UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

August 1, 2008

TO: Docket File 040-03400

THROUGH: Jack E. Whitten, Chief
Nuclear Materials Safety Branch B

FROM: Robert Evans, CHP, PE, Senior Health Physicist
Nuclear Materials Safety Branch B

SUBJECT: FIELD NOTES FOR NRC INSPECTION REPORT 040-03400/07-001

An NRC inspection was conducted on October 23-November 3, 2007, at the Salmon River Uranium Development (SRUD) site located near North Fork, Idaho. Enclosed to this Memorandum are the original field notes that were collected during the inspection. These notes were used in the development of NRC Inspection Report No. 040-03400/07-001.

The field notes include the daily survey instrument functionality checks, daily instrument background checks, soil sampling data sheets, outdoor exposure rate measurements, equipment release logs, indoor surface contamination survey measurements, and outdoor surface contamination survey measurements. Included in the notes are maps that were sketched during the inspection to provide approximate locations of selected sampling points, including location of soil samples.

Docket No.: 040-03400
License Nos.: P-4001 (expired), R-230 (expired)

Enclosure:
NRC Inspection 040-03400/07-001 Field Notes

NRC FORM 303 (1-2007) U.S. NUCLEAR REGULATORY COMMISSION

REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY

LABORATORY – ☑ ORISE ☐ OTHER _____ (Specify)

LABORATORY USE ONLY

CONTROL NUMBER: RFTA 07-001

SAMPLE LOCATION (LICENSEE)	INSPECTION NO.	LICENSE NO.	DOCKET NO.
Salmon River Uranium Development	040-03400/07-001	P-4001	040-03400

SAMPLE SUBMITTED

# TOTAL	TYPE	VOLUME	WEIGHT
10	Soil / Sand		
36	Swipe		

DATE SAMPLES SUBMITTED: 11/3/07

PRIORITY: ☑ ROUTINE ☐ URGENT

SAMPLE COLLECTION INTERVAL

	MONTH	DAY	YEAR	TIME
START	10	25	07	1140
STOP	11	3	07	

INSPECTOR RESPONSIBLE: Robert Evans

TELEPHONE NUMBER: 817-860-8234

ANALYSIS TO BE PERFORMED	LIST DESIRED LLD (Optional)	OTHER TYPE OF ANALYSIS (Specify)	LIST DESIRED LLD (Optional)
☑ GROSS ALPHA (GA)	swipe samples	☑ alpha spec-SEE BELOW	
☑ GROSS BETA (GB)	swipe samples	☐	
☑ GAMMA SPEC (GS)	soil samples	☐	
☐ TRITIUM (H3)		☐	
☐ CARBON-14 (C14)		☐	
☐ IODINE-125 (I125)		☐	

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
Robert Evans	Fed Ex	11/3/07	430pm	Ship to ORISE
Fed Ex	ORISE			

FEE RECOVERABLE ☑ YES ☐ NO TAC NUMBER J52068 (If Assigned)

REMARKS

Conduct gamma spec on soil samples, then contact the inspector for determination of whether alpha spec is necessary

~~Samples cannot be returned because the site has been reclaimed.~~ RJE 11/3/07 Contact inspectors for Soil disposal, as necessary

Report No. 040-3400/07-001; Inspectors Bob Evans (rje@nrc.gov) and Janine Katanic (jfk@nrc.gov)

817-860-8234 817-860-8151

NOTE: SAMPLES WILL BE DISCARDED AFTER ANALYSIS UNLESS REASONS ARE NOTED IN REMARKS ABOVE.

NRC FORM 303A (1-2007) — U.S. NUCLEAR REGULATORY COMMISSION

SAMPLE RECORD -- Continued

LABORATORY -- ☑ ORISE ☐ OTHER _____ (Specify)

NRC-

LABORATORY USE ONLY

CONTROL NUMBER

RFTA 07-001

SAMPLE NUMBER	SAMPLE NAME AND DESCRIPTION	COLLECTION DATE/TIME	REMARKS, PRESERVATIVE ANALYSIS REQUESTED, ETC.
1S	Sand F-4 interior	10/25/07 1140am	may contain lead
2S	Soil F-2 exterior	11/1/07 840am	
3S	Soil H-3 exterior	11/1/07 931am	
4S	Soil G-3 exterior	11/1/07 1005am	
5S	Soil G-3 exterior	11/1/07 1023am	
6S	Soil Possible location of drain	11/2/07 845 am	
7S	Soil drain pipe	11/2/07 935 am	
8S	Soil upper tailings berm	11/2/07 100pm	
9S	Soil middle tailings berm	11/2/07 120 pm	
10S	Soil lower tailings berm	11/2/07 145pm	
5W	swipe A1 1-2	11/2/07 1102 am	
6W	swipe B1 2-1	11/2/07 1103 am	
7W	swipe C1 3-3	11/2/07 1104 am	
8W	swipe D1 2-1	11/2/07 1106 am	
9W	swipe E1 2-1	11/2/07 1108 am	
10W	swipe F1 3-1	11/2/07 1109 am	
11W	swipe F2 1-1	11/2/07 1110 am	
12W	swipe E2 2-1	11/2/07 1111am	
13W	swipe D2 2-1	11/2/07 1112 am	
14W	swipe C2 2-2	11/2/07 1113 am	
15W	swipe B2 1-2	11/2/07 1114 am	
16W	swipe A2 3-1	11/2/07 1114 am	
17W	swipe A3 3-1	11/2/07 1116am	
18W	swipe B3 2-2	11/2/07 1117 am	
19W	swipe F3 3-1	11/2/07 1123am	
20W	swipe F4 1-1	11/2/07 1125 am	
21W	swipe E4 2-2	11/2/07 1127 am	

NRC FORM 303A (1-2007) — U.S. NUCLEAR REGULATORY COMMISSION

SAMPLE RECORD -- Continued

NRC - LABORATORY -- ☑ ORISE ☐ OTHER _____ (Specify)

LABORATORY USE ONLY
CONTROL NUMBER
RFTA 07-001

SAMPLE NUMBER	SAMPLE NAME AND DESCRIPTION	COLLECTION DATE/TIME	REMARKS, PRESERVATIVE ANALYSIS REQUESTED, ETC.
22W	swipe D4 1-2	11/2/07 1128 am	
23W	swipe C4 3-2	11/2/07 1130 am	
24W	swipe B4 1-1	11/2/07 1131 am	
25W	swipe A-4 1-3	11/2/07 1132 am	
26W	swipe A5 2-1	11/2/07 1133 am	
27W	swipe B5 2-1	11/2/07 1135 am	
28W	swipe C5 1-2	11/2/07 1136 am	
29W	swipe D5 1-1	11/2/07 1136 am	
30W	swipe E5 1-2	11/2/07 1137 am	
31W	swipe F5 1-2	11/2/07 1138 am	
32W	swipe E2 Drain	11/2/07 1140 am	
33W	swipe Agitator Tank	11/2/07 1141 am	
34W	swipe Grinder	11/2/07 1142 am	1142 am
35W	swipe Screw Drive	11/2/07 1143 am	
36W	swipe Metal tub	11/2/07 1144 am	
37W	swipe Pump	11/2/07 1145 am	
38W	swipe Outdoor D-1	11/3/07 917 am	
39W	swipe Outdoor E-1	11/3/07 918 am	
40W	swipe Outdoor D-0	11/3/07 918 am	

SITE SRuD
AREA Building 1
START TIME:
END TIME:
DATE: 10/29/07
SURVEYOR(S) Rodriguez
Scribe - Katanic

MAGGIE

TYPE	INSTRUMENT	DETECTOR	BKG. ~~(cpm)~~ μR/hr	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Ludlum	Model 19	—	15	—	—

