



**ROCKY MOUNTAIN  
ENERGY**

40-8380

A Subsidiary of  
Union Pacific Corporation

04008380400E

RETURN ORIGINAL TO PDR, HQ.

March 10, 1986

Gary Koowinski  
U. S. Nuclear Regulatory Commission  
Uranium Recovery Field Office  
P. O. Box 25325  
Denver, CO 80225



Dear Gary,

As per your request, I have enclosed photocopies of the radiation surveys on Nine Mile Lake equipment removed from the project.

For your information, I am making plans to remove all contaminated fiberglass insulation from the process building in the near future.

If you have any questions, please call me at (307)235-0175.

Sincerely,

*Pat Spieles*  
Pat Spieles

8604040580 860310  
PDR ADCK 04008380  
C PDR

PRS/jd

FEE NOT REQUIRED

DESIGNATED ORIGINAL

Certified By *Mary C. Hood*

ISL Development  
P.O. Box 3719  
Casper, Wyoming 82601  
307/237-8326

*Adal Info*

4/6

Gamma survey - Aug 30, 1983, NML facility  
 Ludlum Model 125 Micro R meter  
 by Pat Spiles RMEC

Site  
 Parking area 40' E of Plant garage door

	psi/a
I-75	22
M-8A	18
M-ED	18
I-16A	17
OB-1	40
P-15	40
I-19	37
OB-23	25
I-18	27
M-25	25
OB-2	23
M-24	24
Panel 2 Panel Board	24
I-17	41
P-26	27
I-28	26
PL-73	50
M-21	20
Bongard - Used batteries	19
Bongard	16
Bongard	20
Bongard	24
I-29	19
M-22	19
M-23	19
74	(cont)

Transcribed from dictation by Pat Spiles 9/23/83

Patspikes 10/11/83

Site	ft/hr
Pond B berm SW corner	19
Pond B bank SW corner	20
Pond B bottom SW corner	25
Pond B bottom, 50' in from SW corner, toward center	42
Pond B Center	25
Pond B 50' toward center SE corner	24
Pond B Bottom SE corner	19
Pond B SE corner bank	21
Pond B SE corner berm	19
Pond B Center E berm	23
Pond B Bottom E side	26
Pond B 50' E side	27
Pond B 50' NE corner	35
Pond B NE corner	26
Pond B NE corner bank	27
Pond B NE corner berm	28
Pond B midpoint N berm	40
Pond B midpoint N berm bank	27
Pond B midpoint N side	29
Pond B 50' NW corner	37
Pond B NW corner	42
Pond B NW corner bank	40
Pond B NW corner berm	38
Pond B midpoint W berm	24
Pond B W bank midpoint	29
Pond B midpoint W side	90
Pond B W side 50'	38
Pond B 50' in S midpoint	24
Pond B E side midpoint	24
Pond B E bank midpoint	20
Pond B E berm midpoint	22

Patspikes 10/11/83

Site	ft/hr
Pond A SW corner upper berm	35
Pond A SW corner lower berm	50
Pond A SW corner	100
Pond A 50' in SW corner	160
Pond A S side 1/4 dist. SW corner	130
Pond A S side midpoint	125
Pond A S side 1/4 up from SE corner	150
Pond A SE corner	35
Pond A SE corner lower berm	23
Pond A SE upper	80
Pond A midpoint E side	40
Pond A NE corner 50' in	40
Pond A NE corner	27
Pond A NE corner lower berm	21
Pond A NE corner upper berm	18
53 Air Quality Station	
Pond A N side 1/4 way up NE corner	80
Pond A N side midpoint	85
Pond A N side 1/4 way down NW corner	90
Pond A 50-60' in NW corner	175
Pond A NW corner	160
Pond A NW corner lower berm	40
Pond A NW corner upper	26
Pond A W side midpoint	115
Sept 23, 1983 Gamma Survey using Ludlum model 125 micrometer	
I-1	20
I-2	20
M-12	20
I-3	21

Pat Spulke 10/11/83

1

Site	mp/hr
I-4	23
I-5	22
I-6	19
P1-A	21
P1	19
M-11	19
M-54	21
Pipeyard	18
M-55	21
I-9	20
GS-65	20
I-60	21
SM-68	18
I-58	22
P-62	19
P-67	20
I-58	20
GM-63	19
I-61	20
M-66	21
M-56	18
WF 72	22
M-41	20
M-42	20
I-48	23
I-47	21
P-50	35
P-53	24
OB 51	20
I-49	22
I-44	20

5

Site	mp/hr
M-43	20
WF 69	19
WF 70	20
OB 52	23
I 45	45
I 46	20
WF 71	20
M 40	21
M 40 B	20
M 40 A	20
M 57	21
I-10	21
M-7	20

water tank west of plant

parking lot between main office & purchasing trailer

around big gray

around big blue

outside W end building

transcribed from dictaphone by Barb Dennis 10-10-83

Pat Spulke 10/11/83

Jan 31, 1964

Transfer of equipment to SCA

Item	quantity	spare parts
1. Pig Tank #801, Inv 3	18	30
2. Roll Tank #102, Inv 2	27	24
3. 4x4 Tank #401, Inv 3	18	34
4. 5x5 Tank #504	18	34
5. Hand pump Model 3045T	17	30
S/N 7918925		
6. Pump Motor, Westinghouse	17	32
S/N 7705		
7. Tank #401	18	34
8. Lighting Arm, Inv. 42	22	24
9. Lightning Arm, Inv. 93	19	16
10. Halliburton Tolerator, Inv. 46	17	32
11. Halliburton Tolerator, Inv. 43	15	26

Truck appropriately placarded w/ "Radioactive"

instruments: Eberline MS-3 Miniradiometer (4095) w/ S/N 12128  
 used in CH<sub>2</sub>O<sub>4</sub>  
 Ludlum Model 125 Monitor with S/N 12123

Pot Spills 1/31/64

Feb 2, 1964

Transfer of misc. office supplies from  
 NMC to Broomfield. Items were packed  
 in individual boxes; included pens,  
 pencils, printed forms, files, etc.

