WORKSHEETS
HN55 Residential Water Calculator
SELECTING CHEMILIZER PUMP SIZE AND DILUTION

CHLORINE DEMAND CALCULATION:

IRON _____PPM X .9 = _____PPM
HYDROGEN SULFIDE _____PPM X 8.5 = _____PPM
ALGAE REQUIRES EXTRA 5 PPM = _____PPM
DESIRED RESIDUAL= _____PPM
TOTAL CHLORINE DEMAND = _____PPM

Selection of the pump ratio will determine how long the stock solution lasts
(2:128 will cause stock solution to run out quicker than 1:128):

Injection factor Using 2:128 is .0156 Using 1:128 is .0078 Using 1:100 is .01
Using 2:100 is .02 Using 1:250 is .004 Using 1:500 is .0025

Required Dilution:

% chlorine X Injection factor X 1,000,000 then subtract 1 = gallons of water to mix with 1 gal. of chlorine
Total Chlorine Demand PPM

# of Days chlorine solution will last

GPD of water use X Injection factor = GPD of chlorine solution used
128

GPD of solution = # of days between refills
Size of solution container in gallons

Examples: A well supplying 400 gal. of water per day (4 people, 100 gal. each) with least frequent refill.

3.0 PPM IRON	X .9 = 2.7 PPM
5.0 PPM H2S	X 8.5 = 42.5 PPM
ALGAE	= 5.0 PPM
DESIRED RESIDUAL	= 0.5 PPM
Chlorine Demand	**= 50.7 PPM**

Dilution using 5.25% chlorine (household bleach) and a 1:250 pump

.0525 X .004 X 1,000,000 = 4.14 – 1 = 3.14 gal. of water to 1 gal. chlorine
50.7 PPM

Time between refills with a 25 gal. solution tank

400 X .004 = 1.6 GPD, then divide 25 by 1.6 to get approximately 15.5 days to empty the tank

---

20.0 PPM IRON	X .9 = 18 PPM
15.0 PPM H2S	X 8.5 = 127.5 PPM
ALGAE	= 5.0 PPM
DESIRED RESIDUAL	= 0.5 PPM
Chlorine Demand	**= 151 PPM**

Dilution using 12% chlorine and a 1:128 pump

.12 X .0078 X 1,000,000 = 6.2 – 1 = 5.2 gal. of water to 1 gal. chlorine
151 PPM

Time between refills with a 35 gal. solution tank

400 X .0078 = 3.12 GPD, then divide 35 by 3.12 to get approximately 11 days to empty the tank.