pCi/g						
Neodymium-147	U	-1.4	+/-15.2	24.3	1000	pCi/g						
Neptunium-239	U	-0.951	+/-1.82	2.52	2.00	pCi/g						
Niobium-94	U	0.143	+/-0.394	0.658	1.00	pCi/g						
Niobium-95	U	0.655	+/-1.34	1.13	0.050	pCi/g						
Potassium-40	U	8.18	+/-4.14	9.21	1.00	pCi/g						
Promethium-144	U	0.496	+/-0.418	0.747	0.080	pCi/g						
Promethium-146	U	-0.0315	+/-0.456	0.728	1.00	pCi/g						
Radium-228	UUI	0.00	+/-2.31	2.47	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Paint Sample #1 Project: WPIA00105
Sample ID: 135938010 Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	0.0973	+/-3.61	5.87	0.800	pCi/g					
Silver-110m	U	0.235	+/-0.436	0.668	0.080	pCi/g					
Sodium-22	U	0.177	+/-0.395	0.748	0.080	pCi/g					
Thallium-208	U	0.069	+/-0.593	0.697	0.080	pCi/g					
Thorium-230	U	1.36	+/-0.895	1.58	1.00	pCi/g					
Thorium-234	U	1.84	+/-13.9	9.25	5.00	pCi/g					
Tin-113	U	0.063	+/-0.491	0.791	0.100	pCi/g					
Uranium-235	U	0.323	+/-2.19	3.14	0.500	pCi/g					
Uranium-238	U	1.84	+/-13.9	9.25	1.00	pCi/g					
Yttrium-88	U	0.159	+/-0.469	0.954	0.100	pCi/g					
Zinc-65	U	-0.093	+/-0.913	1.37	0.300	pCi/g					
Zirconium-95	U	-0.166	+/-0.785	1.33	0.200	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Gross A/B, solid											
Alpha	U	0.588	+/-1.37	2.56	4.00	pCi/g		SXE1 05/24/05	1941	423849	2
Beta	U	2.86	+/-1.58	2.90	10.0	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 900.0 Modified	

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Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Core bore Sample #5
Sample ID: 135938011
Matrix: Misc Solid
Collect Date: 21-APR-05 11:00
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid											
Tritium	U	-2.06	+/-2.84	5.12	6.00	pCi/g		ATH1 05/18/05	0700	425676	1

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

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Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Core bore Sample #6
Sample ID: 135938012
Matrix: Misc Solid
Collect Date: 21-APR-05 11:48
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid											
Tritium	U	0.683	+/-2.90	4.99	6.00	pCi/g		ATH1 05/18/05	0732	425676	1

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

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Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID:	Core bore Sample #5 Outside	Project:	WPIA00105
Sample ID:	135938013	Client ID:	WPIA001
Matrix:	Misc Solid		
Collect Date:	21-APR-05 11:00		
Receive Date:	05-MAY-05		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid											
Tritium	U	0.628	+/-2.92	5.05	6.00	pCi/g		ATH1 05/18/05	0803	425676	1

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

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Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Core bore Sample #6 Outside
Sample ID: 135938014
Matrix: Misc Solid
Collect Date: 21-APR-05 11:48
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid											
Tritium	U	-0.738	+/-2.97	5.23	6.00	pCi/g		ATH1 05/18/05	0835	425676	1