Indoor Exposure Rates - All Readings @ 1 meter

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: μR/hr				TYPE:					
	~~c/---m~~	ϵ_S	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
A1	25									
A2	25									
A3	19									
A4	20									
A5	20									
B1	35									
B2	30									Resurveyed - 25μR/hr after staged radioactive material was moved
B3	25									
B4	21									
B5	25									
C1	29									
C2	25									
C3	41									
C4	29									
C5	31									

CALCULATION BY: RJRuvalcaba DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE
reviewed data + classifications

CALCULATIONS REVIEWED / DATE 11/15/07

Figure B-12 (Front)

SITE SRUD
AREA Bldg 1
START TIME:
END TIME:
DATE: 10/29/07
SURVEYOR(S) Rodriguez
scribe - Katanic

magsie mR/hr

TYPE	INSTRUMENT	DETECTOR	BKG. ~~(cpm)~~	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Ludlum	Model 19	—	15	—	—

Indoor Exposure Rates - All readings @ 1 meter

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: mR/hr				TYPE:					
	~~c/m~~	ϵ_s	ϵ_{Total}	dpm/100cm²	c/m	ϵ_s	ϵ_{Total}	dpm/100cm²		
D1	25									MARSSIM class 1 Area
D2	39									MARSSIM class 1 Area
D3	70									
D4	25									
D5	25									
E1	60									MARSSIM class 1 Area
E2	35									MARSSIM class 1 Area
E3	30									
E4	25									
E5	25									
F1	40									MARSSIM class 1 Area
F2	35									MARSSIM class 1 Area
F3	15									
F4	25									MARSSIM class 1 Area
F5	30									MARSSIM class 1 Area

CALCULATION BY: RJ Rodriguez DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE
reviewed data + classifications

11/15/07
CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

EXPOSURE RATE MEASUREMENTS AND SOIL SAMPLES

Benny B.

SITE SRUD

AREA Outdoors

DATE 10/25-11/1/07

SURVEYOR(S) Katanic

START TIME 10/25/07 @ 11:40 AM

END TIME 11/01/07 @ 8:40 AM

PIC/micro-rem meter				
TYPE	INSTRUMENT	DETECTOR	BACK-GROUND	
Ludlum	Model 19	—	15 μR/h	Benny
Ludlum	Model 19	—	15 μR/h	Maggie

11/01/07 @ 9:31 AM — 11/01/07 10:05 AM — 11/01/07 10:23 AM

	F4-i	F-2-e	H-3-e	G-3-e	G-3-e
SOIL SAMPLE	NRC-Sample 1	NRC Sample 2	NRC Sample 3	NRC Sample 4	NRC Sample 5
LOCATION	Sand NE Corner Bldg 1	Soil from NE corner Bld 1	Soil from N end of Bld 3 pad	Soil from W edge Bld 3 pad	Soil from W side Bld 2 pad
SCINTILLATION Kcpm 1 METER	N/A		70 μR/h	60 μR/h	45 μR/h
SCINTILLATION Kcpm CONTACT			contact pad	contact pad	contact
READINGS μR/hr	(Dus sample contact) 33 ...	(Benny) 60 μR/h min – 140 μR/h max @ 1 meter ground	(Benny) 65 μR/h on contact ground	(Benny) 400 μR/h contact ground	70 μR/h contact ground
		(Benny) 40 μR/h contact sample	85 μR/h @ 1 meter	8½ inches deep	10.5 in below surface (slope)
		33 inches deep	surface sample next to weed	from below former concrete floor	
MEAN:			6 in below surface		

REMARKS: ______

DATE REVIEWED ______ DATE ~~RLW~~ 11/15/07

CALCULATIONS REVIEWED ______ DATE [signature] 11/15/07

Figure B-15

i = interior
e = exterior

readings @ 1m may be impacted by waste pile

"black gold"

Page 1 of 2

EXPOSURE RATE MEASUREMENTS AND SOIL SAMPLES

SITE SRUD

SURVEYOR(S) Katanic

AREA Outdoors

DATE 11/2/07

START TIME 11/2/07 8:45AM

END TIME 11/02/07 9:35AM

PIC/micro-rem meter			
TYPE	INSTRUMENT	DETECTOR	BACK-GROUND
Ludlum	model 19	1	15
Ludlum	model 19	2	15

SOIL SAMPLE NRC-6 exterior	SOIL SAMPLE NRC-7 outside drain gate	SOIL SAMPLE NRC-8 upper tailings pond berm	SOIL SAMPLE NRC-9 middle tailings pond berm	SOIL SAMPLE NRC-10 lower tailings pond berm
LOCATION 10' of roadside drain	LOCATION inside	LOCATION	LOCATION	LOCATION
SCINTILLATION Kcpm	SCINTILLATION Kcpm	SCINTILLATION Kcpm	SCINTILLATION Kcpm	SCINTILLATION Kcpm
1 METER / CONTACT: background / 60uR/h	1 METER / CONTACT: 100uR/h	1 METER / CONTACT: Dag cont 45uR/h	1 METER / CONTACT: Dag cont 40uR/h	1 METER / CONTACT: Dag cont 20uR/h
READINGS µR/hr	READINGS µR/hr	READINGS µR/hr	READINGS µR/hr	READINGS µR/hr
ground / 150uR/h	ground / 300uR/h	ground / 80, 70, 80	ground 20, 25, 22	ground 20 / 20, 20
1m / 45uR/h	1m / 70uR/h			
		1m 70, 60, 70	1m 20, 20, 20	1m 18 / 18, 18
surface NTE	surface NTE	surface NTE	surface NTE	
6 inches	6 inches	6 inches	6 inches	
MEAN:	MEAN:	MEAN:	MEAN:	MEAN:

REMARKS: 4pt composite; 3pt composite; 3pt composite; 3pt composite

DATE REVIEWED 11/15/07

DATE R. Edwards

CALCULATIONS REVIEWED —

DATE [illegible] 11/15/07

Figure B-15

ACTIVITY SURVEY RECORD

model 3

SITE SRUP
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) EVANS
Rodriguez - scribe
smears - Katanic (11/2/07)

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Ludlum	Model 3	44-9	25	.071		A
Ludlum	Model 3	44-9	25	.108		B
			(Avg)			

Equipment inside Bldg. 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: β, avg mas.				TYPE: β, max mas.					
	c/---m	ϵ_s *	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s *	ϵ_{Total}	dpm/100cm²		
Screw Pusher Denver Equip	100	1/2	.054	1389	700	1/2	.054	12,500	35	
Yellow PV tall	50	1/2	.054	463	50	1/2	.054	463		ext. readings only
Yellow PV short	50	1/2	.054	463	50	1/2	.054	463		ext. readings only
Wood Tables	50	1/2	.054	463	50	1/2	.054	463		
Large Metal Water Tank	50	1/2	.054	463	50	1/2	.054	463		ext. readings only
Metal Tub	100	1/2	.054	1389	700	1/2	.054	12,500	36	Residue @ bottom
* Yellow Grinder	—	1/2	.054	—	2,900	1/2	.054	53,241		Processed Ore in Grinder
Yellow Corros. Tank	50	1/2	.054	463	50	1/2	.054	463		
Pump	100	1/2	.054	1389	500	1/2	.054	8796	37	
Small Metal Water Tank	50	1/2	.054	463	50	1/2	.054	463		White Residue
Metal Trench	200	1/2	.054	3241	250	1/2	.054	4167		Ground Ore in Trench
* Agitator Tank	100	1/2	.054	1389	1,500	1/2	.054	27,315		ext. readings only
Blue Fiberglass Tank	100	1/2	.054	1389	100	1/2	.054	1389		

CALCULATION BY: RLawand DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE

11/15/07
CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

* Decontaminated and resurveyed on 11/1/07

* Source Efficiency = 0.50 per MARSSIM
→ reviewed efficiency and β avg mas dpm, β max mas dpm