Box #	per hr
1	14
2	14
3	15
4	14
5	15
6	15
7	14
8	15
9	15
10	13
11	15
12	14
13	15
14	13
15	15
16	14

Ludlum Model 125 per meter. S/N 12128

Pot Spills 2/2/64



Feb 8, 1984

Transfer of equipment and supplies from  
NML to Bell via Larry KitchumItem

Sump pumps SN 6654

8 boxes 21C fittings

Gould Pump trouble meter inv. # 32,33

μr/hr

19

17-19

19

Ludlum Model 125  $\mu$ R meter SN 12128

2/8/84

Pat Spiller

Feb 8, 1984

Alpha contamination Survey - 2/6/84  
Sample Plant

<u>Smear #</u>	<u>Location</u>	<u>Source</u>	<u>Removable alpha dpm/in</u>
1	Sample Plant Door	15 ft/hr	3.1
2	Sample Plant Deck		<1.0
3	Apex Motor stand		8.8
4	Dewer Jig guides on side		8.1
5	Dewer Jig guides on mill		7.1
6	Bag House on well outside		19.9
7	Bag House inside wall		11.1
8	Wardrobe cabinets in SE corner		13.5
9	Chimneys in SE corner along Feed Hopper		22.3
10	SE Corner guides along outside wall		4.7

Instrument

Eberline MS-3 MiniSealer/SN 649 G SAC-RS

efficiency factor - 2.37

TK-230 chkd source (H 11127) 13040 dpm; 5492 cpi

Average of 3 one minute counts minus background

Feb 29, 1984

Transfer of safety supplies from Nine Mile Lake to Salt Lake Slag Products.

1 in Box containing:

2 first aid kits

6 Willson Model 1200 respirators

4 cases R-25 Willson cartridges

per/hr

14

Instrument: Ludlum Model 125 Micrometer SN 12128

March 13, 1984

Transfer of office equipment, office supplies and files to Broomfield from Nine Mile Lake facility. The move was contracted to Burke Moving and Storage of Carper, WY. All items moved were numbered and surveyed for radiation prior to the move. P.R. Jacobs measured gamma - beta using a Vinten Type III model # 490 w 489-4 probe S/N 2725. K. Patrick performed smear tests for removable alpha on all items except boxes containing file folders. These boxes were scanned for  $\gamma$ - $\beta$  only. The smears were taken with methanol-wetted Nu-Con cloth smears over a 100 cm<sup>2</sup> surface and counted on an Eberline MS-3 minivials w SAC/RS.

Item #	file cabinet	$\gamma$ - $\beta$ mr/hr	Removable alpha dpm/100cm <sup>2</sup>
1	credenza	0.02	11.5
2	desk	0.025	0
3	chair	0.02	6.9
4	chair	0.015	6.9
5	desk	0.015	0
6	Trash can	0.025	4.6
7	Trash can	0.015	6.9
8	desk	0.020	6.9
9	desk chair	0.015	9.2
10	desk chair	0.025	2.3
11	chair	0.015	9.2
12	Trash can	0.010	9.2

T<sub>90</sub> per

Item #	Item	Material	Removable alpha		Item #	Item	Material	Removable alpha		Item #	Item	Material	Removable alpha	
			dpm	100 cm <sup>2</sup>				dpm	100 cm <sup>2</sup>				dpm	100 cm <sup>2</sup>
13	Chair	0.020	2.3		44	File Cabinet	0.020	6.9		44	File Cabinet	0.020	6.9	Renovable 1.3 alpha dpm/100cm <sup>2</sup>
14	Chair	0.015	2.3		45	File Cabinet	0.020	9.2		45	File Cabinet	0.020	9.2	
15	File Cabinet	0.020	2.3		46	File Cabinet	0.015	6.9		46	File Cabinet	0.015	6.9	
16	Desk	0.015	0.0		47	File Cabinet	0.010	4.6		47	File Cabinet	0.010	4.6	
17	Chair	0.010	2.3		48	File Cabinet	0.015	2.3		48	File Cabinet	0.015	2.3	
18	Chair	0.015	9.2		49	Book Shelf	0.015	11.5		49	Book Shelf	0.015	11.5	
19	Desk	0.010	6.9	type	50	Book Shelf	0.020	0.0		50	Book Shelf	0.020	0.0	
20	Desk	0.015	2.3		51	Book Shelf	0.020	4.6		51	Book Shelf	0.020	4.6	
21	Desk	0.015	11.5		52	Book Shelf	0.020	9.2		52	Book Shelf	0.020	9.2	
22	Chair	0.010	6.9		53	Chair	0.025	6.9	Toppec	53	Chair	0.025	6.9	Toppec
23	Book Shelf	0.015	6.9		54	Book Shelf	0.020	6.9		54	Book Shelf	0.020	6.9	
24	Credenza	0.010	16.1		55	Book Shelf	0.015	11.5		55	Book Shelf	0.015	11.5	
25	Chair	0.015	4.6		56	Book Shelf	0.015	0.0		56	Book Shelf	0.015	0.0	
26	Book Shelf	0.025	9.2		57	Folding Table	0.020	2.3		57	Folding Table	0.020	2.3	
27	Coat Tree	0.015	2.3		58	Credenza	0.015	2.3	Toppec	58	Credenza	0.015	2.3	Toppec
28	Secretary Chair	0.015	9.2		59	Chair	0.020	9.2	Toppec	59	Chair	0.020	9.2	Toppec
29	File Cab.	0.020	16.1		60	Desk	0.025	0.0	Toppec	60	Desk	0.025	0.0	Toppec
30	Desk	0.015	4.6	Toppec	61	Book Shelf	0.015	4.6	Toppec	61	Book Shelf	0.015	4.6	Toppec
31	Chair	0.025	2.3		62	Typing Table	0.025	4.6		62	Typing Table	0.025	4.6	
32	File Table	0.020	9.2		63	Chair	0.015	6.9		63	Chair	0.015	6.9	
33	File Cabinet	0.015	9.2		64	Chalk Board	0.025	4.6		64	Chalk Board	0.025	4.6	
34	Book Shelf	0.010	4.6		65	Storage Cabinet	0.010	6.9		65	Storage Cabinet	0.010	6.9	
35	Key Cabinet	0.025	2.3		66	Storage Cabinet	0.015	6.9		66	Storage Cabinet	0.015	6.9	
36	File Cabinet	0.015	9.2		67	Storage Cabinet	0.015	4.6		67	Storage Cabinet	0.015	4.6	
37	Safe	0.020	6.9		68	Conference Table	0.012	13.8	Toppec	68	Conference Table	0.012	13.8	Toppec
38	File Cabinet	0.015	6.9		69	Paper Cutter	0.015	16.1	Toppec	69	Paper Cutter	0.015	16.1	Toppec
39	File Profile	0.010	6.9		70	Chair	0.020	2.3		70	Chair	0.020	2.3	
40	Desk	0.015	4.6		71	Chair	0.020	9.2		71	Chair	0.020	9.2	
41	Chair	0.015	11.5		72	Chair	0.015	6.9		72	Chair	0.015	6.9	
42	Desk Chair	0.020	4.6		73	Chair	0.015	4.6		73	Chair	0.015	4.6	
43	File Cabinet	0.010	6.9		74	Chair	0.010	4.6		74	Chair	0.010	4.6	



