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Mine File
D-Cline
R Summers

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Engineers/Scientists

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August 12, 1986

C-27

Rick Summers
Utah Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Rick:

As you are aware, a mistake was recently discovered in our design calculations for the Genwal sedimentation pond. In our original calculations, a barrel diameter of 18 inches was assumed, whereas the existing diameter is 12 inches. We have, therefore, recalculated the pond performance using SEDIMOT II. Printouts are attached.

In our original calculations, the peak stage during the design event in the sedimentation pond during the operational period was determined to be 6.009 ft (measured from the top of the sediment storage level). As noted on the attached printout, the peak stage was determined to be 6.013 ft with the revised barrel diameter. Both of these stages are equaivalent to rounded elevations of 7783.1 ft. Since the emergency spillway is designed with a crest elevation of 7784.0 ft, water will not flow through the emergency spillway under either condition. Thus, the revised calculations indicate that the spillway is adequate.

During the reclamation phase, previous calculations indicated that the peak stage during the design event would be 5.800 ft. With the reduced barrel diameter, the attached calculations indicate that the peak stage will also be 5.800 ft. Hence, the spillway is again adequate.

Please contact us if you have any questions.

Sincerely,

Rich

Richard B. White, P.E.
Principal Hydrologist

7324 South 1300 East, Suite 100 Midvale, Utah 84047 (801) 561-1555

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*****************************************************************
                    -- SEDPC --
          SEDIMOT II MODEL FOR THE IBM PC/XT
          CONVERTED BY TECH ENGINEERING INC.
             VERSION 1.10 NOVEMBER 17,1983
*****************************************************************

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*****************************************************************
      UNIVERSITY OF KENTUCKY COMPUTER MODEL
      OF SURFACE MINE HYDROLOGY AND SEDIMENTOLOGY
      FOR MORE INFORMATION CONTACT THE AGRICULTURAL
      ENGINEERING DEPARTMENT
      THE UK MODEL IS A DESIGN MODEL DEVELOPED TO PREDICT
      THE HYDRAULIC AND SEDIMENT RESPONSE FROM SURFACE
      MINED LANDS FOR A SPECIFIED RAINFALL EVENT (SINGLE STORM)
      VERSION DATE 9-23-83
      DISCLAIMER: NEITHER THE UNIVERSITY NOR ANY OF ITS EMPLOYEES
      ACCEPT ANY RESPONSIBILITY OR LEGAL LIABILITY FOR THE
      CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL
*****************************************************************
*****************************************************************
*****************************************************************
*                                                               *
*     THE FOLLOWING VALUES ARE NOW PREDICTED BY SEDIMOT II.     *
*     THEY CAN BE FOUND IN SUMMARY TABLES.                      *
*      1. PERIOD OF SIGNIFICANT CONCENTRATION                   *
*      2. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION      *
*         DURING PERIOD OF SIGNIFICANT CONCENTRATION            *
*      3. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION      *
*         DURING PEAK 24 HOUR PERIOD                            *
*      4. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION           *
*         DURING PERIOD OF SIGNIFICANT CONCENTRATION            *
*      5. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION           *
*         DURING PEAK 24 HOUR PERIOD                            *
*                                                               *
*     ALL CONCENTRATIONS ARE IN ML/L.                           *
*                                                               *
*****************************************************************
          ***********************************************
                WATERSHED IDENTIFICATION CODE
                ------------------------------------
 REVISED GENWAL SEDIMENTATION POND - 8/12/1986
          ***********************************************
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INPUT PARTICLE SIZE-PERCENT FINER DISTRIBUTIONS

SIZE,MM	.250	.100	.050	.010	.005	.001	.000
PCT FINER NO. 1	100.000	50.000	35.000	19.000	15.000	6.000	.000

**********INPUT VALUES**********

STORM DURATION	=	24.00	HOURS
PRECIPATION DEPTH	=	2.92	INCHES
SPECIFIC GRAVITY	=	2.50	
LOAD RATE EXPONENT FACTOR	=	1.50	
SUBMERGED BULK SPECIFIC GRAVITY	=	1.25	

19.80	.352	.000	*	19.90	.353	.000
20.00	.353	.000	*	20.10	.284	.000
20.20	.280	.000	*	20.30	.272	.000
20.40	.265	.000	*	20.50	.260	.000
20.60	.257	.000	*	20.70	.255	.000
20.80	.253	.000	*	20.90	.252	.000
21.00	.250	.000	*	21.10	.249	.000
21.20	.248	.000	*	21.30	.247	.000
21.40	.246	.000	*	21.50	.245	.000
21.60	.244	.000	*	21.70	.243	.000
21.80	.243	.000	*	21.90	.242	.000
22.00	.241	.000	*	22.10	.241	.000
22.20	.241	.000	*	22.30	.240	.000
22.40	.240	.000	*	22.50	.240	.000
22.60	.240	.000	*	22.70	.240	.000
22.80	.240	.000	*	22.90	.240	.000
23.00	.240	.000	*	23.10	.240	.000
23.20	.241	.000	*	23.30	.241	.000
23.40	.241	.000	*	23.50	.241	.000
23.60	.241	.000	*	23.70	.241	.000
23.80	.242	.000	*	23.90	.101	.000
24.00	.101	.000	*	24.10	.101	.000
24.20	.092	.000	*	24.30	.075	.000
24.40	.061	.000	*	24.50	.050	.000
24.60	.042	.000	*	24.70	.037	.000
24.80	.034	.000	*	24.90	.031	.000
25.00	.027	.000	*	25.10	.024	.000
25.20	.022	.000	*	25.30	.019	.000
25.40	.017	.000	*	25.50	.014	.000
25.60	.012	.000	*	25.70	.010	.000
25.80	.008	.000	*	25.90	.007	.000
26.00	.005	.000	*	26.10	.004	.000
26.20	.003	.000	*	26.30	.002	.000
26.40	.001	.000	*	26.50	.001	.000