Background 254pm = 463dpm/100cm²
MDC = 566 dpm/100cm²

SITE SRND
AREA Processing Area
START TIME:
END TIME:
DATE: 11/1/07
SURVEYOR(S) Katanic
Evans - Scribe

Model 3

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Ludlum	Model 3	44-9	25	.071		α
Ludlum	Model 3	44-9	25	.108		β
			(AVG)			

Smears - Katanic (11/2/07) Equipment inside Bldg. 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: β AVG meas.				TYPE: β MAX meas.					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s*	ϵ_{Total}	dpm/100cm²		
Agitator Tank	250	½	.054	4167	900	½	.054	16204	33	Exterior only
Yellow Grinder	250	½	.054	4167	900	½	.054	16204	34	Grinder Area only

CALCULATION BY: R Edwards DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE

11/15/07
CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

* Source Efficiency = 0.50 per MARSSIM
Reviewed efficiency and beta meas dpm

INSTRUMENTATION WORKSHEET

Inspector: REvans
Licensee: Salmon River
Isotopes of Interest: Thorium
Instrument: Model 3
Probe: Model 44-9
Calibration Due Date: 7-10-08

Date: 10-18-07
Docket No. 040-08400
Serial No. 21123G
Serial No. 20780G

****

Background Readings: (1) _____ (2) _____ (3) _____ (Avg) 18.0

****

Calculation of Instrument Efficiency (Ei) Using Check Source:

Isotope: Th-230 Serial No. D663

Half Life ($T_{1/2}$) 8E4 (years) x 365 = 2.92E7 days

Assay Date: 1/96 Activity: 52,182 dpm (Note: Multiply µCi amount by 2.2×10^6 to convert activity to dpm)

869.7Bq

Current date minus source date = 4333 days (t)

Current Activity $A=A_0e^{(-0.693t/T1/2)}$

70-75 cpm

A= 52182 dpm x exp [-0.693 x 4333 days/ 2.92E7 days] = 52176 dpm = 1000dpm

Meter reading with check source: 3700 (C_{R+B})

Efficiency (E_i) = C_{R+B} - C_B / A = (3700 - 18) / 52176 cpd

Efficiency (E_i) = .071 cpd x 100% = 7.1 % for Th-230

11/15/07

****

MDC Calculation:

$$MDC = \frac{3 + 4.65\sqrt{C_B}}{KT}$$

MDC = 3 + 4.65 $\sqrt{\text{Average Background}}$ / (Ei)(Es)(W)

where Es = 0.5 for high energy betas and 0.25 for low energy betas and alphas and W is detector probe area in cm² / 100 cm²

MDC = 3 + 4.65 (_____)^{½} / (_____)(_____)(_____)

MDC = _____ dpm/100 cm²

Calculations Conducted By: _____ Date: _____

Calculations Reviewed By: _____ Date: _____

INSTRUMENTATION WORKSHEET

Inspector: REvans
Date: 10-18-07
Licensee: Salmon River
Docket No. 040-03400
Isotopes of Interest: Beta Emitters
Instrument: model 3
Serial No. 21123G
Probe: model 44-9
Serial No. 20780G
Calibration Due Date: 7-10-08

****

Background Readings: (1) _____ (2) _____ (3) _____ (Avg) 10.0

****

Calculation of Instrument Efficiency (Ei) Using Check Source:

Isotope: Tc-99
Serial No. D669

1002 Bq x 60 sec = 60,120 Bq/min

Half Life ($T_{1/2}$) 212,000 (years) x 365 = 7.74E7 days

Assay Date: 4/96
Activity: 1.002 KBq ~~dpm~~ (Note: Multiply µCi amount by 2.2×10^6 to convert activity to dpm)

Current date minus source date = 4228 days (t)

Current Activity $A=A_0e^{(-0.693t/T1/2)}$

60 117

A=60,120 dpm x exp [-0.693 x 4228 days/ 7.74E7 days] = 60,120 dpm

Meter reading with check source: 6500 (C_{R+B})

Efficiency (E_i) = C_{R+B} - C_B / A = (6500 - 10) / 60120 cpd

Efficiency (E_i) = .108 ✓OK cpd x 100% = 10.8 %

11/15/07

****

MDC Calculation:

$$MDC = \frac{3 + 4.65\sqrt{C_B}}{KT}$$

MDC = 3 + 4.65 $\sqrt{\text{Average Background}}$ / (Ei)(Es)(W)

where Es = 0.5 for high energy betas and 0.25 for low energy betas and alphas and W is detector probe area in cm² / 100 cm²

MDC = 3 + 4.65 (_____)$^{1/2}$ / (_____)(_____)(_____)

MDC = _____ dpm/100 cm²

Calculations Conducted By: _____ Date: _____

Calculations Reviewed By: _____ Date: _____

SITE SRUD
AREA Rear of Bldg 1
START TIME: 300pm
END TIME: 400pm
DATE: 11/2/07
SURVEYOR(S) Evans-Scribe, Katanic

	Kitty		Benny			
TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP 380AB	18.3	.406	248.9	α
Eberline	E-600	SHP 380AB	412.3	.152	5770	β
Ludlum	Model 19	—	15	—	—	

Outdoor Concrete – location where processed thorium had been stored since 1960

1x1 grid, class 1 area

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)	
	TYPE: α				TYPE: β						
	c/---m	* ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	** ϵ_s	ϵ_{Total}	dpm/100cm²			μR/hr
A-0	118	1/4	0.1	997	608	1/2	.076	2,575		Concrete	32
A-1	156	1/4	0.1	1377	1153	1/2	.076	9,746		"	32
A-2	46	1/4	0.1	277	595	1/2	.076	2,404		"	35
A-3	30	1/4	0.1	117	577	1/2	.076	2,167		"	45
B-0	149	1/4	0.1	1307	773	1/2	.076	4,746		"	35
B-1	240	1/4	0.1	2217	1350	1/2	.076	12,338		"	37
B-2	58	1/4	0.1	397	587	1/2	.076	2,299		"	40
B-3	109	1/4	0.1	907	770	1/2	.076	4,707		"	40
C-0	195	1/4	0.1	1767	1477	1/2	.076	14,009		"	40
C-1	499	1/4	0.1	4807	2830	1/2	.076	31,812		"	40
C-2	157	1/4	0.1	1387	1095	1/2	.076	8,983		"	40
C-3	126	1/4	0.1	1077	766	1/2	.076	4,654		"	40
D-0	517	1/4	0.1	4987	4400	1/2	.076	52,470	40	"	47
D-1	865	1/4	0.1	8467	3820	1/2	.076	44,838	38	"	42
D-2	207	1/4	0.1	1887	1221	1/2	.076	10,641		"	35
D-3	110	1/4	0.1	917	847	1/2	.076	5,720		"	32

CALCULATION BY: RGward DATE: 11/13/07

11/14/07
DATA REVIEWED / DATE
reviewed α and β calcs for dpm, reviewed efficiency calcs

[signature] 11/14/07
CALCULATIONS REVIEWED / DATE

* Alpha source efficiency 0.25
** Beta source efficiency 0.5

Figure B-12 (Front)

1 of 3

SITE SRUD
AREA Rear of Bldg 1
START TIME: 300pm
END TIME: 400pm
DATE: 11/2/07
SURVEYOR(S) Evans - Scribe
Katonic

Kitty

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Eberline	E-600	SHP 380AB	18.3	.406	248.9 α
Eberline	E-600	SHP 380AB	412.3	.152	5770 β
Ludlum	Model 19				

