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 040-03400/08-001

An NRC inspection was conducted on May 28-June 4, 2008, 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. 040-03400/08-001.

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 040-03400/08-001 Field Notes

NRC # 21123G

CDD 7/10/08

44-9 Probe

Ludlum Model 3

Alpha/Beta Portable Survey Instrument Daily Log

Ludlum Model 43-89 probe Serial Number_____

Ludlum Model 2224 detector Serial Number_____

Cal. Due Date:_____

Background	Date	Battery Check	Response Check
20cpm	5/30/08	OK	OK
40cpm	6/2/08	OK	OK
30cpm	6/3/08	OK	OK
	Response check conducted		
	with thorium ore		

Date	Battery Check	Response Check

RJ Ward 6/6/08

PIC/MICRO-REM METER TRACKING FORM

INSTRUMENT # 015544 CALIBRATION DATE 14Feb08 RE-CALIBRATION DUE DATE 14Feb09

	Checkout Date	Background (µR/hr)	Source Check # Rock		Battery Check	Performed by:	Comments (see reverse)
			Gross µR/hr	Net µR/hr*	% Charge**		
	5/30/08	25	130	105	OK	RJE	Initial Operational Check
1	6/2/08	24	130	106	OK	RJE	
2	6/3/08	20	120	100	OK	RJE	
3	6/4/08	20	400	380	OK	RJE	Different Rock
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

* Response limits _____ to _____ µR/hr (NET).

** Response mut be > 85% for the 300V battery.

NOTE: This form is kept in the ESSAP instrument room files.

RJEwards

6/6/08

Figure B-5

PIC/MICRO-REM METER TRACKING FORM

INSTRUMENT # 015525 CALIBRATION DATE 14 Feb 08 RE-CALIBRATION DUE DATE 14FEB09

	Checkout Date	Background (µR/hr)	Source Check #		Battery Check	Performed by:	Comments (see reverse)
			Gross µR/hr	Net µR/hr*	% Charge**		
							Initial Operational Check
1	6/2/08	25	135	110	ok	RJE	
2	6/3/08	20	130	110	ok	RJE	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

* Response limits _____ to _____ µR/hr (NET).

** Response mut be > 85% for the 300V battery.

NOTE: This form is kept in the ESSAP instrument room files.

Figure B-5

RJ Ewald
6/6/08

NRC # 063473
CDD 14 Jan 09

INSTRUMENT OPERATIONAL CHECK OUT

SITE # SRUD

INSTRUMENT TYPE: Eberline E600
DETECTOR TYPE: SHP380AB
VOLTAGE:
α ε_I 38.1% ε_S 25%
β ε_I 12.9% ε_S 50%

INSTRUMENT #: 063473
DETECTOR #: 072358
TOTAL EFFICIENCY:
THRESHOLD:

		Check Out Date/Time	Background (c/__m)	*Source Type: ID #: (c/__m)	**Source Type: ID #: (c/__m)	Checked Out By:	Comments (see reverse)
							ORAU Data
α	1	6/2/08	22 20 21	Avg = 21			concrete
β	2	6/2/08	373 367 366	Avg = 368.6			concrete
α	3	6/3/08	26 15 27	Avg = 22.6			
β	4	6/3/08	348 342 336	Avg = 342			
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						
	13						

Calibration Background Response: 2 σ limits _____ to _____ c/m, 3 σ limits _____ to _____ c/m

Site Redetermination: 2 σ limits _____ to _____ c/m, 3 σ limits _____ to _____ c/m

Site/Area Specific Background Response: See back of form

* Source Response Limits _____ to _____ c/m

**Source Response Limits _____ to _____ c/m

Pre-survey Data Reviewed _____

Date _____

Post-survey Data Reviewed _____

Date _____

Figure B-1 (Front)

RJ Ward 6/6/08

EXPOSURE RATE MEASUREMENTS AND SOIL SAMPLES

SITE SRUD

SURVEYOR(S) V. WATKINS

AREA

K. CONWAY

DATE 6/4/08

R EVANS

START TIME 0735

END TIME

PIC/micro-rem meter			
TYPE	INSTRUMENT	DETECTOR	BACK-GROUND
Ludlum 19	Micro-R Serial # 33055	NA	20 uR/h
Cal. 14Feb08 Due 14Feb09	(CD15544)		

SOIL SAMPLE	SOIL SAMPLE	SOIL SAMPLE	NRC-4 SOIL SAMPLE	NRC-5 SOIL SAMPLE
NRC-1	NRC-2	NRC-3		
LOCATION DRAIN LINE	LOCATION Drain PATH (Natural) (Run-off)	LOCATION N. of Trailer (Baird)	LOCATION Site Access (N)	LOCATION SE of Building
SCINTILLATION ~~Kcpm~~ uR/h	SCINTILLATION ~~Kcpm~~ uR/h	SCINTILLATION ~~Kcpm~~ uR/h	SCINTILLATION ~~Kcpm~~ uR/h	SCINTILLATION ~~Kcpm~~ uR/h

1 METER	CONTACT	1 METER	CONTACT	1 METER	CONTACT	1 METER	CONTACT	1 METER	CONTACT
30 uR/h	50 uR/h	40	70	30	30	30	30	30	30

READINGS Soil µR/hr Sample		READINGS µR/hr		READINGS µR/hr		READINGS µR/hr		READINGS µR/hr	
MEAN:		MEAN:		MEAN:		MEAN:		MEAN:	

