

Minor Modification Request

33628

Date: March 26, 1992

ETM No. E91-126-2

SC16-184444

TRAIL RIDGE LANDFILL - ANCILLARY FACILITIES

STORMWATER CALCULATIONS

3116P 02787 W

TABLE OF CONTENTS

DESCRIPTION	PAGE
Water Quality Compliance Calculations	1-2
Stage-Storage-Discharge Spreadsheet	3
Post-Development Attenuation Narrative	4
Pre-Development Hydrograph - Ancillary Facilities Drainage Area	5-9
Post-Development Model - Nodal Thruput Summary	10
Post-Development Model - Nodal Stage Summary	11
Post-Development Model - Network Summary	12-16

DOUGLASS HILL
INVESTIGATION
3-26-92

**TRAIL RIDGE LANDFILL - ANCILLARY FACILITIES
WATER QUALITY COMPLIANCE CALCULATIONS
(WET DETENTION)**

Drainage Area = 8.6 Ac

Runoff Coefficient = 0.70

Percentage Impervious = 60

Treatment Volume Required: 1.08 Ac-Ft

Treatment Volume Provided: 1.48 Ac-Ft

(1) Maximum Allowable Discharge of Treatment Volume:

$$\begin{aligned} Q_{\text{Max}} &= 1.48 \text{ Ac-Ft } (1/2) 43560 \text{ Ft}^2/\text{Ac } (1/60 \text{ Hr}) 1 \text{ Hr}/3600 \text{ S} \\ &= 0.15 \text{ CFS} \end{aligned}$$

Proposed NWL = 97.0

(2) Groundwater inflow Estimate

N/A

Diameter of Proposed Orifice = 0.20 Feet

Crest Elevation of proposed Orifice = 97.00

(3) Pond discharge at NWL

N/A

(4) Depth of storage above NWL

D = 1.85 Feet (Refer to stage-storage spreadsheet)

(5) Average of depth required above NWL to provide treatment volume (4), and depth required above NWL to provide one half treatment volume

$$D_{\text{ave}} \approx 0.75 (1.85) = 1.39 \text{ Feet}$$

(6) Stage elevation at (5)

$$97.00 + 1.39 = 98.39$$

(7) Discharge at stage elevation (6)

$$\begin{aligned} Q_{0.75D} &= 0.6(\pi/4)(0.20)^2[2(32.2)(98.39 - 97.00 - 0.20/2)]^{1/2} \\ &= 0.17 \text{ CFS} \end{aligned}$$

2

(8) Total maximum allowable discharge [(1) + (2)]

$$Q_{\max} = 0.15 + 0.00 = 0.15 \text{ CFS} \approx 0.17 \text{ CFS (7)}$$

Permanent Pool Volume Required:

$$\begin{aligned} \text{PPV}_{\text{req'd}} &= 8.6 \text{ Ac. (0.70) } 21^* \text{ days/153 days (30 in) (1 Ft/12 in)} \\ &= 2.07 \text{ Ac-Ft} \end{aligned}$$

Permanent Pool Volume Provided:

$$\begin{aligned} \text{Area of Pond at bottom} &= 0.27 \text{ Ac (Elev. 89.0)} \\ \text{Area of Pond at NWL} &= 0.74 \text{ Ac (Elev. 97.0)} \end{aligned}$$

$$\begin{aligned} \text{PPV}_{\text{prov'd}} &= \frac{0.74 \text{ Ac} + 0.27 \text{ Ac}}{2} (8 \text{ Ft}) \\ &= 4.04 \text{ Ac-Ft} \end{aligned}$$

*21 day residence time is provided as alternative to Littoral Zones

2

ENGLAND THIMS & MILLER, Inc.