* * * \

* *

JUNCTION 1, BRANCH 1, STRUCTURE 1

* *

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X	UNIT HYDRO
1	2.90	91.00	.110	.000	.000	.00	.0
2	5.50	69.00	.210	.000	.000	.00	3.0
3	2.00	75.00	.070	.000	.000	.00	.0

*** SEDIMENT INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	SEG NUM	SOIL K	LENGTH FEET	SLOPE PCT	CP VALUE	PART OPT	SURF COND
1	1	.00	.0	.00	.000	1.0	.0
2	1	.00	.0	.00	.000	1.0	.0
3	1	.00	.0	.00	.000	1.0	.0

***** GENERATED DATA FOR INPUT INTO STRUCTURE 1 *****

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE,MM	.2500	.1000	.0500	.0100	.0050	.0010
PERCENT FINER	.0000	.0000	.0000	.0000	.0000	.0000
SIZE,MM	.0001					
PERCENT FINER	.0000					

*** HYDROGRAPH AND SEDIMENT GRAPH ***

(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	********	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000
3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000
3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
4.40	.000	.000	*	4.50	.000	.000
4.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
5.60	.000	.000	*	5.70	.000	.000
5.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.013	.000
6.20	.014	.000	*	6.30	.016	.000

6.60	.021	.000	*	6.70	.023	.000
6.80	.024	.000	*	6.90	.026	.000
7.00	.028	.000	*	7.10	.029	.000
7.20	.031	.000	*	7.30	.032	.000
7.40	.034	.000	*	7.50	.035	.000
7.60	.036	.000	*	7.70	.038	.000
7.80	.039	.000	*	7.90	.041	.000
8.00	.042	.000	*	8.10	.056	.000
8.20	.059	.000	*	8.30	.061	.000
8.40	.063	.000	*	8.50	.065	.000
8.60	.072	.000	*	8.70	.074	.000
8.80	.077	.000	*	8.90	.079	.000
9.00	.081	.000	*	9.10	.095	.000
9.20	.098	.000	*	9.30	.100	.000
9.40	.103	.000	*	9.50	.106	.000
9.60	.122	.000	*	9.70	.125	.000
9.80	.128	.000	*	9.90	.131	.000
10.00	.133	.000	*	10.10	.174	.000
10.20	.179	.000	*	10.30	.183	.000
10.40	.187	.000	*	10.50	.191	.000
10.60	.264	.000	*	10.70	.270	.000
10.80	.277	.000	*	10.90	.283	.000
11.00	.289	.000	*	11.10	.470	.000
11.20	.493	.000	*	11.30	.514	.000
11.40	.535	.000	*	11.50	.555	.000
11.60	5.000	.000	*	11.70	5.909	.000
11.80	6.736	.000	*	11.90	7.583	.000
12.00	8.437	.000	*	12.10	2.821	.000
12.20	3.009	.000	*	12.30	2.838	.000
12.40	2.669	.000	*	12.50	2.532	.000
12.60	1.701	.000	*	12.70	1.649	.000
12.80	1.599	.000	*	12.90	1.558	.000
13.00	1.528	.000	*	13.10	1.291	.000
13.20	1.270	.000	*	13.30	1.243	.000
13.40	1.219	.000	*	13.50	1.198	.000
13.60	1.048	.000	*	13.70	1.025	.000
13.80	.997	.000	*	13.90	.970	.000
14.00	.946	.000	*	14.10	.790	.000
14.20	.761	.000	*	14.30	.726	.000
14.40	.692	.000	*	14.50	.662	.000
14.60	.637	.000	*	14.70	.619	.000
14.80	.607	.000	*	14.90	.599	.000
15.00	.592	.000	*	15.10	.586	.000
15.20	.581	.000	*	15.30	.578	.000
15.40	.575	.000	*	15.50	.572	.000
15.60	.570	.000	*	15.70	.568	.000
15.80	.567	.000	*	15.90	.567	.000
16.00	.566	.000	*	16.10	.430	.000
16.20	.422	.000	*	16.30	.406	.000
16.40	.394	.000	*	16.50	.384	.000
16.60	.377	.000	*	16.70	.373	.000
16.80	.371	.000	*	16.90	.368	.000
17.00	.366	.000	*	17.10	.364	.000
17.20	.362	.000	*	17.30	.360	.000
17.40	.358	.000	*	17.50	.356	.000
17.60	.355	.000	*	17.70	.354	.000
17.80	.352	.000	*	17.90	.351	.000
18.00	.351	.000	*	18.10	.350	.000
18.20	.349	.000	*	18.30	.349	.000
18.40	.348	.000	*	18.50	.348	.000
18.60	.348	.000	*	18.70	.348	.000
18.80	.349	.000	*	18.90	.349	.000
19.00	.349	.000	*	19.10	.350	.000
19.20	.350	.000	*	19.30	.351	.000
19.40	.351	.000	*	19.50	.351	.000