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 906.0 Modified	

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Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Core bore Sample #5 Middle
Sample ID: 135938015
Matrix: Misc Solid
Collect Date: 21–APR–05 11:00
Receive Date: 05–MAY–05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Actinium–228		0.497	+/–0.143	0.131	0.800	pCi/g		AKB 05/11/05	1730	424563	1
Americium–241	U	0.0697	+/–0.0894	0.151	0.200	pCi/g					
Antimony–124	U	–0.0252	+/–0.024	0.0391	0.100	pCi/g					
Antimony–125	U	0.00409	+/–0.0464	0.084	0.200	pCi/g					
Barium–133	U	0.00492	+/–0.0235	0.0377	0.100	pCi/g					
Barium–140	U	–0.0876	+/–0.182	0.309	0.500	pCi/g					
Beryllium–7	U	0.222	+/–0.199	0.375	0.700	pCi/g					
Bismuth–212	U	0.143	+/–0.271	0.292	0.500	pCi/g					
Bismuth–214		0.266	+/–0.0816	0.062	0.200	pCi/g					
Cerium–139	U	0.0013	+/–0.015	0.0266	0.050	pCi/g					
Cerium–141	U	0.0244	+/–0.0449	0.0604	0.100	pCi/g					
Cerium–144	U	–0.0594	+/–0.105	0.181	0.500	pCi/g					
Cesium–134	U	0.0322	+/–0.0305	0.0414	0.100	pCi/g					
Cesium–136	U	0.0459	+/–0.0828	0.155	0.300	pCi/g					
Cesium–137	U	–0.0109	+/–0.0198	0.0333	0.100	pCi/g					
Chromium–51	U	0.0668	+/–0.210	0.388	0.600	pCi/g					
Cobalt–56	U	–0.000919	+/–0.0257	0.0402	0.100	pCi/g					
Cobalt–57	U	–0.012	+/–0.0126	0.0217	0.050	pCi/g					
Cobalt–58	U	–0.0235	+/–0.0208	0.0343	0.100	pCi/g					
Cobalt–60	U	–0.00629	+/–0.0212	0.0369	0.100	pCi/g					
Europium–152	U	–0.0343	+/–0.0504	0.0878	0.200	pCi/g					
Europium–154	U	–0.0529	+/–0.0703	0.116	0.500	pCi/g					
Europium–155	U	0.0254	+/–0.0542	0.0993	0.500	pCi/g					
Iridium–192	U	–0.00335	+/–0.0178	0.0321	0.100	pCi/g					
Iron–59	U	–0.0577	+/–0.0574	0.0933	0.300	pCi/g					
Lead–210	U	1.33	+/–2.59	4.09	4.00	pCi/g					
Lead–212		0.429	+/–0.069	0.0496	0.100	pCi/g					
Lead–214		0.331	+/–0.0729	0.0671	0.100	pCi/g					
Manganese–54	U	–0.00191	+/–0.0387	0.0375	0.100	pCi/g					
Mercury–203	U	–0.00951	+/–0.0252	0.0389	0.100	pCi/g					
Neodymium–147	U	0.271	+/–0.441	0.812	1000	pCi/g					
Neptunium–239	U	0.0326	+/–0.0917	0.167	2.00	pCi/g					
Niobium–94	U	0.0141	+/–0.0181	0.0336	1.00	pCi/g					
Niobium–95	U	0.0244	+/–0.0284	0.0546	0.050	pCi/g					
Potassium–40		13.8	+/–1.33	0.225	1.00	pCi/g					
Promethium–144	U	–0.00153	+/–0.0186	0.0324	0.080	pCi/g					
Promethium–146	U	0.00226	+/–0.0236	0.0425	1.00	pCi/g					
Radium–228		0.497	+/–0.143	0.131	0.500	pCi/g					

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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Core bore Sample #5 Middle
Sample ID: 135938015

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	0.0363	+/-0.180	0.321	0.800	pCi/g					
Silver-110m	U	0.00555	+/-0.0178	0.0323	0.080	pCi/g					
Sodium-22	U	-0.0187	+/-0.0252	0.0416	0.080	pCi/g					
Thallium-208		0.0996	+/-0.0463	0.0349	0.080	pCi/g					
Thorium-230		0.266	+/-0.0816	0.062	1.00	pCi/g					
Thorium-234	U	0.247	+/-0.860	1.16	5.00	pCi/g					
Tin-113	U	-0.014	+/-0.025	0.0436	0.100	pCi/g					
Uranium-235	U	0.0729	+/-0.134	0.174	0.500	pCi/g					
Uranium-238	U	0.247	+/-0.860	1.16	1.00	pCi/g					
Yttrium-88	U	0.0217	+/-0.0189	0.0418	0.100	pCi/g					
Zinc-65	U	-0.0121	+/-0.0599	0.0893	0.300	pCi/g					
Zirconium-95	U	0.029	+/-0.0395	0.0759	0.200	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	05/10/05	1412	423806