REMARKS: 0745 0800 B. Watson - scribe

DATE REVIEWED 0810 6/4/08

CALCULATIONS REVIEWED 0825 6/6/08 0835 R. Evans

DATE

DATE

Figure B-15

EXPOSURE RATE MEASUREMENTS AND SOIL SAMPLES

SITE SRUD

SURVEYOR(S) V. WATKINS

AREA

K. CONWAY

DATE 6/4/08

R. EVANS

START TIME 0735

END TIME

PIC/micro-rem meter			
TYPE	INSTRUMENT	DETECTOR	BACK-GROUND
Ludlum 19	Micro-R Meter # 32055	NA	20 uR/h
Cal: 04Feb08 Due: 04Feb09	NRC# 015544		

SOIL SAMPLE	SOIL SAMPLE	SOIL SAMPLE	SOIL SAMPLE	SOIL SAMPLE
NRC-6	NRC-7	NRC8	NRC 9	NRC-10
LOCATION SW Corner of Bldg	LOCATION SW corner of 0/s PAD	LOCATION West of Large Box	LOCATION South of West Access Road	LOCATION OFF S W corner of Bldg ~~Not~~ SW of Trailer
SCINTILLATION ~~Kcpm~~ uR/h	SCINTILLATION ~~Kcpm~~ uR/h	SCINTILLATION ~~Kcpm~~ uR/h	SCINTILLATION ~~Kcpm~~ uR/h	SCINTILLATION ~~Kcpm~~ uR/h
1 METER / CONTACT	1 METER / CONTACT	1 METER / CONTACT	1 METER / CONTACT	1 METER / CONTACT
30 / 30	40 / 50	80 / 110	30 / 30	30 / 30
READINGS µR/hr	READINGS µR/hr	READINGS µR/hr	READINGS µR/hr	READINGS µR/hr
MEAN:	MEAN:	MEAN:	MEAN:	MEAN:

REMARKS: 0850 B Watson 0905 0915 0920 0940

DATE REVIEWED 6/4/08

CALCULATIONS REVIEWED 6/6/08 R Edwards

DATE

DATE

Figure B-15

EXPOSURE RATE MEASUREMENTS AND SOIL SAMPLES

SITE SRUD

SURVEYOR(S) V. WATKINS, K. Conway, R. EVANS

AREA

DATE

START TIME 0735 END TIME

PIC/micro-rem meter			
TYPE	INSTRUMENT	DETECTOR	BACK-GROUND
Ludlum 19	Micro-R meter SN: 33055	NA	20 uR/h

SOIL SAMPLE	SOIL SAMPLE	SOIL SAMPLE	SOIL SAMPLE	SOIL SAMPLE
NRC-11	NRC-12	NRC 13	NRC 14	NRC-15
LOCATION EXCAVATION SITE FAR W. Side	LOCATION EXCAVATION & Large Yellow Container	LOCATION South side of Road near Tank.	LOCATION BAIRD Trailer S. Side	LOCATION 75° Decline South. ~~Sw~~ 30 meters from Main Bldg SW corner
Biased Sample SCINTILLATION ~~Kcpm~~ uR/h	Biased Sample SCINTILLATION ~~Kcpm~~ uR/h	Biased Sample SCINTILLATION ~~Kcpm~~ uR/h	Biased Sample SCINTILLATION ~~Kcpm~~ uR/h	Biased Sample SCINTILLATION ~~Kcpm~~ uR/h
1 METER / CONTACT	1 METER / CONTACT	1 METER / CONTACT	1 METER / CONTACT	1 METER / CONTACT
70 / 150	90 / 170	70 / 180	60 / 180	120 / 280
READINGS µR/hr	READINGS µR/hr	READINGS µR/hr	READINGS µR/hr	READINGS µR/hr
MEAN: 0755	MEAN: 1005	MEAN: 1015	MEAN: 1030	MEAN: 1050

