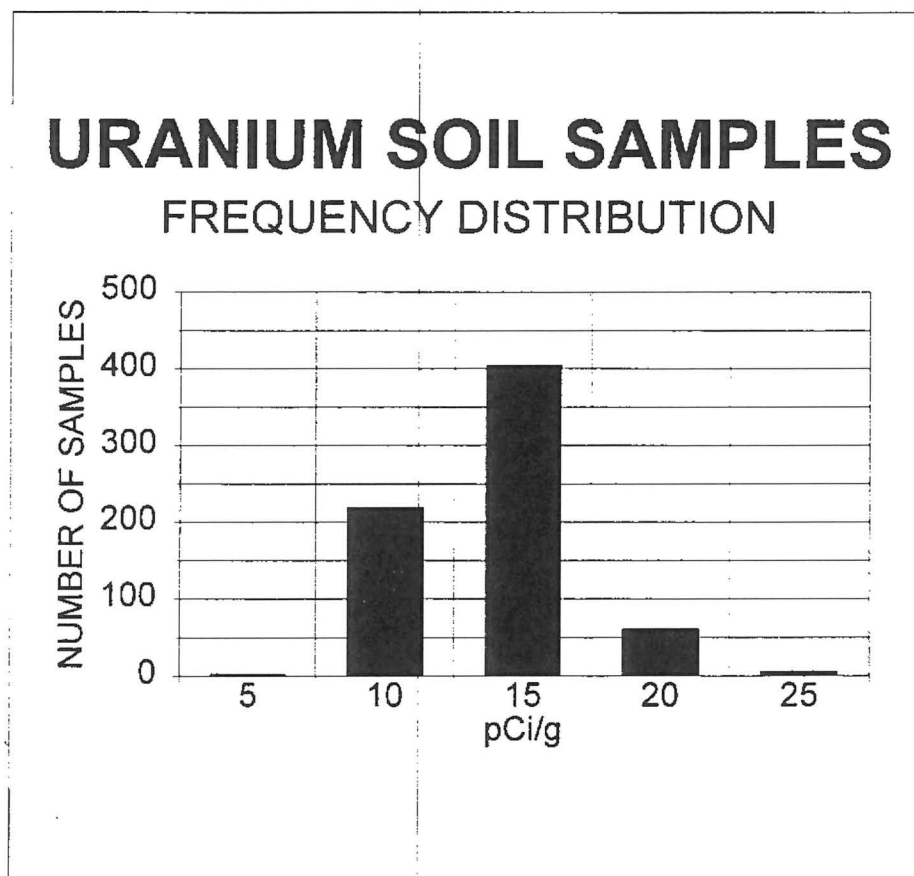


**PHASE II - SUB-AREA 'G' - SURFACE  
AFFECTED EXPANDED DRAINAGE  
CIMARRON SOIL COUNTER  
TOTAL URANIUM SOIL SAMPLE RESULTS  
SITE BACKGROUND OF 4 pCi/g NOT SUBTRACTED**

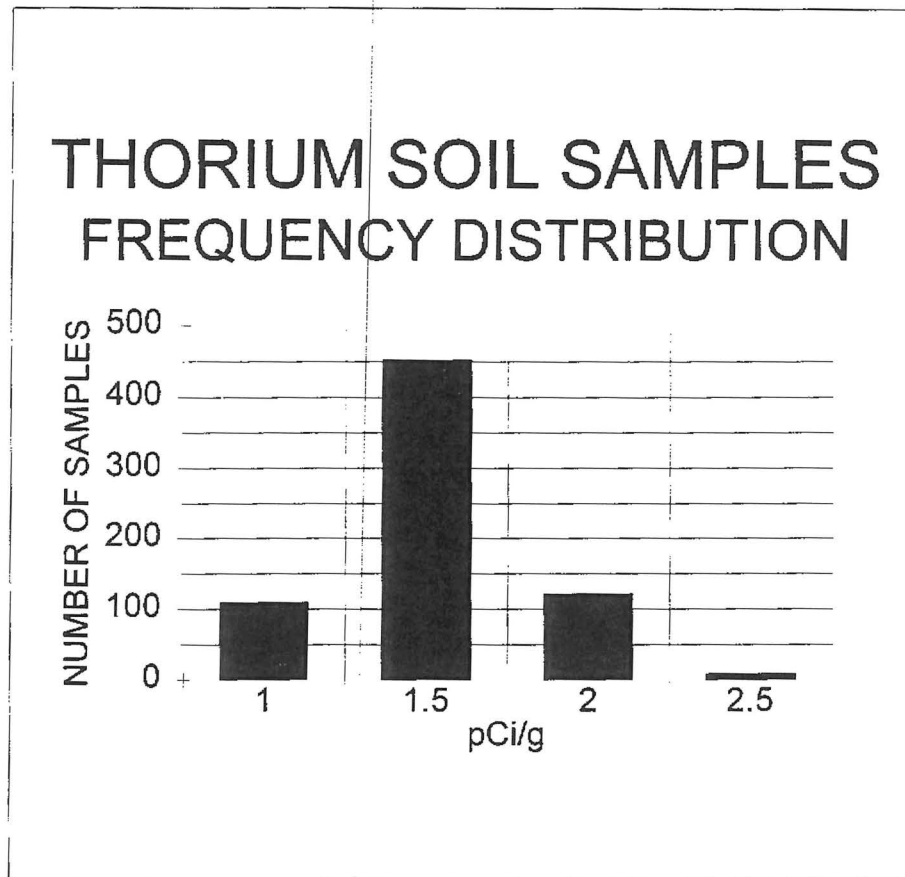
**AUGUST 4, 1999**



NUMBER OF SAMPLES	694
AVERAGE SAMPLE	11.3
MINIMUM SAMPLE	4.2
MAXIMUM SAMPLE	21.2
STANDARD DEVIATION	2.8

**PHASE II, SUB-AREA "G" - SURFACE  
AFFECTED EXPANDED DRAINAGE  
CIMARRON SOIL COUNTER  
TOTAL THORIUM SOIL SAMPLE RESULTS  
SITE BACKGROUND OF 1.5 pCi/g NOT SUBTRACTED**

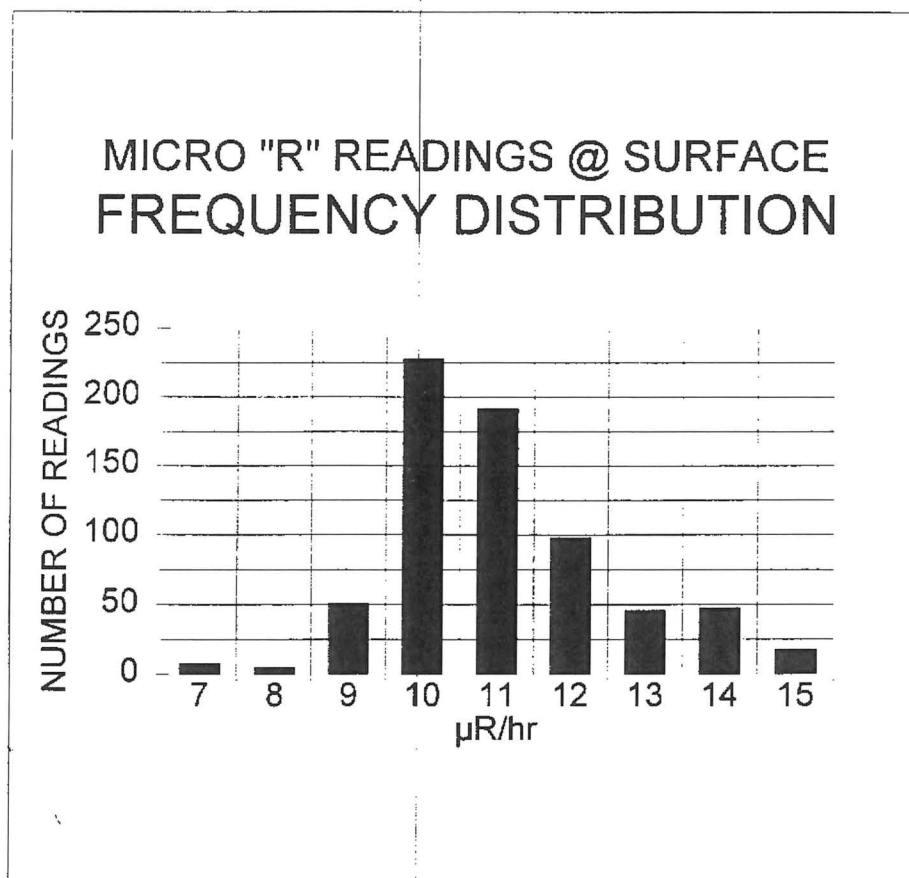
**AUGUST 4, 1999**



NUMBER OF SAMPLES	694
AVERAGE SAMPLE	1.3
MINIMUM SAMPLE	0.4
MAXIMUM SAMPLE	2.4
STANDARD DEVIATION	0.3

**PHASE II, SUB-AREA "G" - SURFACE  
AFFECTED EXPANDED DRAINAGE  
MICRO-R METER READINGS AT SURFACE  
LUDLUM MODEL 19, S/N 111299  
RESULTS IN  $\mu\text{R/hr}$**

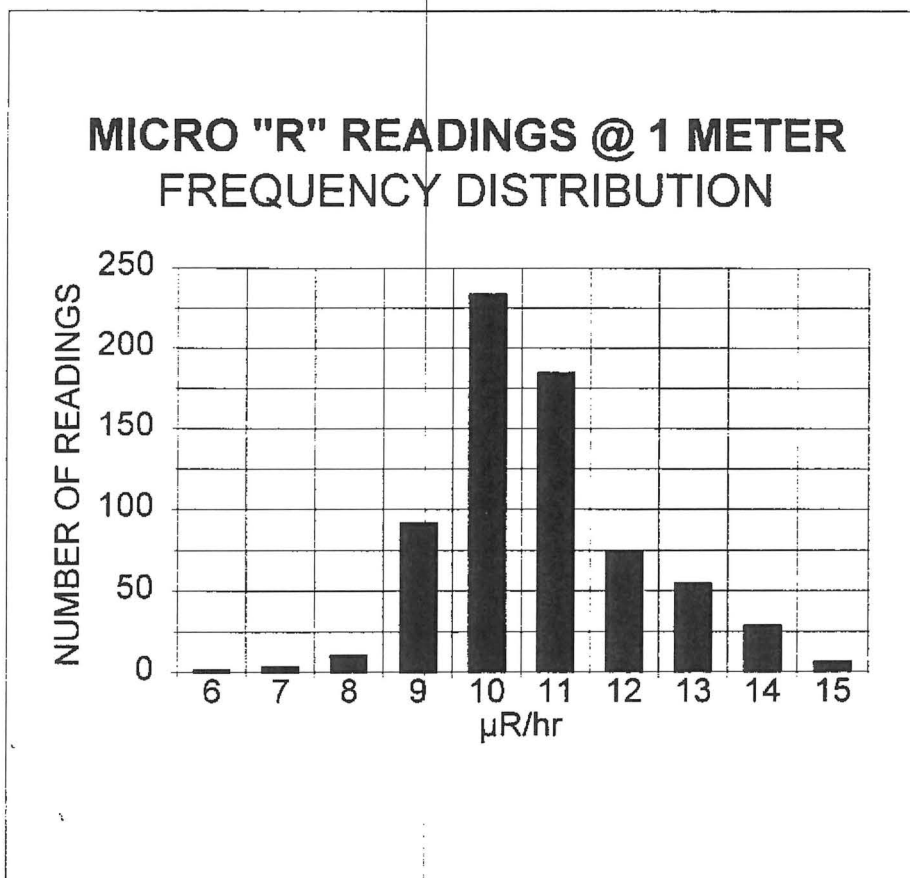
**AUGUST 4, 1999**



NUMBER OF SAMPLES	694
AVERAGE SAMPLE	11
MINIMUM SAMPLE	7
MAXIMUM SAMPLE	15
STANDARD DEVIATION	2

**PHASE II, SUB-AREA "G" - SURFACE  
AFFECTED EXPANDED DRAINAGE  
MICRO-R METER READINGS AT 1 METER ABOVE SURFACE  
LUDLUM MODEL 19, S/N 111299  
RESULTS IN  $\mu\text{R/hr}$**

**AUGUST 4, 1999**

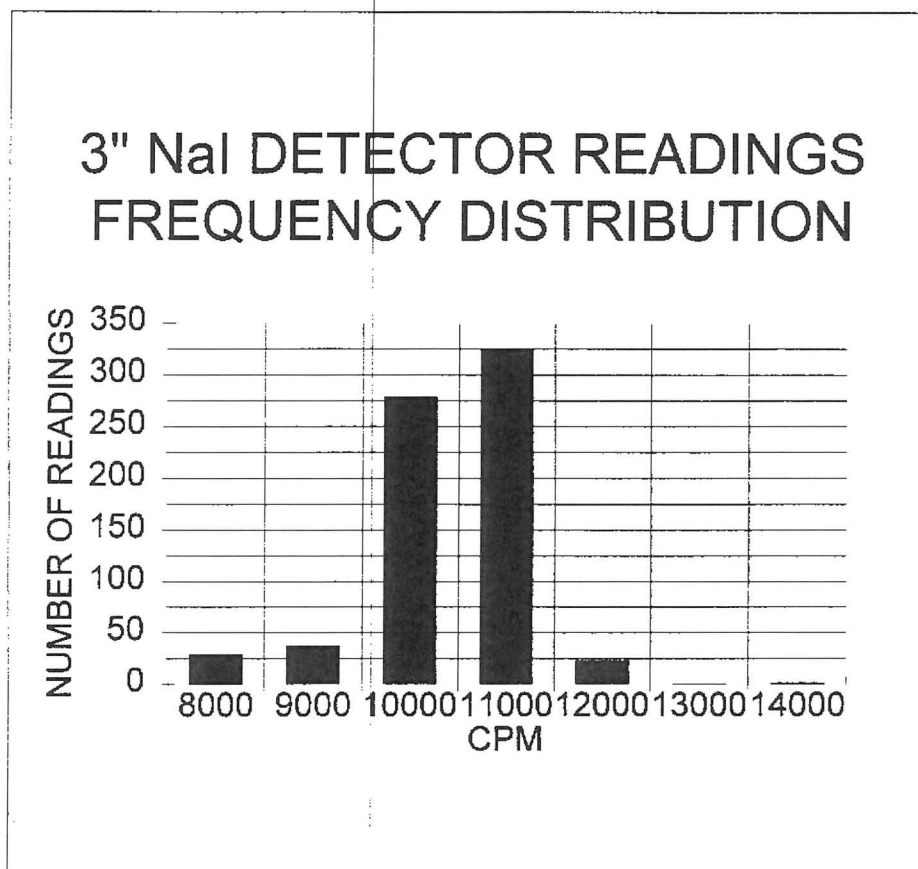


NUMBER OF SAMPLES	694
AVERAGE SAMPLE	11
MINIMUM SAMPLE	6
MAXIMUM SAMPLE	15
STANDARD DEVIATION	1



**PHASE II, SUB-AREA "G" - SURFACE  
AFFECTED EXPANDED DRAINAGE  
GROSS GAMMA READINGS IN CPM  
LUDLUM MODEL 2221, S/N 97264  
BACKGROUND AVERAGES: 8000**

**AUGUST 4,1999**



NUMBER OF SAMPLES	694
AVERAGE SAMPLE	9894
MINIMUM SAMPLE	4820
MAXIMUM SAMPLE	13200
STANDARD DEVIATION	839

Number	n	(n-N)	(n-N) <sup>2</sup>
1	8.4	-2.9	8.5
2	6.9	-4.4	19.5
3	9.5	-1.8	3.3
4	7.8	-3.5	12.4
5	7.8	-3.5	12.4
6	7.5	-3.8	14.6
7	8.8	-2.5	6.3
8	7.0	-4.3	18.7
9	9.1	-2.2	4.9
10	12.2	0.9	0.8
11	10.1	-1.2	1.5
12	10.6	-0.7	0.5
13	12.2	0.9	0.8
14	8.4	-2.9	8.5
15	11.4	0.1	0.0
16	6.6	-4.7	22.3
17	8.1	-3.2	10.4
18	7.2	-4.1	17.0
19	5.8	-5.5	30.5
20	6.1	-5.2	27.2
21	11.0	-0.3	0.1
22	13.5	2.2	4.8
23	5.2	-6.1	37.4
24	12.3	1.0	1.0
25	9.6	-1.7	3.0
26	9.4	-1.9	3.7
27	10.1	-1.2	1.5
28	12.0	0.7	0.5
29	5.6	-5.7	32.7
30	5.5	-5.8	33.9
31	5.5	-5.8	33.9
32	5.9	-5.4	29.4
33	4.7	-6.6	43.8
34	5.3	-6.0	36.2
35	7.1	-4.2	17.8
36	5.8	-5.5	30.5
37	6.9	-4.4	19.5
38	6.1	-5.2	27.2
39	7.8	-3.5	12.4
40	12.0	0.7	0.5
41	11.3	-0.0	0.0
42	11.3	-0.0	0.0
43	9.7	-1.6	2.6
44	10.5	-0.8	0.7
45	8.9	-2.4	5.9
46	10.6	-0.7	0.5
47	8.6	-2.7	7.4
48	8.1	-3.2	10.4
49	9.6	-1.7	3.0
50	10.2	-1.1	1.3
	606.2		463.1
	624.4		706.1
	560.4		292.8
	601.2		425.1
	566.4		172.0
	587.7		301.9
	579.7		304.2
	520.5		319.2
	531.3		314.2
	576.1		505.7
	611.3		308.9
	618.2		402.9
	440.8		334.6
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
total	7855.8		5472.1
	Sum(n)		Sum(n-N)