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	

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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Core bore Sample #6 Middle
Sample ID: 135938016
Matrix: Misc Solid
Collect Date: 21-APR-05 11:48
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228		0.451	+/-0.0835	0.056	0.800	pCi/g		AKB	05/11/05	1928	424563	1
Americium-241	U	0.0262	+/-0.036	0.0648	0.200	pCi/g						
Antimony-124	U	-0.00521	+/-0.0104	0.0185	0.100	pCi/g						
Antimony-125	U	0.00475	+/-0.0228	0.041	0.200	pCi/g						
Barium-133	U	-0.00066	+/-0.0117	0.0186	0.100	pCi/g						
Barium-140	U	-0.00973	+/-0.0887	0.154	0.500	pCi/g						
Beryllium-7	U	-0.0833	+/-0.0849	0.143	0.700	pCi/g						
Bismuth-212		0.261	+/-0.116	0.122	0.500	pCi/g						
Bismuth-214		0.139	+/-0.0419	0.0313	0.200	pCi/g						
Cerium-139	U	0.000945	+/-0.00737	0.0133	0.050	pCi/g						
Cerium-141	U	-0.00436	+/-0.0162	0.0293	0.100	pCi/g						
Cerium-144	U	0.00552	+/-0.0526	0.0867	0.500	pCi/g						
Cesium-134	U	0.0158	+/-0.0158	0.0215	0.100	pCi/g						
Cesium-136	U	0.0245	+/-0.0398	0.0712	0.300	pCi/g						
Cesium-137	U	-0.00994	+/-0.00979	0.0168	0.100	pCi/g						
Chromium-51	U	0.0752	+/-0.103	0.193	0.600	pCi/g						
Cobalt-56	U	-0.0106	+/-0.0109	0.0182	0.100	pCi/g						
Cobalt-57	U	-0.00274	+/-0.00575	0.0105	0.050	pCi/g						
Cobalt-58	U	-0.00904	+/-0.0108	0.0182	0.100	pCi/g						
Cobalt-60	U	-0.0107	+/-0.0108	0.0177	0.100	pCi/g						
Europium-152	U	-0.0163	+/-0.0237	0.042	0.200	pCi/g						
Europium-154	U	0.00324	+/-0.0349	0.0619	0.500	pCi/g						
Europium-155	U	0.0269	+/-0.0238	0.0458	0.500	pCi/g						
Iridium-192	U	-0.00895	+/-0.00872	0.0154	0.100	pCi/g						
Iron-59	U	-0.00726	+/-0.0281	0.0496	0.300	pCi/g						
Lead-210	U	0.667	+/-1.04	1.75	4.00	pCi/g						
Lead-212		0.447	+/-0.0459	0.024	0.100	pCi/g						
Lead-214		0.172	+/-0.0409	0.0303	0.100	pCi/g						
Manganese-54	U	0.0101	+/-0.0167	0.0174	0.100	pCi/g						
Mercury-203	U	0.0194	+/-0.0119	0.0206	0.100	pCi/g						
Neodymium-147	U	-0.154	+/-0.206	0.345	1000	pCi/g						
Neptunium-239	U	0.0381	+/-0.0437	0.0828	2.00	pCi/g						
Niobium-94	U	0.00053	+/-0.00883	0.0159	1.00	pCi/g						
Niobium-95	U	-0.00657	+/-0.0156	0.0233	0.050	pCi/g						
Potassium-40		12.1	+/-0.902	0.148	1.00	pCi/g						
Promethium-144	U	-0.00143	+/-0.00938	0.0167	0.080	pCi/g						
Promethium-146	U	-0.00955	+/-0.011	0.0186	1.00	pCi/g						
Radium-228		0.451	+/-0.0835	0.056	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Core bore Sample #6 Middle
Sample ID: 135938016

