

PRILOG 5

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**
**          HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE          **
**          HELP MODEL VERSION 3.07 (1 November 1997)              **
**          DEVELOPED BY ENVIRONMENTAL LABORATORY                   **
**          USAE WATERWAYS EXPERIMENT STATION                      **
**          FOR USEPA RISK REDUCTION ENGINEERING LABORATORY        **
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PRECIPITATION DATA FILE:      C:\WHI\VHELP22\data\P3728.VHP\_weather1.dat
TEMPERATURE DATA FILE:       C:\WHI\VHELP22\data\P3728.VHP\_weather2.dat
SOLAR RADIATION DATA FILE:   C:\WHI\VHELP22\data\P3728.VHP\_weather3.dat
EVAPOTRANSPIRATION DATA:    C:\WHI\VHELP22\data\P3728.VHP\_weather4.dat
SOIL AND DESIGN DATA FILE:   C:\WHI\VHELP22\data\P3728.VHP\I_388627.inp
OUTPUT DATA FILE:           C:\WHI\VHELP22\data\P3728.VHP\O_388627.prt
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TIME: 12: 9 DATE: 2/10/2006

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TITLE: 1 : 2 – prekriveno izravnavajućim slojem

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NOTE: INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER
WERE SPECIFIED BY THE USER.

LAYER 1 -----

TYPE 1 – VERTICAL PERCOLATION LAYER
MATERIAL TEXTURE NUMBER 6

THICKNESS	=	100.00	CM
POROSITY	=	0.4530	VOL/VOL
FIELD CAPACITY	=	0.1900	VOL/VOL
WILTING POINT	=	0.0850	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.1900	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.720000000000E-03	CM/SEC

NOTE: SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY 5.00
FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.

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LAYER 2

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS	=	2000.00	CM
POROSITY	=	0.6710	VOL/VOL
FIELD CAPACITY	=	0.2920	VOL/VOL
WILTING POINT	=	0.0770	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3100	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000224000E-02	CM/SEC

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

SCS RUNOFF CURVE NUMBER	=	87.30	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.0000	HECTARES
EVAPORATIVE ZONE DEPTH	=	25.0	CM
INITIAL WATER IN EVAPORATIVE ZONE	=	4.750	CM
UPPER LIMIT OF EVAPORATIVE STORAGE	=	11.325	CM
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.125	CM
INITIAL SNOW WATER	=	0.000	CM
INITIAL WATER IN LAYER MATERIALS	=	639.000	CM
TOTAL INITIAL WATER	=	639.000	CM
TOTAL SUBSURFACE INFLOW	=	0.00	MM/YR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
SPLIT/KASTEL FORM

STATION LATITUDE	=	43.53	DEGREES
MAXIMUM LEAF AREA INDEX	=	5.00	
START OF GROWING SEASON (JULIAN DATE)	=	74	
END OF GROWING SEASON (JULIAN DATE)	=	319	
EVAPORATIVE ZONE DEPTH	=	25.0	CM
AVERAGE ANNUAL WIND SPEED	=	11.26	KPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	72.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	65.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	61.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	76.00	%

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NORMAL MEAN MONTHLY PRECIPITATION (MM)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
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82.1	80.0	94.8	70.1	79.0	50.5
20.0	50.2	52.5	79.1	89.0	99.8

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR SPLIT/KASTEL FORM

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES CELSIUS)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
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7.3	7.9	10.2	13.1	17.6	21.3
24.3	24.2	20.8	16.8	11.7	8.9

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LEAK #1: PERCOLATION OR LEAKAGE THROUGH LAYER 2

AVERAGE MONTHLY VALUES (MM) FOR YEARS 1 THROUGH 3

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	89.17 34.30	88.80 28.70	72.77 23.33	96.10 103.07	50.90 101.00	30.80 85.60
STD. DEVIATIONS	89.98 30.36	20.29 34.92	16.54 19.38	52.77 36.76	30.78 25.87	12.90 36.82
RUNOFF						
TOTALS	2.110 0.000	1.481 3.335	1.191 0.000	1.170 5.180	0.896 2.717	0.000 3.667
STD. DEVIATIONS	1.985 0.000	1.776 5.776	1.031 0.000	1.008 4.618	1.259 2.974	0.000 4.805
EVAPOTRANSPIRATION						
TOTALS	28.668 31.407	38.602 29.004	63.382 23.155	74.480 51.638	49.133 24.750	33.749 20.591
STD. DEVIATIONS	2.246 27.025	2.970 25.843	3.929 19.423	31.122 10.166	6.995 4.030	9.220 2.253
PERCOLATION/LEAKAGE THROUGH LAYER 2						
TOTALS	56.0954 19.9927	47.0863 2.8369	60.0427 2.8408	64.1852 2.4522	51.7111 11.7301	30.0601 30.2083
STD. DEVIATIONS	46.8265 25.0445	39.2460 1.9341	24.2939 2.5792	6.9576 2.8056	15.9943 3.1828	37.0536 4.5783

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 3

	MM	CU. METERS	PERCENT
PRECIPITATION	804.53 (141.833)	8045.3	100.00
RUNOFF	21.746 (4.5876)	217.46	2.703
EVAPOTRANSPIRATION	468.558 (16.3328)	4685.58	58.240
PERCOLATION/LEAKAGE THROUGH LAYER 2	379.24183 (73.37903)	3792.418	47.13811
CHANGE IN WATER STORAGE	-65.013 (6.9330)	-650.13	-8.081

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PEAK DAILY VALUES FOR YEARS		
	1 THROUGH	3
	(MM)	(CU. METERS)
PRECIPITATION	55.30	553.00000
RUNOFF	10.004	100.03577
PERCOLATION/LEAKAGE THROUGH LAYER 2	3.837613	38.37613
SNOW WATER	0.00	0.0000
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.2929
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.0850

FINAL WATER STORAGE AT END OF YEAR		
		3
LAYER	(CM)	(VOL/VOL)
1	27.7668	0.2777
2	591.7293	0.2959
SNOW WATER	0.000	