Factors for Comparison of Survey Data with Guidelines					
(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinita	1.645	1.96
18	1.734	2.101			

PAGE 1 OF 8

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
51	13.4	2.08	4.33
52	11.7	0.38	0.14
53	13.1	1.78	3.17
54	10.1	-1.22	1.49
55	12.6	1.28	1.64
56	12.0	0.68	0.46
57	10.7	-0.62	0.38
58	13.3	1.98	3.92
59	9.7	-1.62	2.62
60	10.4	-0.92	0.85
61	7.8	-3.52	12.39
62	10.8	-0.52	0.27
63	12.6	1.28	1.64
64	11.2	-0.12	0.01
65	11.6	0.28	0.08
66	7.5	-3.82	14.59
67	13.9	2.58	6.66
68	10.0	-1.32	1.74
69	7.8	-3.52	12.39
70	13.8	2.48	6.15
71	12.8	1.48	2.19
72	15.1	3.78	14.29
73	14.3	2.98	8.88
74	16.5	5.18	26.84
75	8.1	-3.22	10.37
76	13.0	1.68	2.82
77	15.7	4.38	19.19
78	12.5	1.18	1.39
79	14.1	2.78	7.73
80	15.4	4.08	16.65
81	7.7	-3.62	13.10
82	9.5	-1.82	3.31
83	9.8	-1.52	2.31
84	7.9	-3.42	11.69
85	7.9	-3.42	11.69
86	13.0	1.68	2.82
87	15.4	4.08	16.65
88	8.1	-3.22	10.37
89	13.4	2.08	4.33
90	7.3	-4.02	16.16
91	8.3	-3.02	9.12
92	10.8	-0.52	0.27
93	14.1	2.78	7.73
94	15.7	4.38	19.19
95	17.5	6.18	38.20
96	19.1	7.78	60.53
97	14.2	2.88	8.30
98	15.1	3.78	14.29
99	14.1	2.78	7.73
100	15.8	4.48	20.07
	606.2		463.1
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
101	17.6	6.28	39.44
102	11.4	0.08	0.01
103	12.7	1.38	1.91
104	7.3	-4.02	16.16
105	12.1	0.78	0.61
106	8.6	-2.72	7.40
107	9.6	-1.72	2.96
108	7.3	-4.02	16.16
109	13.9	2.58	6.66
110	15.7	4.38	19.19
111	10.3	-1.02	1.04
112	15.0	3.68	13.55
113	9.1	-2.22	4.93
114	6.8	-4.52	20.43
115	13.6	2.28	5.20
116	14.2	2.88	8.30
117	12.9	1.58	2.50
118	14.8	3.48	12.11
119	15.0	3.68	13.55
120	21.2	9.88	97.62
121	19.4	8.08	65.29
122	8.2	-3.12	9.73
123	8.7	-2.62	6.86
124	14.2	2.88	8.30
125	9.8	-1.52	2.31
126	15.1	3.78	14.29
127	9.1	-2.22	4.93
128	11.6	0.28	0.08
129	12.1	0.78	0.61
130	5.0	-6.32	39.94
131	10.9	-0.42	0.18
132	10.9	-0.42	0.18
133	11.2	-0.12	0.01
134	7.7	-3.62	13.10
135	12.5	1.18	1.39
136	13.1	1.78	3.17
137	11.8	0.48	0.23
138	14.5	3.18	10.11
139	16.5	5.18	26.84
140	16.4	5.08	25.81
141	20.3	8.98	80.65
142	17.9	6.58	43.30
143	12.8	1.48	2.19
144	11.5	0.18	0.03
145	15.4	4.08	16.65
146	13.2	1.88	3.54
147	11.1	-0.22	0.05
148	9.1	-2.22	4.93
149	16.4	5.08	25.81
150	8.9	-2.42	5.85
	624.4		706.1
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
151	14.1	2.78	7.73
152	12.1	0.78	0.61
153	6.6	-4.72	22.27
154	10.4	-0.92	0.85
155	13.6	2.28	5.20
156	11.9	0.58	0.34
157	10.0	-1.32	1.74
158	11.7	0.38	0.14
159	9.4	-1.92	3.68
160	11.6	0.28	0.08
161	11.5	0.18	0.03
162	10.9	-0.42	0.18
163	16.2	4.88	23.82
164	13.8	2.48	6.15
165	15.9	4.58	20.98
166	9.4	-1.92	3.68
167	13.7	2.38	5.67
168	18.3	6.98	48.73
169	11.0	-0.32	0.10
170	12.4	1.08	1.17
171	10.5	-0.82	0.67
172	11.6	0.28	0.08
173	9.0	-2.32	5.38
174	10.8	-0.52	0.27
175	9.5	-1.82	3.31
176	11.2	-0.12	0.01
177	8.9	-2.42	5.85
178	13.2	1.88	3.54
179	15.8	4.48	20.07
180	12.8	1.48	2.19
181	13.9	2.58	6.66
182	8.4	-2.92	8.52
183	8.7	-2.62	6.86
184	11.6	0.28	0.08
185	13.4	2.08	4.33
186	10.9	-0.42	0.18
187	10.2	-1.12	1.25
188	11.6	0.28	0.08
189	9.2	-2.12	4.49
190	8.9	-2.42	5.85
191	8.3	-3.02	9.12
192	10.6	-0.72	0.52
193	9.2	-2.12	4.49
194	10.4	-0.92	0.85
195	9.2	-2.12	4.49
196	5.2	-6.12	37.45
197	10.4	-0.92	0.85
198	10.1	-1.22	1.49
199	10.6	-0.72	0.52
200	11.8	0.48	0.23
	560.4		292.8
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
201	14.9	3.58	12.82
202	15.4	4.08	16.65
203	15.1	3.78	14.29
204	12.2	0.88	0.78
205	13.2	1.88	3.54
206	13.1	1.78	3.17
207	9.9	-1.42	2.02
208	14.6	3.28	10.76
209	7.5	-3.82	14.59
210	15.2	3.88	15.06
211	12.4	1.08	1.17
212	6.6	-4.72	22.27
213	9.6	-1.72	2.96
214	5.9	-5.42	29.37
215	13.9	2.58	6.66
216	11.7	0.38	0.14
217	11.0	-0.32	0.10
218	10.1	-1.22	1.49
219	11.7	0.38	0.14
220	12.5	1.18	1.39
221	10.0	-1.32	1.74
222	14.6	3.28	10.76
223	13.9	2.58	6.66
224	15.7	4.38	19.19
225	14.4	3.08	9.49
226	13.9	2.58	6.66
227	15.9	4.58	20.98
228	11.2	-0.12	0.01
229	12.2	0.88	0.78
230	13.9	2.58	6.66
231	14.6	3.28	10.76
232	11.1	-0.22	0.05
233	7.8	-3.52	12.39
234	11.0	-0.32	0.10
235	8.7	-2.62	6.86
236	8.2	-3.12	9.73
237	12.7	1.38	1.91
238	12.5	1.18	1.39
239	9.7	-1.62	2.62
240	6.9	-4.42	19.53
241	8.6	-2.72	7.40
242	12.2	0.88	0.78
243	9.1	-2.22	4.93
244	14.5	3.18	10.11
245	17.1	5.78	33.41
246	15.9	4.58	20.98
247	11.9	0.58	0.34
248	15.1	3.78	14.29
249	7.2	-4.12	16.97
250	14.2	2.88	8.30
	601.2		425.1
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
251	12.5	1.18	1.39
252	12.2	0.88	0.78
253	11.6	0.28	0.08
254	12.8	1.48	2.19
255	10.6	-0.72	0.52
256	9.0	-2.32	5.38
257	9.3	-2.02	4.08
258	12.7	1.38	1.91
259	12.9	1.58	2.50
260	10.7	-0.62	0.38
261	15.1	3.78	14.29
262	9.5	-1.82	3.31
263	9.4	-1.92	3.68
264	10.5	-0.82	0.67
265	12.3	0.98	0.96
266	8.1	-3.22	10.37
267	11.3	-0.02	0.00
268	11.9	0.58	0.34
269	11.6	0.28	0.08
270	11.1	-0.22	0.05
271	12.4	1.08	1.17
272	8.3	-3.02	9.12
273	12.2	0.88	0.78
274	10.1	-1.22	1.49
275	10.4	-0.92	0.85
276	12.8	1.48	2.19
277	13.1	1.78	3.17
278	10.4	-0.92	0.85
279	7.4	-3.92	15.36
280	9.3	-2.02	4.08
281	13.9	2.58	6.66
282	11.2	-0.12	0.01
283	13.7	2.38	5.67
284	15.4	4.08	16.65
285	10.9	-0.42	0.18
286	9.0	-2.32	5.38
287	11.3	-0.02	0.00
288	9.5	-1.82	3.31
289	10.5	-0.82	0.67
290	11.1	-0.22	0.05
291	15.3	3.98	15.84
292	13.3	1.98	3.92
293	13.7	2.38	5.67
294	13.2	1.88	3.54
295	11.2	-0.12	0.01
296	8.7	-2.62	6.86
297	9.5	-1.82	3.31
298	11.2	-0.12	0.01
299	12.2	0.88	0.78
300	10.1	-1.22	1.49
	566.4		172.0
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
301	10.3	-1.02	1.04
302	20.5	9.18	84.28
303	11.1	-0.22	0.05
304	12.6	1.28	1.64
305	13.2	1.88	3.54
306	10.2	-1.12	1.25
307	14.3	2.98	8.88
308	11.8	0.48	0.23
309	10.6	-0.72	0.52
310	12.8	1.48	2.19
311	12.8	1.48	2.19
312	10.3	-1.02	1.04
313	12.1	0.78	0.61
314	14.7	3.38	11.43
315	13.1	1.78	3.17
316	13.1	1.78	3.17
317	12.1	0.78	0.61
318	9.9	-1.42	2.02
319	10.2	-1.12	1.25
320	13.3	1.98	3.92
321	7.6	-3.72	13.84
322	10.0	-1.32	1.74
323	9.8	-1.52	2.31
324	7.8	-3.52	12.39
325	12.1	0.78	0.61
326	13.5	2.18	4.75
327	13.5	2.18	4.75
328	12.1	0.78	0.61
329	16.8	5.48	30.03
330	12.1	0.78	0.61
331	11.2	-0.12	0.01
332	12.1	0.78	0.61
333	12.3	0.98	0.96
334	11.1	-0.22	0.05
335	13.5	2.18	4.75
336	11.3	-0.02	0.00
337	15.7	4.38	19.19
338	14.2	2.88	8.30
339	8.3	-3.02	9.12
340	10.0	-1.32	1.74
341	7.7	-3.62	13.10
342	14.0	2.68	7.18
343	11.8	0.48	0.23
344	10.1	-1.22	1.49
345	10.8	-0.52	0.27
346	7.2	-4.12	16.97
347	10.0	-1.32	1.74
348	13.3	1.98	3.92
349	9.7	-1.62	2.62
350	9.1	-2.22	4.93
	587.7		301.9
	Sum(n)		Sum(n-N) <sup>2</sup>



**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
351	11.3	0.00	0.00
352	9.5	-1.82	3.31
353	8.1	-3.22	10.37
354	17.0	5.68	32.27
355	9.5	-1.82	3.31
356	9.2	-2.12	4.49
357	10.7	-0.62	0.38
358	12.6	1.28	1.64
359	11.1	-0.22	0.05
360	17.4	6.08	36.97
361	12.0	0.68	0.46
362	11.3	-0.02	0.00
363	8.9	-2.42	5.85
364	12.0	0.68	0.46
365	12.7	1.38	1.91
366	11.4	0.08	0.01
367	11.3	-0.02	0.00
368	12.4	1.08	1.17
369	11.3	-0.02	0.00
370	12.7	1.38	1.91
371	13.6	2.28	5.20
372	10.6	-0.72	0.52
373	10.9	-0.42	0.18
374	12.7	1.38	1.91
375	8.9	-2.42	5.85
376	5.5	-5.82	33.87
377	15.0	3.68	13.55
378	9.5	-1.82	3.31
379	11.3	-0.02	0.00
380	14.1	2.78	7.73
381	13.2	1.88	3.54
382	12.5	1.18	1.39
383	15.6	4.28	18.32
384	16.5	5.18	26.84
385	11.7	0.38	0.14
386	9.7	-1.62	2.62
387	8.3	-3.02	9.12
388	10.6	-0.72	0.52
389	10.9	-0.42	0.18
390	7.3	-4.02	16.16
391	11.5	0.18	0.03
392	14.1	2.78	7.73
393	12.5	1.18	1.39
394	13.2	1.88	3.54
395	12.8	1.48	2.19
396	9.2	-2.12	4.49
397	14.3	2.98	8.88
398	11.7	0.38	0.14
399	12.6	1.28	1.64
400	7.0	-4.32	18.66
	579.7		304.2
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
401	7.0	-4.32	18.66
402	11.3	-0.02	0.00
403	11.1	-0.22	0.05
404	11.7	0.38	0.14
405	10.0	-1.32	1.74
406	10.1	-1.22	1.49
407	11.8	0.48	0.23
408	10.6	-0.72	0.52
409	9.0	-2.32	5.38
410	10.9	-0.42	0.18
411	10.3	-1.02	1.04
412	8.8	-2.52	6.35
413	5.3	-6.02	36.24
414	5.7	-5.62	31.58
415	8.1	-3.22	10.37
416	12.9	1.58	2.50
417	11.0	-0.32	0.10
418	7.4	-3.92	15.36
419	10.5	-0.82	0.67
420	13.8	2.48	6.15
421	14.5	3.18	10.11
422	10.1	-1.22	1.49
423	10.6	-0.72	0.52
424	13.0	1.68	2.82
425	12.1	0.78	0.61
426	10.9	-0.42	0.18
427	8.7	-2.62	6.86
428	11.0	-0.32	0.10
429	13.8	2.48	6.15
430	12.3	0.98	0.96
431	13.8	2.48	6.15
432	12.4	1.08	1.17
433	9.5	-1.82	3.31
434	9.3	-2.02	4.08
435	8.4	-2.92	8.52
436	7.4	-3.92	15.36
437	5.6	-5.72	32.71
438	6.2	-5.12	26.21
439	9.5	-1.82	3.31
440	12.0	0.68	0.46
441	11.4	0.08	0.01
442	11.1	-0.22	0.05
443	17.2	5.88	34.58
444	10.0	-1.32	1.74
445	8.5	-2.82	7.95
446	10.9	-0.42	0.18
447	10.8	-0.52	0.27
448	10.4	-0.92	0.85
449	12.2	0.88	0.78
450	9.6	-1.72	2.96
	520.5		319.2
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
451	11.2	-0.12	0.01
452	13.9	2.58	6.66
453	11.0	-0.32	0.10
454	11.2	-0.12	0.01
455	10.3	-1.02	1.04
456	10.1	-1.22	1.49
457	8.9	-2.42	5.85
458	11.2	-0.12	0.01
459	11.2	-0.12	0.01
460	5.5	-5.82	33.87
461	13.0	1.68	2.82
462	9.1	-2.22	4.93
463	9.2	-2.12	4.49
464	11.8	0.48	0.23
465	13.4	2.08	4.33
466	10.5	-0.82	0.67
467	15.6	4.28	18.32
468	9.5	-1.82	3.31
469	5.7	-5.62	31.58
470	11.4	0.08	0.01
471	10.8	-0.52	0.27
472	8.9	-2.42	5.85
473	10.2	-1.12	1.25
474	14.6	3.28	10.76
475	12.8	1.48	2.19
476	13.0	1.68	2.82
477	9.3	-2.02	4.08
478	10.4	-0.92	0.85
479	10.2	-1.12	1.25
480	5.8	-5.52	30.47
481	12.7	1.38	1.91
482	13.0	1.68	2.82
483	10.7	-0.62	0.38
484	7.9	-3.42	11.69
485	8.4	-2.92	8.52
486	10.3	-1.02	1.04
487	16.1	4.78	22.85
488	9.5	-1.82	3.31
489	7.8	-3.52	12.39
490	8.3	-3.02	9.12
491	9.2	-2.12	4.49
492	12.0	0.68	0.46
493	13.2	1.88	3.54
494	16.1	4.78	22.85
495	10.3	-1.02	1.04
496	9.9	-1.42	2.02
497	9.3	-2.02	4.08
498	10.5	-0.82	0.67
499	9.2	-2.12	4.49
500	7.2	-4.12	16.97
	531.3		314.2
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
501	9.0	-2.32	5.38
502	9.8	-1.52	2.31
503	10.6	-0.72	0.52
504	14.6	3.28	10.76
505	14.5	3.18	10.11
506	12.5	1.18	1.39
507	8.0	-3.32	11.02
508	8.7	-2.62	6.86
509	13.0	1.68	2.82
510	7.9	-3.42	11.69
511	11.6	0.28	0.08
512	14.8	3.48	12.11
513	11.6	0.28	0.08
514	10.5	-0.82	0.67
515	11.0	-0.32	0.10
516	8.6	-2.72	7.40
517	9.7	-1.62	2.62
518	13.6	2.28	5.20
519	8.8	-2.52	6.35
520	8.3	-3.02	9.12
521	13.6	2.28	5.20
522	12.7	1.38	1.91
523	10.1	-1.22	1.49
524	6.8	-4.52	20.43
525	14.1	2.78	7.73
526	11.4	0.08	0.01
527	16.6	5.28	27.88
528	10.8	-0.52	0.27
529	5.1	-6.22	38.68
530	9.6	-1.72	2.96
531	9.6	-1.72	2.96
532	11.5	0.18	0.03
533	14.3	2.98	8.88
534	6.0	-5.32	28.30
535	10.5	-0.82	0.67
536	7.0	-4.32	18.66
537	13.0	1.68	2.82
538	10.7	-0.62	0.38
539	13.5	2.18	4.75
540	15.3	3.98	15.84
541	13.0	1.68	2.82
542	16.5	5.18	26.84
543	15.8	4.48	20.07
544	19.5	8.18	66.92
545	16.2	4.88	23.82
546	18.2	6.88	47.34
547	10.2	-1.12	1.25
548	8.1	-3.22	10.37
549	11.1	-0.22	0.05
550	8.2	-3.12	9.73
	576.1		505.7
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
551	10.2	-1.12	1.25
552	9.7	-1.62	2.62
553	11.7	0.38	0.14
554	11.1	-0.22	0.05
555	9.7	-1.62	2.62
556	11.1	-0.22	0.05
557	12.4	1.08	1.17
558	11.4	0.08	0.01
559	16.4	5.08	25.81
560	12.0	0.68	0.46
561	12.6	1.28	1.64
562	12.6	1.28	1.64
563	16.0	4.68	21.91
564	15.2	3.88	15.06
565	13.3	1.98	3.92
566	8.2	-3.12	9.73
567	10.6	-0.72	0.52
568	12.8	1.48	2.19
569	11.9	0.58	0.34
570	12.8	1.48	2.19
571	11.8	0.48	0.23
572	10.7	-0.62	0.38
573	11.1	-0.22	0.05
574	12.2	0.88	0.78
575	11.0	-0.32	0.10
576	11.7	0.38	0.14
577	13.7	2.38	5.67
578	11.0	-0.32	0.10
579	9.9	-1.42	2.02
580	12.9	1.58	2.50
581	15.5	4.18	17.48
582	21.0	9.68	93.71
583	15.4	4.08	16.65
584	11.3	-0.02	0.00
585	14.8	3.48	12.11
586	11.3	-0.02	0.00
587	10.9	-0.42	0.18
588	12.0	0.68	0.46
589	11.5	0.18	0.03
590	11.3	-0.02	0.00
591	9.2	-2.12	4.49
592	8.7	-2.62	6.86
593	11.3	-0.02	0.00
594	10.8	-0.52	0.27
595	10.7	-0.62	0.38
596	9.7	-1.62	2.62
597	12.9	1.58	2.50
598	16.5	5.18	26.84
599	14.6	3.28	10.76
600	14.2	2.88	8.30
	611.3		308.9
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
601	13.4	2.08	4.33
602	14.1	2.78	7.73
603	11.1	-0.22	0.05
604	12.1	0.78	0.61
605	8.8	-2.52	6.35
606	8.5	-2.82	7.95
607	11.2	-0.12	0.01
608	8.9	-2.42	5.85
609	10.0	-1.32	1.74
610	11.9	0.58	0.34
611	9.0	-2.32	5.38
612	12.4	1.08	1.17
613	12.1	0.78	0.61
614	14.6	3.28	10.76
615	16.9	5.58	31.14
616	14.1	2.78	7.73
617	14.6	3.28	10.76
618	13.3	1.98	3.92
619	10.2	-1.12	1.25
620	12.9	1.58	2.50
621	11.0	-0.32	0.10
622	13.0	1.68	2.82
623	10.6	-0.72	0.52
624	12.0	0.68	0.46
625	10.3	-1.02	1.04
626	8.3	-3.02	9.12
627	11.1	-0.22	0.05
628	11.7	0.38	0.14
629	12.4	1.08	1.17
630	11.8	0.48	0.23
631	20.4	9.08	82.45
632	20.4	9.08	82.45
633	13.4	2.08	4.33
634	12.0	0.68	0.46
635	9.3	-2.02	4.08
636	14.2	2.88	8.30
637	13.2	1.88	3.54
638	13.6	2.28	5.20
639	11.6	0.28	0.08
640	11.6	0.28	0.08
641	14.0	2.68	7.18
642	10.2	-1.12	1.25
643	13.6	2.28	5.20
644	12.8	1.48	2.19
645	14.6	3.28	10.76
646	12.6	1.28	1.64
647	13.5	2.18	4.75
648	17.1	5.78	33.41
649	10.9	-0.42	0.18
650	6.9	-4.42	19.53
	618.2		402.9
	Sum(n)		Sum(n-N) <sup>2</sup>