Item #		γ-B	Removable alpha dpm/100 cm <sup>2</sup>
75	Credenza	0.010	2.3
76	Credenza	0.015	2.3
77	Table	0.025	6.9
78	Chair	0.015	4.6
79	Chair	0.015	2.3
80	Desk	0.020	0.0
81	Desk Chair	0.025	4.6
82	Credenza	0.025	4.6
83	Book Case	0.015	11.5
84	Table	0.015	2.3
85	Waste Basket	0.025	6.9
86	Waste Basket	0.025	2.3
87	Waste Basket	0.020	6.9
88	Waste Basket	0.020	11.5
89	Waste Basket	0.015	9.2
90	Waste Basket	0.020	11.5
91	Desk	0.025	9.2
92	Chair	0.015	0.0
93	Balance Rack	0.015	9.2
94	Waste Basket	0.010	0.0
95	Book Case	0.025	6.9
96	Files F-1	0.020	11.5
97	Files F-2	0.025	—
98	Files F-3	0.025	—
99	Files F-4	0.025	—
100	Files F-5	0.015	—
101	Files F-6	0.015	—
102	Files F-7	0.015	—
103	Files F-8	0.015	—
104	Files F-9	0.015	—
105	Files F-10	0.020	—

Item #		γ-B	Removable alpha dpm/100 cm <sup>2</sup>
106	Files F-11	0.015	—
107	Files F-12	0.020	—
108	Files F-13	0.015	—
109	Files F-14	0.020	—
110	Files F-15	0.015	—
111	Files F-16	0.015	—
112	Files F-17	0.025	—
113	Files F-18	0.010	—
114	Files F-20	0.025	—
115	Files F-21	0.010	—
116	Files F-22	0.025	—
117	Files F-23	0.015	—
118	Desk Chair	0.020	0.0
119	Desk	0.020	6.9
120	Credenza	0.015	4.6
121	Desk	0.025	11.5
122	Desk Chair	0.015	18.4
123	Waste Basket	0.020	2.3
124	Storage Cabinet	0.010	2.3
125	Book Shelf	0.015	6.9
126	Desk	0.010	13.8
127	Desk Chair	0.020	2.3
128	Backboard	0.025	16.1
129	Half backboard	0.020	13.8
130	Typing Table	0.015	2.3
131	Desk	0.020	6.9
132	Chair	0.015	4.6
133	File Cabinet	0.025	4.6
134	File Cabinet	0.025	6.9
135	Desk Chair	0.015	4.6
136	Cabinet	0.020	11.5

Item #		γ-B	Removable alpha dpm/100 cm <sup>2</sup>
137	Files	0.015	—
138	Files	0.020	—
139	Files	0.015	—
140	Files	0.020	—
141	Files	0.015	—
142	Files	0.015	—
143	Files	0.025	—
144	Files	0.010	—
145	Files	0.025	—
146	Files	0.010	—
147	Files	0.025	—
148	Files	0.015	—
149	Files	0.025	—
150	Files	0.010	—
151	Files	0.025	—
152	Files	0.015	—
153	Files	0.025	—
154	Files	0.010	—
155	Files	0.025	—
156	Files	0.015	—
157	Files	0.025	—
158	Files	0.010	—
159	Files	0.025	—
160	Files	0.015	—
161	Files	0.025	—
162	Files	0.010	—
163	Files	0.025	—
164	Files	0.015	—
165	Files	0.025	—
166	Files	0.010	—
167	Files	0.025	—
168	Files	0.015	—
169	Files	0.025	—
170	Files	0.010	—
171	Files	0.025	—
172	Files	0.015	—
173	Files	0.025	—
174	Files	0.010	—
175	Files	0.025	—

Item# 4-B  
115 Dry Chem Feeder 0.025  
116 Fan 0.020

Removable  
alpha  
dpu/100cm<sup>2</sup>

2.3  
23.0

20 June  
3/14/84

May 24, 1984

Transfer of Office Trailer to Turkey, AZ

Elder, Quinn 14x56 (RME property #923)

Gamma Scan

A Ludlum model 45-5 meter was  
used to scan each office of the trailer  
and the hallway and exterior walls.  
All values ranged from 16-19  $\mu$ R/hr.

Pat Apiles

May 24, 1984

The following items are being transferred  
to the Salt Lake Slag Products

Item	no./h- gamma	dpu/100 square meters
1. Pipe Reader (no. 296)	16	84.6
2. Pipe Reader (no. 294)	18	68.2
3. Pipe Reader (no. 292)	17	91.7
4. Pipe Cutter (no. 293)	18	56.4
5. Pipe Dye (no. 298)	18	72.9
6. Power Threader (no. 293)	10	72.9
7. Power Threader Adapter (no. 228)	9	35.3
8. Power Threader Dye (no. 294)	9	<1.0

Instrument

Ludlum model 125 micrometer

Etchline MS-3 / SAC-RS s.f. 2.35  
No-Con cloth means wetted in methanol

May 25, 1984

Transfer of Nitro balance to Salt Lake  
Slay Products

Gamma  
17 pc/hr  
Rear Alpha den/100cm<sup>2</sup>  
37

May 30, 1984

Transfer of air compressor to SL Slay

Gamma  
17 pc/hr  
Rear Alpha den/100cm<sup>2</sup>  
44

July 17, 1984

The following stems were spray painted.  
Prior to painting, each stem was surveyed  
for removable alpha

Stems gross net Removable alpha  
cm cm den/100cm<sup>2</sup>

dolly inflat. pins	24	9	21
dolly hand pins	27	12	28
Barrel Rack	24	9	21
Barrel #1	13	0	<1
"	28	13	31
"	20	5	12
Barrel dolly	13	0	<1
Fantastic Scale	15	0	<1
C-clamp	15	0	<1
America's finest.	26	11	26
Pony Wagon	18	3	7
Wheelbarrow	38	23	54

Barline MS-3 scale / SATRS with NaCon  
clock means added with methanol  
c.f. = 2.35

Sept 25, 1984. Transfer of motor to BCE.

Leakland Gaseous, 1480V, 3φ, TEFC motor (new - still in crate) SN D2271117

Gamma - 16 gal/hr  
Remover L - 4 dpm/100cm<sup>2</sup>

Ludlum Model 125

Eberline MSB - SACRS - 6 No Con Sources

Jan 21, 1985

Gross gamma survey  
Ludlum model 125

Site	% moisture	Surface
BM-12	6.25	14
Pond A	16.2	45
Pond B	17.05	38
A-40	7.97	14.2
P-50		35
M-43	4	13
P-15		37

1/21/85  
R<sub>222</sub>  
psi/g  
C.F.T.C.  
13 F 2  
10 F 2  
1.3 F 0

Surface	Location
13	
45	
32	
13.4	
22	
13	
34	

Feb 15, 1985

Gross gamma survey  
Ludlum model 125

Site	% moisture	Surface
M-21	16	9.16
P-73	25	6.02
I-18	20	7.52
I-19	30	7.53
P-15	39	5.62
I-17	21	12.12
Ext of M-93	15	6.44
P-1a	14	3.28
Claim Steels	13	4.66
Ext of S-3	30	8.64
Surface Sats S-3	40	25.65

R<sub>222</sub>  
psi/g  
C.F.T.C.  
5.9 F 0.8  
5.9 F 1.5  
2.8 F 1.0  
5.8 F 1.2  
177.3  
5.7 F 1.4  
1.2 F 0.6  
0.9 F 0.5  
1.1 F 0.6  
3.3 F 0.9

Oct 24, 1984. Transfer of 3'x4' fiberglass tank (11000) from warehouse to BCE. Tank had been used for BCE make-up.