STAGE - STORAGE - DISCHARGE SPREADSHEET

PROJECT : ANCILLARY FACILITIES

No. : E89-113

DATE : 18-Feb-92

SITE DATA

DRAINAGE AREA-PRE : 8.60 Acres

DRAINAGE AREA-POST : 8.60 Acres

PRE-DEVELOPMENT 'C' : 0.30

PERCENT IMPERVIOUS : 60

LAKE DATA

TOP OF BANK ELEV. : 101.00

AREA AT TOP OF BANK : 1.020 Acres

BOT/NWL ELEVATION : 97.00

AREA AT BOT/NWL : 0.740 Acres

TREATMENT VOLUME : 1.075 Ac.Ft

NUMBER

DIAMETER

xxxxxx

Inches

SIDE OF SQUARE ORIFICE

Feet

LENGTH

xxxxxx

Feet

SLOPE

xxxxxx

Ft/Ft

'N'

'C'

ENT COEFF.

INV. ELEV.

Centroid

WEIR 1 - WEIR 2

LENGTH

Feet

'C'

WEIR ELEV.

DEPTH INCREMENT :

0.20

Feet

LAKE BANK SLOPE :

4 : 1

DEPTH OF
WATER
(Feet)

ELEVATION

POND
AREA
(Acres)

TOTAL
STORAGE
(Ac.Ft)

1 STAGE
WEIR DIS.
(Cfs)

ORIFICE
DISCHARGE
(Cfs)

2 STAGE
WEIR DIS.
(Cfs)

TOTAL
DISCHARGE
(Cfs)

1.85

98.85

0.864

1.482

0.00

97.00

0.740

0.000

0.20

97.20

0.753

0.149

0.40

97.40

0.766

0.301

0.60

97.60

0.779

0.456

0.80

97.80

0.792

0.613

1.00

98.00

0.806

0.773

1.20

98.20

0.819

0.935

1.40

98.40

0.833

1.100

1.60

98.60

0.847

1.268

1.80

98.80

0.860

1.439

2.00

99.00

0.874

1.613

2.20

99.20

0.888

1.789

2.40

99.40

0.903

1.968

2.60

99.60

0.917

2.150

2.80

99.80

0.931

2.335

3.00

100.00

0.946

2.522

3.20

100.20

0.960

2.713

3.40

100.40

0.975

2.907

3.60

100.60

0.990

3.103

3.80

100.80

1.005

3.303

4.00

101.00

1.020

3.505

4.00

101.00

1.020

3.505

POST-DEVELOPMENT ATTENUATION

To comply with State water quantity criteria, the post-development discharge from the site was attenuated to less than the pre-development level by routing the stormwater runoff through a detention pond. As shown in the accompanying runoff hydrograph, the pre-development peak discharge resulting from the 25 year, 24 hour storm event was 17.7 cfs. After routing the runoff through the detention pond, the post-development peak discharge from the site will be 14.6 cfs, which is below the pre-development level.

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RUNOFF HYDROGRAPH PRE-DEVELOPED SUBBASIN

UNIT HYDROGRAPH FILE..... SCS_484	FILE.... PRETRAD
TOTAL DRAINAGE AREA, ACRES... 8.6	INPUT ID 701617988
WEIGHTED SCS CURVE NUMBER.... 65.0	TYPE.... RNF002
INITIAL ABSTRACTION FACTOR... 0.2	RUN, HRS 27.4
TIME OF CONCENTRATION, HOURS. 1.0	DT, HRS. 0.1
	DATA PTS 275
	STORM... SCS_IIM
	DURATION 24.0
	RAINFALL 8.6
	EXCESS.. 4.3847256
	ACREAGE. 8.6
	TC, HRS. 1.0
	TP, HRS. 12.7
	PEAK CFS 17.686134
	ACFT VOL 3.1434704
	READY... YES
	CFS TOL. 0.001
	HRS TOL. 0.01