**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
651	10.0	-1.32	1.74
652	11.5	0.18	0.03
653	8.0	-3.32	11.02
654	10.1	-1.22	1.49
655	8.6	-2.72	7.40
656	8.2	-3.12	9.73
657	9.2	-2.12	4.49
658	8.9	-2.42	5.85
659	10.3	-1.02	1.04
660	8.1	-3.22	10.37
661	9.2	-2.12	4.49
662	10.2	-1.12	1.25
663	11.0	-0.32	0.10
664	11.8	0.48	0.23
665	15.8	4.48	20.07
666	14.6	3.28	10.76
667	13.1	1.78	3.17
668	14.0	2.68	7.18
669	4.2	-7.12	50.69
670	7.8	-3.52	12.39
671	7.8	-3.52	12.39
672	7.9	-3.42	11.69
673	7.3	-4.02	16.16
674	10.1	-1.22	1.49
675	7.5	-3.82	14.59
676	7.9	-3.42	11.69
677	8.2	-3.12	9.73
678	8.8	-2.52	6.35
679	10.2	-1.12	1.25
680	11.1	-0.22	0.05
681	10.9	-0.42	0.18
682	11.0	-0.32	0.10
683	11.8	0.48	0.23
684	16.8	5.48	30.03
685	7.9	-3.42	11.69
686	11.0	-0.32	0.10
687	13.2	1.88	3.54
688	9.0	-2.32	5.38
689	9.0	-2.32	5.38
690	8.0	-3.32	11.02
691	13.2	1.88	3.54
692	8.6	-2.72	7.40
693	10.0	-1.32	1.74
694	9.0	-2.32	5.38
695	0.0	0.00	0.00
696	0.0	0.00	0.00
697	0.0	0.00	0.00
698	0.0	0.00	0.00
699	0.0	0.00	0.00
700	0.0	0.00	0.00
	440.8		334.6
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
701	0.0	0.00	0.00
702	0.0	0.00	0.00
703	0.0	0.00	0.00
704	0.0	0.00	0.00
705	0.0	0.00	0.00
706	0.0	0.00	0.00
707	0.0	0.00	0.00
708	0.0	0.00	0.00
709	0.0	0.00	0.00
710	0.0	0.00	0.00
711	0.0	0.00	0.00
712	0.0	0.00	0.00
713	0.0	0.00	0.00
714	0.0	0.00	0.00
715	0.0	0.00	0.00
716	0.0	0.00	0.00
717	0.0	0.00	0.00
718	0.0	0.00	0.00
719	0.0	0.00	0.00
720	0.0	0.00	0.00
721	0.0	0.00	0.00
722	0.0	0.00	0.00
723	0.0	0.00	0.00
724	0.0	0.00	0.00
725	0.0	0.00	0.00
726	0.0	0.00	0.00
727	0.0	0.00	0.00
728	0.0	0.00	0.00
729	0.0	0.00	0.00
730	0.0	0.00	0.00
731	0.0	0.00	0.00
732	0.0	0.00	0.00
733	0.0	0.00	0.00
734	0.0	0.00	0.00
735	0.0	0.00	0.00
736	0.0	0.00	0.00
737	0.0	0.00	0.00
738	0.0	0.00	0.00
739	0.0	0.00	0.00
740	0.0	0.00	0.00
741	0.0	0.00	0.00
742	0.0	0.00	0.00
743	0.0	0.00	0.00
744	0.0	0.00	0.00
745	0.0	0.00	0.00
746	0.0	0.00	0.00
747	0.0	0.00	0.00
748	0.0	0.00	0.00
749	0.0	0.00	0.00
750	0.0	0.00	0.00
	0.0		0.0
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
1	0.7	-0.6	0.4
2	0.8	-0.5	0.3
3	0.7	-0.6	0.4
4	0.7	-0.6	0.4
5	0.8	-0.5	0.3
6	0.9	-0.4	0.2
7	0.9	-0.4	0.2
8	1.0	-0.3	0.1
9	1.1	-0.2	0.1
10	1.0	-0.3	0.1
11	1.1	-0.2	0.1
12	1.0	-0.3	0.1
13	1.1	-0.2	0.1
14	0.9	-0.4	0.2
15	1.3	-0.0	0.0
16	1.0	-0.3	0.1
17	0.9	-0.4	0.2
18	0.9	-0.4	0.2
19	1.0	-0.3	0.1
20	0.7	-0.6	0.4
21	1.2	-0.1	0.0
22	1.6	0.3	0.1
23	1.1	-0.2	0.1
24	1.2	-0.1	0.0
25	1.3	-0.0	0.0
26	1.5	0.2	0.0
27	1.4	0.1	0.0
28	0.9	-0.4	0.2
29	0.9	-0.4	0.2
30	1.0	-0.3	0.1
31	1.0	-0.3	0.1
32	1.2	-0.1	0.0
33	1.0	-0.3	0.1
34	1.2	-0.1	0.0
35	1.2	-0.1	0.0
36	1.0	-0.3	0.1
37	1.0	-0.3	0.1
38	0.7	-0.6	0.4
39	0.9	-0.4	0.2
40	1.1	-0.2	0.1
41	0.8	-0.5	0.3
42	0.8	-0.5	0.3
43	1.1	-0.2	0.1
44	1.4	0.1	0.0
45	0.8	-0.5	0.3
46	1.2	-0.1	0.0
47	1.8	0.5	0.2
48	1.7	0.4	0.1
49	1.4	0.1	0.0
50	1.2	-0.1	0.0
	69.3		8.1
	69.4		7.2
	68.8		4.2
	69.5		3.3
	69.7		4.0
	65.6		2.8
	68.0		4.0
	70.8		7.3
	62.2		1.9
	62.7		3.5
	67.7		1.2
	66.9		1.2
	58.9		4.5
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
total	922.6		60.1
	Sum(n)		Sum(n-N) <sup>2</sup>

A:\GAEDTHCP.WB2

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N) <sup>2</sup>
51	1.6	0.27	0.07
52	1.7	0.37	0.14
53	1.0	-0.33	0.11
54	0.5	-0.83	0.69
55	0.8	-0.53	0.28
56	1.2	-0.13	0.02
57	1.3	-0.03	0.00
58	1.3	-0.03	0.00
59	0.9	-0.43	0.18
60	1.2	-0.13	0.02
61	1.2	-0.13	0.02
62	1.2	-0.13	0.02
63	0.9	-0.43	0.18
64	1.0	-0.33	0.11
65	1.4	0.07	0.00
66	1.6	0.27	0.07
67	1.0	-0.33	0.11
68	1.7	0.37	0.14
69	1.5	0.17	0.03
70	1.3	-0.03	0.00
71	1.3	-0.03	0.00
72	1.7	0.37	0.14
73	1.7	0.37	0.14
74	1.8	0.47	0.22
75	1.5	0.17	0.03
76	1.8	0.47	0.22
77	2.0	0.67	0.45
78	1.3	-0.03	0.00
79	1.3	-0.03	0.00
80	1.4	0.07	0.00
81	0.4	-0.93	0.86
82	1.1	-0.23	0.05
83	1.4	0.07	0.00
84	1.4	0.07	0.00
85	1.0	-0.33	0.11
86	0.8	-0.53	0.28
87	1.2	-0.13	0.02
88	0.9	-0.43	0.18
89	1.5	0.17	0.03
90	2.0	0.67	0.45
91	1.4	0.07	0.00
92	1.7	0.37	0.14
93	1.6	0.27	0.07
94	2.0	0.67	0.45
95	1.9	0.57	0.33
96	1.7	0.37	0.14
97	1.9	0.57	0.33
98	2.0	0.67	0.45
99	2.2	0.87	0.76
100	1.1	-0.23	0.05
	69.3		8.1
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
101	1.3	-0.03	0.00
102	1.3	-0.03	0.00
103	1.1	-0.23	0.05
104	0.8	-0.53	0.28
105	1.4	0.07	0.00
106	1.3	-0.03	0.00
107	1.1	-0.23	0.05
108	1.3	-0.03	0.00
109	0.8	-0.53	0.28
110	1.3	-0.03	0.00
111	1.0	-0.33	0.11
112	1.5	0.17	0.03
113	1.5	0.17	0.03
114	1.7	0.37	0.14
115	1.5	0.17	0.03
116	1.5	0.17	0.03
117	1.8	0.47	0.22
118	1.9	0.57	0.33
119	1.9	0.57	0.33
120	2.0	0.67	0.45
121	1.8	0.47	0.22
122	0.8	-0.53	0.28
123	1.1	-0.23	0.05
124	1.2	-0.13	0.02
125	1.3	-0.03	0.00
126	1.3	-0.03	0.00
127	0.6	-0.73	0.53
128	1.0	-0.33	0.11
129	1.3	-0.03	0.00
130	1.1	-0.23	0.05
131	0.8	-0.53	0.28
132	0.8	-0.53	0.28
133	1.4	0.07	0.00
134	1.9	0.57	0.33
135	1.8	0.47	0.22
136	1.6	0.27	0.07
137	1.5	0.17	0.03
138	1.3	-0.03	0.00
139	1.7	0.37	0.14
140	1.5	0.17	0.03
141	2.0	0.67	0.45
142	1.9	0.57	0.33
143	1.9	0.57	0.33
144	1.7	0.37	0.14
145	2.2	0.87	0.76
146	1.3	-0.03	0.00
147	1.2	-0.13	0.02
148	1.2	-0.13	0.02
149	1.2	-0.13	0.02
150	1.0	-0.33	0.11
	69.4		7.2
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

$$n = pCi/g \text{ Th (NAT)}$$

Number	n	(n-N)	(n-N) <sup>2</sup>
151	1.0	-0.33	0.11
152	1.2	-0.13	0.02
153	1.1	-0.23	0.05
154	1.1	-0.23	0.05
155	1.2	-0.13	0.02
156	1.2	-0.13	0.02
157	1.7	0.37	0.14
158	1.6	0.27	0.07
159	1.8	0.47	0.22
160	1.9	0.57	0.33
161	1.7	0.37	0.14
162	1.5	0.17	0.03
163	1.7	0.37	0.14
164	1.8	0.47	0.22
165	1.7	0.37	0.14
166	1.6	0.27	0.07
167	1.7	0.37	0.14
168	1.5	0.17	0.03
169	1.1	-0.23	0.05
170	1.2	-0.13	0.02
171	1.3	-0.03	0.00
172	1.1	-0.23	0.05
173	0.9	-0.43	0.18
174	1.3	-0.03	0.00
175	1.4	0.07	0.00
176	1.0	-0.33	0.11
177	1.1	-0.23	0.05
178	0.9	-0.43	0.18
179	1.3	-0.03	0.00
180	1.7	0.37	0.14
181	1.2	-0.13	0.02
182	1.8	0.47	0.22
183	1.8	0.47	0.22
184	1.7	0.37	0.14
185	1.3	-0.03	0.00
186	1.7	0.37	0.14
187	1.6	0.27	0.07
188	1.3	-0.03	0.00
189	1.3	-0.03	0.00
190	1.2	-0.13	0.02
191	1.6	0.27	0.07
192	1.3	-0.03	0.00
193	1.4	0.07	0.00
194	1.3	-0.03	0.00
195	1.4	0.07	0.00
196	1.2	-0.13	0.02
197	0.6	-0.73	0.53
198	1.3	-0.03	0.00
199	1.3	-0.03	0.00
200	1.2	-0.13	0.02
	68.8		4.2
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
201	1.2	-0.13	0.02
202	1.2	-0.13	0.02
203	1.4	0.07	0.00
204	1.6	0.27	0.07
205	1.9	0.57	0.33
206	1.7	0.37	0.14
207	1.6	0.27	0.07
208	1.3	-0.03	0.00
209	1.2	-0.13	0.02
210	1.0	-0.33	0.11
211	1.1	-0.23	0.05
212	1.2	-0.13	0.02
213	1.3	-0.03	0.00
214	1.2	-0.13	0.02
215	1.2	-0.13	0.02
216	1.2	-0.13	0.02
217	1.3	-0.03	0.00
218	1.2	-0.13	0.02
219	1.2	-0.13	0.02
220	1.2	-0.13	0.02
221	1.3	-0.03	0.00
222	1.2	-0.13	0.02
223	1.3	-0.03	0.00
224	1.1	-0.23	0.05
225	1.6	0.27	0.07
226	1.4	0.07	0.00
227	2.0	0.67	0.45
228	1.6	0.27	0.07
229	1.8	0.47	0.22
230	1.5	0.17	0.03
231	1.8	0.47	0.22
232	1.7	0.37	0.14
233	1.4	0.07	0.00
234	1.2	-0.13	0.02
235	1.3	-0.03	0.00
236	1.5	0.17	0.03
237	1.2	-0.13	0.02
238	1.3	-0.03	0.00
239	1.4	0.07	0.00
240	1.4	0.07	0.00
241	1.3	-0.03	0.00
242	1.5	0.17	0.03
243	1.0	-0.33	0.11
244	1.3	-0.03	0.00
245	1.1	-0.23	0.05
246	1.1	-0.23	0.05
247	1.7	0.37	0.14
248	1.7	0.37	0.14
249	1.9	0.57	0.33
250	1.7	0.37	0.14
	69.5		3.3
	Sum(n)		Sum(n-N) <sup>2</sup>