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	0.0727	+/-0.0826	0.155	0.800	pCi/g					
Silver-110m	U	0.00342	+/-0.0103	0.0166	0.080	pCi/g					
Sodium-22	U	0.00122	+/-0.0125	0.0222	0.080	pCi/g					
Thallium-208		0.157	+/-0.0251	0.0152	0.080	pCi/g					
Thorium-230		0.139	+/-0.0419	0.0313	1.00	pCi/g					
Thorium-234	U	0.163	+/-0.513	0.529	5.00	pCi/g					
Tin-113	U	-0.00775	+/-0.0112	0.0197	0.100	pCi/g					
Uranium-235	U	-0.0072	+/-0.0486	0.0882	0.500	pCi/g					
Uranium-238	U	0.163	+/-0.513	0.529	1.00	pCi/g					
Yttrium-88	U	0.0011	+/-0.00967	0.0179	0.100	pCi/g					
Zinc-65	U	-0.0128	+/-0.0278	0.0414	0.300	pCi/g					
Zirconium-95	U	0.00678	+/-0.0206	0.0372	0.200	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	05/10/05	1412	423806

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Steel Disk #5
Sample ID: 135938017
Matrix: Misc Solid
Collect Date: 21-APR-05 11:00
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	0.033	+/-0.0502	0.0438	0.800	pCi/g		AKB	05/19/05	1544	423794	1
Americium-241	U	-0.00563	+/-0.0156	0.0257	0.200	pCi/g						
Antimony-124	U	0.00355	+/-0.00761	0.0129	0.100	pCi/g						
Antimony-125	U	-0.00388	+/-0.0139	0.0223	0.200	pCi/g						
Barium-133	U	0.000399	+/-0.00704	0.0101	0.100	pCi/g						
Barium-140	U	0.0502	+/-0.0765	0.129	0.500	pCi/g						
Beryllium-7	U	-0.0209	+/-0.0577	0.0913	0.700	pCi/g						
Bismuth-212	U	0.0255	+/-0.0443	0.075	0.500	pCi/g						
Bismuth-214	UUI	0.00	+/-0.0129	0.022	0.200	pCi/g						
Cerium-139	U	-0.00291	+/-0.00457	0.00708	0.050	pCi/g						
Cerium-141	U	0.00369	+/-0.012	0.0193	0.100	pCi/g						
Cerium-144	U	0.0132	+/-0.0284	0.0459	0.500	pCi/g						
Cesium-134	U	0.00112	+/-0.00615	0.0102	0.100	pCi/g						
Cesium-136	U	0.0164	+/-0.0359	0.062	0.300	pCi/g						
Cesium-137	U	0.00294	+/-0.00551	0.00937	0.100	pCi/g						
Chromium-51	U	-0.00265	+/-0.0746	0.122	0.600	pCi/g						
Cobalt-56	U	-0.000924	+/-0.00772	0.0126	0.100	pCi/g						
Cobalt-57	U	0.000374	+/-0.0037	0.00595	0.050	pCi/g						
Cobalt-58	U	-0.00456	+/-0.00721	0.0114	0.100	pCi/g						
Cobalt-60	U	0.0054	+/-0.00677	0.0119	0.100	pCi/g						
Europium-152	U	-0.00592	+/-0.0138	0.0222	0.200	pCi/g						
Europium-154	U	0.0179	+/-0.0251	0.0293	0.500	pCi/g						
Europium-155	U	-0.000213	+/-0.014	0.0227	0.500	pCi/g						
Iridium-192	U	0.00165	+/-0.0057	0.00945	0.100	pCi/g						
Iron-59	U	-0.00282	+/-0.0165	0.0277	0.300	pCi/g						
Lead-210	U	0.247	+/-0.634	0.590	4.00	pCi/g						
Lead-212	UUI	0.00	+/-0.00939	0.0162	0.100	pCi/g						
Lead-214	U	0.00159	+/-0.0181	0.0184	0.100	pCi/g						
Manganese-54	U	-0.000482	+/-0.00608	0.00993	0.100	pCi/g						
Mercury-203	U	0.00168	+/-0.00686	0.0114	0.100	pCi/g						
Neodymium-147	U	-0.0813	+/-0.180	0.298	1000	pCi/g						
Neptunium-239	U	0.00148	+/-0.0263	0.0425	2.00	pCi/g						
Niobium-94	U	0.00133	+/-0.00552	0.00921	1.00	pCi/g						
Niobium-95	U	-0.00214	+/-0.00946	0.0154	0.050	pCi/g						
Potassium-40	U	0.0834	+/-0.159	0.111	1.00	pCi/g						
Promethium-144	U	-0.000817	+/-0.00593	0.00975	0.080	pCi/g						
Promethium-146	U	0.00395	+/-0.00638	0.0105	1.00	pCi/g						
Radium-228	U	0.033	+/-0.0502	0.0438	0.500	pCi/g						