Data	Time	Rainfall	Excess	Raw	Runoff
Pt #	Hours	Inches	Inches	CFS	CFS
0000	0.000	0.000	0.000	0.000	0.000
0001	0.100	0.010	0.000	0.000	0.000
0002	0.200	0.020	0.000	0.000	0.000
0003	0.300	0.030	0.000	0.000	0.000
0004	0.400	0.041	0.000	0.000	0.000
0005	0.500	0.051	0.000	0.000	0.000
0006	0.600	0.061	0.000	0.000	0.000
0007	0.700	0.072	0.000	0.000	0.000
0008	0.800	0.082	0.000	0.000	0.000
0009	0.900	0.093	0.000	0.000	0.000
0010	1.000	0.104	0.000	0.000	0.000
0011	1.100	0.114	0.000	0.000	0.000
0012	1.200	0.125	0.000	0.000	0.000
0013	1.300	0.136	0.000	0.000	0.000
0014	1.400	0.147	0.000	0.000	0.000
0015	1.500	0.158	0.000	0.000	0.000
0016	1.600	0.169	0.000	0.000	0.000
0017	1.700	0.180	0.000	0.000	0.000
0018	1.800	0.192	0.000	0.000	0.000
0019	1.900	0.203	0.000	0.000	0.000
0020	2.000	0.214	0.000	0.000	0.000
0021	2.100	0.226	0.000	0.000	0.000
0022	2.200	0.237	0.000	0.000	0.000
0023	2.300	0.249	0.000	0.000	0.000
0024	2.400	0.261	0.000	0.000	0.000
0025	2.500	0.273	0.000	0.000	0.000
0026	2.600	0.285	0.000	0.000	0.000
0027	2.700	0.297	0.000	0.000	0.000
0028	2.800	0.309	0.000	0.000	0.000
0029	2.900	0.321	0.000	0.000	0.000
0030	3.000	0.333	0.000	0.000	0.000
0031	3.100	0.346	0.000	0.000	0.000
0032	3.200	0.358	0.000	0.000	0.000
0033	3.300	0.371	0.000	0.000	0.000
0034	3.400	0.384	0.000	0.000	0.000

0035	3.500	0.396	0.000	0.000	0.000
0036	3.600	0.409	0.000	0.000	0.000
0037	3.700	0.422	0.000	0.000	0.000
0038	3.800	0.436	0.000	0.000	0.000
0039	3.900	0.449	0.000	0.000	0.000
0040	4.000	0.462	0.000	0.000	0.000
0041	4.100	0.476	0.000	0.000	0.000
0042	4.200	0.490	0.000	0.000	0.000
0043	4.300	0.503	0.000	0.000	0.000
0044	4.400	0.517	0.000	0.000	0.000
0045	4.500	0.531	0.000	0.000	0.000
0046	4.600	0.545	0.000	0.000	0.000
0047	4.700	0.560	0.000	0.000	0.000
0048	4.800	0.574	0.000	0.000	0.000
0049	4.900	0.589	0.000	0.000	0.000
0050	5.000	0.604	0.000	0.000	0.000
0051	5.100	0.618	0.000	0.000	0.000
0052	5.200	0.634	0.000	0.000	0.000
0053	5.300	0.649	0.000	0.000	0.000
0054	5.400	0.664	0.000	0.000	0.000
0055	5.500	0.680	0.000	0.000	0.000
0056	5.600	0.695	0.000	0.000	0.000
0057	5.700	0.711	0.000	0.000	0.000
0058	5.800	0.727	0.000	0.000	0.000
0059	5.900	0.744	0.000	0.000	0.000
0060	6.000	0.760	0.000	0.000	0.000
0061	6.100	0.777	0.000	0.000	0.000
0062	6.200	0.794	0.000	0.000	0.000
0063	6.300	0.811	0.000	0.000	0.000
0064	6.400	0.828	0.000	0.000	0.000
0065	6.500	0.846	0.000	0.000	0.000
0066	6.600	0.863	0.000	0.000	0.000
0067	6.700	0.881	0.000	0.000	0.000
0068	6.800	0.900	0.000	0.000	0.000
0069	6.900	0.918	0.000	0.000	0.000
0070	7.000	0.937	0.000	0.000	0.000
0071	7.100	0.956	0.000	0.000	0.000
0072	7.200	0.975	0.000	0.000	0.000
0073	7.300	0.995	0.000	0.000	0.000
0074	7.400	1.015	0.000	0.000	0.000
0075	7.500	1.035	0.000	0.000	0.000
0076	7.600	1.056	0.000	0.000	0.000
0077	7.700	1.077	0.000	0.000	0.000
0078	7.800	1.098	0.000	0.007	0.000
0079	7.900	1.120	0.000	0.022	0.000
0080	8.000	1.142	0.001	0.038	0.001
0081	8.100	1.164	0.001	0.054	0.003
0082	8.200	1.187	0.002	0.071	0.006
0083	8.300	1.210	0.003	0.088	0.011
0084	8.400	1.234	0.004	0.107	0.018
0085	8.500	1.258	0.006	0.126	0.027
0086	8.600	1.283	0.008	0.146	0.037
0087	8.700	1.308	0.01	0.168	0.049
0088	8.800	1.334	0.012	0.190	0.063
0089	8.900	1.361	0.014	0.214	0.077
0090	9.000	1.388	0.017	0.239	0.094
0091	9.100	1.415	0.020	0.265	0.111
0092	9.200	1.444	0.023	0.294	0.129
0093	9.300	1.473	0.027	0.323	0.149

