WORKSHEET for Zero Liquid Discharge Disposal Costs						
FOR PRELIMINARY LEVEL COSTS ONLY						
	Variable					
ENTER variable values	**range**	**example**	**case 1**	**case 2**	**case 3**	**case 4**
A - flow rate (mgd)	0 - 5	1				
B - reject level of unit	2 to 10%	5				
MAKE calculation	**Action**					
C - Concentrator reject/feed to crystallizer (mgd)	= A*B/100	0.05				
D - Feed to Crystallizer (gpm)	= C * 694	34.7				
FIND costs and energies from figures	**Action**					
E - Capital cost of installed concentrator ($)	use A, Figures 12.4 - 12.6	5,300,000				
F - Capital cost of installed crystallizer ($)	use D, Figure 12.7	2,650,000				
G - Energy usage for concentrator (kW)	use A, Figures 12.9 & 12.10	3750				
H - Energy usage for crystallizer (kW)	use D, Figure 12.11	525				
ESTIMATE energy cost	**Action**					
I - Cost of electricity ($/kwh)	estimate	0.1				
MAKE calculations	**Action**					
J - Annualized capital cost of concentrator	= E/20	265,000				
K - Annualized capital cost of crystallizer	= F/20	132,500				
L - Annual energy cost of concentrator	= G*I*8760	3,285,000				
M - Annual energy cost of crystallizer	= H*I*8760	459,900				
TOTAL ANNUAL COST	= J+K+L+M	4,142,400				
COMMENTS:	The cost of disposal of the solid waste produced is not included in the model					