7784.6

7.00	.192	6.04	7.51	.94	
7.50	.20[illegible]	6.42	7.62	1.04	1.04

*** STORM EVENT SUMMARY ***

TURBULENCE FACTOR	=	1.00	
PERMANENT POOL CAPACITY	=	.673	ACRE-FT
DEAD STORAGE	=	20.00	PERCENT
TIME INCREMENT OUTFLOW	=	.10	HRS
VISCOSITY	=	.009	CM**2/SEC
INFLOW RUNOFF VOLUME	=	.922	ACRE-FT
OUTFLOW ROUTED VOLUME	=	.922	ACRE-FT
STORM VOLUME DISCHARGED (PLUG FLOW)	=	.922	ACRE-FT
POND VOLUME AT PEAK STAGE	=	.761	ACRE-FT
PEAK STAGE	=	6.013	FT
PEAK INFLOW RATE	=	>8.437	CFS
PEAK DISCHARGE RATE	=	6.900	CFS
PEAK INFLOW SEDIMENT CONCENTRATION	=	.00	MG/L
PEAK EFFLUENT SEDIMENT CONCENTRATION	=	.00	MG/L
PEAK EFFLUENT SETTLEABLE CONCENTRATION	=	.0000	ML/L
PEAK EFFLUENT SETTLEABLE CONCENTRATION	=	.00	MG/L
STORM AVERAGE EFFLUENT CONCENTRATION	=	.00	MG/L
AVERAGE EFFLUENT SEDIMENT CONCENTRATION	=	.00	MG/L
BASIN TRAP EFFICIENCY	=	**********	PERCENT
DETENTION TIME OF FLOW WITH SEDIMENT	=	.15	HRS
DETENTION TIME FROM HYDROGRAPH CENTERS	=	.15	HRS
DETENTION TIME INCLUDING STORED FLOW	=	.15	HRS
SEDIMENT LOAD DISCHARGED	=	.00	TONS
PERIOD OF SIGNIFICANT CONCENTRATION	=	-26.90	HRS
VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION	=	.00	ML/L
VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD	=	.00	ML/L
ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION	=	.00	ML/L
ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD	=	.00	ML/L

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE,MM	.2500	.1000	.0500	.0100	.0050	.0010
PERCENT FINER	.0000	.0000	.0000	.0000	.0000	.0000
SIZE,MM	.0001					
PERCENT FINER	.0000					

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*** HYDROGRAPH AND SEDIMENT GRAPH ***
(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	******* *	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000

3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000
3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
4.40	.000	.000	*	4.50	.000	.000
4.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
5.60	.000	.000	*	5.70	.000	.000
5.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.003	.000
6.20	.008	.000	*	6.30	.012	.000
6.40	.014	.000	*	6.50	.017	.000
6.60	.018	.000	*	6.70	.020	.000
6.80	.022	.000	*	6.90	.024	.000
7.00	.025	.000	*	7.10	.027	.000
7.20	.028	.000	*	7.30	.030	.000
7.40	.031	.000	*	7.50	.033	.000
7.60	.034	.000	*	7.70	.036	.000
7.80	.037	.000	*	7.90	.039	.000
8.00	.040	.000	*	8.10	.045	.000
8.20	.051	.000	*	8.30	.055	.000
8.40	.059	.000	*	8.50	.061	.000
8.60	.065	.000	*	8.70	.069	.000
8.80	.072	.000	*	8.90	.075	.000
9.00	.077	.000	*	9.10	.083	.000
9.20	.090	.000	*	9.30	.094	.000
9.40	.098	.000	*	9.50	.101	.000
9.60	.107	.000	*	9.70	.115	.000
9.80	.121	.000	*	9.90	.125	.000
10.00	.128	.000	*	10.10	.141	.000
10.20	.159	.000	*	10.30	.170	.000
10.40	.177	.000	*	10.50	.183	.000
10.60	.205	.000	*	10.70	.236	.000
10.80	.255	.000	*	10.90	.267	.000
11.00	.277	.000	*	11.10	.328	.000
11.20	.405	.000	*	11.30	.454	.000
11.40	.489	.000	*	11.50	.517	.000
11.60	1.648	.000	*	11.70	3.551	.000
11.80	4.937	.000	*	11.90	6.047	.000
12.00	6.900	.000	*	12.10	6.390	.000
12.20	4.650	.000	*	12.30	3.785	.000
12.40	3.268	.000	*	12.50	2.933	.000
12.60	2.524	.000	*	12.70	2.099	.000
12.80	1.861	.000	*	12.90	1.719	.000
13.00	1.630	.000	*	13.10	1.519	.000
13.20	1.400	.000	*	13.30	1.328	.000
13.40	1.279	.000	*	13.50	1.243	.000
13.60	1.183	.000	*	13.70	1.109	.000
13.80	1.060	.000	*	13.90	1.022	.000
14.00	.989	.000	*	14.10	.928	.000
14.20	.852	.000	*	14.30	.797	.000
14.40	.753	.000	*	14.50	.715	.000
14.60	.682	.000	*	14.70	.655	.000
14.80	.634	.000	*	14.90	.618	.000
15.00	.607	.000	*	15.10	.598	.000
15.20	.591	.000	*	15.30	.585	.000
15.40	.580	.000	*	15.50	.577	.000
15.60	.574	.000	*	15.70	.571	.000
15.80	.569	.000	*	15.90	.568	.000
16.00	.567	.000	*	16.10	.532	.000