0094	9.400	1.503	0.031	0.355	0.170
0095	9.500	1.534	0.036	0.390	0.192

0097	9.700	1.598	0.046	0.465	0.241
0098	9.800	1.632	0.052	0.508	0.268
0099	9.900	1.667	0.058	0.553	0.297
0100	10.000	1.703	0.065	0.603	0.327
0101	10.100	1.740	0.073	0.658	0.360
0102	10.200	1.779	0.081	0.717	0.395
0103	10.300	1.820	0.090	0.783	0.433
0104	10.400	1.862	0.10	0.855	0.474
0105	10.500	1.907	0.111	0.937	0.518
0106	10.600	1.953	0.123	1.028	0.566
0107	10.700	2.002	0.136	1.131	0.619
0108	10.800	2.054	0.150	1.249	0.677
0109	10.900	2.109	0.166	1.386	0.741
0110	11.000	2.168	0.184	1.546	0.812
0111	11.100	2.232	0.204	1.736	0.892
0112	11.200	2.301	0.227	1.967	0.983
0113	11.300	2.376	0.253	2.255	1.086
0114	11.400	2.461	0.283	2.623	1.207
0115	11.500	2.556	0.319	3.113	1.349
0116	11.600	2.667	0.363	3.804	1.521
0117	11.700	2.913	0.467	9.038	1.782
0118	11.800	3.306	0.652	16.078	2.233
0119	11.900	3.763	0.894	20.967	2.981
0120	12.000	4.547	1.360	40.371	4.317
0121	12.100	5.072	1.702	29.633	6.268
0122	12.200	5.491	1.989	24.873	8.749
0123	12.300	5.864	2.253	22.893	11.572
0124	12.400	5.986	2.341	7.633	14.362
0125	12.500	6.088	2.416	6.489	16.351
0126	12.600	6.178	2.481	5.693	17.483
0127	12.700	6.257	2.540	5.101	17.686
0128	12.800	6.330	2.594	4.641	16.816
0129	12.900	6.396	2.643	4.271	15.435
0130	13.000	6.457	2.689	3.968	13.786
0131	13.100	6.514	2.732	3.711	12.056
0132	13.200	6.567	2.772	3.493	10.457
0133	13.300	6.618	2.810	3.303	9.133
0134	13.400	6.665	2.846	3.138	8.017
0135	13.500	6.711	2.881	2.991	7.082
0136	13.600	6.754	2.914	2.860	6.320
0137	13.700	6.796	2.945	2.743	5.677
0138	13.800	6.835	2.976	2.637	5.128
0139	13.900	6.873	3.005	2.540	4.663
0140	14.000	6.910	3.033	2.452	4.276
0141	14.100	6.946	3.061	2.371	3.948
0142	14.200	6.980	3.087	2.296	3.666
0143	14.300	7.013	3.113	2.227	3.422
0144	14.400	7.046	3.138	2.162	3.213
0145	14.500	7.077	3.162	2.103	3.033
0146	14.600	7.107	3.186	2.046	2.874
0147	14.700	7.137	3.209	1.994	2.733
0148	14.800	7.166	3.231	1.945	2.610
0149	14.900	7.194	3.253	1.899	2.497
0150	15.000	7.221	3.274	1.855	2.395
0151	15.100	7.248	3.295	1.813	2.300
0152	15.200	7.274	3.316	1.775	2.214