Gamma survey	Remover alpha (mean)
inside tank 15 gal/hr	outside 2 dpm/100cm <sup>2</sup>
outside tank 15 gal/hr	inside 4 "

Ludlum Model 125

Eberline MS-7/SAC RS  
No-con down inner

March 27, 1985 Rotary Drum Vacuum Filter  
 Alpha contamination (unremovable)  
 Na-con cloth smeared  
 Eberline MS-3 / SAC R-5 c.f. = 1.99

Site	cpm	dpm/100cm <sup>2</sup>
Under grate #1	1180	2348
Under grate #2	596	1186
gate surface	62	123
inside trough	227	452
lower motor surface	63	125
outside drum	51	101
motor knife	106	211

Pat Spills 3/27/85

The area under the grating was scrubbed with detergent, rinsed, scrubbed with conc. HNO<sub>3</sub>, rinsed, scrubbed with HCl, rinsed and rescrubbed 4/1/85.

c.p.m.  
117

Removal  
dpm/100cm<sup>2</sup>  
234

Pat Spills 4/1/85

Pat Spills 4/7/85 2:3

April 8, 1985

The following items were sold to B&J Construction Co. of Gannett Co. Prior to release to the unrestricted area, the items were surveyed as follows.

Item	Removable alpha decay/cm <sup>2</sup>	Gamma µr/hr
Cole-Palmer Lab Pump #548	10	14
Cole-Palmer 7807 pump & hose #551	< 1	14
Sigbee flowmeter #233	64	15
Cole-Palmer pump & hose #549	8	14
Sigbee flowmeter #232	82	14
Naicon 1000 pH meter #46	68	13
Barnes dolly	60	14
Warehous handcart #543	54	14
Sawzall #2023	40	15
Beck-Reno Pump #510	50	15
Nasa Pump #513	40	15
Drum filter #506	234	14
Metric wrenches #2071	< 1	14
Socket set #2080	2	14
PMI Lab pumps (#552-555)	10	15

Na-Con cloth smeared  
 MS-3 / SAC R-5 c.f. 1.99



Gamma Survey 8/25/05 Pot Apules RT, Bruce Hansen

Adams Survey 4/25/85

Ed. Spuler

Instructions:

- 1) Leadium 125 per meter SN 12128, calculated 3/27/85 by USOM Lt. R-226 source.
- 2) Vietnam Type 141 541 meter model 280 in probe, SN 2725/1852, calculated 3/27/85 by USOM Lt. R-226 source.

Baseline gamma established on spread and adjacent property using regional cell 84-12 as center of grid. Measurements taken every 100 feet in each cardinal direction. Results indicate too much fluctuation in readings on Victorias site due to wind and less sensitivity. Error in Victoria is probably  $\pm 10$  p.p.h. which is satisfactory for gamma survey.

SOUTH	NORTH		EAST		WEST	
	Lead	Wt	Lead %	Wt	Lead %	Wt
100'	12.5	0.18	12.5	0.20	13	0.19
100'	13.5	0.20	12.5	0.22	12.5	0.20
200'	13	0.15	12	0.18	12.5	0.22
300'	13.5	0.15	13	0.15	12.5	0.20
400'	13	0.20	13	0.20	12	0.22
500'	13	0.25	12.5	0.20	12.5	0.20
600'	13.5	0.25	13.5	0.12	13	0.10
700'	14.5	0.18	13.5	0.15	12	0.20
800'	14	0.15	14	0.15	12.5	0.22
900'	14	0.20	13.5	0.25	13	0.22
1000'	15	0.25	13.5	0.20	12	0.18

Lead = 12.5  
 Wt = 0.021

Lead = 0.76  
 Wt = 0.005

A = 44  
 A = 44

$$A = 44$$
$$99 = 0.76$$
$$Q = 12.8$$

$$R = 0.021$$

27

The designated sites for intercalating a gamma-R<sub>222</sub> correlation were surveyed using both the Ludlum Model 125 and Victoreen GM meters. Soil plugs were taken to a depth of 15 cm and sent to Queen's Lab for R<sub>222</sub>, 1202, &  $\alpha$  analysis. Three readings were taken at each site both at 10 min & 5 cm.

Location	V.C.T.	Lud <sup>1202</sup>	Lud <sup>125</sup>	I-13	R <sub>222</sub>
13	.025	12	.025	19	.025
14	.025	11	.025	18	.025
17	.015	6	.020	19	.021

M-40  
 A-13  
 C-1

<u>Code</u>	<u>Lat</u>	<u>Long</u>	<u>Lat</u>	<u>Long</u>	<u>Lat</u>	<u>Long</u>
<u>M-40</u>	13	.025	12	.025	19	.025
<u>E-41-43</u>	14	.025	14	.025	18	.025
	12	.015	13	.020	15	.021
	13	.025	13	.030		
	11	.025	13	.025		
	11	.025	13	.020		
	13	.010	12	.028		
	12.5	.012	11.5	.030		
	13.5	.012	12.5	.030		
	26	.015	21	.028		
	25	.015	22.5	.030		
	24	.015	22	.032		
	15	.017	15	.026		
	14.5	.022	15.5	.021		
	16	.024	15	.021		
	21	.018	24	.024		
	20.5	.024	25	.040		
	22	.028	23.5	.027		
	23	.022	28	.029		
	34	.026	29.5	.025		
	36.5	.029	29	.032		
	24.5	.024	23.5	.017		
	25	.028	23	.017		
	25	.021	24	.027		

## Gamma Survey 5/2/85

Site	10 meters	Scan	Site	10 meters	Scan
P-15	26.5	35	M-40	11.5	12
"	26.0	35	"	13	13
"	26.5	35	"	12	12
I-17	20.5	18.5	M-43	12	14
"	21	19	"	11.5	12.5
"	21	21	"	12	13
I-18	17.5	17	M-12	11	12
"	16.5	16.5	"	11	12
"	17.5	15.5	"	11	11
I-19	24	24.5	Quinn State	12	11
"	23	22.5	"	12.5	12
"	24	24	"	12	12.5
M-21	13	15			
"	13	16			
"	14	15			
P-73	21	22			
"	20	23			
"	20.5	22			
P-1A	11.5	13			
"	11.5	11.5			
"	11.5	12.5			

Model 12.5 Ludlum  $\mu$ R meter Pat SpulerCS 137 # CS7A chukson  
1050

## Gamma Survey 5/8/85

Site	10 meters	Scan	Site	10 meters	Scan
Claim	12	12.5	P-73	24.5	22
"	13	13	"	23	23
"	11.5	13	"	22	21.5
M-12	11	12	I-18	18	17.5
"	11.5	11	"	18	18
"	10.5	12	"	18	18.5
M-43	13.5	13	I-19	25	28
"	14	13	"	24	29
"	13.5	14	"	25	29
M-40	12	12	I-17	24	21.5
"	11.5	12.5	"	22	21
"	12	12	"	22	21
P-1A	11.5	13	P-15	27	41
"	13	14	"	27	40
"	12	13	"	28	42
M-21	15	16			
"	14	16			
"	14.5	15.5			

CS 137 # CS7A chukson  
1050Model 12.5 Ludlum  $\mu$ R meter Pat Spuler

5/7/85

848 timbers (24) were sold to Belwin  
Good Dullens Co.