REMARKS: B. Watson

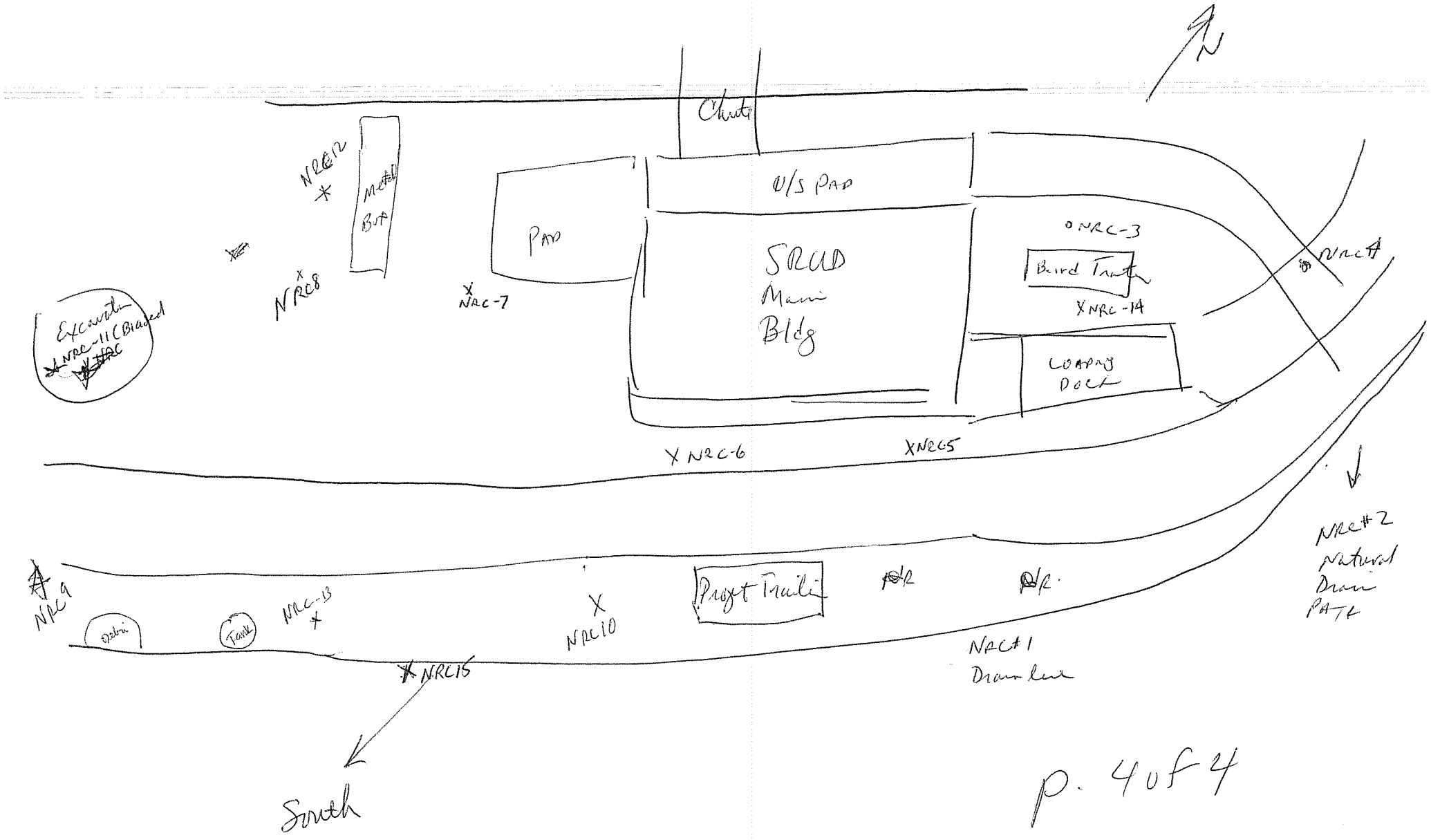
DATE REVIEWED 6/4/08

CALCULATIONS REVIEWED 6/6/08 R. Evans

DATE

DATE

Figure B-15



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RJ Swanson
6/6/08

Exposure Rate Measurements

6/3/08

Background

20 mR/hr Kim #015544

20 Vince #015525

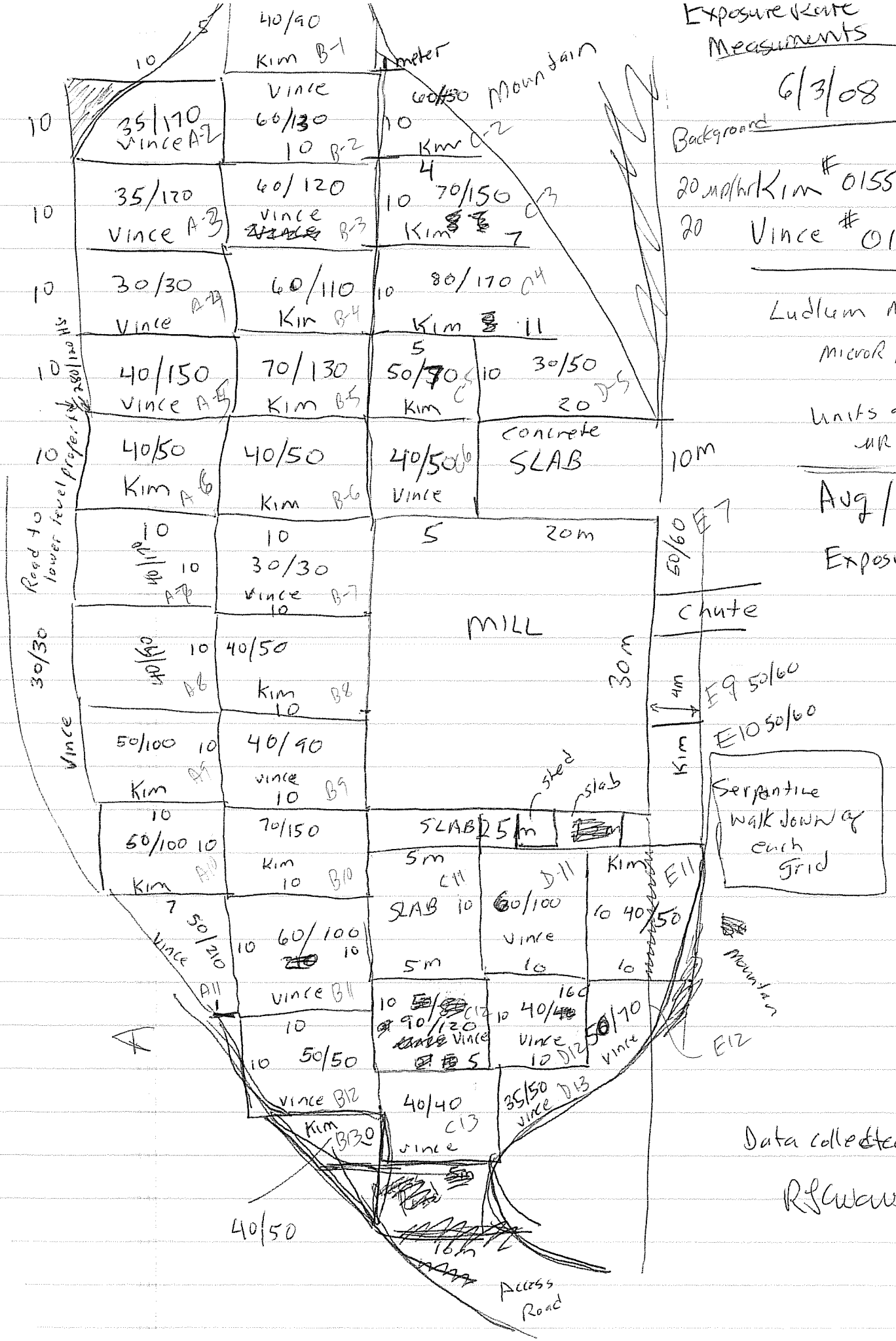
Ludlum Model 19

microR meters

Units of mR/hr

Avg / Max

Exposure rates



Data collected 6/3/08

RJ Edwards 6/6/08

ACTIVITY SURVEY RECORD

SITE SRUD
AREA Inside mill
START TIME:
END TIME:
DATE: 5/30/08
SURVEYOR(S) EVANS

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Frisker	Ludlum 3	44-9	20	.116	755

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: AVG				TYPE: MAX					
	c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
Agitator tank	100	.5	.058	1724	600	.5	.058	10,345	NA	Exterior only
Super Sack	20	.5	.058	344	100	.5	.058	1724		Disposed to be as trash
Super Sack	20	.5	.058	344	100	.5	.058	1724		Disposed to be as trash
Front end loader	100	.5	.058	1724	200	.5	.058	3448		Bucket and Blade

CALCULATION BY: R Evans DATE: 6/9/08

DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

ACTIVITY SURVEY RECORD

SITE SRUD
AREA Inside mill
START TIME:
END TIME:
DATE: 6/2/08
SURVEYOR(S) Evans

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Frisker	Ludlum3	44-9	40	.116	755

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: AVG				TYPE: MAX					
	c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
Grinder	100	.5	.058	1724	600	.5	.058	10,345	NA	metal surface

CALCULATION BY: RJ Cuhel DATE: 6/9/08

DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