16.40	.423	.000	*	16.50	.406	.000
16.60	.393	.000	*	16.70	.384	.000
16.80	.378	.000	*	16.90	.373	.000
17.00	.370	.000	*	17.10	.367	.000
17.20	.365	.000	*	17.30	.363	.000
17.40	.361	.000	*	17.50	.359	.000
17.60	.357	.000	*	17.70	.356	.000
17.80	.354	.000	*	17.90	.353	.000
18.00	.352	.000	*	18.10	.351	.000
18.20	.350	.000	*	18.30	.349	.000
18.40	.349	.000	*	18.50	.349	.000
18.60	.348	.000	*	18.70	.348	.000
18.80	.348	.000	*	18.90	.349	.000
19.00	.349	.000	*	19.10	.349	.000
19.20	.349	.000	*	19.30	.350	.000
19.40	.350	.000	*	19.50	.351	.000
19.60	.351	.000	*	19.70	.351	.000
19.80	.352	.000	*	19.90	.352	.000
20.00	.352	.000	*	20.10	.335	.000
20.20	.309	.000	*	20.30	.292	.000
20.40	.280	.000	*	20.50	.272	.000
20.60	.265	.000	*	20.70	.260	.000
20.80	.257	.000	*	20.90	.255	.000
21.00	.253	.000	*	21.10	.251	.000
21.20	.250	.000	*	21.30	.249	.000
21.40	.247	.000	*	21.50	.246	.000
21.60	.245	.000	*	21.70	.244	.000
21.80	.244	.000	*	21.90	.243	.000
22.00	.242	.000	*	22.10	.242	.000
22.20	.241	.000	*	22.30	.241	.000
22.40	.240	.000	*	22.50	.240	.000
22.60	.240	.000	*	22.70	.240	.000
22.80	.240	.000	*	22.90	.240	.000
23.00	.240	.000	*	23.10	.240	.000
23.20	.240	.000	*	23.30	.240	.000
23.40	.241	.000	*	23.50	.241	.000
23.60	.241	.000	*	23.70	.241	.000
23.80	.241	.000	*	23.90	.206	.000
24.00	.154	.000	*	24.10	.127	.000
24.20	.112	.000	*	24.30	.098	.000
24.40	.083	.000	*	24.50	.069	.000
24.60	.058	.000	*	24.70	.049	.000
24.80	.042	.000	*	24.90	.037	.000
25.00	.033	.000	*	25.10	.030	.000
25.20	.026	.000	*	25.30	.023	.000
25.40	.021	.000	*	25.50	.018	.000
25.60	.016	.000	*	25.70	.013	.000
25.80	.011	.000	*	25.90	.010	.000
26.00	.008	.000	*	26.10	.006	.000
26.20	.005	.000	*	26.30	.004	.000
26.40	.003	.000	*	26.50	.002	.000
26.60	.001	.000	*	26.70	.001	.000

*** RUN COMPLETED ****

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*****************************************************************
                    --- SEDPC ---
          SEDIMOT II MODEL FOR THE IBM PC/XT
          CONVERTED BY TECH ENGINEERING INC.
             VERSION 1.10 NOVEMBER 17,1983
*****************************************************************