Gamma - 15 gal/hr

Removable & - 2 dpm/100 cm<sup>2</sup>

4/8/85

Posterspace Treaty 871714 12460  
(inv. # 577)  $\gamma$  - 12-15 gal/hr  
Saled to Kibwin Drilling

5/6/85 Pump # 28 to Red

$\gamma$  - 17 gal/hr  
 $\alpha$  - 3 dpm/100 cm<sup>2</sup>

5/6/85

Gamma Survey - Ludlum Model 165

- Pat Spiller  
Model 165

	per/hr	per/hr
1	12	30
2	12	M 41
3	12	M 42
4	13	I 48
5	11.5	I 49
6	12.5	M 43
7	13.5	I 44
8	13	I 45
9	13	OB 51
10	13	P 50
11	12.5	P 53
12	14	OB 52
13	14.5	I 47
14	13.5	I 46
15	12.5	WF 72
16	12	WF 71
17	12	WF 70
18	13	WF 69
19	13.5	M 40A
20	13	M 40
21	13	M 40A
22	13	M 57
23	12	M 10
24	11.5	M 7
25	13.5	
26	13	
27	13	
28	14	
29	13	

check source 1100

Emma Survey 5/2/65  
Indian Head 100 ft. high 1000

Site	per/ha	Site	per/ha
11	12	51	11
12	12	52	11
13	12	53	11
14	12	54	11
15	12	55	11
16	12	56	11
17	12	57	11
18	12	58	11
19	12	59	11
20	12	60	11
21	12	61	11
22	12	62	11
23	12	63	11
24	12	64	11
25	12	65	11
26	12	66	11
27	12	67	11
28	12	68	11
29	12	69	11
30	12	70	11
31	12	71	11
32	12	72	11
33	12	73	11
34	12	74	11
35	12	75	11
36	12	76	11
37	12	77	11
38	12	78	11
39	12	79	11
40	12	80	11
41	12	81	11
42	12	82	11
43	12	83	11
44	12	84	11
45	12	85	11
46	12	86	11
47	12	87	11
48	12	88	11
49	12	89	11
50	12	90	11

check source 1000

check source 1000

Emma Survey 5/2/65

Site	per/ha	Site	per/ha
11	12	111	12
12	12	112	12
13	12	113	12
14	12	114	12
15	12	115	12
16	12	116	12
17	12	117	12
18	12	118	12
19	12	119	12
20	12	120	12
21	12	121	12
22	12	122	12
23	12	123	12
24	12	124	12
25	12	125	12
26	12	126	12
27	12	127	12
28	12	128	12
29	12	129	12
30	12	130	12
31	12	131	12
32	12	132	12
33	12	133	12
34	12	134	12
35	12	135	12
36	12	136	12
37	12	137	12
38	12	138	12
39	12	139	12
40	12	140	12
41	12	141	12
42	12	142	12
43	12	143	12
44	12	144	12
45	12	145	12
46	12	146	12
47	12	147	12
48	12	148	12
49	12	149	12
50	12	150	12

Site	Per/Hr	Site	Per/Hr	Site	Per/Hr	Site	Per/Hr	Site	Per/Hr	Site	Per/Hr
177	22	208	19	239	13	270	6.5	301	19.5	332	15
178	30	209	16	240	13.5	271	16	302	19	333	17
179	28	210	16	241	14	272	15	303	18	334	20
180	24	211	15	242	13	273	13	304	22	335	22
181	21	212	13	243	16	274	13	305	35	336	20
182	19	213	12	244	15.5	275	16	306	38	I-1	11
183	16	214	13	245	24	276	14	307	40	I-2	13
184	15	215	13	246	70	277	20	308	52	I-3	13
185	13	216	15	247	92	278	44	309	55	I-4	13
186	12	217	12	248	27	279	78	310	75	I-5	13
187	11	218	15	249	22	280	45	311	50	I-6	13
188	14	219	16	250	83	281	24	312	27	P-1	13
189	22	220	13	251	58	282	80	313	27	P-1A	13
190	15	221	13	252	21	283	78	314	35	08-14	13
191	15	222	13.5	253	17	284	66	315	29	<del>08-14</del> M-11	11
192	16	223	21	254	14.5	285	52	316	22	M-5A	13
193	16.5	224	20	255	12	286	31	317	21	M-9	12.5
194	21	225	24	256	13	287	29.5	318	15	M-12	13
195	21	226	22	257	14	288	31	319	15	WF-74	13
196	20	227	43	258	13	289	40	320	15	WF-71	15
197	27	228	75	259	13	290	35	321	14.5	I-58	15
198	31	229	21	260	13.5	291	29	322	12.5	I-59	13.5
199	50	230	32	261	14	292	20.5	323	12	I-60	14.5
200	70	231	72	262	15	293	18	324	13	I-61	13.5
201	15	232	43	263	15	294	15	325	11	GM-63	14
202	17	233	20.25	264	19.5	295	12.5	326	13	GM-64	12
203	70	234	18	265	42	296	13	327	13	GM-15	13.5
204	57	235	13	266	85	297	13	328	12	GM-66	13
205	21	236	18	267	45	298	14	329	15	P-62	13.5
206	19	237	13	268	23	299	17	330	17	Sm-68	14
207	17.5	238	13.5	269	80	300	16	331	15	00-67	14



Site	$\mu\text{r/hr}$
M-54	16
M-55	13
Rock Lead 14	145
Peterson 1 Nail	13
Peterson 4 Nail	12
Pipe String	11.5
M-20	14
M-21	15
M-22	13
M-23	13
M-24	19
P-25	22
P-26A	19
I-27	17.5
I-28	20
I-16	20
I-16A	27
I-17	27.5
I-18	19
I-19	25
OB-1	72
OB-2	18
OB-3	19
P-15A	27
R-73	76
East UN	15