**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

$$n = pCi/g \text{ Th (NAT)}$$

Number	n	(n-N)	(n-N) <sup>2</sup>
251	1.2	-0.13	0.02
252	1.4	0.07	0.00
253	2.1	0.77	0.59
254	1.5	0.17	0.03
255	1.5	0.17	0.03
256	1.3	-0.03	0.00
257	1.2	-0.13	0.02
258	1.0	-0.33	0.11
259	1.2	-0.13	0.02
260	1.3	-0.03	0.00
261	1.3	-0.03	0.00
262	1.2	-0.13	0.02
263	1.0	-0.33	0.11
264	1.2	-0.13	0.02
265	1.0	-0.33	0.11
266	1.1	-0.23	0.05
267	1.2	-0.13	0.02
268	1.3	-0.03	0.00
269	1.4	0.07	0.00
270	2.0	0.67	0.45
271	1.4	0.07	0.00
272	1.7	0.37	0.14
273	1.7	0.37	0.14
274	1.4	0.07	0.00
275	1.7	0.37	0.14
276	1.4	0.07	0.00
277	2.0	0.67	0.45
278	1.1	-0.23	0.05
279	1.5	0.17	0.03
280	1.1	-0.23	0.05
281	1.2	-0.13	0.02
282	0.9	-0.43	0.18
283	1.3	-0.03	0.00
284	1.3	-0.03	0.00
285	1.2	-0.13	0.02
286	1.1	-0.23	0.05
287	1.3	-0.03	0.00
288	1.4	0.07	0.00
289	1.2	-0.13	0.02
290	1.4	0.07	0.00
291	1.3	-0.03	0.00
292	1.3	-0.03	0.00
293	1.7	0.37	0.14
294	1.7	0.37	0.14
295	1.8	0.47	0.22
296	1.7	0.37	0.14
297	1.6	0.27	0.07
298	1.4	0.07	0.00
299	1.6	0.27	0.07
300	1.9	0.57	0.33
	69.7		4.0
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
301	1.2	-0.13	0.02
302	1.0	-0.33	0.11
303	1.8	0.47	0.22
304	1.4	0.07	0.00
305	0.9	-0.43	0.18
306	1.3	-0.03	0.00
307	1.3	-0.03	0.00
308	1.1	-0.23	0.05
309	1.2	-0.13	0.02
310	1.2	-0.13	0.02
311	1.2	-0.13	0.02
312	1.1	-0.23	0.05
313	1.2	-0.13	0.02
314	1.5	0.17	0.03
315	1.2	-0.13	0.02
316	1.5	0.17	0.03
317	1.3	-0.03	0.00
318	1.7	0.37	0.14
319	1.7	0.37	0.14
320	1.4	0.07	0.00
321	1.5	0.17	0.03
322	1.6	0.27	0.07
323	1.6	0.27	0.07
324	1.1	-0.23	0.05
325	1.1	-0.23	0.05
326	1.3	-0.03	0.00
327	1.3	-0.03	0.00
328	1.0	-0.33	0.11
329	1.2	-0.13	0.02
330	1.1	-0.23	0.05
331	0.8	-0.53	0.28
332	0.9	-0.43	0.18
333	1.3	-0.03	0.00
334	1.3	-0.03	0.00
335	1.0	-0.33	0.11
336	1.3	-0.03	0.00
337	1.1	-0.23	0.05
338	1.3	-0.03	0.00
339	1.7	0.37	0.14
340	1.5	0.17	0.03
341	1.7	0.37	0.14
342	1.3	-0.03	0.00
343	1.7	0.37	0.14
344	1.7	0.37	0.14
345	1.3	-0.03	0.00
346	1.2	-0.13	0.02
347	1.4	0.07	0.00
348	1.2	-0.13	0.02
349	1.5	0.17	0.03
350	1.4	0.07	0.00
	65.6		2.8
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N) <sup>2</sup>
351	1.4	0.00	0.00
352	1.6	0.27	0.07
353	1.5	0.17	0.03
354	2.0	0.67	0.45
355	1.1	-0.23	0.05
356	1.2	-0.13	0.02
357	1.3	-0.03	0.00
358	1.3	-0.03	0.00
359	0.9	-0.43	0.18
360	0.9	-0.43	0.18
361	1.4	0.07	0.00
362	1.5	0.17	0.03
363	1.5	0.17	0.03
364	1.5	0.17	0.03
365	1.3	-0.03	0.00
366	1.5	0.17	0.03
367	1.6	0.27	0.07
368	2.0	0.67	0.45
369	1.3	-0.03	0.00
370	1.1	-0.23	0.05
371	1.2	-0.13	0.02
372	1.3	-0.03	0.00
373	1.3	-0.03	0.00
374	1.1	-0.23	0.05
375	1.6	0.27	0.07
376	1.5	0.17	0.03
377	2.0	0.67	0.45
378	1.0	-0.33	0.11
379	1.2	-0.13	0.02
380	1.1	-0.23	0.05
381	0.9	-0.43	0.18
382	1.1	-0.23	0.05
383	1.1	-0.23	0.05
384	1.1	-0.23	0.05
385	1.4	0.07	0.00
386	1.0	-0.33	0.11
387	2.0	0.67	0.45
388	1.7	0.37	0.14
389	1.6	0.27	0.07
390	1.7	0.37	0.14
391	1.6	0.27	0.07
392	1.4	0.07	0.00
393	1.3	-0.03	0.00
394	1.3	-0.03	0.00
395	1.4	0.07	0.00
396	1.5	0.17	0.03
397	1.1	-0.23	0.05
398	1.2	-0.13	0.02
399	1.4	0.07	0.00
400	1.0	-0.33	0.11
	68.0		4.0
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
401	1.0	-0.33	0.11
402	1.0	-0.33	0.11
403	1.2	-0.13	0.02
404	1.0	-0.33	0.11
405	1.2	-0.13	0.02
406	1.3	-0.03	0.00
407	1.2	-0.13	0.02
408	1.4	0.07	0.00
409	1.0	-0.33	0.11
410	1.0	-0.33	0.11
411	1.9	0.57	0.33
412	1.9	0.57	0.33
413	2.0	0.67	0.45
414	2.1	0.77	0.59
415	2.0	0.67	0.45
416	1.5	0.17	0.03
417	1.2	-0.13	0.02
418	1.6	0.27	0.07
419	1.4	0.07	0.00
420	1.3	-0.03	0.00
421	1.5	0.17	0.03
422	1.2	-0.13	0.02
423	1.5	0.17	0.03
424	1.0	-0.33	0.11
425	0.9	-0.43	0.18
426	1.3	-0.03	0.00
427	1.5	0.17	0.03
428	1.2	-0.13	0.02
429	1.1	-0.23	0.05
430	1.1	-0.23	0.05
431	1.1	-0.23	0.05
432	1.4	0.07	0.00
433	2.0	0.67	0.45
434	2.3	0.97	0.94
435	2.0	0.67	0.45
436	2.1	0.77	0.59
437	2.2	0.87	0.76
438	2.0	0.67	0.45
439	1.2	-0.13	0.02
440	1.3	-0.03	0.00
441	1.2	-0.13	0.02
442	1.1	-0.23	0.05
443	1.1	-0.23	0.05
444	1.2	-0.13	0.02
445	1.5	0.17	0.03
446	1.2	-0.13	0.02
447	1.3	-0.03	0.00
448	1.4	0.07	0.00
449	1.5	0.17	0.03
450	1.2	-0.13	0.02
	70.8		7.3
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

 $n = pCi/g \text{ Th (NAT)}$ 

Number	n	(n-N)	(n-N) <sup>2</sup>
451	1.2	-0.13	0.02
452	1.2	-0.13	0.02
453	1.3	-0.03	0.00
454	1.5	0.17	0.03
455	1.3	-0.03	0.00
456	1.5	0.17	0.03
457	1.4	0.07	0.00
458	1.2	-0.13	0.02
459	1.4	0.07	0.00
460	1.4	0.07	0.00
461	1.3	-0.03	0.00
462	1.1	-0.23	0.05
463	1.2	-0.13	0.02
464	1.0	-0.33	0.11
465	1.0	-0.33	0.11
466	1.3	-0.03	0.00
467	1.3	-0.03	0.00
468	1.2	-0.13	0.02
469	1.3	-0.03	0.00
470	1.3	-0.03	0.00
471	1.0	-0.33	0.11
472	1.0	-0.33	0.11
473	0.9	-0.43	0.18
474	1.3	-0.03	0.00
475	1.2	-0.13	0.02
476	1.3	-0.03	0.00
477	1.2	-0.13	0.02
478	1.1	-0.23	0.05
479	1.2	-0.13	0.02
480	1.6	0.27	0.07
481	1.4	0.07	0.00
482	1.3	-0.03	0.00
483	1.4	0.07	0.00
484	1.0	-0.33	0.11
485	0.7	-0.63	0.40
486	1.1	-0.23	0.05
487	1.2	-0.13	0.02
488	1.4	0.07	0.00
489	1.2	-0.13	0.02
490	1.3	-0.03	0.00
491	1.1	-0.23	0.05
492	1.3	-0.03	0.00
493	1.1	-0.23	0.05
494	1.4	0.07	0.00
495	1.5	0.17	0.03
496	1.2	-0.13	0.02
497	1.1	-0.23	0.05
498	1.5	0.17	0.03
499	1.4	0.07	0.00
500	1.4	0.07	0.00
	62.2		1.9
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
501	1.3	-0.03	0.00
502	1.3	-0.03	0.00
503	1.1	-0.23	0.05
504	1.3	-0.03	0.00
505	1.2	-0.13	0.02
506	1.3	-0.03	0.00
507	1.5	0.17	0.03
508	1.0	-0.33	0.11
509	1.0	-0.33	0.11
510	1.3	-0.03	0.00
511	1.2	-0.13	0.02
512	1.0	-0.33	0.11
513	1.5	0.17	0.03
514	1.3	-0.03	0.00
515	1.1	-0.23	0.05
516	1.2	-0.13	0.02
517	1.4	0.07	0.00
518	2.1	0.77	0.59
519	1.4	0.07	0.00
520	1.4	0.07	0.00
521	1.3	-0.03	0.00
522	0.9	-0.43	0.18
523	1.0	-0.33	0.11
524	1.0	-0.33	0.11
525	1.1	-0.23	0.05
526	1.0	-0.33	0.11
527	1.8	0.47	0.22
528	1.2	-0.13	0.02
529	0.9	-0.43	0.18
530	0.9	-0.43	0.18
531	1.3	-0.03	0.00
532	1.3	-0.03	0.00
533	1.0	-0.33	0.11
534	1.0	-0.33	0.11
535	0.8	-0.53	0.28
536	1.0	-0.33	0.11
537	1.2	-0.13	0.02
538	1.2	-0.13	0.02
539	1.5	0.17	0.03
540	1.3	-0.03	0.00
541	1.4	0.07	0.00
542	1.5	0.17	0.03
543	1.3	-0.03	0.00
544	1.2	-0.13	0.02
545	1.4	0.07	0.00
546	1.4	0.07	0.00
547	1.9	0.57	0.33
548	1.4	0.07	0.00
549	1.1	-0.23	0.05
550	1.5	0.17	0.03
	62.7		3.5
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N) <sup>2</sup>
551	1.3	-0.03	0.00
552	1.7	0.37	0.14
553	1.3	-0.03	0.00
554	1.4	0.07	0.00
555	1.7	0.37	0.14
556	1.1	-0.23	0.05
557	1.3	-0.03	0.00
558	1.3	-0.03	0.00
559	1.1	-0.23	0.05
560	1.2	-0.13	0.02
561	1.2	-0.13	0.02
562	1.3	-0.03	0.00
563	1.5	0.17	0.03
564	1.3	-0.03	0.00
565	1.4	0.07	0.00
566	1.3	-0.03	0.00
567	1.3	-0.03	0.00
568	1.2	-0.13	0.02
569	1.4	0.07	0.00
570	1.3	-0.03	0.00
571	1.2	-0.13	0.02
572	1.3	-0.03	0.00
573	1.5	0.17	0.03
574	1.7	0.37	0.14
575	1.3	-0.03	0.00
576	1.0	-0.33	0.11
577	1.5	0.17	0.03
578	1.3	-0.03	0.00
579	1.5	0.17	0.03
580	1.4	0.07	0.00
581	1.4	0.07	0.00
582	1.3	-0.03	0.00
583	1.2	-0.13	0.02
584	1.2	-0.13	0.02
585	1.2	-0.13	0.02
586	1.3	-0.03	0.00
587	1.4	0.07	0.00
588	1.4	0.07	0.00
589	1.6	0.27	0.07
590	1.1	-0.23	0.05
591	1.5	0.17	0.03
592	1.4	0.07	0.00
593	1.4	0.07	0.00
594	1.5	0.17	0.03
595	1.4	0.07	0.00
596	1.4	0.07	0.00
597	1.4	0.07	0.00
598	1.6	0.27	0.07
599	1.2	-0.13	0.02
600	1.5	0.17	0.03
	67.7		1.2
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
601	1.3	-0.03	0.00
602	1.2	-0.13	0.02
603	1.5	0.17	0.03
604	1.2	-0.13	0.02
605	1.3	-0.03	0.00
606	1.4	0.07	0.00
607	1.2	-0.13	0.02
608	1.5	0.17	0.03
609	1.5	0.17	0.03
610	1.4	0.07	0.00
611	1.3	-0.03	0.00
612	1.4	0.07	0.00
613	1.4	0.07	0.00
614	1.1	-0.23	0.05
615	1.5	0.17	0.03
616	1.5	0.17	0.03
617	1.2	-0.13	0.02
618	1.2	-0.13	0.02
619	1.4	0.07	0.00
620	1.5	0.17	0.03
621	1.4	0.07	0.00
622	1.4	0.07	0.00
623	1.1	-0.23	0.05
624	1.3	-0.03	0.00
625	1.4	0.07	0.00
626	1.6	0.27	0.07
627	1.3	-0.03	0.00
628	1.2	-0.13	0.02
629	1.3	-0.03	0.00
630	1.4	0.07	0.00
631	1.3	-0.03	0.00
632	1.3	-0.03	0.00
633	1.2	-0.13	0.02
634	2.0	0.67	0.45
635	1.5	0.17	0.03
636	1.3	-0.03	0.00
637	1.3	-0.03	0.00
638	1.3	-0.03	0.00
639	1.4	0.07	0.00
640	1.4	0.07	0.00
641	1.3	-0.03	0.00
642	1.4	0.07	0.00
643	1.3	-0.03	0.00
644	1.2	-0.13	0.02
645	1.2	-0.13	0.02
646	1.2	-0.13	0.02
647	1.4	0.07	0.00
648	1.2	-0.13	0.02
649	1.3	-0.03	0.00
650	1.0	-0.33	0.11
	66.9		1.2
	Sum(n)		Sum(n-N) <sup>2</sup>