*****************************************************************
*****************************************************************
      UNIVERSITY OF KENTUCKY COMPUTER MODEL
      OF SURFACE MINE HYDROLOGY AND SEDIMENTOLOGY
      FOR MORE INFORMATION CONTACT THE AGRICULTURAL
      ENGINEERING DEPARTMENT
      THE UK MODEL IS A DESIGN MODEL DEVELOPED TO PREDICT
      THE HYDRAULIC AND SEDIMENT RESPONSE FROM SURFACE
      MINED LANDS FOR A SPECIFIED RAINFALL EVENT (SINGLE STORM)
      VERSION DATE 9-23-83
      DISCLAIMER: NEITHER THE UNIVERSITY NOR ANY OF ITS EMPLOYEES
      ACCEPT ANY RESPONSIBILITY OR LEGAL LIABILITY FOR THE
      CONCLUSIONS DRAWN FROM THE RESULTS OF THIS MODEL
*****************************************************************
*****************************************************************
*****************************************************************
*                                                               *
*     THE FOLLOWING VALUES ARE NOW PREDICTED BY SEDIMOT II.     *
*     THEY CAN BE FOUND IN SUMMARY TABLES.                      *
*      1. PERIOD OF SIGNIFICANT CONCENTRATION                   *
*      2. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION      *
*         DURING PERIOD OF SIGNIFICANT CONCENTRATION            *
*      3. VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION      *
*         DURING PEAK 24 HOUR PERIOD                            *
*      4. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION           *
*         DURING PERIOD OF SIGNIFICANT CONCENTRATION            *
*      5. ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION           *
*         DURING PEAK 24 HOUR PERIOD                            *
*                                                               *
*     ALL CONCENTRATIONS ARE IN ML/L.                           *
*                                                               *
*****************************************************************
          ***********************************************
               WATERSHED IDENTIFICATION CODE
               ------------------------------
 GENWAL SEDIMENTATION POND DURING PHASE I RECLAMATION
          ***********************************************
```

INPUT PARTICLE SIZE-PERCENT FINER DISTRIBUTIONS

SIZE,MM		.250	.100	.050	.010	.005	.001
		.000					
PCT FINER NO. 1	100.000	50.000	35.000	19.000	15.000	6.000	
		.000					

**********INPUT VALUES**********

STORM DURATION	=	24.00	HOURS
PRECIPATION DEPTH	=	2.92	INCHES
SPECIFIC GRAVITY	=	2.50	
LOAD RATE EXPONENT FACTOR	=	1.50	
SUBMERGED BULK SPECIFIC GRAVITY	=	1.25	

* *

JUNCTION 1, BRANCH 1, STRUCTURE 1

* *

*** HYDRAULIC INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	AREA ACRES	CURVE NUMBER	TC HR	TT HR	ROUTING COEFFICIENTS K-HRS	X	UNIT HYDRO
1	6.20	69.00	.210	.000	.000	.00	3.0
2	4.70	75.00	.060	.000	.000	.00	.0

*** SEDIMENT INPUT VALUES FOR SUBWATERSHEDS ***

WATER SHED	SEG NUM	SOIL K	LENGTH FEET	SLOPE PCT	CP VALUE	PART OPT	SURF COND
1	1	.00	.0	.00	.000	1.0	.0
2	1	.00	.0	.00	.000	1.0	.0

***** GENERATED DATA FOR INPUT INTO STRUCTURE 1 *****

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE,MM	.2500	.1000	.0500	.0100	.0050	.0010
PERCENT FINER	.0000	.0000	.0000	.0000	.0000	.0000
SIZE,MM	.0001					
PERCENT FINER	.0000					

*** HYDROGRAPH AND SEDIMENT GRAPH ***

(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	******* *	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000
3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000