Gamma Survey  
5/24/85 Coleman Unit # 413 10  $\mu\text{r/hr}$   
1516 hrs. Wipe Test - dpm/100  $\text{cm}^2$

## Equipment Sales/Transfers

date:	Item	To →	Gemma hr/Hr	Alpha Smeas
5/7/85	Used 8x8 trailer	Klein	15-16	4-6
5/10/85	12x60 PortaSpace Trl.	"	14	2
6/24/85	Air Compressor (85W)	Bidman	14	3
6/24/85	GM counter	Holli-burton	12	<1
6/24/85	Tool chests / tools	Jim Schell	12-13	6-12
6/27/85	Shop Equipment	Jim Schell	12	4-12
6/27/85	Sandpiper Pump	Holli-burton	14	8
6/28/85	Shop Equipment	Jim Schell	13-15	10-22
7-8-85	Chain saw	John Kuhn	12	12
7-11-85	Bench grinder	K. Shoumaker	13	14
7-11-85	8x24' trailer	K. Shoumaker	12-14	<1-6
7-11-85	Arc Welder	Jim Schell	12	4
7-11-85	O/D circular saw	Jim Schell	12	10
7-11-85	Shop Equipment	PRC	13-14	2-4
7-17-85	Shop Equipment	Jim Schell	13-14	2-18
7-17-85	Int'l, tent, float	Brian Jepson	13	<1-6
7-24-85	Emulsion, pump	Rm Chaspey	13	4-9
7-30-85	file cabinet	John Kuhn	13	10
7-30-85	flowmeter	Wm. Earnshaw	12.5	10
7-31-85	trailer, generator	Kenzo	13	2-12
8-7-85	5lb extinguisher	L. Weber	12	20
8-7-85	20lb extinguisher	L. Weber	14	20
8-7-85	First Aid Kit	M. Neumann	11	22
8-7-85	Strap Wrench	L. Weber	13	12
8-7-85	Chain Bommer	N. Bidman	14	20
8-7-85	Hydell Pipe	Bidman	8	28

Gemma measurements - Ludlum Model 125  $\mu$ r meter  
 Alpha Smeas - Nalox cloth smeas; Eberline MS-3/SAR RS

## Equipment Sales/Transfers

date	Item	To	Gemma hr/Hr	Alpha Smeas
8-7-85	Mixer	Colo Minors	12	62
8-7-85	Mixer	Colo Minors	12	18
8-7-85	4x4.5 tank	A. Mettman	15	56
8-7-85	2.5LK generator	Yopp	12	32
8-7-85	2.5LK generator	Weber	10	16
8-7-85	20lb Gasul	Yopp	10	28
8-7-85	Row Boat	Loest	15	20
8-7-85	totalyzer, #142	Id. ST.	12	14
8-7-85	Airtone <sup>TM</sup> , inv 425	Id. ST.	13	16
8-7-85	Airtone 1003, #438	Id. ST.	12	10
8-7-85	Murphy Switch	Id. ST.	12	14
8-7-85	Lockers	PRC	12	18
8-7-85	flood lights <sup>more</sup> 10 ft	PRC	13	12
8-7-85	Ladders, #539	PRC	14	18
8-7-85	Faulstich #62	PRC	13	26
8-7-85	Used electrical stoves	PRC	13-15	10-24
8-7-85	Balance Table	Energy Lab	14	14
8-7-85	glass desiccators	"	12	10
8-7-85	Magnesia	"	12	<1
8-7-85	Jones Riffle	"	13	22
8-7-85	quydek	"	13	18
8-7-85	Red chair	"	13	10
8-7-85	SS Hood	"	14	42
8-7-85	Blue M Oven	"	14	36

Gemma - Ludlum Model 125  $\mu$ r meter  
 Alpha - Nalox cloth smeas; Eberline MS3/SAR RS

8/12/64

Pot Spills

Buried & methane insulated pipe in latrine 4 and running to the plant was pulled from the ground. Prior to breaking the pipe in small pieces, the pipe was surveyed inside with alpha sensors and outside with a GM counter. Six random sites along the pipe were surveyed.

Site	Gamma mr/hr	Remanence alpha dpm/100cm <sup>2</sup>
1	.03	48
2	.02	10
3	.03	12
4	.03	18
5	.02	18
6	.03	12

Victorian 480 489-4 G-M counter SN 2785182  
Eberline MS-3/SAC-15 Eberline Sensors

8-14/65 Gamma Survey on used pipe fittings sent to Bell - 12-16 per hr

8/14/65

Pot Spills

Gamma survey on typewriter block from Ford. 20-25 per hr.

Ludlum DS

8/14/65

Pot Spills

Sensors from vessels at Reno Creek.  
dpm/100cm<sup>2</sup>

1. degas 18
2. 1st Stage ~~5-3007~~ 266
3. Reactor 5-1007 32
4. Vug - 5-3001 294
5. R.O. feed 30
6. Eluent ~~5-3001~~ 5-3011 68
7. Dig Tank 5-4014 132
8. Eluent 5-6025 72

8/14/65 transferred to A24

	dpm 100cm <sup>2</sup>	Gamma
1. Yellowknife River	8792	12
2. ATAC 382-4010A	254	15
3. #201	218	16
4. Dig Blue	210	20
5. #502	18476	23-3
6. 1300 gal (Apcon)	142	14
7. #505	4184	21
8. Decont Sump Tank 3x4	124	17
9. 3x4 200 gal	152	15
10. Precip Tank	200	16
11. Tanken	138	14
12. #202	130	14
13. Gas tank orange	116	15
14. large diel tank	88	15
15. Res. gas Tank (Wd)	86	12
16. Small diel tank	94	15
17. Overhead shop furnace	78	14
18. 10,000 gal insulated steam tank	114	14

(cont. next page)

I. dpm/100 cm<sup>2</sup>

	I. dpm/100 cm <sup>2</sup>	date	Sold to	8	removal dpm/100 cm <sup>2</sup>
19. Digas tank	15	1/58			
20. Wicking for drums	14	1/26			
21. flood ltr. to ppc	12	1/12			
22. "	12	8/4			
23. 220v window A/c	12	10/8			
24. 10v " (Q. 3511)	13	9/4			
25. Centurian 10v #351	12	10/0			
26. " #498	13	8/6			
27. R.O. Unit	13	9/2			
28. Float (Q. 3511)	10	9/2			
29. Pleksh - velocity	11	10/4			
30. 1/17 kinetic	11	9/0			
31. Floometer Home	14	5/2			
32. Cone Rotorik	10	3/0			
33. Envisochron	160	12/8			
34. Hayon thulene	11	4/4			

8/28/85 55 gal drums of misc. reagents were transferred to 154 for storage. The drums were unopened. Gamma survey ranged from 12-14  $\mu$ /hr. Included as reagents were H<sub>2</sub>O<sub>2</sub> (test grade) and NaOH (test grade), FeCl<sub>3</sub>, and formaldehyde. The 55 gal truck was placarded "DANGEROUS".