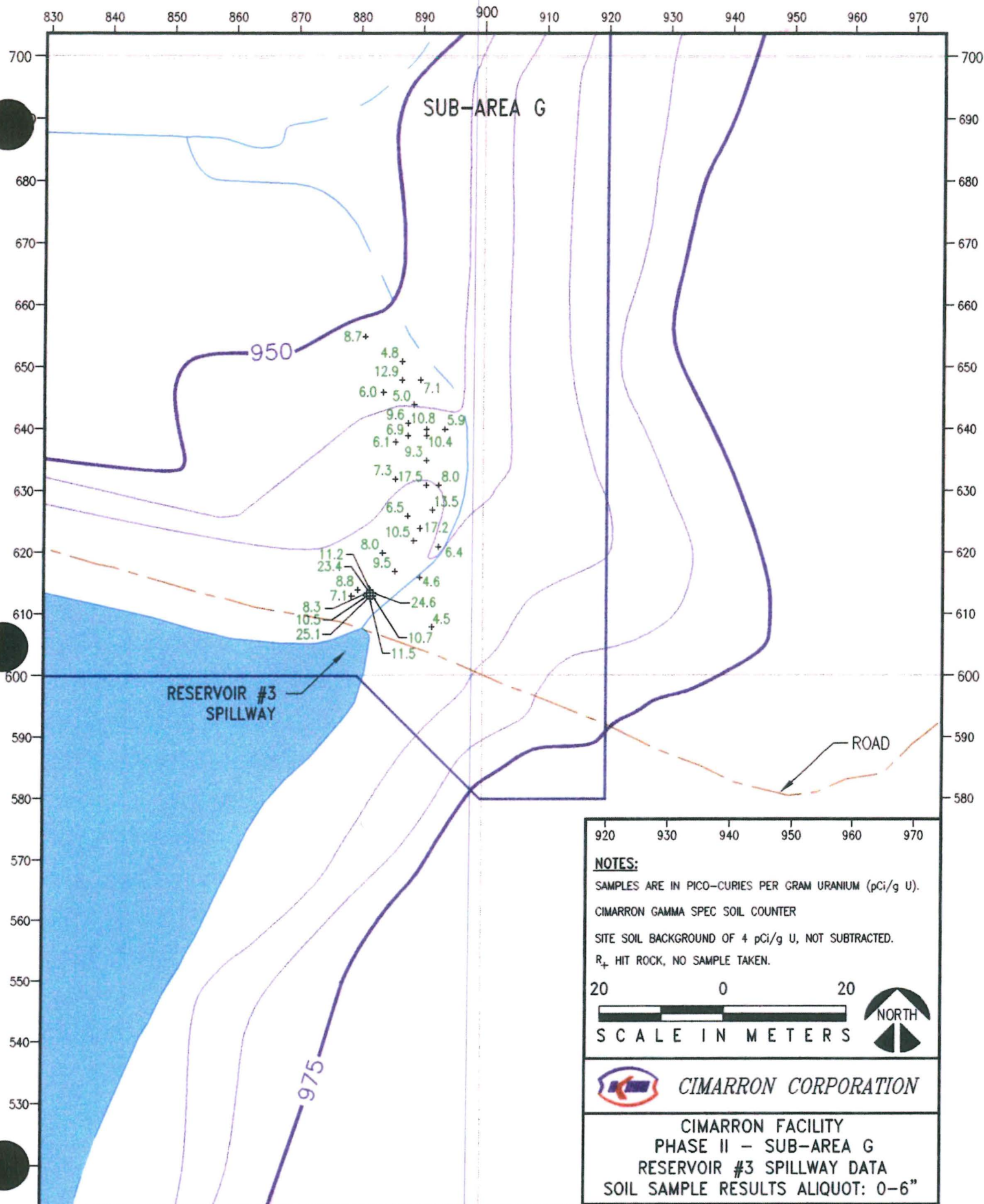


**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED AREA 'G' - EXPANDED DRAINAGE - SURFACE**

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N) <sup>2</sup>
651	1.0	-0.33	0.11
652	1.0	-0.33	0.11
653	1.2	-0.13	0.02
654	1.3	-0.03	0.00
655	1.2	-0.13	0.02
656	1.2	-0.13	0.02
657	1.1	-0.23	0.05
658	1.1	-0.23	0.05
659	0.9	-0.43	0.18
660	1.3	-0.03	0.00
661	1.1	-0.23	0.05
662	1.3	-0.03	0.00
663	0.9	-0.43	0.18
664	0.9	-0.43	0.18
665	1.0	-0.33	0.11
666	1.2	-0.13	0.02
667	1.3	-0.03	0.00
668	1.0	-0.33	0.11
669	1.5	0.17	0.03
670	1.4	0.07	0.00
671	1.4	0.07	0.00
672	1.4	0.07	0.00
673	1.4	0.07	0.00
674	1.2	-0.13	0.02
675	1.2	-0.13	0.02
676	1.5	0.17	0.03
677	1.6	0.27	0.07
678	1.5	0.17	0.03
679	1.3	-0.03	0.00
680	1.4	0.07	0.00
681	1.4	0.07	0.00
682	1.5	0.17	0.03
683	1.5	0.17	0.03
684	1.4	0.07	0.00
685	1.7	0.37	0.14
686	2.4	1.07	1.15
687	1.9	0.57	0.33
688	1.6	0.27	0.07
689	1.0	-0.33	0.11
690	2.0	0.67	0.45
691	2.0	0.67	0.45
692	1.7	0.37	0.14
693	1.0	-0.33	0.11
694	1.0	-0.33	0.11
695	0.0	0.00	0.00
696	0.0	0.00	0.00
697	0.0	0.00	0.00
698	0.0	0.00	0.00
699	0.0	0.00	0.00
700	0.0	0.00	0.00
	58.9		4.5
	Sum(n)		Sum(n-N) <sup>2</sup>

Number	n	(n-N)	(n-N) <sup>2</sup>
701	0.0	0.00	0.00
702	0.0	0.00	0.00
703	0.0	0.00	0.00
704	0.0	0.00	0.00
705	0.0	0.00	0.00
706	0.0	0.00	0.00
707	0.0	0.00	0.00
708	0.0	0.00	0.00
709	0.0	0.00	0.00
710	0.0	0.00	0.00
711	0.0	0.00	0.00
712	0.0	0.00	0.00
713	0.0	0.00	0.00
714	0.0	0.00	0.00
715	0.0	0.00	0.00
716	0.0	0.00	0.00
717	0.0	0.00	0.00
718	0.0	0.00	0.00
719	0.0	0.00	0.00
720	0.0	0.00	0.00
721	0.0	0.00	0.00
722	0.0	0.00	0.00
723	0.0	0.00	0.00
724	0.0	0.00	0.00
725	0.0	0.00	0.00
726	0.0	0.00	0.00
727	0.0	0.00	0.00
728	0.0	0.00	0.00
729	0.0	0.00	0.00
730	0.0	0.00	0.00
731	0.0	0.00	0.00
732	0.0	0.00	0.00
733	0.0	0.00	0.00
734	0.0	0.00	0.00
735	0.0	0.00	0.00
736	0.0	0.00	0.00
737	0.0	0.00	0.00
738	0.0	0.00	0.00
739	0.0	0.00	0.00
740	0.0	0.00	0.00
741	0.0	0.00	0.00
742	0.0	0.00	0.00
743	0.0	0.00	0.00
744	0.0	0.00	0.00
745	0.0	0.00	0.00
746	0.0	0.00	0.00
747	0.0	0.00	0.00
748	0.0	0.00	0.00
749	0.0	0.00	0.00
750	0.0	0.00	0.00
	0.0		0.0
	Sum(n)		Sum(n-N) <sup>2</sup>



**NOTES:**

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

R<sub>+</sub> HIT ROCK, NO SAMPLE TAKEN.

20 0 20

SCALE IN METERS

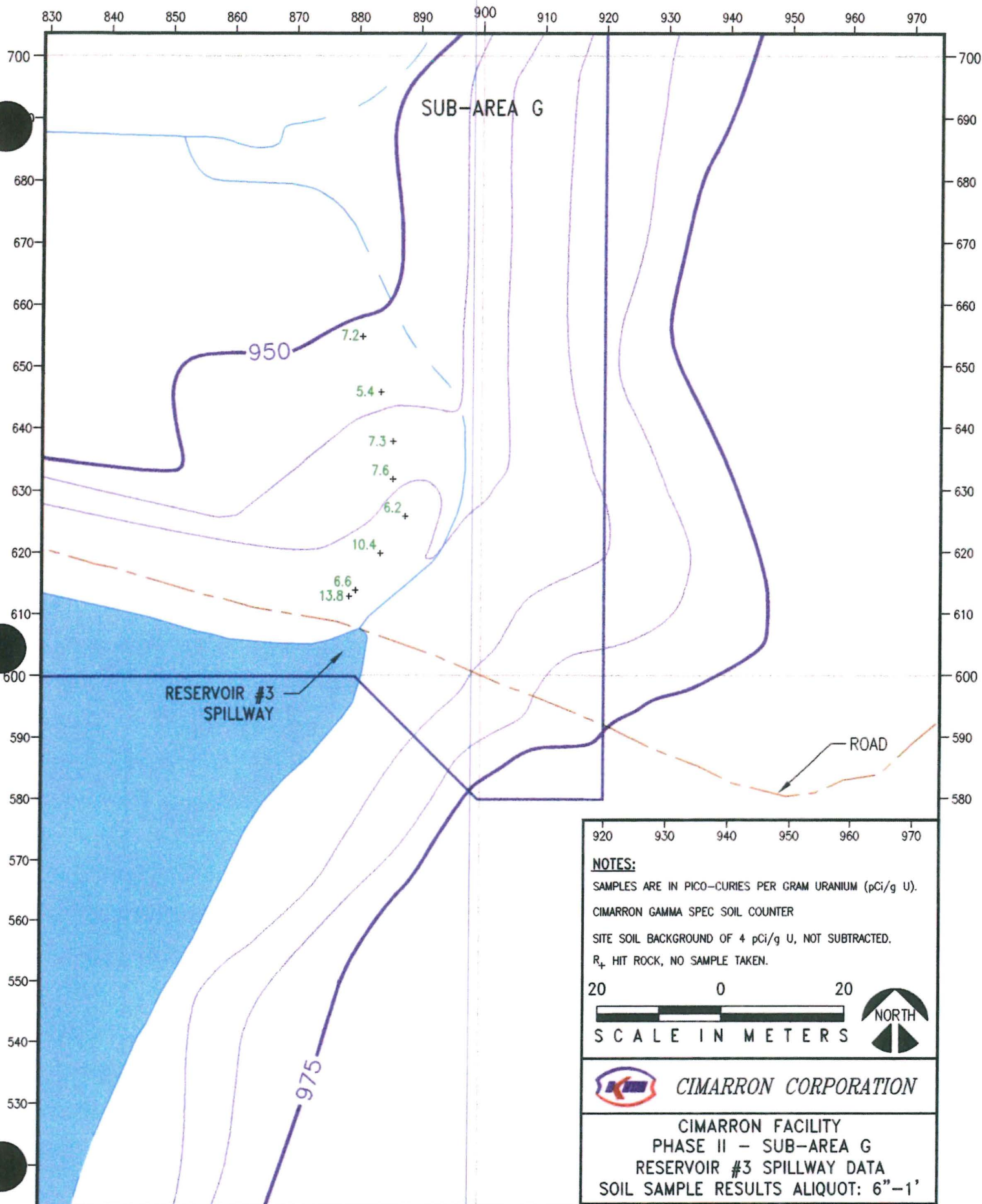


**CIMARRON CORPORATION**

**CIMARRON FACILITY  
PHASE II - SUB-AREA G  
RESERVOIR #3 SPILLWAY DATA  
SOIL SAMPLE RESULTS ALIQUOT: 0-6"**

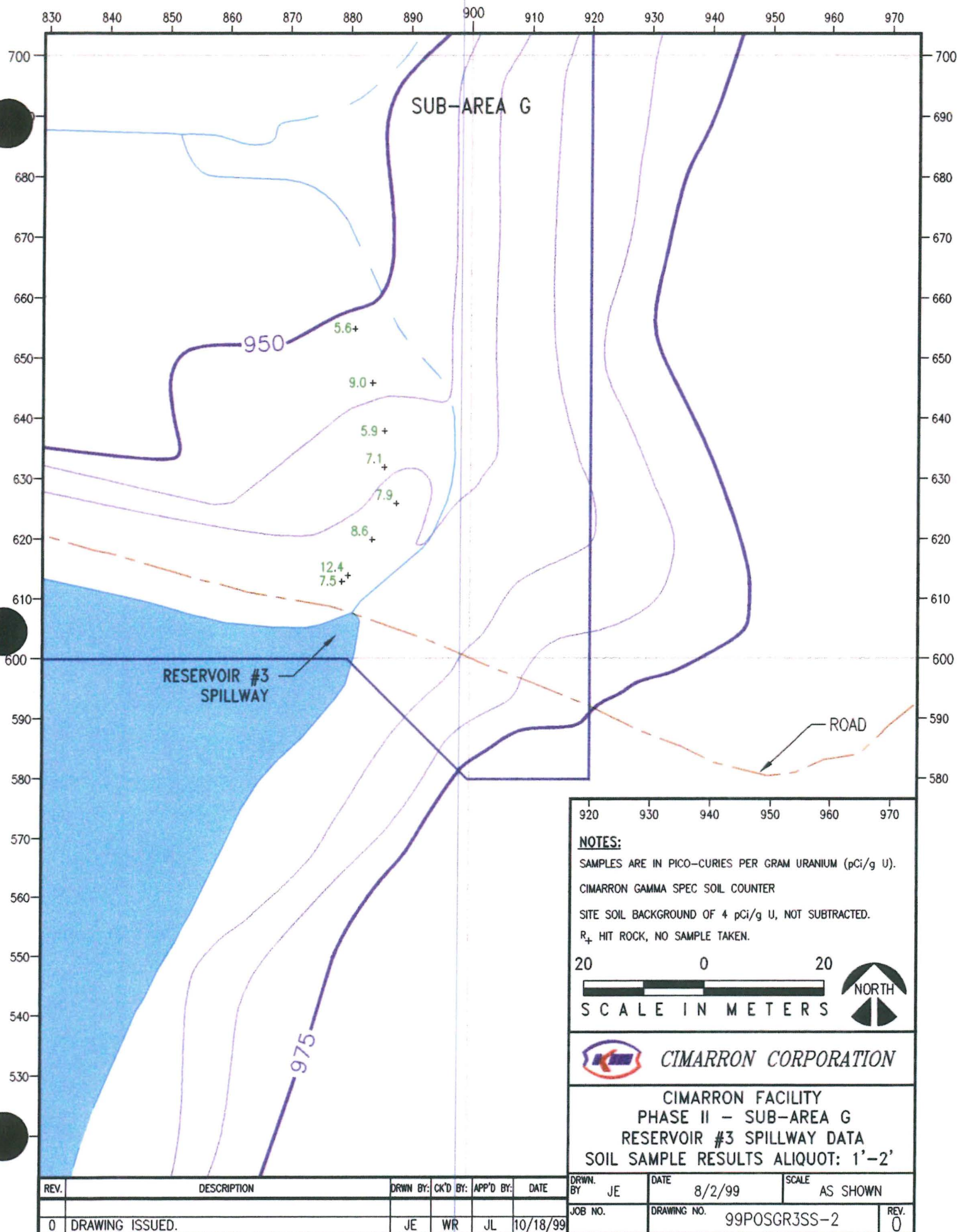
REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE	DRWN. BY	DATE	SCALE
0	DRAWING ISSUED.	JE	WR	JL	10/18/99	JE	8/2/99	AS SHOWN
						JOB NO.	DRAWING NO.	REV.
							99POSGR3SS-0	0

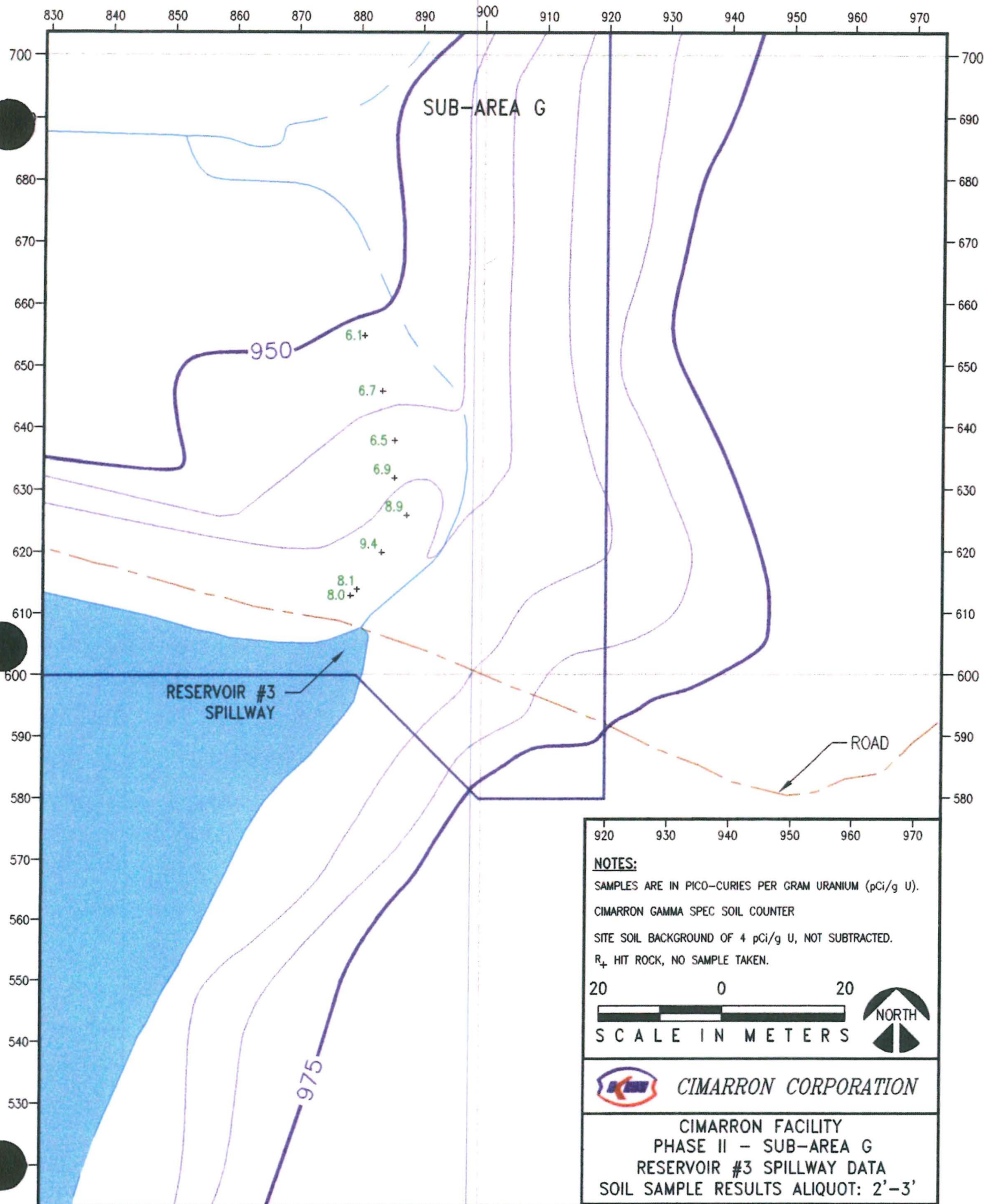
...\\CIM\\SUBAREAG99\\DRAINAGE\\RES3-SPILLWAY\\99PODGEPPS



REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE	DRWN BY:	DATE	SCALE
0	DRAWING ISSUED.	JE	WR	JL	10/18/99	JE	8/2/99	AS SHOWN
						JOB NO.	DRAWING NO.	REV.
							99POSGR3SS-1	0







**NOTES:**

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).