ACTIVITY SURVEY RECORD

SITE SRND
AREA MILL
START TIME:
END TIME:
DATE: 6/3/08
SURVEYOR(S) EVANS

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Ludlum	Model 3	44-9	20	.116	755

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: AVG				TYPE: MAX					
	c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
Shovel	20	.5	.058	345	60	.5	.058	1034	NA	
Shovel	20	.5	.058	345	60	.5	.058	1034		
shovel	20	.5	.058	345	80	.5	.058	1379		
Pick axe	40	.5	.058	690	60	.5	.058	1034		
crow bar	40	.5	.058	690	60	.5	.058	1034		
Broom	40	.5	.058	690	80	.5	.058	1379		
Bucket, 5g	40	.5	.058	690	60	.5	.058	1034		
Bucket, 5g	40	.5	.058	690	60	.5	.058	1034		
Step Sign	20	.5	.058	345	40	.5	.058	690		
Step Sign	20	.5	.058	345	40	.5	.058	690		
Cooler	30	.5	.058	517	60	.5	.058	1034		
Fire extinguiser	20	.5	.058	345	30	.5	.058	517		
Respirator	20	.5	.058	345	20	.5	.058	345		
Respirator	20	.5	.058	345	20	.5	.058	345		
Respirator	20	.5	.058	345	20	.5	.058	345		
loader bucket	200	.5	.058	3448	300	.5	.058	5172		

CALCULATION BY: RJWarn DATE: 6/9/08

DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

ACTIVITY SURVEY RECORD

SITE SRND
AREA MILL
START TIME: 1045am
END TIME:
DATE: 6/3/08
SURVEYOR(S) Evans

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Ludlum	model 3	44-9	20	.116	755

LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: AVG				TYPE: MAX					
	c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
~~Lad~~ Loader Bucket	100	.5	.058	1724	200	.5	.058	3448	NA	metal
Shovel	20	.5	.058	345	30	.5	.058	517		
mini excavator	50	.5	.058	862	200	.5	.058	3448		treads, grater, cab
blue top box	20	.5	.058	345	40	.5	.058	690		

