

APPENDIX D, PART 1: SITE 1 RUNOFF CALCULATIONS AND HYDRAULIC SIZING

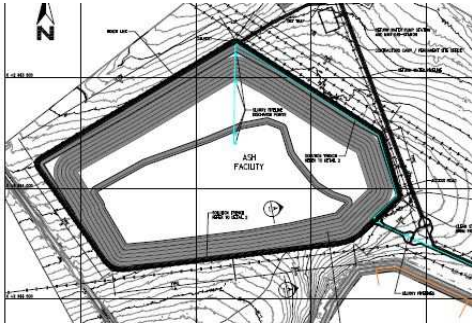
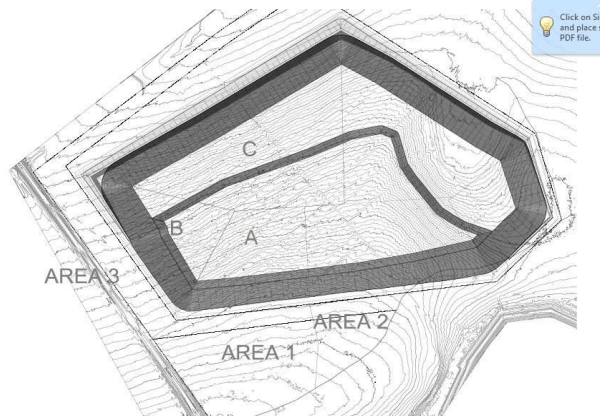
Dirty water runoff:

Area of whole ADF= 990000 m²

Rational Method:

C= 1
I= 120 mm (1in 100 year, 1hrs duration)

Q1= 33.0 m³/s
Q ash return = 2100 m³/day= 0.0243056 m³/s



Q A=	33.02 m ³ /s	Slope A=	0.007813	0.78%
Q B=	33.02 m ³ /s	Slope B=	0.02	2.00%
Q C=	33.02 m ³ /s	Slope C=	0.005882	0.59%
Q D=	33.02 m ³ /s	Slope D=	0.011765	1.18%
Q E=	33.02 m ³ /s	Slope E=	0.007813	0.78%
Q F=	33.02 m ³ /s	Slope F=	0.007634	0.76%
Q G=	33.02 m ³ /s	Slope G=	0.011111	1.11%

Channel	Flow Normal		Q (m ³ /s)	A (m ²)	v (m/s)	v ² (2 ^{9.8} 1)		n	Wetted Perimeter			
	Depth y (m)	Top Width b (m)				P (m)	R		R ^(4/3)	S (%)		
A	1.728	6.183	33.020	6.206	5.32	1.443	28.312	0.015	7.229649	0.858	0.816	0.78%
B	1.404	5.212	33.020	4.360	7.57	2.923	57.354	0.015	6.061687	0.719	0.644	2.00%
C	1.836	6.507	33.020	6.891	4.79	1.170	22.961	0.015	7.61906	0.904	0.875	0.59%
D	1.578	5.734	33.020	5.313	6.21	1.968	38.620	0.015	6.68971	0.794	0.736	1.18%
E	1.728	6.183	33.020	6.206	5.32	1.443	28.312	0.015	7.229649	0.858	0.816	0.78%
F	1.738	6.213	33.020	6.266	5.27	1.415	27.766	0.015	7.264971	0.863	0.821	0.76%
G	1.599	5.797	33.020	5.435	6.08	1.881	36.913	0.015	6.765658	0.803	0.747	1.11%