Benny

Outdoor Concrete

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s*	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s**	ϵ_{Total}	dpm/100cm²		uR/hr
E-0	363	1/4	0.1	3447	3210	1/2	.076	36,812		Concrete 42
E-1	847	1/4	0.1	8287	3630	1/2	.076	42,338	39	" 38
E-2	219	1/4	0.1	2007	1289	1/2	.076	11,536		" 35
E-3	64	1/4	0.1	457	577	1/2	.076	2,167		" 30
F-0	156	1/4	0.1	1377	1014	1/2	.076	7,917		" 38
F-1	283	1/4	0.1	2647	1124	1/2	.076	9,364		" 38
F-2	88	1/4	0.1	697	637	1/2	.076	2,957		" 30
F-3	52	1/4	0.1	337	594	1/2	.076	2,391		" 30
G-0	179	1/4	0.1	1607	1492	1/2	.076	14,207		" 40
G-1	228	1/4	0.1	2097	1321	1/2	.076	11,957		" 35
G-2	80	1/4	0.1	617	560	1/2	.076	1,943		" 35
G-3	39	1/4	0.1	207	477	1/2	.076	851		" 30
H-0	201	1/4	0.1	1827	1071	1/2	.076	8,667		" 35
H-1	360	1/4	0.1	3417	2140	1/2	.076	22,733		" 35
H-2	61	1/4	0.1	427	621	1/2	.076	2,746		" 30
H-3	35	1/4	0.1	167	500	1/2	.076	1,154		" 30

CALCULATION BY: REvans DATE: 11/13/07

11/14/07
DATA REVIEWED / DATE

Whitanie 11/14/07
CALCULATIONS REVIEWED / DATE

* Alpha Source efficiency 0.25
** Beta source efficiency 0.5

Figure B-12 (Front)

reviewed α and β
cales for dpm
reviewed efficiency cales

SITE SRUD
AREA Behind Bldg 1
START TIME: 300pm
END TIME: 400pm
DATE: 11/2/07
SURVEYOR(S) Evans - Scribe
Kafanic

Kathy Benny

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP 380AB	18.3	.406	248.9	α
Eberline	E-600	SHP 380AB	412.3	.152	5770	β
Ludlum	Model 19					

Outdoor Concrete

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s *	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s **	ϵ_{Total}	dpm/100cm²		mR/hr
I-0	173	1/4	0.1	1547	1374	1/2	.076	12,654		Concrete 40
I-1	185	1/4	0.1	1667	1201	1/2	.076	10,378		" 38
I-2	88	1/4	0.1	697	613	1/2	.076	2,641		" 35
I-3	31	1/4	0.1	127	579	1/2	.076	2,193		" 30

CALCULATION BY: Rawan DATE: 11/13/07

11/14/07 DATA REVIEWED / DATE

Daniel Thelen 11/14/07 CALCULATIONS REVIEWED / DATE

reviewed α and β values for dpm, reviewed efficiency calcs

* Alpha Source efficiency 0.25

** Beta Source efficiency 0.5

Figure B-12 (Front)

Kitty

SITE Salmon River Uranium
AREA Bldg 1
START TIME: 1245pm
END TIME:
DATE: 10/31/07
SURVEYOR(S) Evans - Scribe, Katanic
Katanic - Smears - 11/2/07

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP 380AB	9.7/7.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			Concrete / wood			

FLOOR

2x2 grid

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	* ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	* ϵ_s	ϵ_{Total}	dpm/100cm²		
A1 1-1	21	1/4	.1	133	399	1/2	.076	2,250		Wood
A1 1-2	16	1/4	.1	63	439	1/2	.076	1,737	5	Concrete
A1 1-3	18	1/4	.1	83	375	1/2	.076	895		Concrete
A1 2-1	20	1/4	.1	103	384	1/2	.076	1,013		Concrete
A1 2-2	24	1/4	.1	143	371	1/2	.076	842		Concrete
A1 2-3	15	1/4	.1	53	374	1/2	.076	882		Concrete
A1 3-1	28	1/4	.1	183	366	1/2	.076	776		Concrete
A1 3-2	27	1/4	.1	173	390	1/2	.076	1,092		Concrete
A1 3-3	12	1/4	.1	23	379	1/2	.076	947		Concrete
B1 1-1	19	1/4	.1	93	413	1/2	.076	1,395		Concrete
B1 1-2	6	1/4	.1	-37	359	1/2	.076	684		Concrete
B1 1-3	13	1/4	.1	33	414	1/2	.076	1,408		Concrete
B1 2-1	18	1/4	.1	83	429	1/2	.076	1,605	6	Concrete
B1 2-2	21	1/4	.1	113	365	1/2	.076	763		Concrete
B1 2-3	17	1/4	.1	73	371	1/2	.076	842		Concrete

A-1 class 2

B-1 class 2

CALCULATION BY: RJ Gwan[?] DATE: 11/19/07

11/19/07
DATA REVIEWED / DATE

[signature] 11/19/07
CALCULATIONS REVIEWED / DATE

(*) reviewed α and β efficiency calcs, total eff calcs, α and β dpm

* Alpha source efficiency 0.25
** Beta source efficiency 0.5

Figure B-12 (Front)

41 class 1
113 class 2

Bldg 1
~700m²

1 of 11

SITE SRS D
AREA Bldg 1
START TIME:
END TIME:
DATE: 10/31/07
SURVEYOR(S) Katanic
EVANS - scribe
Katanic - Smears - 11/2/07

Kitty

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Eberline	E-600	SHP 380AB	9.7/7.7	.406	
Eberline	E-600	SHP 380AB	307/228	.152	
			concrete / wood		

FLOOR

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: A				TYPE: B					
	c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
C1 1-1	24	1/4	.1	143	386	1/2	.076	1,039		Concrete
C1 1-2	14	1/4	.1	43	380	1/2	.076	961		Concrete
C1 1-3	14	1/4	.1	43	385	1/2	.076	1,026		Concrete
C1 2-1	17	1/4	.1	73	368	1/2	.076	803		Concrete
C1 2-2	13	1/4	.1	33	347	1/2	.076	526		Concrete
C1 2-3	18	1/4	.1	83	367	1/2	.076	789		Concrete
C1 3-1	19	1/4	.1	93	406	1/2	.076	1,303		Concrete
C1 3-2	11	1/4	.1	13	368	1/2	.076	803		Concrete
C1 3-3	16	1/4	.1	63	418	1/2	.076	1,461	7	Concrete
D1 1-1	60	1/4	.1	523	511	1/2	.076	3,724		Wood
D1 1-1	38	1/4	.1	283	374	1/2	.076	882		Concrete
D1 1-2	20	1/4	.1	103	346	1/2	.076	513		Concrete
D1 1-3	9	1/4	.1	-7	358	1/2	.076	671		Concrete
D1 2-1	41	1/4	.1	313	533	1/2	.076	2,974	8	Concrete
D1 2-2	12	1/4	.1	23	445	1/2	.076	1,816		Concrete
D1 2-3	18	1/4	.1	83	507	1/2	.076	2,632		Concrete

C-1 class 2

D-1 class 1

CALCULATION BY: RJ DATE: 11/19/07

11/19/07 see ⊛ p.1 of 11
DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE 11/19/07

Figure B-12 (Front)

SITE SRND
AREA Bldg 1
START TIME:
END TIME:
DATE: 10/31/07
SURVEYOR(S) Katanic
Evans - Scribe

Katanic - Smears - 11/2/07

K, HY

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	9.7/7.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			concrete wood			