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Certificate of Analysis

Company : WPI
Address : 11 S. 12th Street
Suite 210
Richmond, Virginia 23219
Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Steel Disk #5
Sample ID: 135938017

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	0.00139	+/-0.0518	0.0866	0.800	pCi/g					
Silver-110m	U	-0.00136	+/-0.00508	0.00838	0.080	pCi/g					
Sodium-22	U	0.00644	+/-0.00902	0.0103	0.080	pCi/g					
Thallium-208	UUI	0.00	+/-0.016	0.0117	0.080	pCi/g					
Thorium-230	UUI	0.00	+/-0.0129	0.022	1.00	pCi/g					
Thorium-234	UUI	0.00	+/-0.244	0.297	5.00	pCi/g					
Tin-113	U	-0.0026	+/-0.00705	0.0113	0.100	pCi/g					
Uranium-235	UUI	0.00	+/-0.032	0.0511	0.500	pCi/g					
Uranium-238	UUI	0.00	+/-0.244	0.297	1.00	pCi/g					
Yttrium-88	U	-0.00398	+/-0.00735	0.0121	0.100	pCi/g					
Zinc-65	U	-0.00397	+/-0.0141	0.0234	0.300	pCi/g					
Zirconium-95	U	-0.00297	+/-0.0122	0.0199	0.200	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	

