PRESSURIZED DISTRIBUTION SYSTEM WORKSHEET

A. Calculate the number of 1/8" orifices in the disposal field. Linear footage of disposal lines (as required in the system specifications) _____ feet ÷ the orifice spacing (maximum 2 feet on center) _____ feet = _____ number of orifices.

B. Calculate the minimum pump delivery rate for your system. Number of orifices (from A above) _____ x 0.41 GPM = _____ GPM (gallons per minute).

C. Calculate the static head (elevation the pump must lift the effluent).

Elevation of piping in the disposal trenches _____ feet

Elevation of pump "off" _____ feet

Static head (the difference between the two elevations) _____ feet

D. Calculate the friction loss (the amount of resistance to flow caused by turbulence in the pipe). Use the chart below to determine friction loss.

Distance (pressure pipe length) between pump and drainfield _____ feet

Pipe size _____ inches

Pump delivery rate (from A above) _____ GPM

Friction loss in feet of head per 100 ft of pipe (from the table below) x pressure pipe length (from above) divided by 100 ft.

(_____ ft x _____ ft) ÷ 100 ft = _____ feet of head friction loss (Note: some head loss will occur due to fittings and elbows. Recommended to round up).

E. Calculate the total dynamic head for your system. Add the static head (from C above) _____ ft + the friction loss (from D above) _____ ft + operating head of 10 ft (this figure combines 5 ft of head at the orifices plus an allowance of 5 ft for friction losses in the drainfield laterals and fittings) = _____ feet total dynamic head.

F. Using the pump curve for your desired pump (each pump will have its own pump curve), select a pump that can deliver at least the pump delivery rate (from B above) at the total dynamic head (from E above). Select your pump conservatively, as performance will drop slightly as the pump components wear.

FRICTION CHART FOR PVC SCHEDULE 40 PIPE

(Flow Coefficient C-150)

Flow	1.25"	1.5"	2"	2.5"
GPM	H_f	H_f	H_f	H_f
15	3.76	1.74	0.516	0.217
20	6.42	2.96	0.866	0.365
25	9.74	4.46	1.29	0.54
30	13.6	6.27	1.81	0.755
35	18.2	8.4	2.42	1.01
40	23.6	10.7	3.12	1.28
45	29.5	13.5	3.85	1.54
50		16.5	4.68	1.93
60		23.6	6.62	2.72
70			8.86	3.67

H_f = Head loss in ft/100 ft of pipe