3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
4.40	.000	.000	*	4.50	.000	.000
4.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
5.60	.000	.000	*	5.70	.000	.000
5.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.000	.000
6.20	.000	.000	*	6.30	.000	.000
6.40	.000	.000	*	6.50	.000	.000
6.60	.000	.000	*	6.70	.000	.000
6.80	.000	.000	*	6.90	.000	.000

7.00	.000	.000	*	7.10	.000	.000
7.20	.000	.000	*	7.30	.000	.000
7.40	.000	.000	*	7.50	.000	.000
7.60	.000	.000	*	7.70	.000	.000
7.80	.000	.000	*	7.90	.000	.000
8.00	.000	.000	*	8.10	.000	.000
8.20	.000	.000	*	8.30	.000	.000
8.40	.000	.000	*	8.50	.000	.000
8.60	.000	.000	*	8.70	.000	.000
8.80	.000	.000	*	8.90	.000	.000
9.00	.000	.000	*	9.10	.000	.000
9.20	.000	.000	*	9.30	.000	.000
9.40	.000	.000	*	9.50	.000	.000
9.60	.000	.000	*	9.70	.000	.000
9.80	.000	.000	*	9.90	.000	.000
10.00	.000	.000	*	10.10	.000	.000
10.20	.000	.000	*	10.30	.000	.000
10.40	.000	.000	*	10.50	.000	.000
10.60	.000	.000	*	10.70	.000	.000
10.80	.000	.000	*	10.90	.000	.000
11.00	.000	.000	*	11.10	.026	.000
11.20	.048	.000	*	11.30	.069	.000
11.40	.089	.000	*	11.50	.109	.000
11.60	1.512	.000	*	11.70	2.547	.000
11.80	3.556	.000	*	11.90	4.618	.000
12.00	5.700	.000	*	12.10	2.471	.000
12.20	2.688	.000	*	12.30	2.499	.000
12.40	2.313	.000	*	12.50	2.162	.000
12.60	1.564	.000	*	12.70	1.507	.000
12.80	1.451	.000	*	12.90	1.406	.000
13.00	1.373	.000	*	13.10	1.201	.000
13.20	1.178	.000	*	13.30	1.148	.000
13.40	1.122	.000	*	13.50	1.098	.000
13.60	.986	.000	*	13.70	.961	.000
13.80	.929	.000	*	13.90	.899	.000
14.00	.872	.000	*	14.10	.752	.000
14.20	.719	.000	*	14.30	.680	.000
14.40	.642	.000	*	14.50	.609	.000
14.60	.580	.000	*	14.70	.560	.000
14.80	.547	.000	*	14.90	.538	.000
15.00	.531	.000	*	15.10	.524	.000
15.20	.519	.000	*	15.30	.515	.000
15.40	.511	.000	*	15.50	.509	.000
15.60	.507	.000	*	15.70	.505	.000
15.80	.504	.000	*	15.90	.503	.000
16.00	.503	.000	*	16.10	.404	.000
16.20	.394	.000	*	16.30	.377	.000
16.40	.363	.000	*	16.50	.352	.000
16.60	.344	.000	*	16.70	.340	.000
16.80	.337	.000	*	16.90	.334	.000
17.00	.332	.000	*	17.10	.329	.000
17.20	.327	.000	*	17.30	.325	.000
17.40	.323	.000	*	17.50	.321	.000
17.60	.320	.000	*	17.70	.318	.000
17.80	.317	.000	*	17.90	.316	.000
18.00	.315	.000	*	18.10	.314	.000
18.20	.314	.000	*	18.30	.313	.000
18.40	.313	.000	*	18.50	.313	.000
18.60	.313	.000	*	18.70	.313	.000
18.80	.313	.000	*	18.90	.314	.000
19.00	.314	.000	*	19.10	.315	.000
19.20	.315	.000	*	19.30	.316	.000
19.40	.316	.000	*	19.50	.317	.000
19.60	.317	.000	*	19.70	.318	.000
19.80	.318	.000	*	19.90	.319	.000
20.00	.319	.000	*	20.10	.317	.000

20.20	.263	.000	*	20.30	.254	.000
20.40	.247	.000	*	20.50	.241	.000
20.60	.237	.000	*	20.70	.234	.000
20.80	.233	.000	*	20.90	.231	.000
21.00	.230	.000	*	21.10	.228	.000
21.20	.227	.000	*	21.30	.226	.000
21.40	.225	.000	*	21.50	.224	.000
21.60	.223	.000	*	21.70	.222	.000
21.80	.221	.000	*	21.90	.221	.000
22.00	.220	.000	*	22.10	.220	.000
22.20	.219	.000	*	22.30	.219	.000
22.40	.219	.000	*	22.50	.218	.000
22.60	.218	.000	*	22.70	.218	.000
22.80	.219	.000	*	22.90	.219	.000
23.00	.219	.000	*	23.10	.219	.000
23.20	.219	.000	*	23.30	.220	.000
23.40	.220	.000	*	23.50	.220	.000
23.60	.220	.000	*	23.70	.220	.000
23.80	.221	.000	*	23.90	.114	.000
24.00	.114	.000	*	24.10	.114	.000
24.20	.104	.000	*	24.30	.085	.000
24.40	.069	.000	*	24.50	.057	.000
24.60	.048	.000	*	24.70	.042	.000
24.80	.038	.000	*	24.90	.034	.000
25.00	.031	.000	*	25.10	.028	.000
25.20	.024	.000	*	25.30	.022	.000
25.40	.019	.000	*	25.50	.016	.000
25.60	.014	.000	*	25.70	.012	.000