CALCULATION BY: RSWard DATE: 6/9/08

DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

Sophia

ACTIVITY SURVEY RECORD

SITE SRUD
AREA MILL
START TIME: 1000am
END TIME: 1015am
DATE: 6/2/08
SURVEYOR(S) Conway
Evans-scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
	E600	SHP380AB			
		α	21	221 dpm	
		β	369	5721 dpm	

~~Outdoor concrete~~ Indoor

LOCATION Grid	DIRECT DETECTOR MEASUREMENTS TYPE: α c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	TYPE: β c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
E-1 1-1	268	0.25	0.381	2594	1853	.5	0.129	23002		around agitator concrete
E-1 1-1	232			2216	1291			14291		concrete
E-1 1-1	137			1218	937			8804		concrete
D-1 1-1	175			1617	910			8386		concrete
D-1 1-1	119			1029	770			6216		concrete
D-1 1-1	110			934.5	562			2992		wood
E-1 1-1	294			2867	1311			14,601		wood
E-1 1-1	235			2247	1507			17639		wood
E-1 1-1	232			2216	1422			16322		wood
F-1 1-1	171			1575	610			3736		under grinder concrete

Area Decomm'd

CALCULATION BY: [signature] DATE: 6/4/08

DATA REVIEWED / DATE

R Edwards 6/6/08
CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

Sophia

SITE SRNS
AREA Bldg 3 Foundation
START TIME: 1045am
END TIME: 1120am
DATE: 6/2/08
SURVEYOR(S) Conway
Evans-Scribe

ACTIVITY SURVEY RECORD

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Ebersline	E600	SAP 380#B			
		α	21		
		β	369		

outdoor concrete

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		
A-1	27	1/4	.381	63 ✓	300	.5	.129	BKG	-1070	
A-2	87	1/4		693	570	.5		3116		
A-3	29	1/4		84	366	.5		BKG	-47	
A-4	14	1/4		< BKG -73	359	.5		BKG	-155	
A-5	19	1/4		< BKG -21	350	.5		BKG	-295	
A-6	24	1/4		31.5	389	.5		310		
B-1	40	1/4		199	482	.5		1752		
B-2	98	1/4		808	726	.5		5534		
B-3	28	1/4		74	411	.5		651		
B-4	21	1/4		0	389	.5		310		
B-5	19	1/4		< BKG -21	408	.5		605		
B-6	20	1/4		< BKG -19	376	.5		108		
C-4	169	1/4		1554	1048	.5		10,525		
C-5	288	1/4		2806	1081	.5		11,036		
C-6	37	1/4		168	485	.5		1798		
D-4	151	1/4		1365	1565	.5		18538		

CALCULATION BY: [signature] DATE: 8/4/08

DATA REVIEWED / DATE

R Edwards 6/6/08
CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)

corrected backgrounds

Sophia

Pg 2 of 2

ACTIVITY SURVEY RECORD

SITE: SRUD
AREA: Bldg 3 Foundation
START TIME: 1120am
END TIME:
DATE: 6/2/08
SURVEYOR(S): Conway
Evans-Scribe

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Eberline	E600	SHP380AB			
		α	= 21		
		β	= 369		