## Sale of Equipment for non-structed use.

Item	date	Sold to	8	removal dpm/100 cm <sup>2</sup>
1. floor creepers	8/1/85	E. V. Galt	12	18
2. Lamin, scander			12	20
3. Handi-Man			13	16
4. duck chain 613			12	10
Comprobe	8/1/85	G. Evans	12	6
Dislod min	8/26	West. Env.	10	18
Mat. num dings			12	20
IL 157 A.A.			12	24
Chyl	8/26	Sam Graham	10	16
Arch			11	10
Storage cabinet			11	10
bookcase			12	8
side chair			14	12
swivel chair			13	24
swivel chair			12	14
Tool can			12	10
Measuring Tape	8/16	Schell	10	2
Bolts/Note Box			12	16
Hammer			12	30
Hydraulic Jack			12	12
Gas Compressor	8/15	A. Hoagland	11	22
1" pipe - 11lb/ft		Murphy Dulling	10-11	18
Fiberglass tank		Murphy Dulling	10	24
Fiberglass tank			12	24
Man 2.5cm generator		G. O'Connor	12	32
Refrigerator #176			10	16
Microscope #135			10	8
Book shelf			10	10
Book shelf			10	12

Cont on 42



Item	Date	Sold To	yr/hr	num/min	Item	Date	Sold To	yr/hr	num/min	Item	yr/hr	num/min	yr/hr	num/min
file cabinet	8/16/65	G. Onizori	10	12	Underseam	8/20/65	Q. Davis	13	22					
2 door - later cab			10	14	Spare heater	8/25/65	Q. Hogan	13	20					
4 door - later cab			14	24	Trash Pump	8/25/65	Q. Seibel	13	26					
fig saw			16	8	Mag. Stairs	8/28/65	A. Mathews	13	18					
air conditioner			14	22	pH meter	8/28/65	A. Mathews	14	9					
Strumfos 50-2-15	8/22	M. Klein	12	26	flamelle cabinet	9/1/65	S. Kholam	12	6					
Deum belly #89	8/26	E. Sapers	10	14	220 V heater	9/25/65	Q. Ballantyne	12	21					
500 gal gas tank			12	12	Electrical panel	9/26/65	J. J. E. E. E.	13	4-8					
Loggins Unit			10	14	RC doghouse	9-24-65	Kenno E. E. E.	13	14, 16					
Quail tank #549			14	14	RC pipe chis	10/28/65	Cosmo E. E. E.	12	4					
Magna Pump			13	20	gun	10/31/65	B. B. E. E. E.	12	4					
Mytering Pump 193			14	22	gas cabinet	10/31/65	"	13	6					
Mytering Pump 210			13	16	tools	10/31/65	K. E. E. E.	14	8					
Well Screen			12	8	fuel tank	10/28/65	E. E. E. E.	13	20					
Fire Ext., 70lb-Dual	8/31	D. Jay	13	28	analytical balance	10/24/65	Little America	12	<1					
Kerosene Heater			12	18	storage shed	10/28/65	K. E. E. E.	13	6					
Kerosene Heater			12	18	air plant	11/2/65	A. E. E. E.	14	8					
TES amp box			12	14	RC drafting table	11/3/65	J. E. E. E.	11	<1					
Fluorescent fixtures			13	20	RC generator	11/5/65	L. E. E. E.	13	10					
Wall Painting	8/21	L. Ferguson	12	12	trailers	11/6/65	L. E. E. E.	13	6					
iron pipe	8/15	Ted Cosner	10	20	pump jack	11/8/65	B. E. E. E.	12	21					
RC pipe			13	18	washer	11/10/65	S. E. E. E.	13	41					
3000 gal tank			13	20	days	11/10/65	S. E. E. E.	14	16					
"			13	24	small frog	12/30/65	P. E. E. E.	12	<1					
"			14	6	measuring	12/30/65	G. E. E. E.	12	2					
5x5 tank			16	18										
6x6 tank			14	16										
Heat gun			14	12										
Marked Band	8/24/65	L. Ferguson	10	14										
Heat gun #659			13	10										

(cont #43)



Final Lommo Sawey 12-6-85 Patspule  
 Ludlum Model 12S micro R meter SN 12128  
 calibrated 7-16-85  
 Location: 9 miles lake (superior grid map)  
 meter height: 1 meter above ground

Site #	Site #	Site #	Site #
1	12	24	13
2	12	27	12
3	12	28	13
4	13	29	13
5	12	30	13
6	12	31	13
7	12	32	12
8	13	33	13
9	12	34	17
10	13	35	12
11	13	36	13
12	15	37	13
13	14	38	11
14	13	39	13
15	12	40	13
16	13	41	13
17	12	42	12
18	12	43	12
19	13	44	13
20	12	45	14
21	11	46	13
22	12	47	14
23	12	48	12
24	13	49	12
25	12	50	13

Site #	Site #	Site #	Site #
51	13	76	13
52	13	77	13
53	12	78	12
54	12	79	11
55	13	80	11
56	13	81	12
57	12	82	13
58	13	83	14
59	13	84	14
60	14	85	15
61	13	86	14
62	12	87	13
63	13	88	13
64	13	89	18
65	13	90	17
66	13	91	18
67	13	92	20
68	14	93	19
69	13	94	21
70	13	95	19
71	12	96	19
72	12	97	20
73	12	98	19
74	13	99	19
75	13	100	19

(cont. p. 85)

Site #	Site #	Site #	Site #
101	13	132	13
102	12	133	20
103	13	134	15
104	13	135	15
105	13	136	16
106	13	137	18
107	13	138	17
108	15	139	19
109	16	140	18
110	15	141	20
111	16	142	20
112	16	143	21
113	19	144	20
114	19	145	13
115	18	146	14
116	16	147	17
117	16	148	14
118	16	149	18
119	19	150	17
120	20	151	18
121	21	152	19
122	18	153	18
123	17	154	17
124	18	155	17
125	18	156	13
126	17	157	13
127	15	158	13
128	15	159	13
129	13	160	17
130	12	161	18
131	12	162	14

Site #	Site #	Site #	Site #
163	15	194	21
164	20	195	20
165	17	196	19
166	15	197	20
167	19	198	20
168	17	199	15
169	18	200	19
170	20	201	14
171	17	202	13
172	15	203	15
173	14	204	14
174	14	205	20
175	15	206	20
176	15	207	18
177	19	208	20
178	17	209	17
179	18	210	15
180	18	211	13
181	17	212	13
182	19	213	13
183	16	214	12
184	14	215	14
185	13	216	13
186	13	217	13
187	13	218	16
188	13	219	16
189	19	220	16
190	13	221	14
191	16	222	13
192	14	223	21
193	17	224	21

(cont. p. 46)