FLOOR

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
E1 1-1	115	1/4	.1	1,053	893	1/2	.076	7,711		Concrete
E1 1-2	112	1/4	.1	1,023	1421	1/2	.076	14,658		Concrete
E1 1-3	139	1/4	.1	1,293	782	1/2	.076	6,250		Concrete
E1 2-1	152	1/4	.1	1,423	2230	1/2	.076	25,303	9	Concrete
E1 2-2	171	1/4	.1	1,613	1179	1/2	.076	11,474		Concrete
E1 2-3	315	1/4	.1	3,053	1340	1/2	.076	13,592		Concrete
E1 3-1	171	1/4	.1	1,613	1070	1/2	.076	10,039		Concrete
E1 3-2	129	1/4	.1	1,193	1052	1/2	.076	9,803		Concrete
E1 3-3	35	1/4	.1	253	622	1/2	.076	4,145		Concrete
F1 1-1	51	1/4	.1	413	572	1/2	.076	3,487		Concrete
F1 1-2	31	1/4	.1	213	675	1/2	.076	4,842		Concrete
F1 1-3	56	1/4	.1	463	545	1/2	.076	3,132		Concrete
F1 2-1	41	1/4	.1	313	533	1/2	.076	2,974		Concrete
F1 2-2	31	1/4	.1	213	531	1/2	.076	2,947		Concrete
F1 2-3	37	1/4	.1	273	536	1/2	.076	3,013		Concrete

E-1 class 1

F1 class 1

CALCULATION BY: RTavano DATE: 11/19/07

11/19/07 see ⊛p. 1 of 11
DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE 11/19/07

Figure B-12 (Front)

Kitty

SITE SRNP
AREA Bldg 1
START TIME:
END TIME:
DATE: 10/31/07
SURVEYOR(S) Katanic
Evans-Scribe
Katanic - Smears - 11/2/07

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP 380AB	9.7/7.7	.406		A
Eberline	E-600	SHP380AB	307/228	.152		B
			Concrete Wood			

floor

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: A				TYPE: B					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
F1 3-1	68	1/4	.1	583	887	1/2	.076	7,632	10	Concrete
F1 3-2	25	1/4	.1	153	485	1/2	.076	2,342		Concrete
F1 3-3	34	1/4	.1	243	494	1/2	.076	2,461		Concrete
F2 1-1	45	1/4	.1	353	526	1/2	.076	2,882	11	Concrete
F2 1-2	33	1/4	.1	233	495	1/2	.076	2,474		Concrete
F2 2-1	18	1/4	.1	83	385	1/2	.076	1,026		Concrete
F2 2-2	25	1/4	.1	153	452	1/2	.076	1,908		Concrete
F2 3-1	25	1/4	.1	153	431	1/2	.076	1,632		Concrete
F2 3-2	29	1/4	.1	193	384	1/2	.076	1,013		Concrete
E2 1-1	95	1/4	.1	853	1140	1/2	.076	10,961		Concrete
E2 1-2	27	1/4	.1	173	503	1/2	.076	2,579		Concrete
E2 2-1	83	1/4	.1	733	832	1/2	.076	6,908		Concrete
E2 2-2	42	1/4	.1	323	473	1/2	.076	2,184		Concrete
E2 3-1	72	1/4	.1	623	745	1/2	.076	5,763		Concrete
E2 3-2	36	1/4	.1	263	606	1/2	.076	3,934		Concrete
E2 2-1	58	1/4	.1	483	2120	1/2	.076	23,855	12	DRAIN Channel

F1 class 1

F2 class 1

E2 class 1

CALCULATION BY: RThomas DATE: 11/19/07

11/19/07 see ⊛ p. 1 of 11 DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE 11/19/07

Figure B-12 (Front)

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SITE SRUP
AREA Bldg 1
START TIME:
END TIME:
DATE: 10/31/07
SURVEYOR(S) Katanic
Evans - scribe
Katanic - Smears - 11/2/07

Kathy

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	9.7 / 7.7	.406		α
Eberline	E-600	SHP380AB	307 / 228	.152		β
			concrete wood			

Floor

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
D2 1-1	31	1/4	.1	213	386	1/2	.076	1,039		Concrete
D2 1-2	15	1/4	.1	53	374	1/2	.076	882		Concrete
D2 2-1	17	1/4	.1	73	428	1/2	.076	1,592	13	Concrete
D2 2-2	16	1/4	.1	63	407	1/2	.076	1,316		Concrete
C2 1-1	19	1/4	.1	93	406	1/2	.076	1,303		Concrete
C2 1-2	—	—	—	—	—	—	—	—		Mud - NO reading
C2 2-1	20	1/4	.1	103	403	1/2	.076	1,263		Concrete
C2 2-2	31	1/4	.1	213	432	1/2	.076	1,645	14	Concrete
C2 3-1	31	1/4	.1	213	375	1/2	.076	895		Concrete
C2 3-2	31	1/4	.1	213	419	1/2	.076	1,474		Concrete
B2 1-1	24	1/4	.1	143	383	1/2	.076	1,000		Concrete
B2 1-2	31	1/4	.1	213	474	1/2	.076	2,197	15	concrete
B2 2-1	18	1/4	.1	83	407	1/2	.076	1,316		Concrete
B2 2-2	32	1/4	.1	223	387	1/2	.076	1,053		Concrete
A2 1-1	13	1/4	.1	33	332	1/2	.076	329		Concrete
A2 1-2	25	1/4	.1	153	378	1/2	.076	934		Concrete

D2 class 1

C2 class 2

B2 class 2

A2 class 2

CALCULATION BY: R Kennard DATE: 11/19/07

11/19/07 see ⊕ p. 1 of 11
DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE 11/19/07

Figure B-12 (Front)

Kitty

SITE SRUD
AREA Bldg 1
START TIME:
END TIME:
DATE: 10/31/07
SURVEYOR(S) Katanic
Evans - Scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	9.7/7.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			Concrete / wood			

FLOOR

LOCATION	DIRECT DETECTOR MEASUREMENTS TYPE: α				TYPE: β				SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
A2 1-3	23	1/4	.1	133	372	1/2	.076	855		Concrete
A2 2-1	18	1/4	.1	83	387	1/2	.076	1,053		Concrete
A2 2-2	15	1/4	.1	53	332	1/2	.076	329		Concrete
A2 2-3	18	1/4	.1	83	355	1/2	.076	632		Concrete
A2 3-1	13	1/4	.1	33	389	1/2	.076	1,079	16	Concrete
A2 3-2	14	1/4	.1	43	358	1/2	.076	671		Concrete
A2 3-3	—				—			—		Thick dirt
A3 1-1	22	1/4	.1	123	390	1/2	.076	1,092		Concrete
A3 1-2	32	1/4	.1	223	363	1/2	.076	737		Concrete
A3 2-1	33	1/4	.1	233	368	1/2	.076	803		Concrete
A3 2-2	30	1/4	.1	203	410	1/2	.076	1,355		Concrete pedestal
A3 3-1	30	1/4	.1	203	411	1/2	.076	1,368	17	Concrete
A3 3-2	—				—			—		Debris
B3 1-2	11	1/4	.1	13	393	1/2	.076	1,132		Concrete
B3 2-1	27	1/4	.1	173	378	1/2	.076	934		Concrete pedestal
B3 2-2	27	1/4	.1	173	396	1/2	.076	1,171	18	Concrete

A2 class 2

A3 class 2

B3 class 2

CALCULATION BY: RJ [signature] DATE: 11/15/07

11/19/07 see p. 1 of 11 — DATA REVIEWED / DATE

[signature] 11/19/07 — CALCULATIONS REVIEWED / DATE

B3 1-1 Debris
No measurement

Figure B-12 (Front)

SITE SRSD
AREA Bldg 1
START TIME:
END TIME:
DATE: 10/31/07
SURVEYOR(S) Kafamic
Evans-Scribe

&1 H4

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Eberline	E-600	SHP380AB	9.7/7.7	.406	
Eberline	E-600	SHP380AB	307/228	.152	
			concrete wood		