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0153	15.300	7.299	3.336	1.738	2.138
0154	15.400	7.324	3.355	1.702	2.071
0155	15.500	7.349	3.375	1.669	2.011
0156	15.600	7.373	3.394	1.637	1.958
0157	15.700	7.396	3.412	1.607	1.909
0158	15.800	7.420	3.430	1.578	1.863

0160	16.000	7.464	3.466	1.523	1.780
0161	16.100	7.486	3.483	1.498	1.741
0162	16.200	7.508	3.500	1.473	1.705
0163	16.300	7.529	3.517	1.450	1.671
0164	16.400	7.550	3.533	1.427	1.638
0165	16.500	7.570	3.549	1.405	1.607
0166	16.600	7.590	3.565	1.384	1.578
0167	16.700	7.610	3.581	1.364	1.549
0168	16.800	7.629	3.597	1.344	1.522
0169	16.900	7.648	3.612	1.326	1.497
0170	17.000	7.667	3.627	1.307	1.472
0171	17.100	7.686	3.642	1.290	1.448
0172	17.200	7.704	3.657	1.273	1.425
0173	17.300	7.723	3.671	1.256	1.403
0174	17.400	7.740	3.685	1.240	1.382
0175	17.500	7.758	3.700	1.225	1.362
0176	17.600	7.776	3.714	1.210	1.342
0177	17.700	7.793	3.727	1.195	1.323
0178	17.800	7.810	3.741	1.182	1.305
0179	17.900	7.826	3.754	1.168	1.287
0180	18.000	7.843	3.768	1.154	1.270
0181	18.100	7.859	3.781	1.142	1.254
0182	18.200	7.876	3.794	1.129	1.238
0183	18.300	7.892	3.807	1.117	1.223
0184	18.400	7.907	3.820	1.105	1.208
0185	18.500	7.923	3.832	1.093	1.193
0186	18.600	7.939	3.845	1.082	1.179
0187	18.700	7.954	3.857	1.071	1.165
0188	18.800	7.969	3.869	1.059	1.152
0189	18.900	7.984	3.881	1.050	1.139
0190	19.000	7.999	3.893	1.039	1.126
0191	19.100	8.014	3.905	1.029	1.114
0192	19.200	8.028	3.917	1.019	1.102
0193	19.300	8.042	3.929	1.010	1.091
0194	19.400	8.057	3.940	1.000	1.079
0195	19.500	8.071	3.952	0.992	1.068
0196	19.600	8.085	3.963	0.982	1.057
0197	19.700	8.099	3.974	0.973	1.047
0198	19.800	8.112	3.985	0.965	1.037
0199	19.900	8.126	3.996	0.957	1.027
0200	20.000	8.139	4.007	0.949	1.017
0201	20.100	8.153	4.018	0.940	1.007
0202	20.200	8.166	4.029	0.933	0.998
0203	20.300	8.179	4.039	0.925	0.989
0204	20.400	8.192	4.050	0.917	0.980
0205	20.500	8.205	4.061	0.910	0.971
0206	20.600	8.218	4.071	0.903	0.963
0207	20.700	8.230	4.081	0.896	0.955
0208	20.800	8.243	4.092	0.889	0.946
0209	20.900	8.255	4.102	0.882	0.939
0210	21.000	8.268	4.112	0.875	0.931
0211	21.100	8.280	4.122	0.869	0.923

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0212	21.200	8.292	4.132	0.862	0.916
0213	21.300	8.304	4.142	0.856	0.908
0214	21.400	8.316	4.152	0.849	0.901
0215	21.500	8.328	4.161	0.844	0.894
0216	21.600	8.340	4.171	0.838	0.887
0217	21.700	8.352	4.180	0.832	0.880
0218	21.800	8.363	4.190	0.826	0.874
0219	21.900	8.375	4.199	0.821	0.867
0220	22.000	8.386	4.209	0.815	0.861
0221	22.100	8.398	4.218	0.809	0.854