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Company : WPI
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Steel Disk #6
Sample ID: 135938018
Matrix: Misc Solid
Collect Date: 21-APR-05 11:48
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Long List)												
Actinium-228	U	0.0303	+/-0.0176	0.0325	0.800	pCi/g		AKB	05/19/05	1703	423794	1
Americium-241	U	0.0136	+/-0.0195	0.0353	0.200	pCi/g						
Antimony-124	U	-0.00315	+/-0.00565	0.00937	0.100	pCi/g						
Antimony-125	U	0.00716	+/-0.0103	0.0186	0.200	pCi/g						
Barium-133	U	-0.00118	+/-0.00486	0.00745	0.100	pCi/g						
Barium-140	U	0.0314	+/-0.0574	0.102	0.500	pCi/g						
Beryllium-7	U	0.0042	+/-0.0396	0.0696	0.700	pCi/g						
Bismuth-212	U	0.0211	+/-0.0351	0.062	0.500	pCi/g						
Bismuth-214	UUI	0.00	+/-0.020	0.0151	0.200	pCi/g						
Cerium-139	U	-0.00157	+/-0.0029	0.00481	0.050	pCi/g						
Cerium-141	U	0.00194	+/-0.0125	0.0122	0.100	pCi/g						
Cerium-144	U	-0.00227	+/-0.0182	0.031	0.500	pCi/g						
Cesium-134	U	0.000293	+/-0.00475	0.00814	0.100	pCi/g						
Cesium-136	U	-0.0159	+/-0.0248	0.0419	0.300	pCi/g						
Cesium-137	U	0.00315	+/-0.00463	0.00711	0.100	pCi/g						
Chromium-51	U	-0.00631	+/-0.0549	0.0899	0.600	pCi/g						
Cobalt-56	U	0.00501	+/-0.00529	0.00959	0.100	pCi/g						
Cobalt-57	U	0.00165	+/-0.0023	0.00407	0.050	pCi/g						
Cobalt-58	U	-0.0026	+/-0.0053	0.00867	0.100	pCi/g						
Cobalt-60	U	0.00638	+/-0.00547	0.0105	0.100	pCi/g						
Europium-152	U	0.00178	+/-0.0101	0.0179	0.200	pCi/g						
Europium-154	U	0.00978	+/-0.0107	0.0213	0.500	pCi/g						
Europium-155	U	-0.00528	+/-0.00919	0.0156	0.500	pCi/g						
Iridium-192	U	0.0022	+/-0.00413	0.00699	0.100	pCi/g						
Iron-59	U	-0.00936	+/-0.0128	0.018	0.300	pCi/g						
Lead-210	U	0.112	+/-1.37	1.27	4.00	pCi/g						
Lead-212	U	0.00717	+/-0.0108	0.00939	0.100	pCi/g						
Lead-214	U	0.00742	+/-0.0185	0.0122	0.100	pCi/g						
Manganese-54	U	0.00231	+/-0.00439	0.00775	0.100	pCi/g						
Mercury-203	U	-0.000779	+/-0.00502	0.00826	0.100	pCi/g						
Neodymium-147	U	-0.0415	+/-0.135	0.231	1000	pCi/g						
Neptunium-239	U	0.00758	+/-0.0171	0.030	2.00	pCi/g						
Niobium-94	U	-0.00136	+/-0.00416	0.00694	1.00	pCi/g						
Niobium-95	U	0.00463	+/-0.00687	0.0123	0.050	pCi/g						
Potassium-40	U	0.0105	+/-0.105	0.0647	1.00	pCi/g						
Promethium-144	U	-2.010E-06	+/-0.00448	0.00764	0.080	pCi/g						
Promethium-146	U	0.00399	+/-0.00505	0.00842	1.00	pCi/g						
Radium-228	U	0.0303	+/-0.0176	0.0325	0.500	pCi/g						

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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Steel Disk #6
Sample ID: 135938018

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Solid (Long List)											
Ruthenium-106	U	0.0257	+/-0.0565	0.0638	0.800	pCi/g					
Silver-110m	U	0.00138	+/-0.0039	0.00687	0.080	pCi/g					
Sodium-22	U	0.00349	+/-0.00386	0.00766	0.080	pCi/g					
Thallium-208	U	0.00215	+/-0.00967	0.00869	0.080	pCi/g					
Thorium-230	UUI	0.00	+/-0.020	0.0151	1.00	pCi/g					
Thorium-234	U	0.159	+/-0.286	0.260	5.00	pCi/g					
Tin-113	U	0.000649	+/-0.00499	0.00882	0.100	pCi/g					
Uranium-235	U	0.00547	+/-0.0332	0.0341	0.500	pCi/g					
Uranium-238	U	0.159	+/-0.286	0.260	1.00	pCi/g					
Yttrium-88	U	0.00183	+/-0.00619	0.0104	0.100	pCi/g					
Zinc-65	U	-0.000652	+/-0.00973	0.0172	0.300	pCi/g					
Zirconium-95	U	-0.000399	+/-0.00966	0.0164	0.200	pCi/g					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	

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Company : WPI
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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Water Sample #1
Sample ID: 135938019
Matrix: Waste Water
Collect Date: 20-APR-05 14:06
Receive Date: 05-MAY-05
Collector: Client