Floor

LOCATION	DIRECT DETECTOR MEASUREMENTS TYPE: A				TYPE: B				SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
A4 1-1	20	1/4	.1	103	387	1/2	.076	1,053		Concrete
A4 1-2	25	1/4	.1	153	471	1/2	.076	2,158		Concrete
A4 1-3	34	1/4	.1	243	444	1/2	.076	1,803	25	Concrete
A4 2-1	26	1/4	.1	163	384	1/2	.076	1,013		Concrete
A4 2-2	26	1/4	.1	163	446	1/2	.076	1,829		Concrete
A4 2-3	24	1/4	.1	143	399	1/2	.076	1,211		Concrete
A4 3-1	27	1/4	.1	173	417	1/2	.076	1,447		Concrete
A4 3-2	—			—	—			—		Debris - inaccessible
A4 3-3	16	1/4	.1	63	386	1/2	.076	1,039		Concrete
A5 2-1	33	1/4	.1	233	443	1/2	.076	1,789	26	Concrete
B4 1-1	32	1/4	.1	223	426	1/2	.076	1,566	24	Concrete
B4 1-2	27	1/4	.1	173	409	1/2	.076	1,342		Concrete
B4 2-1	19	1/4	.1	93	374	1/2	.076	882		Concrete
B4 2-2	28	1/4	.1	183	378	1/2	.076	934		Concrete
B4 2-3	24	1/4	.1	143	360	1/2	.076	697		Concrete
C4 1-1	29	1/4	.1	193	437	1/2	.076	1,711		Concrete

A4 class 2

class 2 A5

B4 class 2

CALCULATION BY: RTEvans DATE: 11/19/07

11/19/07 see Dp. 1 of 11 — DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE 11/19/07

A5 1-1 Debris-inaccessible
3-1
B4 1-3

Figure B-12 (Front)

C3 - not accessible (any locations)
D3 - Not accessible (any locations)

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KiHy

SITE SRUD
AREA B
START TIME:
END TIME:
DATE: 10/31/07
SURVEYOR(S) Evans-scribe, Katanic

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	9.7/7.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			concrete / wood			

FLOOR

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
C4 1-2	27	1/4	.1	173	366	1/2	.076	776		concrete
C4 1-3	29	1/4	.1	193	383	1/2	.076	1,000		concrete
B5 2-1	31	1/4	.1	213	394	1/2	.076	1,145	27	concrete
C5 1-1	14	1/4	.1	43	359	1/2	.076	684		concrete
C5 1-2	19	1/4	.1	93	382	1/2	.076	987	28	concrete
C4 2-3	30	1/4	.1	223	569	1/2	.076	4,487		wood
C4 3-2	32	1/4	.1	223	428	1/2	.076	1,592	23	concrete
C4 3-3	23	1/4	.1	133	436	1/2	.076	1,697		concrete
C5 3-1	25	1/4	.1	153	388	1/2	.076	1,066		concrete
C5 3-2	20	1/4	.1	103	440	1/2	.076	1,750		concrete
D4 1-2	45	1/4	.1	353	467	1/2	.076	1,316	22	concrete
D4 1-3	24	1/4	.1	143	408	1/2	.076	1,329		concrete
D4 2-2	41	1/4	.1	313	418	1/2	.076	1,461		concrete
D4 2-3	20	1/4	.1	103	393	1/2	.076	1,132		concrete
D5 1-1	36	1/4	.1	263	391	1/2	.076	1,105	29	concrete pedestal
D5 1-2	21	1/4	.1	113	412	1/2	.076	1,382		concrete

B5, C5 class 2 c

CALCULATION BY: RYWard DATE: 11/19/07

11/19/07 [signature] p. 1 of 11 — DATA REVIEWED / DATE

[signature] 11/19/07 — CALCULATIONS REVIEWED / DATE

B5 1-1 Inaccessible
C4 2-2,
C5 2-1, 2-2

Figure B-12 (Front)

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SITE SRSD
AREA Bldg 1
START TIME:
END TIME:
DATE: 10/31/07
SURVEYOR(S) Swanc-scribe
Kalamis

KHH

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	9.7/7.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			concrete wood			

FLOOR

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
D5 2-1	16	1/4	.1	63	350	1/2	.076	566		concrete pedestal
D5 2-2	27	1/4	.1	173	431	1/2	.076	1,632		Concrete
E5 1-1	29	1/4	.1	193	405	1/2	.076	1,289		Concrete
E5 1-2	50	1/4	.1	403	478	1/2	.076	2,250	30	Concrete
E5 2-1	44	1/4	.1	343	388	1/2	.076	1,066		concrete pedestal
E5 2-2	35	1/4	.1	253	511	1/2	.076	2,684		concrete
E5 3-1	43	1/4	.1	333	423	1/2	.076	1,526		concrete
E5 3-2	21	1/4	.1	113	426	1/2	.076	1,566		concrete
E4 1-2	26	1/4	.1	163	449	1/2	.076	1,868		concrete
E4 1-3	27	1/4	.1	173	488	1/2	.076	2,382		Concrete
E4 2-2	75	1/4	.1	653	562	1/2	.076	3,355	21	concrete
E4 2-3	27	1/4	.1	173	397	1/2	.076	1,184		concrete pedestal
E4 3-2	23	1/4	.1	133	420	1/2	.076	1,487		concrete
E4 3-3	20	1/4	.1	103	500	1/2	.076	2,539		concrete

CALCULATION BY: RTSwanc DATE: 11/19/07

11/19/07 see ✱1 DATA REVIEWED / DATE

1 of 11 CALCULATIONS REVIEWED / DATE 11/19/07

Figure B-12 (Front)

SITE SRUD
AREA Bldg 1
START TIME:
END TIME: 435pm
DATE: 10/31/07
SURVEYOR(S) Evans-Scribe
Katanic

Kitty

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	9.7/9.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			concrete / wood			

Floor

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
F4 1-2	48	1/4	.1	383	402	1/2	.076	1,250		Concrete
F4 1-3	24	1/4	.1	143	418	1/2	.076	1,461		Concrete
F4 2-2	22	1/4	.1	143	343	1/2	.076	1,513		Wood
F4 3-2	26	1/4	.1	183	345	1/2	.076	1,539		Wood
F5 1-1	26	1/4	.1	163	475	1/2	.076	2,211		Concrete
F5 1-2	46	1/4	.1	363	577	1/2	.076	3,553	31	Concrete

F4 class 2
Near pile
F5 class 2

CALCULATION BY: RLWard DATE: 11/19/07

11/19/07 see p. 1 of 11
DATA REVIEWED / DATE

[signature] 11/19/07
CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

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Kitchen

SITE SRMD
AREA Bldg 1
START TIME: 1115
END TIME: 1215
DATE: 11/1/07
SURVEYOR(S) Katanic
Evans - Scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP 380AB	9.7 / 7.7	.406		α
Eberline	E-600	SHP 380AB	207 / 228	.152		β
			concrete / wood			

FLOOR

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
C4 1-1	24	1/4	.1	143	433	1/2	.076	1,658		Concrete
C4 3-1	30	1/4	.1	203	412	1/2	.076	1,382		Concrete
D4 1-1	39	1/4	.1	293	469	1/2	.076	2,132		Concrete
D4 2-1	36	1/4	.1	263	446	1/2	.076	1,829		Concrete
E4 1-1	38	1/4	.1	283	460	1/2	.076	2,013		Concrete
E4 2-1	23	1/4	.1	133	420	1/2	.076	1,487		Concrete
E4 3-1	20	1/4	.1	103	391	1/2	.076	842		Concrete
F4 1-1	33	1/4	.1	233	450	1/2	.076	1,882	20	Concrete
F3 3-1	32	1/4	.1	223	534	1/2	.076	2,987	19	Concrete
F3 3-2	19	1/4	.1	93	424	1/2	.076	1,539		Concrete
F3	19	1/4	.1	93	446	1/2	.076	1,829		Bathroom Floor
F3	19	1/4	.1	93	445	1/2	.076	1,816		Shower Floor
F2	48	1/4	.1	403	934	1/2	.076	9,289	32	Floor Drain

class 2 areas

CALCULATION BY: RKatanic DATE: 11/19/07

11/19/07 see ⊕ DATA REVIEWED / DATE

11-19-11 CALCULATIONS REVIEWED / DATE 11/19/07

Figure B-12 (Front)