9

10223	22.300	8.420	4.237	0.798	0.842
10224	22.400	8.431	4.246	0.793	0.836
10225	22.500	8.442	4.255	0.788	0.830
10226	22.600	8.453	4.264	0.783	0.824
10227	22.700	8.464	4.273	0.778	0.819
10228	22.800	8.475	4.282	0.773	0.813
10229	22.900	8.486	4.291	0.768	0.808
10230	23.000	8.497	4.300	0.764	0.802
10231	23.100	8.507	4.308	0.759	0.797
10232	23.200	8.518	4.317	0.754	0.792
10233	23.300	8.528	4.326	0.749	0.786
10234	23.400	8.539	4.334	0.745	0.781
10235	23.500	8.549	4.343	0.741	0.776
10236	23.600	8.559	4.351	0.737	0.772
10237	23.700	8.570	4.360	0.731	0.767
10238	23.800	8.580	4.368	0.728	0.762
10239	23.900	8.590	4.376	0.724	0.757
10240	24.000	8.600	4.385	0.719	0.753
10241	24.100	8.600	4.385	0.000	0.740
10242	24.200	8.600	4.385	0.000	0.716
10243	24.300	8.600	4.385	0.000	0.678
10244	24.400	8.600	4.385	0.000	0.621
10245	24.500	8.600	4.385	0.000	0.542
10246	24.600	8.600	4.385	0.000	0.460
10247	24.700	8.600	4.385	0.000	0.379
10248	24.800	8.600	4.385	0.000	0.302
10249	24.900	8.600	4.385	0.000	0.237
10250	25.000	8.600	4.385	0.000	0.185
10251	25.100	8.600	4.385	0.000	0.143
10252	25.200	8.600	4.385	0.000	0.111
10253	25.300	8.600	4.385	0.000	0.088
10254	25.400	8.600	4.385	0.000	0.069
10255	25.500	8.600	4.385	0.000	0.053
10256	25.600	8.600	4.385	0.000	0.041
10257	25.700	8.600	4.385	0.000	0.032
10258	25.800	8.600	4.385	0.000	0.025
10259	25.900	8.600	4.385	0.000	0.019
10260	26.000	8.600	4.385	0.000	0.015
10261	26.100	8.600	4.385	0.000	0.012
10262	26.200	8.600	4.385	0.000	0.009
10263	26.300	8.600	4.385	0.000	0.007
10264	26.400	8.600	4.385	0.000	0.005
10265	26.500	8.600	4.385	0.000	0.004
10266	26.600	8.600	4.385	0.000	0.003
10267	26.700	8.600	4.385	0.000	0.002
10268	26.800	8.600	4.385	0.000	0.001
10269	26.900	8.600	4.385	0.000	0.000
10270	27.000	8.600	4.385	0.000	0.000

C:\BRN\ASCOTT.WBS\TRAD.STS(9 Lines)

INPUT: PROJECT FILE TRAD, RUN ID# 701613935 (3 NODES)

RESULTS: 0 BAD POINTS OUT OF 241 TOTAL, MAX STAGE ERROR 0.0000 FEET

NODAL THRUPTUT SUMMARY

NODE	NODE NAME	NODE TYPE	CFS IN	AT HR.	CFS OUT	AT HR.	FLOOD
0000	IMPROVEMENTS	SUBAREA	37.89	12.30	37.89	12.30	NO
0001	POND	POND	37.89	12.30	14.62	12.80	NO
0002	WETLANDS	STAGING	14.62	12.80	0.00	0.00	NO

C:\BRN\ASCOTT.WBS\TRAD.SSS(9 Lines)

INPUT: PROJECT FILE TRAD, RUN ID# 701613935 (3 NODES)

RESULTS: 0 BAD POINTS OUT OF 241 TOTAL, MAX STAGE ERROR 0.0000 FEET

NODAL STAGE SUMMARY

NODE	NODE NAME	NODE TYPE	MIN EL.	AT HR.	MAX EL.	AT HR.	FLOOD
0000	IMPROVEMENTS	SUBAREA	101.00	0.00	101.00	0.00	NO
0001	POND	POND	97.00	3.20	99.96	12.80	NO
0002	WETLANDS	STAGING	97.00	0.00	97.00	0.00	NO