25.80	.010	.000	*	25.90	.008	.000
26.00	.006	.000	*	26.10	.005	.000
26.20	.003	.000	*	26.30	.002	.000
26.40	.002	.000	*	26.50	.001	.000

* *

POND RESULTS

* *

***** CONTROL VARIABLES OPTIONS *****

FLOW	FRACTN	ISDO	NRHP	NSP	NCSTR
3	0	2	300	12	2

***** DROP SPILLWAY INPUTS *****

ENTRANCE LOSS COEFFICIENT	=	1.0000	
BEND LOSS COEFFICIENT	=	.5000	
WEIR COEFFICIENT	=	3.1000	
ORIFICE COEFFICIENT	=	.6000	
MANNING COEFFICIENT	=	.0240	
BARREL DIAMATER	=	12.00	INCHES
RISER DIAMETER	=	24.00	INCHES
LENGTH OF PIPE	=	92.00	FEET
VERTICAL HEAD DROP	=	16.00	FEET

***** BASIN GEOMETRY *****

STAGE (FT)	AREA (ACRES)	AVERAGE DEPTH (FT)	DISCHARGE (CFS)	CAPACITY (ACRES-FT)
.00	.083	.00	.00	.00
.50	.090	.49	.00	.04
1.00	.096	.97	.00	.09
1.50	.103	1.44	.00	.14
2.50	.117	2.35	.00	.25
3.50	.133	3.22	.00	.37
4.50	.149	4.06	.00	.52
5.50	.166	4.87	.00	.67
6.00	.175	5.27	6.89	.76
6.50	.183	5.66	7.41	.85
7.00	.192	6.04	7.51	.94

***** STORM EVENT SUMMARY *****

TURBULENCE FACTOR	=	1.00	
PERMANENT POOL CAPACITY	=	.673	ACRE-FT
DEAD STORAGE	=	20.00	PERCENT
TIME INCREMENT OUTFLOW	=	.10	HRS
VISCOSITY	=	.009	CM**2/SEC
INFLOW RUNOFF VOLUME	=	.680	ACRE-FT
OUTFLOW ROUTED VOLUME	=	.680	ACRE-FT
STORM VOLUME DISCHARGED (PLUG FLOW)	=	.680	ACRE-FT
POND VOLUME AT PEAK STAGE	=	.724	ACRE-FT
PEAK STAGE	=	5.800	FT
PEAK INFLOW RATE	=	5.700	CFS
PEAK DISCHARGE RATE	=	4.137	CFS
PEAK INFLOW SEDIMENT CONCENTRATION	=	.00	MG/L
PEAK EFFLUENT SEDIMENT CONCENTRATION	=	.00	MG/L
PEAK EFFLUENT SETTLEABLE CONCENTRATION	=	.0000	ML/L
PEAK EFFLUENT SETTLEABLE CONCENTRATION	=	.00	MG/L
STORM AVERAGE EFFLUENT CONCENTRATION	=	.00	MG/L
AVERAGE EFFLUENT SEDIMENT CONCENTRATION	=	.00	MG/L
BASIN TRAP EFFICIENCY	=**********		PERCENT
DETENTION TIME OF FLOW WITH SEDIMENT	=	.15	HRS
DETENTION TIME FROM HYDROGRAPH CENTERS	=	.15	HRS
DETENTION TIME INCLUDING STORED FLOW	=	.15	HRS
SEDIMENT LOAD DISCHARGED	=	.00	TONS
PERIOD OF SIGNIFICANT CONCENTRATION	=	-26.90	HRS
VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION	=	.00	ML/L
VOLUME WEIGHTED AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD	=	.00	ML/L
ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PERIOD OF SIGNIFICANT CONCENTRATION	=	.00	ML/L
ARITHMETIC AVERAGE SETTLEABLE CONCENTRATION DURING PEAK 24 HOUR PERIOD	=	.00	ML/L

*** PARTICLE SIZE DISTRIBUTION OF SEDIMENT ***

SIZE,MM	.2500	.1000	.0500	.0100	.0050	.0010
PERCENT FINER	.0000	.0000	.0000	.0000	.0000	.0000
SIZE,MM	.0001					
PERCENT FINER	.0000					

*** HYDROGRAPH AND SEDIMENT GRAPH ***
(TWO CONSECUTIVE VALUES PER LINE)

TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)	******* *	TIME (HR)	DISCHARGE (CFS)	SED DISC (MG/L)
.00	.000	.000	*	.10	.000	.000
.20	.000	.000	*	.30	.000	.000
.40	.000	.000	*	.50	.000	.000
.60	.000	.000	*	.70	.000	.000
.80	.000	.000	*	.90	.000	.000
1.00	.000	.000	*	1.10	.000	.000
1.20	.000	.000	*	1.30	.000	.000
1.40	.000	.000	*	1.50	.000	.000
1.60	.000	.000	*	1.70	.000	.000
1.80	.000	.000	*	1.90	.000	.000
2.00	.000	.000	*	2.10	.000	.000
2.20	.000	.000	*	2.30	.000	.000
2.40	.000	.000	*	2.50	.000	.000
2.60	.000	.000	*	2.70	.000	.000
2.80	.000	.000	*	2.90	.000	.000
3.00	.000	.000	*	3.10	.000	.000
3.20	.000	.000	*	3.30	.000	.000
3.40	.000	.000	*	3.50	.000	.000

3.60	.000	.000	*	3.70	.000	.000
3.80	.000	.000	*	3.90	.000	.000
4.00	.000	.000	*	4.10	.000	.000
4.20	.000	.000	*	4.30	.000	.000
4.40	.000	.000	*	4.50	.000	.000
4.60	.000	.000	*	4.70	.000	.000
4.80	.000	.000	*	4.90	.000	.000
5.00	.000	.000	*	5.10	.000	.000
5.20	.000	.000	*	5.30	.000	.000
5.40	.000	.000	*	5.50	.000	.000
5.60	.000	.000	*	5.70	.000	.000