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Concrete

Kitty (cpm)		Model 3 (cpm)
α	β	
23	430	90
22	383	90
10	424	60
		60
Avg. 18.3	412.3	50
LLD 91.2	509.7	86

Wood

Kitty (cpm)		Model 3 (cpm)
α	β	
13	414	60
16	424	60
24	444	90
		90
Avg. 17.6	427.3	50
LLD 90.1	526.4	86

Metal

Kitty (cpm)		Model 3 (cpm)
α	β	
23	389	30
22	351	30
21	360	50
		50
Avg. 22	366.7	40
LLD 46.8	458.7	72.4

ACTIVITY SURVEY RECORD (Kitty)

SITE SRUD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katanic
Rodriguez-Scribe

TYPE	INSTRUMENT	DETECTOR	AVG. BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	9.7/7.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			concrete/wood			

WALL - Indoor Bldg 1

	LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
		TYPE: α				TYPE: β					
		c/---m	* ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	** ϵ_s	ϵ_{Total}	dpm/100cm²		
	F2n6	21	1/4	.1	133	713	1/2	.076	6,382		Cardboard
	F2n7	19	1/4	.1	113	767	1/2	.076	7,092		Cardboard (use wood bkg)
	F2n8	19	1/4	.1	113	792	1/2	.076	7,421		Cardboard
	F2n9	24	1/4	.1	163	953	1/2	.076	9,539		Wood
	F2n10	21	1/4	.1	133	884	1/2	.076	8,632		Wood
95 µR/h	F1e1	22	1/4	.1	143	510	1/2	.076	3,711		Wood
	F1e2	11	1/4	.1	33	544	1/2	.076	4,158		wood
	F1e3	17	1/4	.1	93	490	1/2	.076	3,447		wood
	F1e4	12	1/4	.1	43	528	1/2	.076	3,947		wood
	F1e5	15	1/4	.1	73	504	1/2	.076	3,632		Wood
49 µR/h	F1e6	17	1/4	.1	93	508	1/2	.076	3,684		Wood
	F1e7	18	1/4	.1	103	492	1/2	.076	3,474		Wood
	F1e8	15	1/4	.1	73	506	1/2	.076	3,658		Wood
	F1e9	11	1/4	.1	33	401	1/2	.076	2,276		Wood
	F1e10	19	1/4	.1	113	480	1/2	.076	3,316		Wood

CALCULATION BY: RLawand DATE: 11/15/07

11/15/07 DATA REVIEWED / DATE

JMKatanic 11/15/07 CALCULATIONS REVIEWED / DATE

* Alpha source efficiency 0.25
** Beta source efficiency 0.5

Figure B-12 (Front)

(*) reviewed efficiency calcs + α and β dpm calcs

1 of 9

ACTIVITY SURVEY RECORD (Kitty)

SITE SRWD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katanic
Rodriguez - Scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	9.7/7.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			Conc/Wood			

WALL - Indoor Bldg 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE:				TYPE:					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
F1n1	23	1/4	.1	153	583	1/2	.076	4,671		Wood
F1n2	29	1/4	.1	213	622	1/2	.076	5,184		Wood
F1n3	15	1/4	.1	73	507	1/2	.076	3,671		Wood
F1n4	9	1/4	.1	13	608	1/2	.076	5,000		Wood
F1n5	11	1/4	.1	33	508	1/2	.076	3,684		Wood
F1n6	17	1/4	.1	93	629	1/2	.076	5 276		Wood
F1n7	10	1/4	.1	23	498	1/2	.076	3,553		Wood
F1n8	17	1/4	.1	93	614	1/2	.076	5,079		Wood
F1n9	15	1/4	.1	73	513	1/2	.076	3,750		Wood
F1n10	19	1/4	.1	113	675	1/2	.076	5,487		Wood
F2n1	17	1/4	.1	93	603	1/2	.076	4,934		Wood
F2n2	29	1/4	.1	213	711	1/2	.076	6,355		Wood
F2n3	17	1/4	.1	93	587	1/2	.076	4,724		Wood
F2n4	22	1/4	.1	143	704	1/2	.076	6,263		Wood
F2n5	28	1/4	.1	203	708	1/2	.076	6,316		Cardboard

Expos. (μR/hr): 50, 45, 40, 30

Expos (μR/hr): 80, 50

(use wood bkg)

CALCULATION BY: RSwaund DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE

JM Stanic 11/15/07
CALCULATIONS REVIEWED / DATE

see note p. 1 of 9

Figure B-12 (Front)

ACTIVITY SURVEY RECORD (Kitty)

SITE SRUD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katanic
Rodriguez - scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm) AVG.	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP 380AB	9.7/7.7	.406		α
Eberline	E-600	SHP 380AB	307/228	.152		β
			conc/wood			

WALLS Indoor Bldg 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
E1 e1	15	1/4	.1	73	439	1/2	.076	2,776		Wood
E1 e2	23	1/4	.1	153	530	1/2	.076	3,974		Wood
E1 e3	19	1/4	.1	113	446	1/2	.076	2,868		Wood
E1 e4	21	1/4	.1	133	492	1/2	.076	3,474		Wood
E1 e5	21	1/4	.1	133	627	1/2	.076	5,250		Wood
E1 e6	24	1/4	.1	163	446	1/2	.076	2,868		Wood
E1 e7	23	1/4	.1	153	654	1/2	.076	5,605		Wood
E1 e8	24	1/4	.1	163	438	1/2	.076	2,763		Wood
E1 e9	21	1/4	.1	133	431	1/2	.076	2,671		Wood
E1 e10	14	1/4	.1	63	420	1/2	.076	2,526		Wood
D1 e1	18	1/4	.1	103	329	1/2	.076	1,329		Wood
D1 e2	19	1/4	.1	113	362	1/2	.076	1,763		Wood
D1 e3	14	1/4	.1	63	318	1/2	.076	1,184		Wood
D1 e4	23	1/4	.1	153	345	1/2	.076	1,539		Wood
D1 e5	13	1/4	.1	53	283	1/2	.076	724		Wood

CALCULATION BY: RJawand DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE
* see note p. 1 of 9

CALCULATIONS REVIEWED / DATE 11/15/07

Figure B-12 (Front)

ACTIVITY SURVEY RECORD (Kathy)

SITE SLUD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katamic
Rodriguez - Scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm) AVG	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP380AB	7.7/7.7	.406		α
Eberline	E-600	SHP380AB	307/228	.152		β
			conc/wood			

WALLS - Indoor Bldg 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
D1e6	14	1/4	.1	63	349	1/2	.076	1,526		Wood
D1e7	13	1/4	.1	53	260	1/2	.076	421		Wood
D1e8	13	1/4	.1	53	331	1/2	.076	1,355		Wood
D1e9	18	1/4	.1	103	273	1/2	.076	592		Wood
D1e10	15	1/4	.1	73	293	1/2	.076	855		Wood
C1e1	17	1/4	.1	93	282	1/2	.076	711		Wood
C1e2	16	1/4	.1	83	338	1/2	.076	1,447		Wood
C1e3	5	1/4	.1	-27	259	1/2	.076	408		Wood
C1e4	12	1/4	.1	43	294	1/2	.076	868		Wood
C1e5	11	1/4	.1	33	279	1/2	.076	276		Wood
B1e1	24	1/4	.1	163	283	1/2	.076	724		Wood
B1e2	10	1/4	.1	23	327	1/2	.076	1,303		Wood
B1e3	12	1/4	.1	43	287	1/2	.076	776		Wood