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Liquid (Long List)												
Actinium-228	U	103	+/-182	238	20.0	pCi/L		AKB	05/20/05	0734	424558	1
Americium-241	U	56.4	+/-101	185	25.0	pCi/L						
Antimony-124	U	-51	+/-90.1	153	5.00	pCi/L						
Antimony-125	U	41.8	+/-92.9	163	10.0	pCi/L						
Barium-133	U	25.3	+/-44.6	71.0	5.00	pCi/L						
Barium-140	U	272	+/-533	969	30.0	pCi/L						
Beryllium-7	U	-128	+/-374	619	50.0	pCi/L						
Bismuth-212	U	173	+/-273	499	50.0	pCi/L						
Bismuth-214	U	60.6	+/-306	115	10.0	pCi/L						
Cerium-139	U	5.88	+/-31.8	53.9	5.00	pCi/L						
Cerium-141	U	1.17	+/-137	140	10.0	pCi/L						
Cerium-144	U	-72.1	+/-203	339	50.0	pCi/L						
Cesium-134	U	5.90	+/-35.4	62.8	5.00	pCi/L						
Cesium-136	U	97.5	+/-196	367	15.0	pCi/L						
Cesium-137	UUI	0.00	+/-53.2	54.5	5.00	pCi/L						
Chromium-51	U	735	+/-869	920	50.0	pCi/L						
Cobalt-56	U	8.08	+/-43.8	76.8	5.00	pCi/L						
Cobalt-57	U	-22	+/-25.7	42.0	5.00	pCi/L						
Cobalt-58	U	21.2	+/-41.0	74.6	10.0	pCi/L						
Cobalt-60	U	50.1	+/-37.2	74.5	5.00	pCi/L						
Europium-152	U	-81.4	+/-88.8	145	20.0	pCi/L						
Europium-154	U	17.5	+/-74.6	141	20.0	pCi/L						
Europium-155	U	31.8	+/-97.0	170	20.0	pCi/L						
Iridium-192	U	-5.69	+/-45.0	67.9	10.0	pCi/L						
Iron-59	U	64.7	+/-92.6	177	10.0	pCi/L						
Lead-210	U	3030	+/-4150	3510	750	pCi/L						
Lead-212	U	44.5	+/-101	118	15.0	pCi/L						
Lead-214	U	33.9	+/-91.9	127	10.0	pCi/L						
Manganese-54	U	-0.555	+/-33.5	58.0	5.00	pCi/L						
Mercury-203	U	9.27	+/-49.2	86.8	5.00	pCi/L						
Neodymium-147	U	-5.38	+/-1270	2270	100	pCi/L						
Neptunium-239	U	-138	+/-182	300	25.0	pCi/L						
Niobium-94	U	30.7	+/-30.4	57.0	5.00	pCi/L						
Niobium-95	U	55.9	+/-116	89.8	5.00	pCi/L						
Potassium-40	UUI	0.00	+/-779	547	100	pCi/L						
Promethium-144	U	-6.78	+/-34.2	58.8	5.00	pCi/L						
Promethium-146	U	-38.4	+/-41.1	64.9	5.00	pCi/L						
Radium-228	U	103	+/-182	238	20.0	pCi/L						

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Contact: Mr. John Bowen
Project: **Radiochemistry Analytical**

Report Date: May 25, 2005

Client Sample ID: Water Sample #1
Sample ID: 135938019

Project: WPIA00105
Client ID: WPIA001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Long List)											
Ruthenium-106	U	6.09	+/-294	521	50.0	pCi/L					
Silver-110m	U	-20.7	+/-35.4	50.5	5.00	pCi/L					
Sodium-22	U	0.0791	+/-27.8	50.7	5.00	pCi/L					
Thallium-208	U	13.5	+/-58.8	70.0	10.0	pCi/L					
Thorium-230	U	60.6	+/-306	115	20.0	pCi/L					
Thorium-234	UUI	0.00	+/-1250	2120	250	pCi/L					
Tin-113	U	-34.4	+/-45.4	73.9	10.0	pCi/L					
Uranium-235	U	2.86	+/-335	349	50.0	pCi/L					
Uranium-238	UUI	0.00	+/-1250	2120	250	pCi/L					
Yttrium-88	U	2.98	+/-39.3	70.3	10.0	pCi/L					
Zinc-65	U	-21.2	+/-80.3	119	10.0	pCi/L					
Zirconium-95	U	74.4	+/-63.2	134	10.0	pCi/L					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 901.1	