concrete floor - outdoors

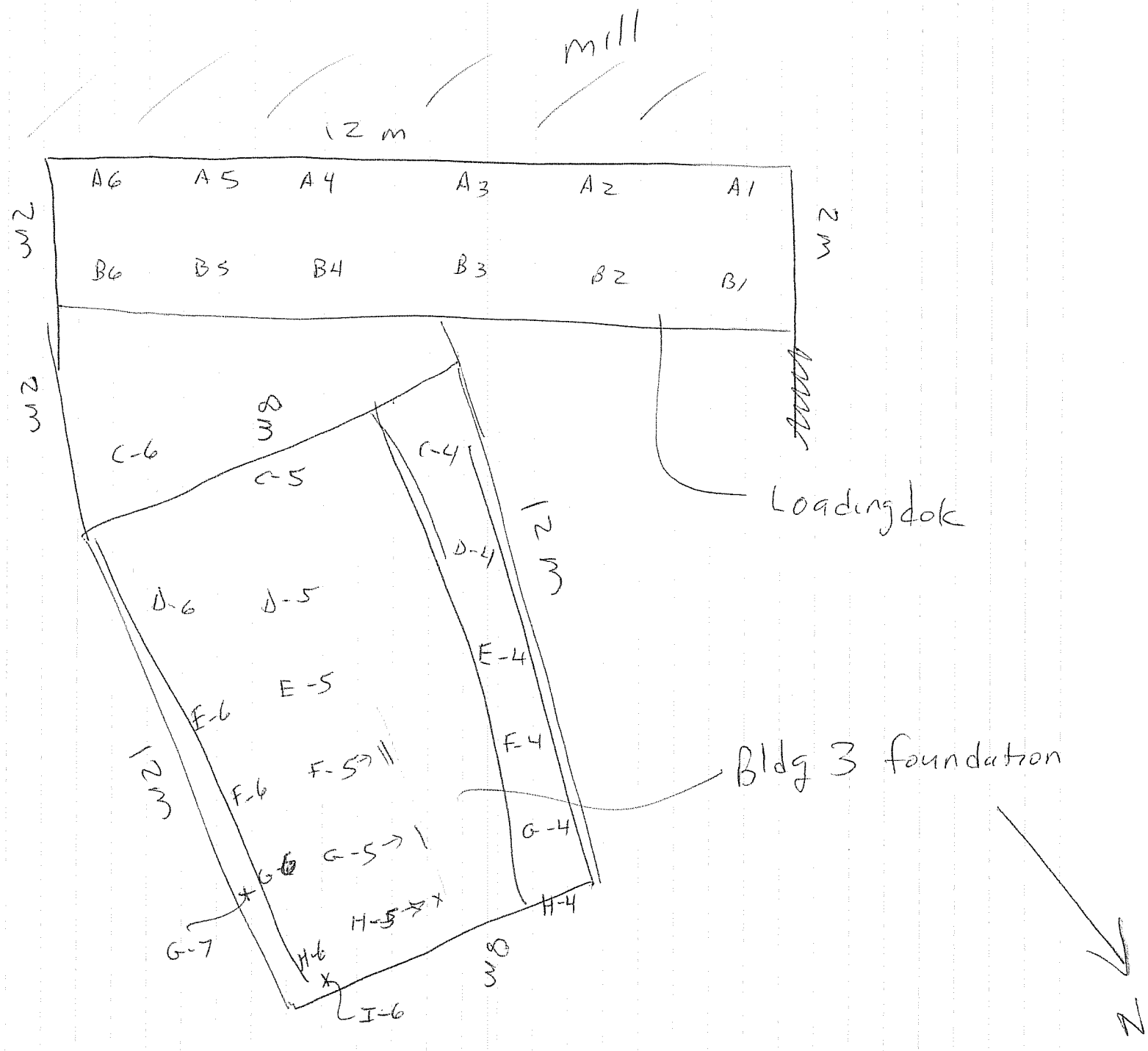
LOCATION	DIRECT DETECTOR MEASUREMENTS								SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
	TYPE: α				TYPE: β					
	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²		
D-5	196	1/4	0.381	~~919~~ 1838	919	.5	0.189	8525		
D-6	259	1/4		2499	1197	.5		12834		
E-4	177	1/4		1638	1772	.5		21747		
E-5	455	1/4		4557	1666	.5		20104		
E-6	182	1/4		1690	694	.5		5038		
F-4	230	1/4		2194.5	2080	.5		26521		
F-5	345	1/4		3402	1255	.5		13733		
F-6	304	1/4		2972	1291	.5		14291		
G-4	59	1/4		399	1702	.5		20662		
G-5	167	1/4		1533	1368	.5		15485		
G-6	191	1/4		1785	1109	.5		11,470		
H-4	71	1/4		525	562	.5		2992		wood
H-5	155	1/4		1467	699	.5		5115		
H-6	94	1/4		7665	664	.5		4573		
I-6	142	1/4		1271	887	.5		8029		
G-7	106	1/4		893	616	.5		3829		ledge

CALCULATION BY: [signature] DATE: 6/4/08

DATA REVIEWED / DATE

[signature] 6/6/08
CALCULATIONS REVIEWED / DATE

Figure B-12 (Front)


mill
12 m
A6 A5 A4 A3 A2 A1
B6 B5 B4 B3 B2 B1
32
32
C-6
C-5
C-4
D-6 D-5
D-4
E-5
E-4
F-6
F-6
F-5
F-4
G-5
G-4
G-7
H-6
H-5
H-4
I-6
12
12
30
Loading dok
Bldg 3 foundation
N

RJ Ward
6/6/08

ACTIVITY SURVEY RECORD

SITE SRUD
AREA SW END of Building
START TIME: 0730
END TIME: 0840
DATE: 6/3/08
SURVEYOR(S) Conway, WATKINS WATSON

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
E-600	#790	#707 072358			
Cal. 19 June 08	Due 14 Jan 09	Sophia α	22.6		
		β	342		

2m Grids

LOCATION	DIRECT DETECTOR MEASUREMENTS TYPE: α c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	TYPE: β c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
A1	21	.26	.381	BKG-17	330	.5	.129	BKG	-186	Concrete wall support
A2	15			BKG-80	312			BKG	-465	
A3	23			~~10~~ 4	328			BKG	-217	
A4	17			BKG-59	373			481		
A5	7			BKG-164	314			BKG	-434	
A6	14			BKG-90	336			BKG	-93	
A7	12			BKG-111	317			BKG	-388	
A8	18			BKG-48	305			BKG	-574	
A9	24			~~38~~ 15	345			47		
B1	41			~~261~~ 225	486			2232		Floor Concrete
B2	47			256	578			3658		
B3	118			1002	633			4511		
* B4	429			4267	1396			16337		
B5	147			1306	517			2713		
B6	23			4	362			310		
B7	25			252	327			BKG	-233	

CALCULATION BY: [signature] DATE: 6/4/08

DATA REVIEWED / DATE

CALCULATIONS REVIEWED / DATE [signature] 6/6/08
corrected backgrounds

Figure B-12 (Front)

ACTIVITY SURVEY RECORD

SITE SRNS
AREA SW End of Bldg
START TIME: 0730
END TIME: 0840
DATE: 6/3/08
SURVEYOR(S) Conway, Watkins
WATSON
2m Grids

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
E600 #790	#790	#907 Sophia			
Cal 14 June 08		α	22.6		
Due 14 June 09		β	342		