BRN PROJECT TRAD
PATH# 0
FROM IMPROVEMENTS TO POND

DATA CODE NUMBER..... 6
DATA TYPE..... DIRECT
DATA TITLE.....
DATA ID NUMBER..... 690737482

DIRECT.. -----

HW PE/KE NO
TW PE/KE YES
HW EL... 101.0
TW EL... 101.0

REVISION DATE: Thu Nov 21 10:31:22 1991

DATA CODE NUMBER..... 1
DATA TYPE..... DIRECT
DATA TITLE..... OUTPUT
DATA ID NUMBER..... 701613935

INPUT ID 690737482
TO CFS.. 0.0
TO CF... 0.0
MAX IN.. 37.894684
MIN IN.. 0.0
MAX OUT. 37.894684
MIN OUT. 0.0

FWD K... 0.0
REV K... 0.0
FWD X... 0.0
REV X... 0.0

REVISION DATE: Thu Mar 26 07:45:35 1992

BRN PROJECT TRAD
PATH# 1
FROM POND TO WETLANDS

DATA CODE NUMBER..... 3
DATA TYPE..... RECT WEIR
DATA TITLE.....
DATA ID NUMBER..... 701613925

CREST EL 98.85
WIDTH... 5.0
WEIR C... 2.6
NUM ENDS 2

BREADTH. Optional

HW PE/KE YES
TW PE/KE YES
MAX HW.. 101.0
MAX TW.. 98.0

REVISION DATE: Thu Mar 26 07:45:25 1992

DATA CODE NUMBER..... 1
DATA TYPE..... RECT WEIR
DATA TITLE..... OUTPUT
DATA ID NUMBER..... 701613935

INPUT ID 701613925
TO CFS.. 0.0
TO CF... 0.0
MAX IN.. 14.61856
MIN IN.. 0.0
MAX OUT. 14.61856
MIN OUT. 0.0

FWD K... 0.0
REV K... 0.0
FWD X... 0.0
REV X... 0.0

REVISION DATE: Thu Mar 26 07:45:35 1992

BRN PROJECT TRAD
NODE 0
IMPROVEMENTS

DATA CODE NUMBER..... 0
DATA TYPE..... SUBAREA
DATA TITLE..... RUNOFF HYDROGRAPH DEVELOPED SUBBASIN
DATA ID NUMBER..... 690737723

FILE NAME TRAD25 || FLOOD EL. 101.0
INPUT ID# 701547689 ||-----
ALT TYPE. RNF002 ||
RUN, HRS. 25.7 ||
DT, HRS.. 0.1 ||
DATA PTS. 258 ||
STORM.... SCS_IIM ||
HOURS.... 24.0 ||
RAINFALL. 8.6 ||
EXCESS... 6.914134 ||
ACREAGE.. 8.6 ||
TC, HRS.. 0.5 ||
TP, HRS.. 12.3 ||
PEAK CFS. 37.894684 ||
ACFT VOL. 4.9568581 ||
EXECUTED. YES ||

BASE CFS. 0.0 ||
X COORD.. Optional || Y COORD.. Optional

REVISION DATE: Thu Nov 21 10:35:23 1991

DATA CODE NUMBER..... 1
DATA TYPE..... SUBAREA
DATA TITLE..... OUTPUT
DATA ID NUMBER..... 701613935

INPUT ID..... 690737723
FLOOD ELEVATION REACHED..... NO
INITIAL STAGE ELEVATION..... 101.0
INITIAL STORAGE, CUBIC FEET... 0.0
MAXIMUM STAGE REACHED..... 101.0
MINIMUM STAGE REACHED..... 101.0
MAXIMUM GROSS STORAGE, CF..... 0.0
MAXIMUM DETENTION STORAGE, CF. 0.0
FINAL STAGE ELEVATION..... 101.0
TIME OF MAXIMUM STAGE, HOURS.. 0.0
TIME OF MINIMUM STAGE, HOURS.. 0.0

PEAK NODAL INTAKE, CFS..... 37.894684
TIME OF PEAK INTAKE, HOURS.... 12.3
PEAK NODAL OUTPUT, CFS..... 37.894684
TIME OF PEAK OUTPUT, HOURS.... 12.3
POINTS OUT OF TOLERANCE..... 0
MAXIMUM STAGE ERROR..... 0.0