5.80	.000	.000	*	5.90	.000	.000
6.00	.000	.000	*	6.10	.000	.000
6.20	.000	.000	*	6.30	.000	.000
6.40	.000	.000	*	6.50	.000	.000
6.60	.000	.000	*	6.70	.000	.000
6.80	.000	.000	*	6.90	.000	.000
7.00	.000	.000	*	7.10	.000	.000
7.20	.000	.000	*	7.30	.000	.000
7.40	.000	.000	*	7.50	.000	.000
7.60	.000	.000	*	7.70	.000	.000
7.80	.000	.000	*	7.90	.000	.000
8.00	.000	.000	*	8.10	.000	.000
8.20	.000	.000	*	8.30	.000	.000
8.40	.000	.000	*	8.50	.000	.000
8.60	.000	.000	*	8.70	.000	.000
8.80	.000	.000	*	8.90	.000	.000
9.00	.000	.000	*	9.10	.000	.000
9.20	.000	.000	*	9.30	.000	.000
9.40	.000	.000	*	9.50	.000	.000
9.60	.000	.000	*	9.70	.000	.000
9.80	.000	.000	*	9.90	.000	.000
10.00	.000	.000	*	10.10	.000	.000
10.20	.000	.000	*	10.30	.000	.000
10.40	.000	.000	*	10.50	.000	.000
10.60	.000	.000	*	10.70	.000	.000
10.80	.000	.000	*	10.90	.000	.000
11.00	.000	.000	*	11.10	.007	.000
11.20	.022	.000	*	11.30	.040	.000
11.40	.059	.000	*	11.50	.079	.000
11.60	.445	.000	*	11.70	1.238	.000
11.80	2.145	.000	*	11.90	3.116	.000
12.00	4.137	.000	*	12.10	4.110	.000
12.20	3.344	.000	*	12.30	2.967	.000
12.40	2.686	.000	*	12.50	2.461	.000
12.60	2.161	.000	*	12.70	1.848	.000
12.80	1.663	.000	*	12.90	1.545	.000
13.00	1.467	.000	*	13.10	1.376	.000
13.20	1.283	.000	*	13.30	1.223	.000
13.40	1.178	.000	*	13.50	1.144	.000
13.60	1.093	.000	*	13.70	1.033	.000
13.80	.988	.000	*	13.90	.951	.000
14.00	.918	.000	*	14.10	.865	.000
14.20	.800	.000	*	14.30	.749	.000
14.40	.705	.000	*	14.50	.665	.000
14.60	.630	.000	*	14.70	.600	.000
14.80	.576	.000	*	14.90	.560	.000
15.00	.547	.000	*	15.10	.537	.000
15.20	.529	.000	*	15.30	.523	.000
15.40	.518	.000	*	15.50	.514	.000
15.60	.511	.000	*	15.70	.508	.000
15.80	.506	.000	*	15.90	.505	.000
16.00	.504	.000	*	16.10	.478	.000
16.20	.438	.000	*	16.30	.412	.000
16.40	.391	.000	*	16.50	.374	.000

16.80	.345	.000	*	16.90	.340	.000
17.00	.337	.000	*	17.10	.333	.000
17.20	.331	.000	*	17.30	.328	.000
17.40	.326	.000	*	17.50	.324	.000
17.60	.322	.000	*	17.70	.321	.000
17.80	.319	.000	*	17.90	.318	.000
18.00	.317	.000	*	18.10	.316	.000
18.20	.315	.000	*	18.30	.314	.000
18.40	.313	.000	*	18.50	.313	.000
18.60	.313	.000	*	18.70	.313	.000
18.80	.313	.000	*	18.90	.313	.000
19.00	.314	.000	*	19.10	.314	.000
19.20	.315	.000	*	19.30	.315	.000
19.40	.315	.000	*	19.50	.316	.000
19.60	.316	.000	*	19.70	.317	.000
19.80	.317	.000	*	19.90	.318	.000
20.00	.318	.000	*	20.10	.306	.000
20.20	.285	.000	*	20.30	.272	.000
20.40	.261	.000	*	20.50	.252	.000
20.60	.246	.000	*	20.70	.241	.000
20.80	.237	.000	*	20.90	.235	.000
21.00	.232	.000	*	21.10	.231	.000
21.20	.229	.000	*	21.30	.228	.000
21.40	.227	.000	*	21.50	.225	.000
21.60	.224	.000	*	21.70	.223	.000
21.80	.222	.000	*	21.90	.222	.000
22.00	.221	.000	*	22.10	.220	.000
22.20	.220	.000	*	22.30	.219	.000
22.40	.219	.000	*	22.50	.219	.000
22.60	.219	.000	*	22.70	.218	.000
22.80	.218	.000	*	22.90	.219	.000
23.00	.219	.000	*	23.10	.219	.000
23.20	.219	.000	*	23.30	.219	.000
23.40	.219	.000	*	23.50	.220	.000
23.60	.220	.000	*	23.70	.220	.000
23.80	.220	.000	*	23.90	.194	.000
24.00	.154	.000	*	24.10	.134	.000
24.20	.121	.000	*	24.30	.108	.000
24.40	.092	.000	*	24.50	.077	.000
24.60	.065	.000	*	24.70	.055	.000
24.80	.047	.000	*	24.90	.042	.000
25.00	.037	.000	*	25.10	.033	.000
25.20	.030	.000	*	25.30	.026	.000
25.40	.023	.000	*	25.50	.020	.000
25.60	.018	.000	*	25.70	.015	.000
25.80	.013	.000	*	25.90	.011	.000
26.00	.009	.000	*	26.10	.007	.000
26.20	.006	.000	*	26.30	.004	.000
26.40	.003	.000	*	26.50	.002	.000
26.60	.001	.000	*	26.70	.001	.000

*** RUN COMPLETED ****