CALCULATION BY: RJ Rodriguez DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE

Whitenie 11/15/07
CALCULATIONS REVIEWED / DATE

* see note p. 1 of 9

Figure B-12 (Front)

SITE SRUD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katanic
Rodriguez - Scribe

Kitty

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Eberline	E-600	SHP380AB	9.7/7.7	.406	
Eberline	E-600	SHP380AB	307/228	.152	
			Conc/wood		

Avg

α
β

WALLS - Indoor Bldg 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
B1e4	17	1/4	.1	93	297	1/2	.076	908		Wood
B1e5	10	1/4	.1	23	284	1/2	.076	737		Wood
A1e1	12	1/4	.1	43	273	1/2	.076	592		
A1e2	12	1/4	.1	43	346	1/2	.076	1,553		Wood
A1e3	11	1/4	.1	33	286	1/2	.076	763		Wood
A1e4	29	1/4	.1	163	389	1/2	.076	2,053		Wood
A1e5	10	1/4	.1	23	403	1/2	.076	2,303		Wood
										Wood
A5w5	18	1/4	.1	83	402	1/2	.076	1,250		
A5w4	15	1/4	.1	53	409	1/2	.076	1,342		Concrete
A5w2	21	1/4	.1	113	415	1/2	.076	1,421		Concrete
A5w3	15	1/4	.1	53	358	1/2	.076	671		Concrete
A5w1	21	1/4	.1	113	374	1/2	.076	882		Concrete
										Concrete

CALCULATION BY: RJ Schwartz DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE 11/15/07

⊕ see note p. 1 of 9

Figure B-12 (Front)

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ACTIVITY SURVEY RECORD

Kitty AVG

SITE SRUD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katanic
Rodriguez - Scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP 380AB	9.7/7.7	.406		α
Eberline	E-600	SHP 380AB	307/228	.152		β
			Conc/Wood			

WALLS - Indoor Bldg. 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
B5w5	26	1/4	.1	163	376	1/2	.076	908		Concrete
B5w4	26	1/4	.1	163	348	1/2	.076	539		Concrete
B5w3	15	1/4	.1	53	395	1/2	.076	1,158		Concrete
B5w2	20	1/4	.1	103	369	1/2	.076	816		Concrete
B5w1	19	1/4	.1	43	304	1/2	.076	-39		Concrete
C5w5	17	1/4	.1	73	361	1/2	.076	711		Concrete
C5w4	17	1/4	.1	73	395	1/2	.076	1,158		Concrete
C5w3	25	1/4	.1	153	413	1/2	.076	1,395		Concrete
C5w2	20	1/4	.1	123	254	1/2	.076	342		Wood
C5w1	16	1/4	.1	83	225	1/2	.076	-39		Wood
D5w5	14	1/4	.1	43	322	1/2	.076	197		Concrete
D5w4	16	1/4	.1	63	395	1/2	.076	1,158		Concrete
D5w3	19	1/4	.1	93	352	1/2	.076	592		Concrete
D5w2	14	1/4	.1	-80	306	1/2	.076	-802		Metal Background
D5w1	31	1/4	.1	213	359	1/2	.076	684		Concrete

α β -22/367 (outdoors only)

CALCULATION BY: RJ Rodriguez DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE

11/15/07
CALCULATIONS REVIEWED / DATE

data point excluded as outlier due to no suitable bkg

see next p. 1 of 9

Figure B-12 (Front)

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ACTIVITY SURVEY RECORD Kitty

SITE SRUD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katanic
Rodriguez-Scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Eberline	E-600	SHP380AB	9.7/7.7	.406	
Eberline	E-600	SHP380AB	307/228	.152	
			Conc/wood		

WALLS - Indoor Bldg 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE:				TYPE:					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
E5w10	21	1/4	.1	113	471	1/2	.076	2,158		Concrete
E5w9	23	1/4	.1	133	330	1/2	.076	303		Concrete
E5w8	25	1/4	.1	153	401	1/2	.076	1,237		Concrete
E5w7	19	1/4	.1	93	452	1/2	.076	1,908		Concrete
E5w6	13	1/4	.1	33	370	1/2	.076	829		Concrete
E5w5	22	1/4	.1	123	378	1/2	.076	934		Concrete
E5w4	13	1/4	.1	33	456	1/2	.076	1,961		Concrete
E5w3	7	1/4	.1	-27	388	1/2	.076	1,066		Concrete
E5w2	23	1/4	.1	133	414	1/2	.076	1,408		Concrete
E5w1	17	1/4	.1	73	388	1/2	.076	1,066		Concrete
F5w10	27	1/4	.1	173	466	1/2	.076	2,092		Concrete. Adjacent to thorium/lead Sand Pile
F5w9	19	1/4	.1	93	487	1/2	.076	2,368		Same as above
F5w8	15	1/4	.1	53	429	1/2	.076	1,605		Concrete
F5w7	25	1/4	.1	153	417	1/2	.076	1,447		Concrete
F5w6	18	1/4	.1	83	398	1/2	.076	1,197		Concrete

CALCULATION BY: RJ Ward DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE
see note p. 1 of 9

CALCULATIONS REVIEWED / DATE 11/15/07

Figure B-12 (Front)

SITE SRUD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katanic
Rodriguez - Scribe

Kitty

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²	
Eberline	E-600	SHP 380AB	9.7/7.7	.406		A
Eberline	E-600	SHP 380AB	307/228	.152		B
			Conc/wood			

WALLS - Indoor Bldg 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: A				TYPE: B					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
FSw5	20	1/4	.1	103	349	1/2	.076	553		Concrete
FSw4	14	1/4	.1	43	463	1/2	.076	2,053		Concrete
FSw3	13	1/4	.1	33	351	1/2	.076	579		Concrete
FSw2	21	1/4	.1	113	393	1/2	.076	1,132		Concrete
FSw1	10	1/4	.1	3	486	1/2	.076	2,355		Concrete
FSn8	14	1/4	.1	63	336	1/2	.076	1,421		Wood
FSn7	13	1/4	.1	53	413	1/2	.076	2,434		Wood
FSn6	16	1/4	.1	83	352	1/2	.076	1,632		Wood
FSn5	25	1/4	.1	173	350	1/2	.076	1,605		Wood
FSn4	13	1/4	.1	53	338	1/2	.076	1,447		Wood
FSn3	13	1/4	.1	53	352	1/2	.076	1,632		Wood
FSn2	15	1/4	.1	73	321	1/2	.076	1,224		Wood
FSn1	13	1/4	.1	53	311	1/2	.076	1,092		Wood
F4n6	13	1/4	.1	53	322	1/2	.076	1,237		Wood

CALCULATION BY: RRodriguez DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE

11/15/07
CALCULATIONS REVIEWED / DATE

~~See~~ see note p. 1 of 9

Figure B-12 (Front)

SITE SRUD
AREA Processing Area
START TIME:
END TIME:
DATE: 10/30/07
SURVEYOR(S) Katanic
Rodriguez-Scribe

Kitty

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm) AVG	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Eberline	E-600	SHP380AB	9.7/7.7	.406	
Eberline	E-600	SHP380AB	307/228	.152	
			conc/wood		

B

WALLS Indoor Bldg 1

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE:				TYPE:					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
F4n5	19	1/4	.1	113	306	1/2	.076	1,026		Wood
F4n4	16	1/4	.1	83	243	1/2	.076	197		Wood
F4n3	21	1/4	.1	133	240	1/2	.076	158		Wood
F4n2	11	1/4	.1	33	240	1/2	.076	158		Wood
F4n1	7	1/4	.1	-7	257	1/2	.076	382		Wood

CALCULATION BY: Richard DATE: 11/15/07

11/15/07
DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE 11/15/07

Figure B-12 (Front)

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