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		
B-8	5	.25	.381	BKG-185	316	.5	.129	BKG	-403	Concrete Floor
B-9	19			BKG-38	345			47		Concrete Half Wall
C-1	18			BKG-48	379			574		Concrete Floor
C-2	20			BKG-27	399			884		
C-3	66			456	473			2030		
C-4	31			88	410			1054		
C-5	26			357	371			450		
C-6	27			46.2	395			822		
C-7	14			BKG-90	331			BKG	-171	
C-8	8			BKG-153	353			171		
C-9	11			BKG-122	362			310		
D-1	20			BKG-27	310			BKG	-496	wood on top of concrete
D-2	17			BKG-59	345			47		Concrete floor
D3	17			-59	422			1240		
D4	21			-17	406			992		
D5	17			-59	417			1163		

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Corrected background values

Figure B-12 (Front)

ACTIVITY SURVEY RECORD

Inside

SITE SRMP
AREA SW end of Building
START TIME: 0730
END TIME: 0840
DATE: 6/3/08
SURVEYOR(S) Conway, WATKINS
WATSON

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
E 600 #790		#907 Sphere			
		α	22.6		
		β	342		

LOCATION	DIRECT DETECTOR MEASUREMENTS TYPE: α c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	TYPE: β c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
D-6	15	.25	0.381	BKG-80	592	.5	~~0.381~~	3875		
D-7	21			BKG-17	394		.129	806		
D-8	31			88	412			1085		
* B-4	266	.25	.381	2556	1266			13,702		Concrete floor after
										recon
E-1	21			BKG-17	361			295		Concrete wall foundation
F-1	24			15	294		~~BKG~~	BKG	-744	↓
G-1	23			4	432			1395		↓
H-1	12			BKG-111	333		~~BKG~~	BKG	-140	↓
I-1	18			BKG-42	383			636		↓

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Figure B-12 (Front)

ACTIVITY SURVEY RECORD

PAD | Main Bldg | Scrubber

SITE SRUD
AREA O/S PAD SW of Bldg.
START TIME: 0840
END TIME:
DATE: 6/3/08
SURVEYOR(S) Conway, WATKINS, WATSON

TYPE	INSTRUMENT	DETECTOR Sophia	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
E600	790	907			
Cal: 14 June 08 Due 14 June 09			α 22.6		
			β 342		

LOCATION	DIRECT DETECTOR MEASUREMENTS TYPE: α c/---m	ϵ_S	ϵ_{Total}	dpm/100cm²	TYPE: β c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
A-1	60	.25	.381	393	1922	.5	0.129	24490		Concrete Pad
A2	39		1	172	384			651		
A3	20			BKG -27	376			527		
A4	14			BKG -90	867			8138		
A5	42			204	1686			20832		
B1	29			67	4400			62899		
B2	14			BKG -90	338			BKG	-62	
B3	13			BKG -101	326			BKG	-248	
B4	18			BKG -48	338			BKG	-62	
B5	16			BKG -69	348			93		
C-1	20			BKG -27	304			BKG	-589	
C2	27			46	357			140		
C3	21			BKG -17	217			BKG	-1938	Metal Pedestal
C4	25			25.2	336			BKG	-93	Concrete PAD
C5	10			BKG -13.2	327			BKG	-233	
D-4	10			BKG -13.2	310			BKG	-496	

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corrected background values

Figure B-12 (Front)

ACTIVITY SURVEY RECORD

P2 of 2

SITE SRUD
AREA Outside PAD
START TIME: 0840
END TIME:
DATE: 6/3/08
SURVEYOR(S) Conway, WATKINS WATSON

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
Electro	790	Sophia 907			
			α = 22.6		
			β = 342		

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		
D-5	11	0.25	0.381	BKG-122	329	0.5	.129	BKG	-202	Concrete PAD
E-4	34			120	392			775		↓
E5	14			BKG-90	315			BKG	-419	↓
F-4	16			BKG-69	335			BKG	-109	↓
F-5	18			BKG-48	317			BKG	-388	↓
A-1	64			435	579			3674		after decon
B-1	24			B×14.6	346			62		After decon

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corrected background values

Figure B-12 (Front)

ACTIVITY SURVEY RECORD

SITE SKUD
AREA Backside PAO (O/S) behind Bldg
START TIME: 1445
END TIME: 1545
DATE: 6/3/08
SURVEYOR(S) Conway
Watson

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
E600	#790	Sophist #907			
Cal 14 Jan 08 Due 14 Jan 09			α = 22.6		
			β = 342		

2 meter grid

LOCATION	DIRECT DETECTOR MEASUREMENTS TYPE: α c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	TYPE: β c/---m	ϵ_s	ϵ_{Total}	dpm/100cm²	SMEAR #	SURFACE TYPE AND CONDITION (other remarks)
A1	38	.25	.381	~~550~~ 162	550	.05	0.129	3224		Concrete PAD
A2	61			~~604~~ 403	601			2720		
A3	232			~~1003~~ 2199	1003			6941		
A4	128			~~867~~ 1633 ~~1633~~	867			8138		
A5	38			~~475~~ 161	475			2067		
A6	35			~~387~~ 130	387			698		
A7	29			~~378~~ 87	378			558		
A8	21			~~BKG~~ -17	363			326		
A9	14			~~BKG~~ -90	350			124		
A10	20			~~BKG~~ -27	358			248		
A11	28			~~528~~ 57	528			2883		Wood
A12	34			~~425~~ 120	425			1287		Concrete PAD
A13	15		-80	~~BKG~~ BKG	330			BKG	-186	
A14	21		-17	~~BKG~~ BKG	309			BKG	-512	
B1	27			~~403~~ 46	403			946		
B2	29			~~341~~ 67	341			BKG	-16	