CIMARRON GAMMA SPEC SOIL COUNTER

SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

R<sub>+</sub> HIT ROCK, NO SAMPLE TAKEN.

20 0 20

SCALE IN METERS

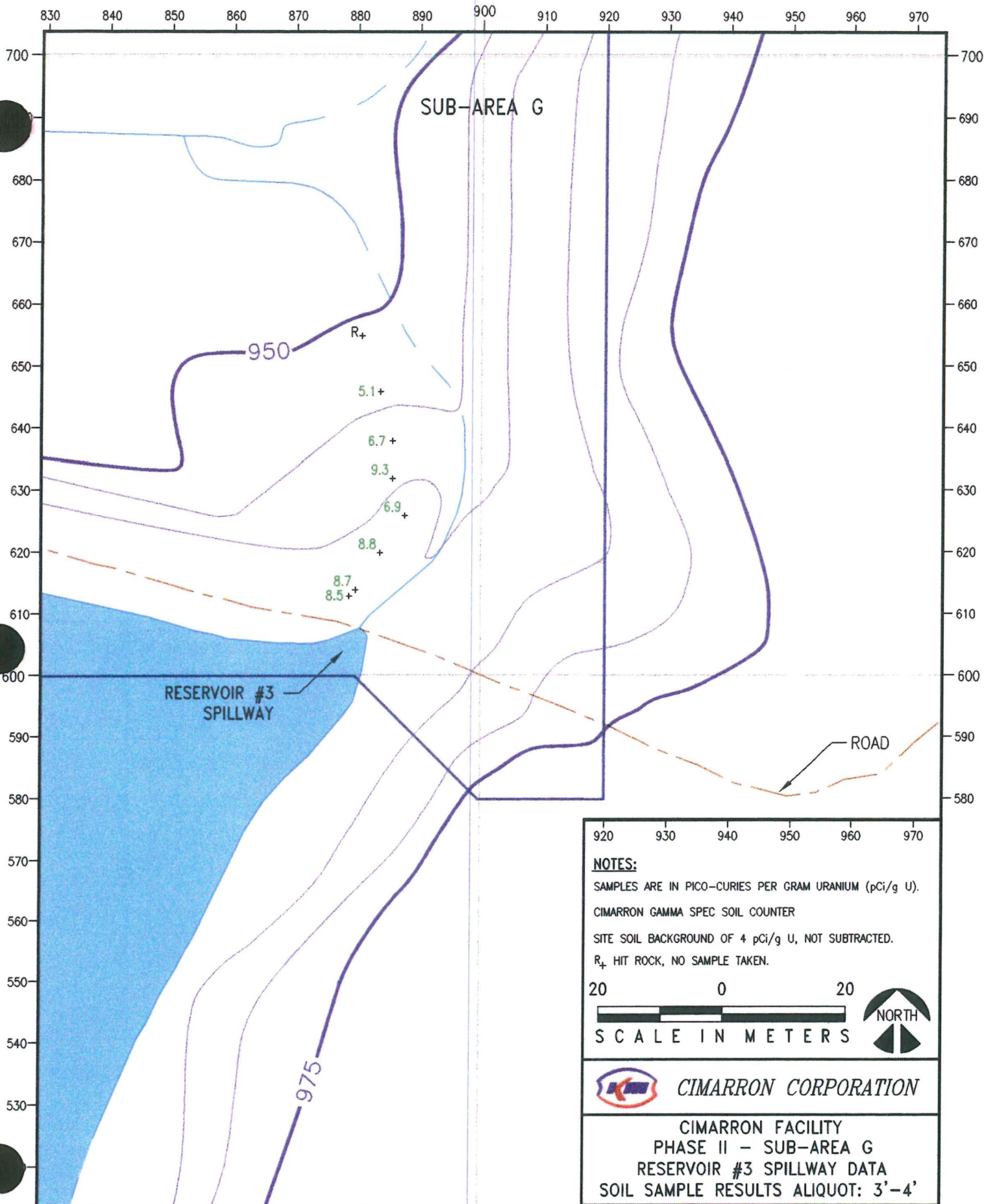


**CIMARRON CORPORATION**

**CIMARRON FACILITY  
PHASE II - SUB-AREA G  
RESERVOIR #3 SPILLWAY DATA  
SOIL SAMPLE RESULTS ALIQUOT: 2'-3'**

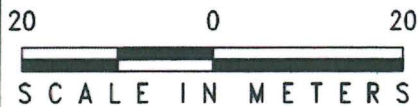
REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE	DRWN BY:	DATE	SCALE
0	DRAWING ISSUED.	JE	WR	JL	10/18/99	JE	8/2/99	AS SHOWN
						JOB NO.	DRAWING NO.	REV.
							99POSGR3SS-3	0





**NOTES:**

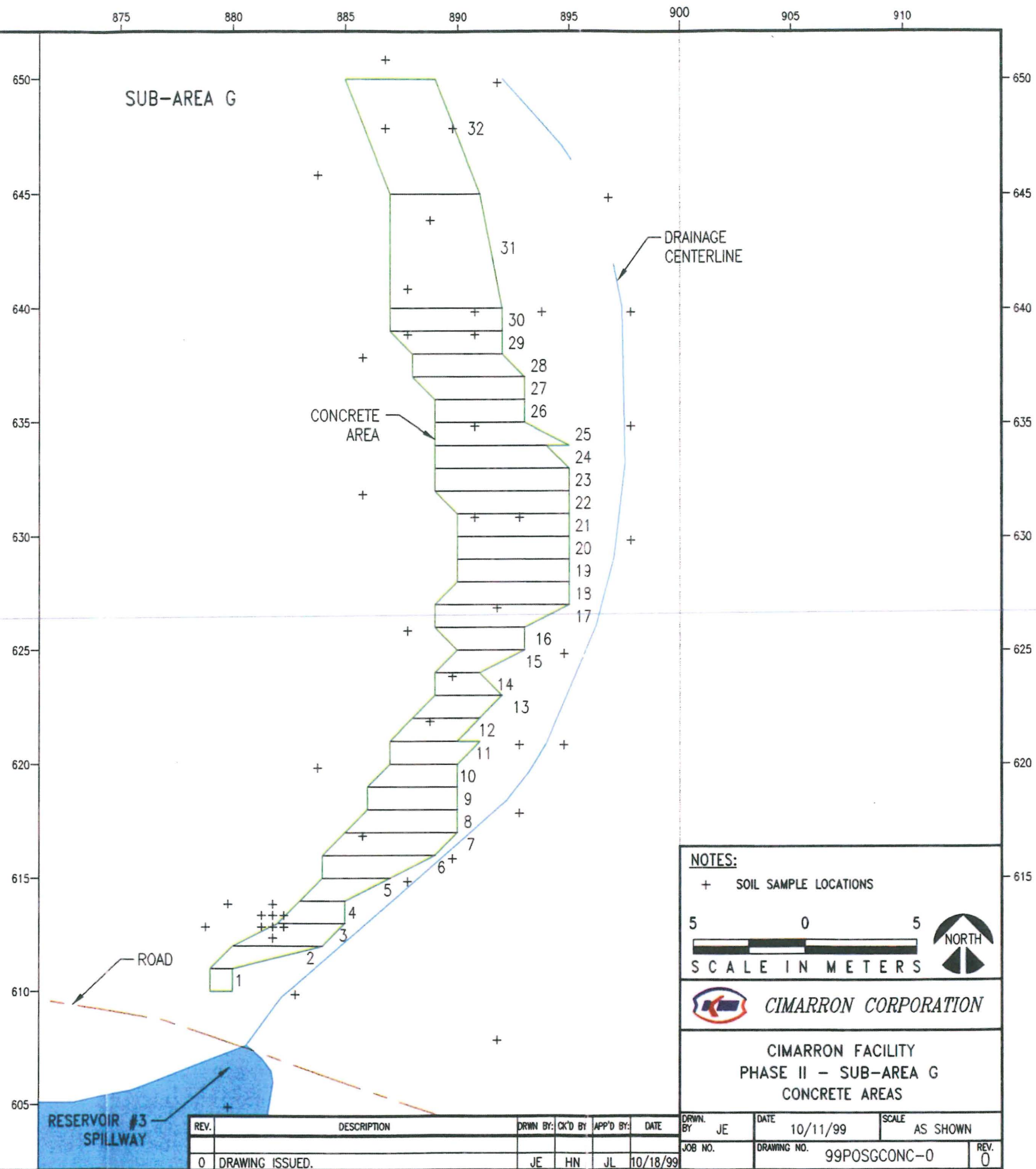
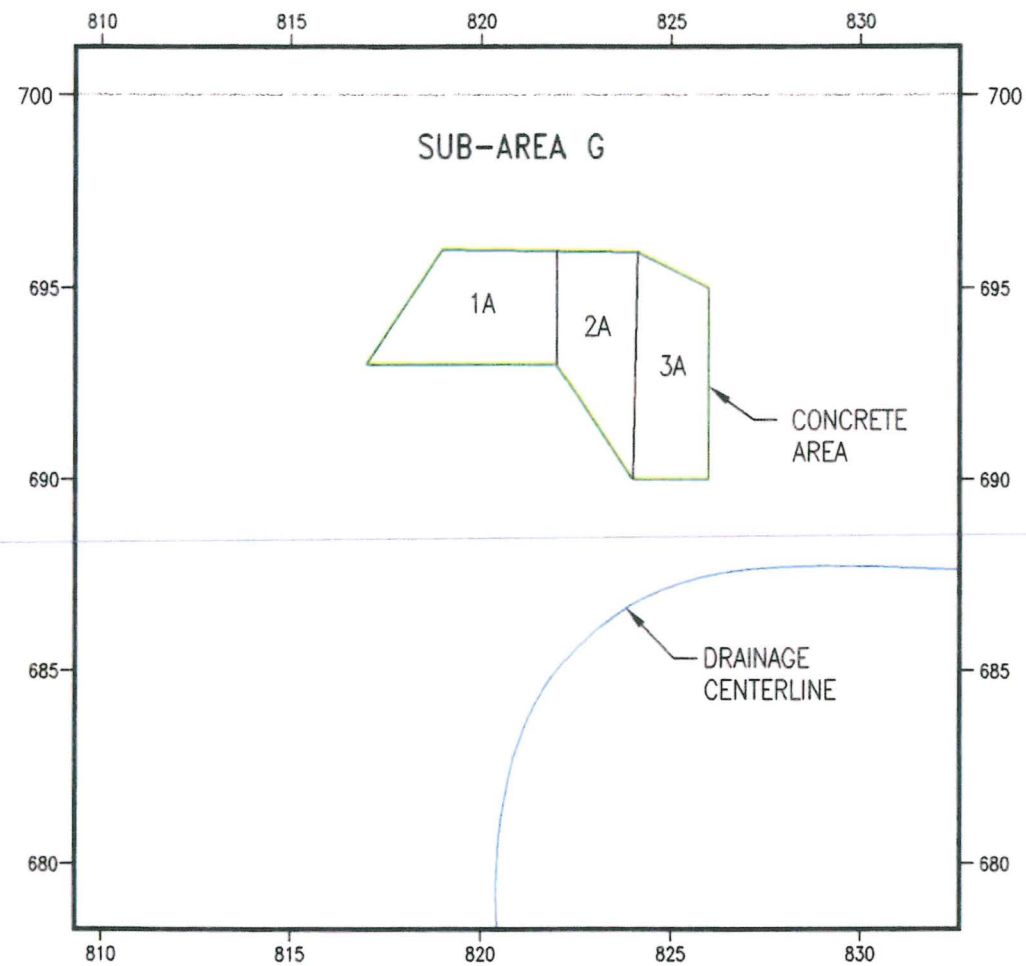
SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).  
 CIMARRON GAMMA SPEC SOIL COUNTER  
 SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.  
 R<sub>+</sub> HIT ROCK, NO SAMPLE TAKEN.



**CIMARRON CORPORATION**

**CIMARRON FACILITY  
 PHASE II - SUB-AREA G  
 RESERVOIR #3 SPILLWAY DATA  
 SOIL SAMPLE RESULTS ALIQUOT: 3'-4'**

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE	DRWN. BY	DATE	SCALE
0	DRAWING ISSUED.	JE	WR	JL	10/18/99	JE	8/2/99	AS SHOWN
						JOB NO.	DRAWING NO.	REV.
							99POSGR3SS-4	0



NOTES:

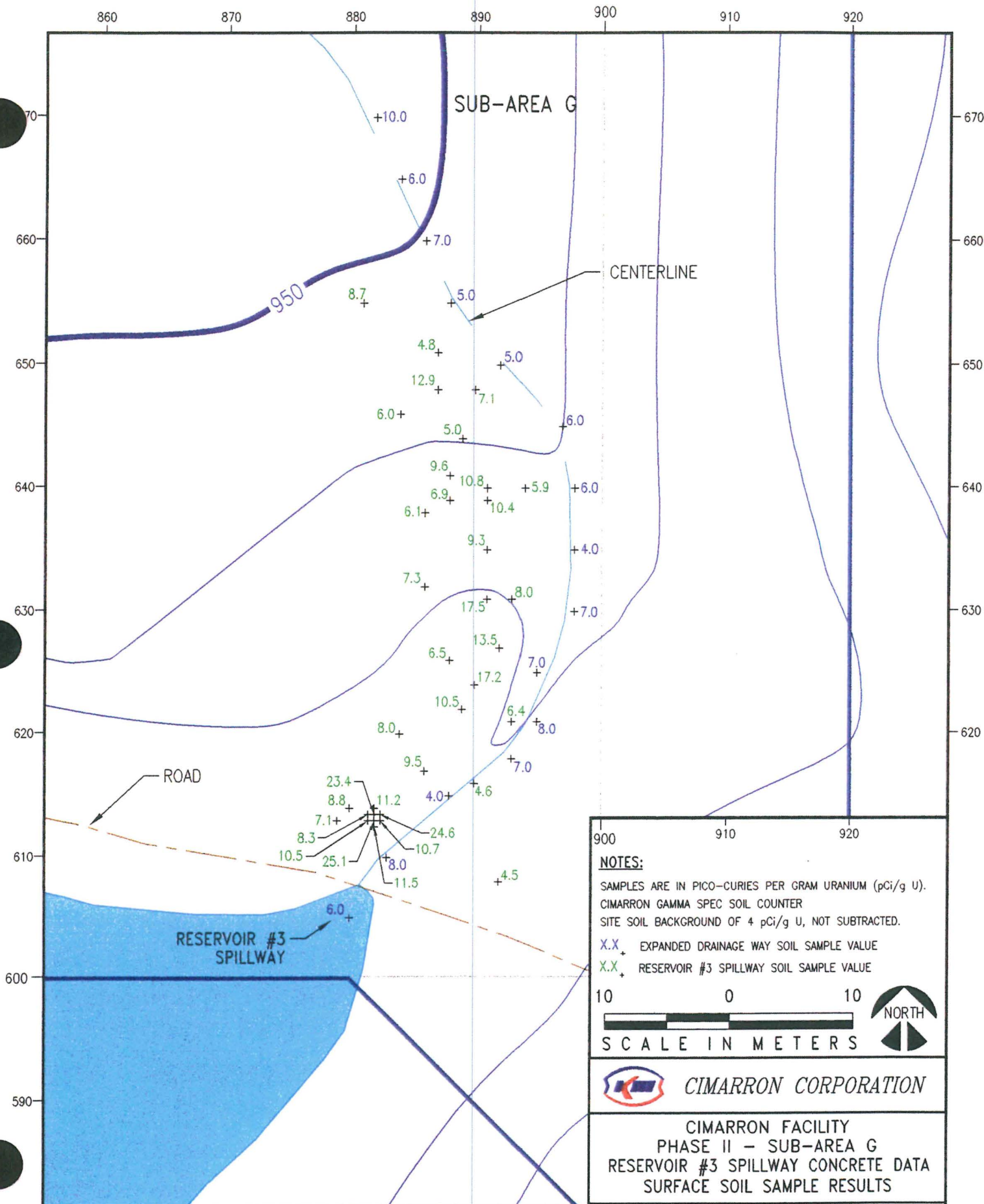
+ SOIL SAMPLE LOCATIONS



CIMARRON FACILITY  
PHASE II - SUB-AREA G  
CONCRETE AREAS

REV.	DESCRIPTION	DRWN BY:	CHK'D BY:	APP'D BY:	DATE	DRWN BY:	DATE	SCALE
0	DRAWING ISSUED.	JE	HN	JL	10/18/99	JE	10/11/99	AS SHOWN
						JOB NO.	DRAWING NO.	REV.
							99POSGCONC-0	0





**NOTES:**

SAMPLES ARE IN PICO-CURIES PER GRAM URANIUM (pCi/g U).  
 CIMARRON GAMMA SPEC SOIL COUNTER  
 SITE SOIL BACKGROUND OF 4 pCi/g U, NOT SUBTRACTED.

