

**APPENDIX R**

**FINANCIAL CLOSURE AND POST-CLOSURE SURETY ANALYSIS**

**APPENDIX R - 2021 FEDERAL CELL FACILITY SURETY  
QUANTITY CALCULATIONS**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
1	<b>FEDERAL CELL FACILITY DECOMMISSIONING</b>																															
2																																
3																																
4																																
5	<b>31 DISPOSAL OF STORED FEDERAL WASTE</b>																															
6	This item includes the maximum volume of radioactive waste that is allowed on site that has not been placed to approved disposal specifications.																															
7																																
8																																
9	MAXIMUM VOLUMES DEFINED AS:																															
10	In Rail Cars, Not Unloaded = 243 cy																															
11	Time required to unload waste (cars or containers): 10 cy per hour per worker = 24 hrs																										\$	45.00	\$ 1,091.69			
12																																
13	In Storage Building = 2,184 cy																															
14																																
15	DISPOSAL CALCULATIONS																															
16	CLSM Required (Based on current Facility operation costs) 2,426 cy depleted uranium x 1.87 cy CLSM / cy of depleted uranium = 4,537 cy																										\$	60.98	\$ 276,654.49			
17																																
18	<b>PLACEMENT OF SRS DU WASTE</b>																															
19																																
20	Palletized drums will be removed from the storage building, transferred to the Federal Cell using an Extended Reach Forklift (assume forklift available on site)																															
21	16 pallets per container at the staging area																															
22	Palletized drums will be hauled to the cell.																															
23	Assumed that on-site equipment will be used for transfer to the embankment from storage building.																															
24	Assumed 4 drums per pallet																															
25	Assumed number of drums = 5,408.00 ea x																															
26	Assumed number of pallets = 1,352.00 ea x																															
27																																
28	Assumed hours per to transfer pallets																															
29	Labor required is as follows:																															
30																																
31	Assumed hours to remove from storage area																															
32	Equipment Operators 2 ea x 120 hr = 240.00 hr x \$ 59.47 \$ 14,273.71																															
33	Labor Foreman 1 ea x 120 hr = 120.00 hr x \$ 67.30 \$ 8,076.00																															
34																																
35	Assumed hours to transfer to Federal Cell																															
36	Equipment Operators 1 ea x 160 hr = 160.00 hr x \$ 59.47 \$ 9,515.81																															
37																																
38																																
39																																
40																																
41																																
42																																
43	<b>204 LINER CONSTRUCTION</b>																															
44	This item includes construction of the liner. The liner design is assumed to be consistent with plan drawings in the Radioactive Material License.																															
45																																
46	Open Embankment Limitation = 197,414.00 sf																															
47	This includes areas for the construction of sideslopes.																															
48																																
49	LINER																															
50	Based on the current footprint of the Federal Cell Facility conceptual																															
51	premature closure design, the amount of clay liner to be constructed is as follows.																															
52																																
53	Assume that 8 ft of excavation to design depth is used as fill and clay source for liner/radon barrier; thus																															
54	minimal haul distance. Assume 11% is overburden.																															
55																																
56	Liner Volume 63,800 sf x 3 ft = 7,088.89 cy \$ 2.94 \$ 20,823.25																															
57	(includes an additional 1 ft thickness for liner protective cover)																															
58	Remove overburden 7,088.89 cy x 0.11 = 779.78 cy \$ 2.99 \$ 2,331.79																															
59	Liner Area 63,800 sf + 0 sf + 0 sf = 63,800.00 sf																															
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64																																
65																																
66	<b>205 SETTLEMENT MONITORING</b>																															
67																																
68	Temporary cover will be placed on area with uncovered waste and will consist of native soil																															
69	Clean native fill will be required to close the embankments per the Premature Designs--no credit for future waste disposal.																															
70																																
71																																
72	Clean Fill Material (Similar to Grade Restoration Backfill) to Construct Premature Closure Embankments to Design Grades																															
73	Required Fill Material 110,031.00 cy																															
74	Total Fill Material 110,031.00 cy \$ 2.94 \$ 323,210.39																															
75																																
76	Temporary Cover Volume																															
77	Federal Cell 23,519 sf x 1 ft = 871.07 cy																															
78	Total Native Soil Volume 871.07 cy																															
79																																







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260	Principle required to generate sufficient interest to fund annual surveillances based on an annual 2% interest rate (URS, 2015 - basis for Utah Code 19-3-106.2)																														
261																															
262	<b>FEDERAL CELL FACILITY PERPETUAL CARE SURETY BOND VALUE</b>																														
	<b>\$ 1,344,976.85</b>																														