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Figure B-12 (Front)

ACTIVITY SURVEY RECORD

(O/S)

SITE: SRCD
AREA: Backside Pad behind Blg
START TIME: 1445
END TIME: 1545
DATE: 6/3/08
SURVEYOR(S): Conway, Watson

TYPE	INSTRUMENT	DETECTOR	BKG. (cpm)	INSTRUMENT EFF. (ϵ_i)	MDC dpm/100cm²
E600	790	Sphon 907			
			α = 22.6		
			β = 342		

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		
B3	31	.26	.381	88	452	.5	.29	1705		Concrete Pad
B4	31			88	455			1752		
B5	24			15	420			1209		
B6	19			BKG-38	372			315		
B7	22			BKG-6	370			434		
B8	41			193	580			3689		

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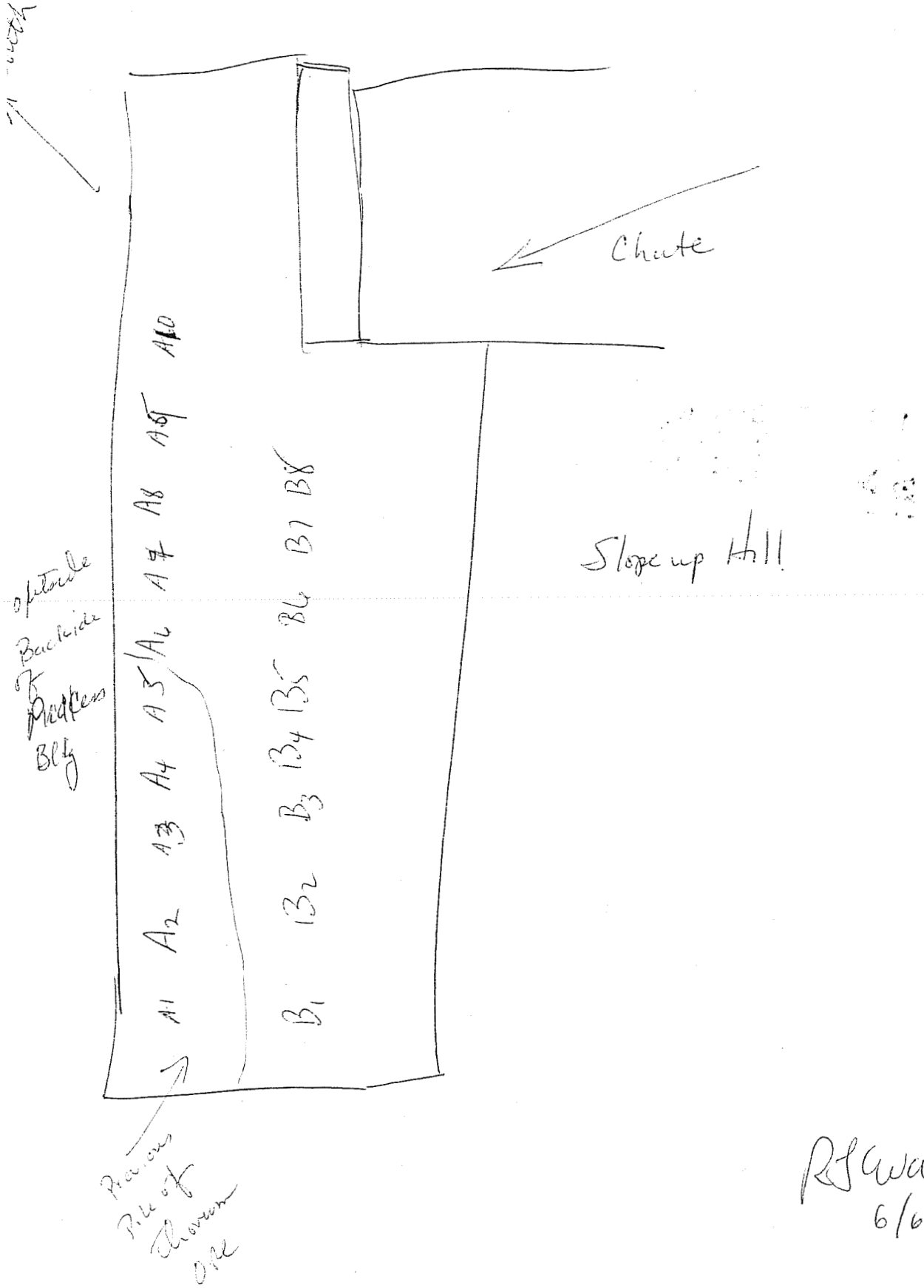
Figure B-12 (Front)

corrected background values


Chute
Slope up Hill
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10
B1 B2 B3 B4 B5 B6 B7 B8
Previous Pile of Thorium Ore

RJ Ward
6/6/8