X.X. EXPANDED DRAINAGE WAY SOIL SAMPLE VALUE  
 X.X. RESERVOIR #3 SPILLWAY SOIL SAMPLE VALUE

10 0 10  
 SCALE IN METERS

**CIMARRON CORPORATION**

**CIMARRON FACILITY  
 PHASE II - SUB-AREA G  
 RESERVOIR #3 SPILLWAY CONCRETE DATA  
 SURFACE SOIL SAMPLE RESULTS**

REV.	DESCRIPTION	DRWN BY:	CK'D BY:	APP'D BY:	DATE	DRWN BY:	DATE	SCALE
0	DRAWING ISSUED.	JE	WR	JL	10/18/99	JE	8/2/99	AS SHOWN
						JOB NO.	DRAWING NO. 99POSGSWSS-0	REV. 0



**CIMARRON CORPORATION  
CIMARRON FACILITY**

QA 58  
REV.1

**AFFECTED SUB-AREA 'G' - EXPANDED DRAINAGE WAY - DEPTH  
RESERVOIR #3 SPILLWAY**

LN #	GRID NUMBER				3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g										
								0 - 6"		6" - 1'		1' - 2'		2' - 3'		3' - 4'		
								Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	
1	879	E	-	613	N	3110	10	8	7.1	1.0	13.8	0.8	7.5	1.0	8.0	0.8	8.5	0.8
2	880	E	-	614	N	3260	9	10	8.8	1.0	6.6	1.0	12.4	0.6	8.1	1.2	8.7	1.0
3	881	E	-	655	N	5510	10	10	8.7	0.9	7.2	1.0	5.6	0.8	6.1	0.6	ROCK	ROCK
4	881.5	E	-	613	N	2882	8	8	10.5	0.9								
5	881.5	E	-	613.5	*	2740	8	8	8.3	0.8								
6	882	E	-	612.5	N	2802	10	9	11.5	0.9								
7	882	E	-	613	N	4110	10	9	25.1	0.8								
8	882	E	-	613.5	N	2810	8	11	23.4	0.8								
9	882	E		614	N	2440	8	8	11.2	0.4								
10	882.5	E		613	N	2742	8	10	10.7	0.6								
11	882.5	E	-	613.5	N	2360	8	8	24.6	0.3								
12	884	E	-	620	N	3630	10	10	8.0	1.1	10.4	1.2	8.6	0.9	9.4	0.9	8.8	0.8
13	884	E	-	646	N	3800	9	9	6.0	1.0	5.4	1.1	9.0	1.0	6.7	0.9	5.1	0.7
14	886	E	-	617	N	2440	8	8	9.5	0.6								
15	886	E	-	632	N	2570	10	9	7.3	1.0	7.6	0.9	7.1	1.0	6.9	0.8	9.3	0.9
16	886	E	-	638	N	2740	10	9	6.1	1.0	7.3	0.9	5.9	0.8	6.5	1.0	6.7	1.0
17	887	E	-	648	N	2960	9	9	12.9	1.0								
18	887	E	-	651	N	3240	9	8	4.8	1.0								
19	888	E	-	626	N	3170	10	10	6.5	1.1	6.2	1.1	7.9	1.0	8.9	1.0	6.9	1.2
20	888	E	-	639	N	2760	9	9	6.9	1.0								

**INSTRUMENTS:**

**RESULTS IN**

**BACKGROUND**

**MDA**

LUDLUM MICRO 'R' METER - S/N 138420 µr/hr

9

2

LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395 CPM

2800

N/A

CIMARRON SOIL COUNTER X" X 4" X 16" NaI DETECTOR pCi/G

Total U

5

Th (Nat)

1.5

BACKGROUND NOT SUBTRACTED

A:AGED.WB2

REVIEWED BY: W.A. Rogers

DATE: 7-27-99

**AFFECTED SUB-AREA 'G' - EXPANDED DRAINAGE WAY - DEPTH  
RESERVOIR #3 SPILLWAY**

LN #	GRID NUMBER				3" DETECT C.P.M.	MICRO R' SURF	MICRO R' 1 METER	pCi/g									
								0 - 6"		6" - 1'		1' - 2'		2' - 3'		3' - 4'	
								Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)	Total-U	Th (Nat)
21	888	E	-	641	N	2690	9	9	9.6	0.7							
22	889	E	-	622	N	3250	9	8	10.5	0.6							
23	889	E	-	644	N	3890	11	10	5.0	1.2							
24	890	E	-	616	N	2560	9	8	4.6	0.5							
25	890	E	-	624	N	2430	9	8	17.2	0.4							
26	890	E	-	648	N	2250	8	8	7.1	0.6							
27	891	E	-	631	N	2410	8	8	17.5	0.2							
28	891	E	-	635	N	2260	8	8	9.3	0.4							
29	891	E		639	N	2690	8	8	10.4	0.9							
30	891	E		640	N	2310	8	8	10.8	0.7							
31	892	E	-	608	N	2990	9	9	4.5	0.5							
32	892	E	-	627	N	4140	10	9	13.5	0.8							
33	893	E	-	621	N	3170	9	9	6.4	0.8							
34	893	E	-	631	N	2640	8	8	8.0	0.7							
35	894	E	-	640	N	3530	10	10	5.9	0.8							
36																	
37																	
38																	
39																	
40																	

INSTRUMENTS:RESULTS INBACKGROUNDMDA

LUDLUM MICRO 'R' METER - S/N 138420

 $\mu\text{r/hr}$ 

9

2

LUDLUM 2220, LEAD SHIELDED 3" X 1/2" NaI DETECTOR S/N 48395

CPM

2800

N/A

CIMARRON SOIL COUNTER X" X 4" X 16" NaI DETECTOR

pCi/G

Total U

5

Th (Nat)

1.5

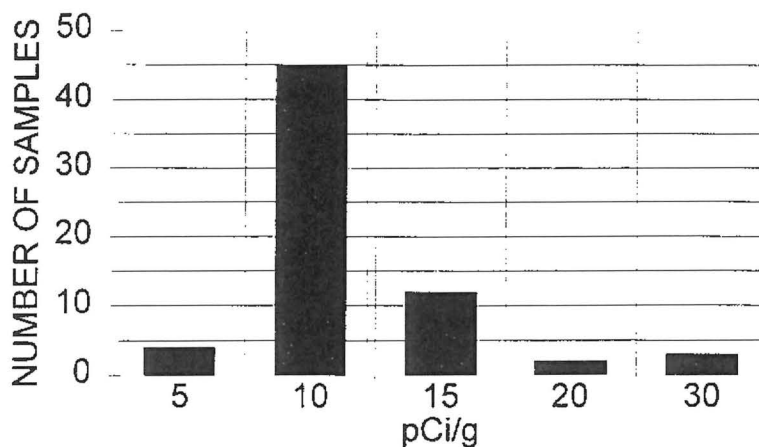
BACKGROUND NOT SUBTRACTED

REVIEWED BY: W.A. RogersDATE: 7-27-99

**PHASE II, SUB-AREA "G" - DEPTH  
AFFECTED EXPANDED DRAINAGE WAY - RESERVOIR #3 SPILLWAY  
CIMARRON SOIL COUNTER  
TOTAL URANIUM SOIL SAMPLE RESULTS  
SITE BACKGROUND OF 4 pCi/g NOT SUBTRACTED**

**JULY 26,1999**

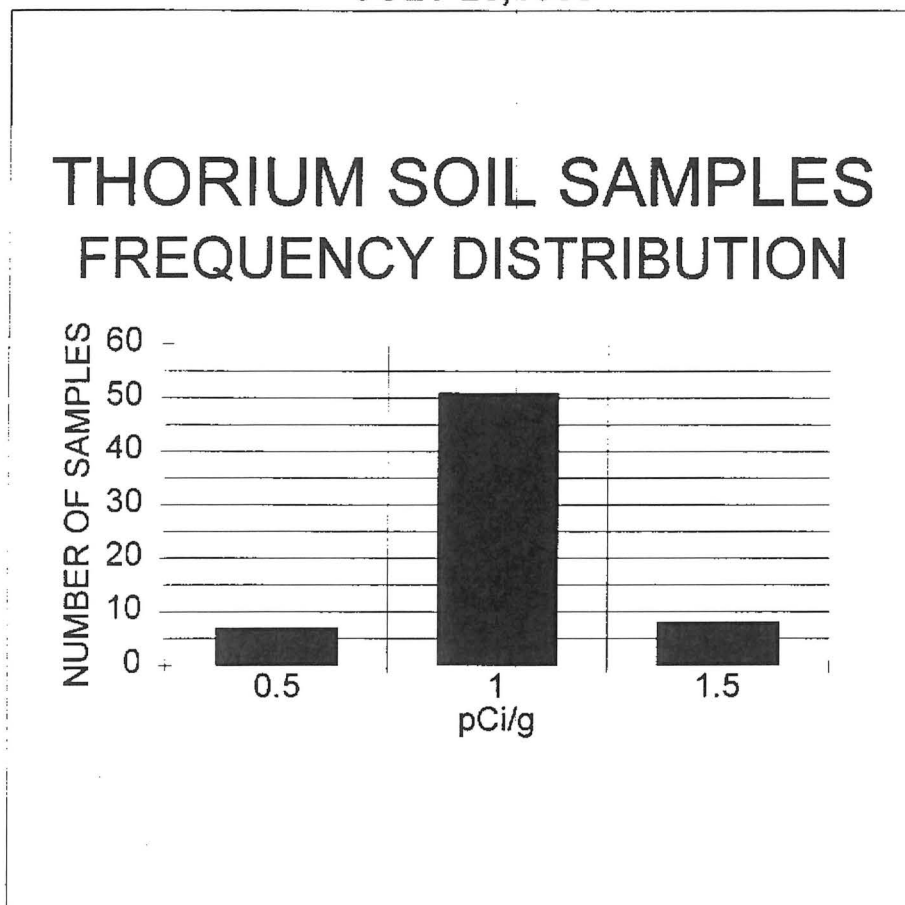
**URANIUM SOIL SAMPLES  
FREQUENCY DISTRIBUTION**



NUMBER OF SAMPLES	66
AVERAGE SAMPLE	9.1
MINIMUM SAMPLE	4.5
MAXIMUM SAMPLE	25.1
STANDARD DEVIATION	4.2

**PHASE II, SUB-AREA "G" - DEPTH  
AFFECTED EXPANDED DRAINAGE WAY - RESERVOIR #3 SPILLWAY  
CIMARRON SOIL COUNTER  
TOTAL THORIUM SOIL SAMPLE RESULTS  
SITE BACKGROUND OF 1.5 pCi/g NOT SUBTRACTED**

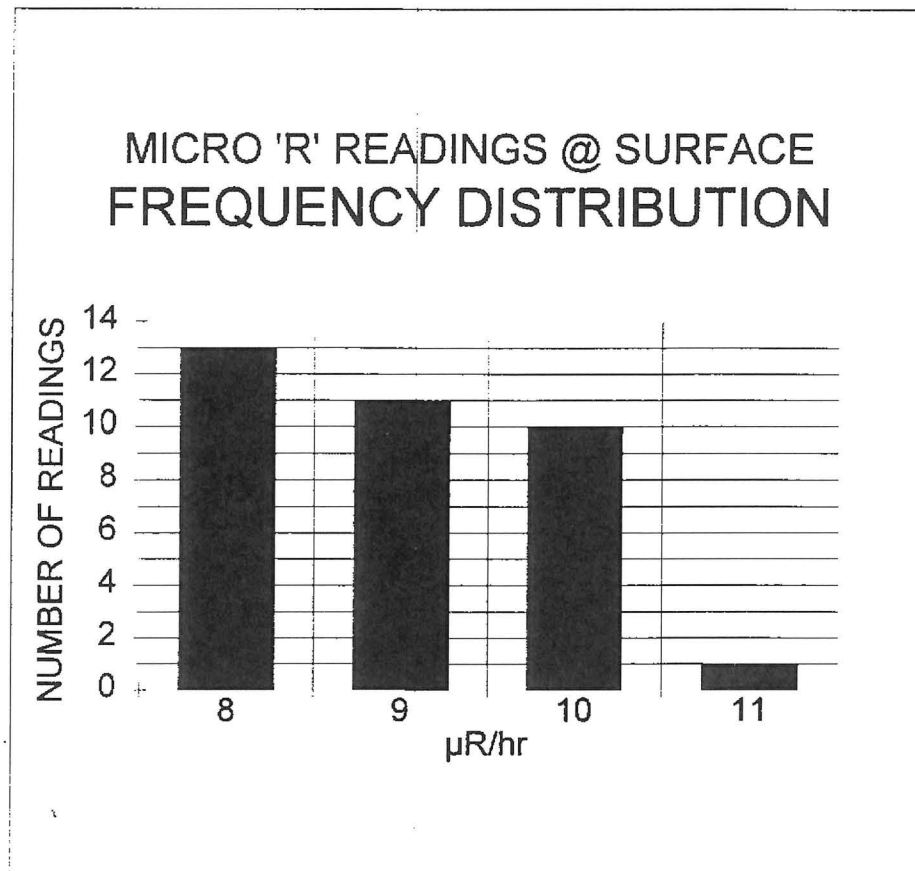
**JULY 26, 1999**



NUMBER OF SAMPLES	66
AVERAGE SAMPLE	0.9
MINIMUM SAMPLE	0.2
MAXIMUM SAMPLE	1.2
STANDARD DEVIATION	0.2

**PHASE II, SUB-AREA "G" - DEPTH  
AFFECTED EXPANDED DRAINAGE WAY - RESERVOIR #3 SPILLWAY  
MICRO-R METER READINGS AT SURFACE  
LUDLUM MODEL 19, S/N 138420  
RESULTS IN  $\mu\text{R/hr}$**

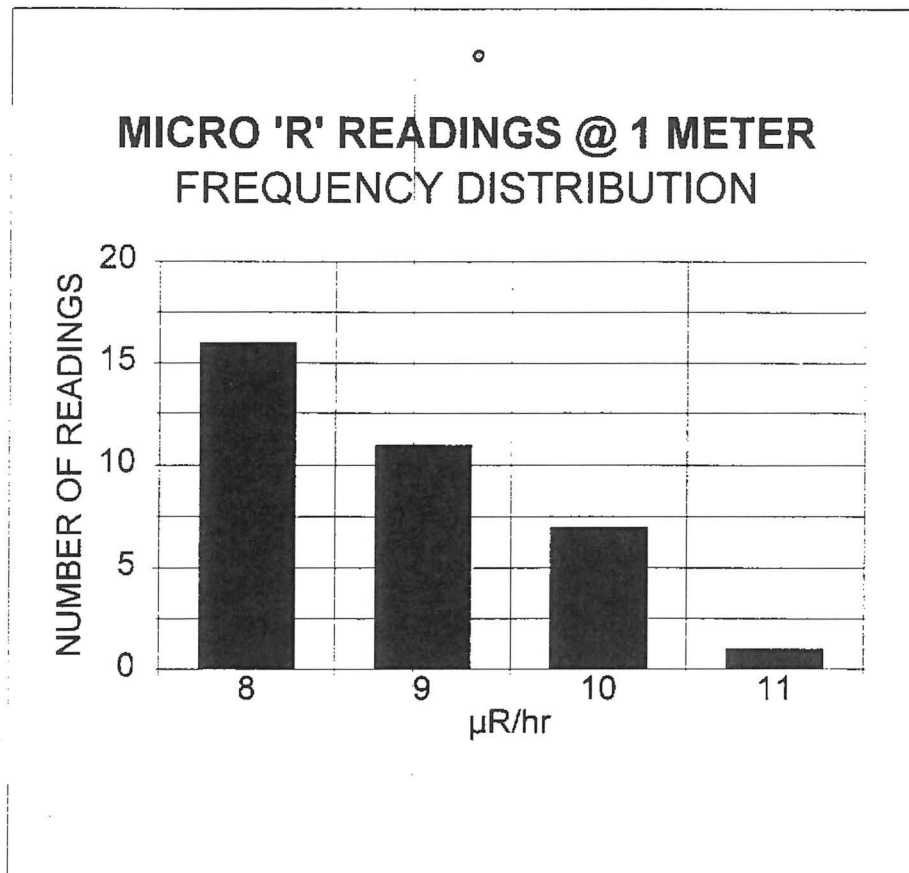
**JULY 26, 1999**



NUMBER OF SAMPLES	35
AVERAGE SAMPLE	9
MINIMUM SAMPLE	8
MAXIMUM SAMPLE	11
STANDARD DEVIATION	1

**PHASE II, SUB-AREA "G" - DEPTH  
AFFECTED EXPANDED DRAINAGE WAY - RESERVOIR #3 SPILLWAY  
MICRO-R METER READINGS AT 1 METER ABOVE SURFACE  
LUDLUM MODEL 19, S/N 138420  
RESULTS IN  $\mu\text{R/hr}$**