Site	per/hr	Site	per/hr	Site	per/hr	Site	per/hr	Site	per/hr	Site	per/hr	Site	per/hr
I-1	13	I-28	19	0047	13	495	17	526	12	561	10	592	11
I-2	13	P-73	17	5048	13	496	17	527	11	562	11	593	11
I-3	13	M-40	13	0049	13	497	15	528	11	563	11	594	11
I-4	13	M-40A	13	0050	13	498	15	529	10	564	11	595	11
I-5	13	M-40B	13	0051	13	499	13	530	11	565	11	596	12
I-6	15	M-41	13	0052	13	500	13	531	11	566	10	597	11
M-7	13	M-42	13	0053	13	501	13	532	12	567	11	598	11
M-8A	13	M-43	13	0054	14	502	13	533	11	568	11	599	11
M-9	13	I-44	14	0055	13	503	13	534	11	569	11	600	12
M-10	13	I-45	19	0056	13	504	14	535	10	570	10	601	12
M-11	12	I-46	18	0057	13	505	13	536	12	571	10	602	11
M-12	13	I-47	16	0058	13	506	15	537	12	572	11	603	11
P-1A	13	I-48	16	0059	13	507	15	538	11	573	10	604	11
08-14	13	I-49	20	0060	13	508	17	539	13	574	12	605	11
P-15	18	P-50	20	0061	13	509	15	540	12	575	11	606	11
I-16	18	08-51	16	0062	13	510	12	541	13	576	11	607	12
I-16A	15	00-52	13	0063	13	511	13	542	13	577	11	608	11
I-17	16	P-53	18	0064	13	512	13	543	11	578	11	609	11
I-18	17	M-54	17	0065	11	513	13	544	12	579	11	610	12
I-19	17	M-55	13	0066	11	514	15	545	12	580	11	611	11
M-20	13	M-56	13	0067	12	515	15	546	13	581	12	612	11
M-21	15	M-57	13	0068	12	516	15	547	12	582	11	613	11
M-22	13	I-58	15	0069	13	517	14	548	13	583	10	614	11
M-23	13	I-59	15	0070	13	518	13	549	13	584	10	615	11
M-24	18	I-60	14	0071	13	519	13	550	13	585	11	616	10
08-1	17	I-61	14	0072	13	520	13	551	12	586	11	617	12
08-2	16	P-62	13	0073	13	521	12	552	13	587	11	618	11
08-3	16	6m-63	14	0074	14	522	13	553	13	588	11	619	11
M-25	18	6m-64	14	0075	15	523	11	554	13	589	11	620	11
P-26	17	6m-65	15	0076	16	524	11	555	13	590	12	621	11
I-27	18	6m-66	13	0077	16	525	11	556	11	591	11		

(cont'd 49)

12/24/85 Final Soil Sampling - NML

Soil samples were taken to a depth of 6" at eight NML sites. The soils were dried, split and sent to Hazen Lab for Ro<sub>226</sub> analysis. A corresponding gamma reading was taken at a 1 meter height prior to soil sampling. Gamma readings taken with Ludlum Model 120 micro R meter, 5/12/88, calibrated 7/16/85.

Site	Location	Gamma cpm/ea.	Hazen Ro <sub>226</sub> pcc/g
A	Point A	17	1.4 ± 0.8
B	"	16.5	3.4 ± 1.1
C	"	20	2.4 ± 1.0
D	"	24	6.1 ± 1.5
E	<del>Point A</del> and A	21	11 ± 2
F	Point B	20	6.3 ± 1.5
G	Pattern 2	20	6.2 ± 1.5
H	Pattern 3	13	1.3 ± 0.8

Sampling by Pat Apulis and Gary Chase - RSO

10/31/85 Final Removable alpha Survey - NML

Nucon clath smear  
Eberline ~~MS-2~~ scale w SAC-RS

Site	Removable $\alpha$ cpm/100 cm <sup>2</sup>
Main Bldg - W. wall above work bench	12
Lab Bldg - outside surface	9
Break Room - wall	14
Break Room - floor	19
Assay Station - wall	14
Assay Station - counter top	26
Assay Station - floor	40
Mill restroom - floor	21
Mill restroom - wall	28
Mill Bldg - S. Wall below Bulletin board	16
Mill Bldg - storage cabinet	26
Mill Bldg - E. Wall near pressure tank	16
Mill Bldg - N. Wall behind yellow waste drum filter	54
Mill Bldg - floor - drum filter site	71
" - floor - lime reactor #1 site	38
" - floor - lime reactor #2 site	33
" - floor - above precipitation tank	26
" - wall - behind ppt. tank	136
" - ceiling above ppt. tank	14
" - electric panel box - E. wall	14
" - attic floor	19
" - attic wall	16
" - wall adjoining main floor site	16
" - styrofoam blocks	31
" - floor - injection tank site	7
" - floor - prep tank site	33

(cont. 52)

well bldg.	floor - slant tank site	31
"	floor - center area	24
"	floor - cone tanks site	40
"	N. Well - cone tanks site	216
"	N. Well - yellowish brown site	367
"	N. Well - ppt. tank site	132
"	floor - yellowish brown site	21
"	floor - ppt. tank site	14
"	East trench wall - S. end	24
"	trench - sump pump site (near bottom)	21
"	West trench wall - middle area	49
"	Small trench wall	54
"	Small trench floor	24
"	East trench wall - N. end	31
"	West trench wall - S. end	24
"	West trench wall - N. end	45
"	trench - sump pump site (near top)	31
"	East trench wall - middle area	35
"	Support column adjoining yellowish brown	52
"	Outside wall, West Side	12
Cherry Trailer	outside surface	2
"	floor	5
"	well	2
Main office	outside wall	26
Main office	floor (entrance)	17
"	wall (entrance)	2
Lab Trailer	floor (prep area)	<1
"	counter (prep area)	5
"	wall (adjoining hood)	<1
Generator Bldg	floor	2
"	wall	5

J. Dick-Sonne 11/10/66 1974, 8595 gpm, c.t. ~ 2.2

## Soil Sampling 1/20/76 NML

Site	Location	Gamma Kt/hr	accum. rad R <sub>0</sub> 220 psi/g	Moist R <sub>0</sub> 220 psi/g
I	Pond B	18		1.4 ± 0.9
J	"	18		1.5 ± 0.9
K	Pattern 2	18-19	2.9	4.0 ± 1.3
L	"	17-18		4.0 ± 1.3
M	Downwind Pond A	16-17	9.4	0.9 ± 0.8
N	"	17-18		0.8 ± 0.7
O	Pond A	17-18		2.2 ± 1.0
P	"	15-17	12	0.9 ± 0.1
Q	"	15-17		1.4 ± 0.9

Samples taken to depth of 15cm w/ 55 auger.  
Samples dried, crushed and split

Y - Ludlum Model 125 with meter SN 12128