REVISION DATE: Thu Mar 26 07:45:35 1992

BRN PROJECT TRAD
 NODE 1
 POND

DATA CODE NUMBER..... 1
 DATA TYPE..... POND
 DATA TITLE.....
 DATA ID NUMBER..... 690759595

TOP EL...	101.0	TOP AREA.	1.02
EL.....	97.0	AREA.....	0.74
EL.....	Optional	AREA.....	Optional
EL.....	Optional	AREA.....	Optional
EL.....	Optional	AREA.....	Optional
EL.....	Optional	AREA.....	Optional
EL.....	Optional	AREA.....	Optional
EL.....	Optional	AREA.....	Optional
EL.....	Optional	AREA.....	Optional
EL.....	Optional	AREA.....	Optional
BOT EL...	89.0	BOT AREA.	0.28

TOP LF...	Optional	SIDE %PER	Optional
MID LF...	Optional	BASE %PER	Optional
BOT LF...	Optional		

BASE CFS.	0.0	STAGE T0.	97.0
X COORD..	Optional	Y COORD..	Optional

REVISION DATE: Thu Nov 21 16:39:55 1991

DATA CODE NUMBER..... 1
 DATA TYPE..... POND
 DATA TITLE..... OUTPUT
 DATA ID NUMBER..... 701613935

INPUT ID..... 690759595
 FLOOD ELEVATION REACHED..... NO
 INITIAL STAGE ELEVATION..... 97.0
 INITIAL STORAGE, CUBIC FEET... 177724.8
 MAXIMUM STAGE REACHED..... 99.964066
 MINIMUM STAGE REACHED..... 96.997849
 MAXIMUM GROSS STORAGE, CF..... 291345.72
 MAXIMUM DETENTION STORAGE, CF. 113620.92
 FINAL STAGE ELEVATION..... 99.020966
 TIME OF MAXIMUM STAGE, HOURS.. 12.8
 TIME OF MINIMUM STAGE, HOURS.. 3.2

PEAK NODAL INTAKE, CFS..... 37.894684
 TIME OF PEAK INTAKE, HOURS.... 12.3
 PEAK NODAL OUTPUT, CFS..... 14.61856
 TIME OF PEAK OUTPUT, HOURS.... 12.8
 POINTS OUT OF TOLERANCE..... 0
 MAXIMUM STAGE ERROR..... 0.0

REVISION DATE: Thu Mar 26 07:45:35 1992

BRN PROJECT TRAD
 NODE 2
 WETLANDS

 DATA CODE NUMBER..... 2
 DATA TYPE..... STAGING
 DATA TITLE.....
 DATA ID NUMBER..... 690737602

FLOOD EL. 98.0 || PE TO KE. YES

 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional
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 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional
 TIME, HRS Optional || STAGE EL. Optional

 || STAGE T0. 97.0
 X COORD.. Optional || Y COORD.. Optional

REVISION DATE: Thu Nov 21 10:33:22 1991

 DATA CODE NUMBER..... 1
 DATA TYPE..... STAGING
 DATA TITLE..... OUTPUT
 DATA ID NUMBER..... 701613935

INPUT ID..... 690737602
 FLOOD ELEVATION REACHED..... NO
 INITIAL STAGE ELEVATION..... 97.0
 INITIAL STORAGE, CUBIC FEET... 0.0
 MAXIMUM STAGE REACHED..... 97.0
 MINIMUM STAGE REACHED..... 97.0
 MAXIMUM GROSS STORAGE, CF..... 0.0
 MAXIMUM DETENTION STORAGE, CF. 0.0
 FINAL STAGE ELEVATION..... 97.0
 TIME OF MAXIMUM STAGE, HOURS.. 0.0
 TIME OF MINIMUM STAGE, HOURS.. 0.0

PEAK NODAL INTAKE, CFS..... 14.61856
 TIME OF PEAK INTAKE, HOURS.... 12.8
 PEAK NODAL OUTPUT, CFS..... 0.0
 TIME OF PEAK OUTPUT, HOURS.... 0.0
 POINTS OUT OF TOLERANCE..... 0
 MAXIMUM STAGE ERROR..... 0.0

REVISION DATE: Thu Mar 26 07:45:35 1992