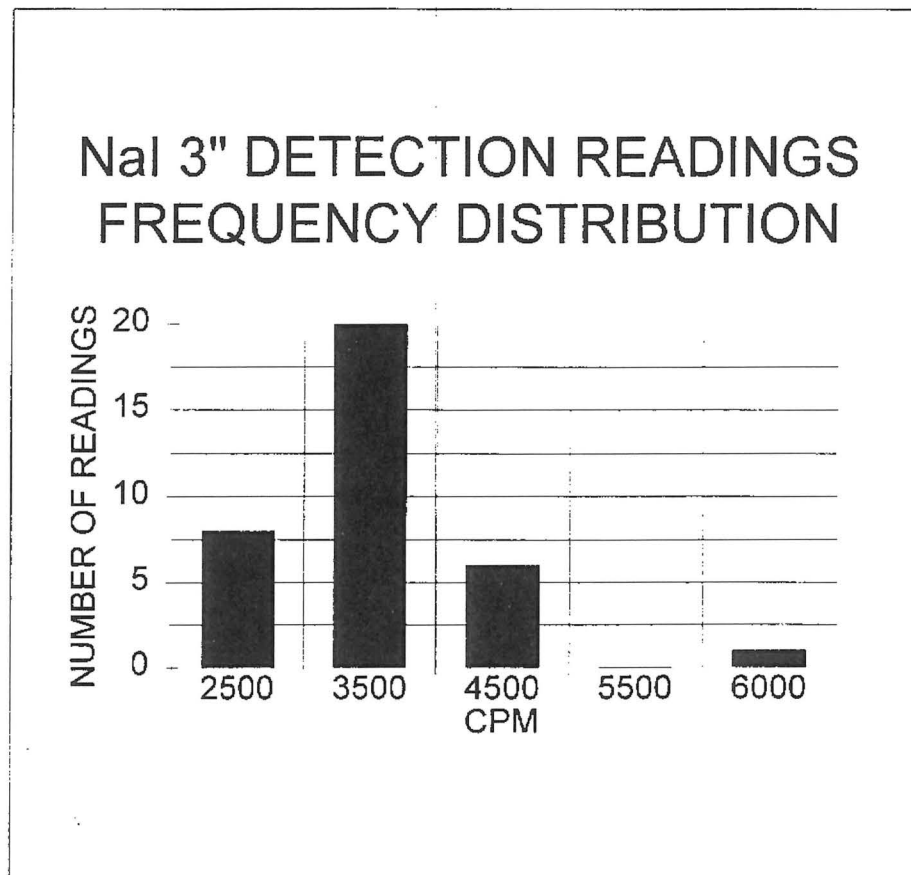
**JULY 26, 1999**



NUMBER OF SAMPLES	35
AVERAGE SAMPLE	9
MINIMUM SAMPLE	8
MAXIMUM SAMPLE	11
STANDARD DEVIATION	1

**PHASE II, SUB-AREA "G" - DEPTH  
AFFECTED EXPANDED DRAINAGE WAY - RESERVOIR #3 SPILLWAY  
GROSS GAMMA READINGS IN CPM  
LUDLUM MODEL 2221, S/N 48395  
BACKGROUND AVERAGES: 8000**

**JULY 26, 1999**



NUMBER OF SAMPLES	35
AVERAGE SAMPLE	3021
MINIMUM SAMPLE	2250
MAXIMUM SAMPLE	5510
STANDARD DEVIATION	658

$$n = \text{pCi/g Th (NAT)}$$

Number	n	(n-N)	(n-N) <sup>2</sup>
1	0.2	-0.6	0.4
2	0.4	-0.4	0.2
3	0.4	-0.4	0.2
4	0.4	-0.4	0.2
5	0.5	-0.3	0.1
6	0.5	-0.3	0.1
7	0.6	-0.2	0.1
8	0.6	-0.2	0.1
9	0.6	-0.2	0.1
10	0.6	-0.2	0.1
11	0.6	-0.2	0.1
12	0.6	-0.2	0.1
13	0.7	-0.1	0.0
14	0.7	-0.1	0.0
15	0.7	-0.1	0.0
16	0.7	-0.1	0.0
17	0.3	-0.8	0.7
18	0.8	-0.0	0.0
19	0.8	-0.0	0.0
20	0.8	-0.0	0.0
21	0.8	-0.0	0.0
22	0.8	-0.0	0.0
23	0.8	-0.0	0.0
24	0.8	-0.0	0.0
25	0.8	-0.0	0.0
26	0.8	-0.0	0.0
27	0.8	-0.0	0.0
28	0.8	-0.0	0.0
29	0.8	-0.0	0.0
30	0.8	-0.0	0.0
31	0.9	0.1	0.0
32	0.9	0.1	0.0
33	0.9	0.1	0.0
34	0.9	0.1	0.0
35	0.9	0.1	0.0
36	0.9	0.1	0.0
37	0.9	0.1	0.0
38	0.9	0.1	0.0
39	0.9	0.1	0.0
40	0.9	0.1	0.0
41	1.0	0.2	0.0
42	1.0	0.2	0.0
43	1.0	0.2	0.0
44	1.0	0.2	0.0
45	1.0	0.2	0.0
46	1.0	0.2	0.0
47	1.0	0.2	0.0
48	1.0	0.2	0.0
49	1.0	0.2	0.0
50	1.0	0.2	0.0
	17.2		1.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	55.4		3.7
	Sum(n)		Sum(n-N) <sup>2</sup>

No. of Samples (x) : 66

**COUNT TIME: 5 MINUTES**

**Sample Mean (N) =  $\text{Sum}(n) \div (x)$**

Sample Mean (N) : 0.84

**Standard Deviation (Sd) = SQRT [(n-N)<sup>2</sup> + (x - 1)]**

Standard Deviation: 0.24

2 Std Deviations:	0.47
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Degree of Freedom(df).= (x) - 1      Data listed on Table B-1

 $(df) = 1.670$ 

**Area's Average Level ( $A\mu$ ) =  $(N) + (df) \times [(Sd)/SQRT(x)]$**

$$(A_{\mu}) = \boxed{0.89} \text{ pCi/gTh (NAT)}$$

GUIDELINE VALUE:	10	pCi/gTh (NAT)
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Acceptable Level:	4.0	pCi/gTh (NAT)
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TABLE B-1

Factors for Comparison of Survey Data with Guidelines					
(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

**For values of Degrees of Freedom not listed:**

**Interpolate between the listed values.**

(df) high value(Z)	120	is (B)	1.658	95%
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(df) low value(Y)	60	is (A)	1.671	95%
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Desired value(df) (X)	65	is calculated as follow:
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$$\text{EXP}[(\text{Ln}(B) - \text{Ln}(A)) + (Z - Y) + (X - Y) + \text{Ln}(A)]$$

The (df) value for (X)	65	1.670	95%
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PERFORMED BY: Dustin Khan

DATE: 7-27-99

REVIEWED BY: W. A. Rogers

DATE: 7-27-99



**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDEN**  
**AFFECTED "G" - EXPANDED DRAINAGE WAY - RESERVOIR #3 S**

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N) <sup>2</sup>
51	1.0	0.16	0.03
52	1.0	0.16	0.03
53	1.0	0.16	0.03
54	1.0	0.16	0.03
55	1.0	0.16	0.03
56	1.0	0.16	0.03
57	1.0	0.16	0.03
58	1.0	0.16	0.03
59	1.1	0.26	0.07
60	1.1	0.26	0.07
61	1.1	0.26	0.07
62	1.1	0.26	0.07
63	1.2	0.36	0.13
64	1.2	0.36	0.13
65	1.2	0.36	0.13
66	1.2	0.36	0.13
67		0.00	0.00
68		0.00	0.00
69		0.00	0.00
70		0.00	0.00
71		0.00	0.00
72		0.00	0.00
73		0.00	0.00
74		0.00	0.00
75		0.00	0.00
76		0.00	0.00
77		0.00	0.00
78		0.00	0.00
79		0.00	0.00
80		0.00	0.00
81		0.00	0.00
82		0.00	0.00
83		0.00	0.00
84		0.00	0.00
85		0.00	0.00
86		0.00	0.00
87		0.00	0.00
88		0.00	0.00
89		0.00	0.00
90		0.00	0.00
91		0.00	0.00
92		0.00	0.00
93		0.00	0.00
94		0.00	0.00
95		0.00	0.00
96		0.00	0.00
97		0.00	0.00
98		0.00	0.00
99		0.00	0.00
100		0.00	0.00
	17.2		1.0
	Sum(n)		Sum(n-N) <sup>2</sup>

n = pCi/g Th (NAT)

Number	n	(n-N)	(n-N) <sup>2</sup>
101		0.00	0.00
102		0.00	0.00
103		0.00	0.00
104		0.00	0.00
105		0.00	0.00
106		0.00	0.00
107		0.00	0.00
108		0.00	0.00
109		0.00	0.00
110		0.00	0.00
111		0.00	0.00
112		0.00	0.00
113		0.00	0.00
114		0.00	0.00
115		0.00	0.00
116		0.00	0.00
117		0.00	0.00
118		0.00	0.00
119		0.00	0.00
120		0.00	0.00
121		0.00	0.00
122		0.00	0.00
123		0.00	0.00
124		0.00	0.00
125		0.00	0.00
126		0.00	0.00
127		0.00	0.00
128		0.00	0.00
129		0.00	0.00
130		0.00	0.00
131		0.00	0.00
132		0.00	0.00
133		0.00	0.00
134		0.00	0.00
135		0.00	0.00
136		0.00	0.00
137		0.00	0.00
138		0.00	0.00
139		0.00	0.00
140		0.00	0.00
141		0.00	0.00
142		0.00	0.00
143		0.00	0.00
144		0.00	0.00
145		0.00	0.00
146		0.00	0.00
147		0.00	0.00
148		0.00	0.00
149		0.00	0.00
150		0.00	0.00
	0.0		0.0
	Sum(n)		Sum(n-N) <sup>2</sup>

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDENCE**  
**AFFECTED "G" - EXPANDED DRAINAGE WAY - RESERVOIR #3 SPILLWAY**

$n = pCi/g$  TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
1	4.5	-4.6	21.3
2	4.6	-4.5	20.3
3	4.8	-4.3	18.6
4	5.0	-4.1	16.9
5	5.1	-4.0	16.1
6	5.4	-3.7	13.8
7	5.6	-3.5	12.3
8	5.9	-3.2	10.3
9	5.9	-3.2	10.3
10	6.0	-3.1	9.7
11	6.1	-3.0	9.1
12	6.1	-3.0	9.1
13	6.2	-2.9	8.5
14	6.4	-2.7	7.3
15	6.5	-2.6	6.8
16	6.5	-2.6	6.8
17	6.6	-2.5	6.3
18	6.7	-2.4	5.8
19	6.7	-2.4	5.8
20	6.9	-2.2	4.9
21	6.9	-2.2	4.9
22	6.9	-2.2	4.9
23	7.1	-2.0	4.0
24	7.1	-2.0	4.0
25	7.1	-2.0	4.0
26	7.2	-1.9	3.7
27	7.3	-1.8	3.3
28	7.3	-1.8	3.3
29	7.5	-1.6	2.6
30	7.6	-1.5	2.3
31	7.9	-1.2	1.5
32	8.0	-1.1	1.2
33	8.0	-1.1	1.2
34	8.0	-1.1	1.2
35	8.1	-1.0	1.0
36	8.3	-0.8	0.7
37	8.5	-0.6	0.4
38	8.6	-0.5	0.3
39	8.7	-0.4	0.2
40	8.7	-0.4	0.2
41	8.8	-0.3	0.1
42	8.8	-0.3	0.1
43	8.9	-0.2	0.0
44	9.0	-0.1	0.0
45	9.3	0.2	0.0
46	9.3	0.2	0.0
47	9.4	0.3	0.1
48	9.5	0.4	0.2
49	9.6	0.5	0.2
50	10.4	1.3	1.7
	236.0		923.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	0.0		0.0
	601.3		1190.2
	Sum(n)		Sum(n-N) <sup>2</sup>

No. of Samples (x) : **66**

COUNT TIME: 5 MINUTES

Sample Mean (N) = Sum(n) ÷ (x)

Sample Mean (N) : **9.11**

Standard Deviation (Sd) = SQRT [(n-N)<sup>2</sup> ÷ (x - 1)]

Standard Deviation: **4.28**

2 Std Deviations: **8.56**

Degree of Freedom(df) = (x) - 1 Data listed on Table B-1

(df) = **1.670**

Area's Average Level (Aμ) = (N) + (df) x [(Sd)/SQRT(x)]

(Aμ) = **9.99**

pCi/gU TOTAL U

GUIDELINE VALUE: **30**

pCi/gU TOTAL U

Acceptable Level: **34.0**

pCi/gU TOTAL U

TABLE B - 1

Factors for Comparison of Survey Data with Guidelines					
(df)	95%	97.5%	(df)	95%	97.5%
1	6.314	12.706	19	1.729	2.093
2	2.92	4.303	20	1.725	2.086
3	2.353	3.182	21	1.721	2.08
4	2.132	2.776	22	1.717	2.074
5	2.015	2.571	23	1.714	2.069
6	1.943	2.447	24	1.711	2.064
7	1.895	2.365	25	1.708	2.06
8	1.86	2.306	26	1.706	2.056
9	1.833	2.262	27	1.703	2.052
10	1.812	2.228	28	1.701	2.048
11	1.796	2.201	29	1.699	2.045
12	1.782	2.179	30	1.697	2.042
13	1.771	2.16	40	1.684	2.021
14	1.761	2.145	60	1.671	2
15	1.753	2.131	120	1.658	1.98
16	1.746	2.12	400	1.649	1.966
17	1.74	2.11	Infinite	1.645	1.96
18	1.734	2.101			

For values of Degrees of Freedom not listed:

Interpolate between the listed values.

(df) high value(Z) **120** is (B) **1.658** 95%

(df) low value(Y) **60** is (A) **1.671** 95%

Desired value(df) (X) **65** is calculated as follow:

EXP[(Ln(B)-Ln(A)) ÷ (Z-Y) (X-Y) + Ln(A)]

The (df) value for (X) **65** **1.670** 95%

PERFORMED BY: *James K. Kohn*

DATE: **7-27-99**

REVIEWED BY: *W. A. Rozen*

DATE: **7-27-99**

**CIMARRON CORPORATION - CIMARRON FACILITY**  
**TRUE MEAN ACTIVITY VS. GUIDELINE VALUE AT 95% CONFIDEN**  
**AFFECTED "G" - EXPANDED DRAINAGE WAY - RESERVOIR #3 S**

n = pCi/g TOTAL U

Number	n	(n-N)	(n-N) <sup>2</sup>
51	10.4	1.29	1.66
52	10.5	1.39	1.93
53	10.5	1.39	1.93
54	10.7	1.59	2.53
55	10.8	1.69	2.85
56	11.2	2.09	4.37
57	11.5	2.39	5.71
58	12.4	3.29	10.82
59	12.9	3.79	14.36
60	13.5	4.39	19.27
61	13.8	4.69	21.99
62	17.2	8.09	65.44
63	17.5	8.39	70.38
64	24.6	15.49	239.92
65	23.4	14.29	204.19
66	25.1	15.99	255.66
67		0.00	0.00
68		0.00	0.00
69		0.00	0.00
70		0.00	0.00
71		0.00	0.00
72		0.00	0.00
73		0.00	0.00
74		0.00	0.00
75		0.00	0.00
76		0.00	0.00
77		0.00	0.00
78		0.00	0.00
79		0.00	0.00
80		0.00	0.00
81		0.00	0.00
82		0.00	0.00
83		0.00	0.00
84		0.00	0.00
85		0.00	0.00
86		0.00	0.00
87		0.00	0.00
88		0.00	0.00
89		0.00	0.00
90		0.00	0.00
91		0.00	0.00
92		0.00	0.00
93		0.00	0.00
94		0.00	0.00
95		0.00	0.00
96		0.00	0.00
97		0.00	0.00
98		0.00	0.00
99		0.00	0.00
100		0.00	0.00
	236.0		923.0
	Sum(n)		Sum(n-N) <sup>2</sup>

n = pCi/g TOTAL

Number	n	(n-N)	(n-N) <sup>2</sup>
101		0.00	0.00
102		0.00	0.00
103		0.00	0.00
104		0.00	0.00
105		0.00	0.00
106		0.00	0.00
107		0.00	0.00
108		0.00	0.00
109		0.00	0.00
110		0.00	0.00
111		0.00	0.00
112		0.00	0.00
113		0.00	0.00
114		0.00	0.00
115		0.00	0.00
116		0.00	0.00
117		0.00	0.00
118		0.00	0.00
119		0.00	0.00
120		0.00	0.00
121		0.00	0.00
122		0.00	0.00
123		0.00	0.00
124		0.00	0.00
125		0.00	0.00
126		0.00	0.00
127		0.00	0.00
128		0.00	0.00
129		0.00	0.00
130		0.00	0.00
131		0.00	0.00
132		0.00	0.00
133		0.00	0.00
134		0.00	0.00
135		0.00	0.00
136		0.00	0.00
137		0.00	0.00
138		0.00	0.00
139		0.00	0.00
140		0.00	0.00
141		0.00	0.00
142		0.00	0.00
143		0.00	0.00
144		0.00	0.00
145		0.00	0.00
146		0.00	0.00
147		0.00	0.00
148		0.00	0.00
149		0.00	0.00
150		0.00	0.00
	0.0		0.0
	Sum(n)		Sum(n-N) <sup>2</sup>