

A	B	C	D	E	F	G	H	I
1		Version 0.2.6	https://www.ing-goebel.de/dbhd-1-4-1-canada/					
2	Calculation 10 x DBHD 1.4.1 Canada nuclear repository							
3	Last edit: 27. January 2020 / Dipl.-Ing. Volker Goebel Switzerland / Nuclear Repository Planner ww							
4	Capacity : 8.320 DSC's Canada (white 60 tons concrete Dry Storage Container with +10 tons net spent fuel)							
5	Repository-Storage-Depth in DBHD 1.4.1 Canada : from -1.350 Meters down to -2.100 Meters							
6	Based on : Draft-Planning from 2014 - 2020 actually in Version 1.4.1 - Final for CANADA							
7								
8								
9	Type of invest	Amount	Offer / Quote	Factor	Total	Comment	dwg	
10			or hint from :					
11	Repository Plans	2014-2020 (6 yrs)	Ing. V. Goebel + T.	1'785'000 CAD	10'710'000 CAD	Draft-Plans, B-Plans	yes	
12	Probe-Drillings	20 x	Prof. Dr. M. Reich	9'500'000 CAD	190'000'000 CAD	Cores > -2.250 m		
13	24x Land Purchase	1,1 km2	from local owners		396'000'000 CAD	10 x 110.000 m2		
14	Shaft-Boring-Ma.	4 x SBM / SBR	Herrenknecht AG	90'000'000 CAD	360'000'000 CAD	2 yrs. delivery time	yes	
15	External streets	70 km	make-over		30'000'000 CAD	new / enhance		
16	E-powerconnection	10 x	local NB Power		38'000'000 CAD	10 kV med. voltage		
17	Water-connection	10 x	incl. water		45'000'000 CAD	10 bar with DN 200		
18	Internal Logistics		anticipation		75'000'000 CAD	10 building sites		
19	Drilling platforms	10 x	43.000 m3	1500 CAD/m3	645'000'000 CAD	floors and walls	yes	
20	Mat. storage ring	10 x	70.000 m3	1350 CAD/m3	945'000'000 CAD	floors and walls	yes	
21	Conveyor Belts	5 x			150'000'000 CAD	diverse types		
22	Heavy load trucks				22'500'000 CAD	Dump trucks		
23	Compensationes	20.000 Shares	direct local people	45'000 CAD	600'000'000 CAD	payment not bribe	yes	
24	Planning Offices	Scientific expertise	many disciplines		308'000'000 CAD	over 80 years		
25	Approval Fees		many agencies		124'000'000 CAD	to Gov. Agencies		
26	Start-Setting SBM	10 x	Thyssen Schachtbau	4'500'000 CAD	45'000'000 CAD	temp. Structures		
27	Shaft Drills D=12 m	10 x	Thyssen Schachtbau	53'000'000 CAD	530'000'000 CAD	autom. Maschine		
28	Spray-concr.-wall	9,3 m2 x 1.315 m	12.230 m3 x 10	900 CAD/m3	110'070'000 CAD	steel-fibre-amored	yes	
29	Shaft completion	6 sets	Siemag Tecberg	45'000'000 CAD	270'000'000 CAD	Vent., Transport		
30	Air-Conditioning	2 x	CFT GmbH	44'100'000 CAD	88'200'000 CAD	cold air + 8 °C IN	yes	
31	Air-Cooling Power	100 x 4,5 Mio. kWh	local suppliers	1'600'000 CAD	160'000'000 CAD	10 x 10 years		
32	Watercooling tubes	2 Sets DN 100 PN 340	Steelbuilders	13'440'000 CAD	26'880'000 CAD	16.000 Elements		
33	Watercooling Sets	2x9x2 ESO 9702AHF-ze	Stulz Hamburg	13'650'000 CAD	27'300'000 CAD	151 m3 / h - 5 °C	yes	
34	Watercooling Power	100 x 4,5 Mio. kWh	local suppliers	1'600'000 CAD	160'000'000 CAD	10 x 10 years		
35	Cable-Drum-Houses	10 x	90.000 m3 S.T.	1'500 CAD	1'350'000'000 CAD	House with crane	yes	
36	Cabledrum&Motor	5 x	Siemag Tecberg	6'000'000 CAD	30'000'000 CAD	Drum-Diam.=14 m		
37	Work-Over Rigs	3 x	Steelbuilders	4'800'000 CAD	14'400'000 CAD	with return pulley	yes	
38	Dyneema Ropes	16 x	Gleistein DE	4'400'000 CAD	70'400'000 CAD	D=60 mm 2.100 m		
39	Transition Cone	10 x	concrete constr.	1'100'000 CAD	11'000'000 CAD	12 m. to 16,18 m.	yes	
40	Hole-opening	10 x	to Diam. = 16,2 m.	2'700'000 CAD	27'000'000 CAD	with chain-saws		
41	Staff 80 years	50 Man&Woman	4 h. shifts down t.		3'100'000'000 CAD	Work & Safety		
42	Rocksalt-Salt-Sale	10 x 310.000 m3	rough quality	75 CAD/m3	232'500'000 CAD	Salt many uses	K+S	
43	Concr. Mix Plant	2x	Stetter DE	1'400'000 CAD	2'800'000 CAD	2x 110 m3/h	yes	
44	Concrete-Pellets	104 Pellets	1.203 m3 x 104 x 10	150 CAD/m3	187'668'000 CAD	Quality-Concrete	yes	
45	Sand/fine gravel	104 Layers 1m	206 m3 x 104 x 10	105 CAD/m3	214'240 CAD	D = max. 3 mm		
46	Magnetit powder	104 Portions	70 m3 x 104 x 10	1020 CAD/m3	72'800 CAD	Rio Tinto, Billiton	yes	
47	Closure works	10 x	own Salt grain		134'000'000 CAD	Salt + M. Pressure		
48	building back	10 x			30'000'000 CAD	farmland again		
49	Unforseeables	3%			302'451'451 CAD	the un-expected		
50	Total	January 2020	Version 26		10'384'166'491 CAD			
51								
52								
53	plus street - ship - street transports, plus law cases					10,4 Bio. CAD		
54								
55								
56								