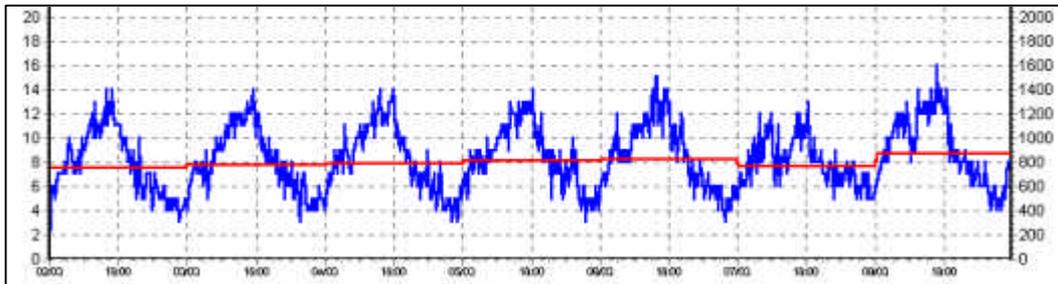


## Water Use & Leakage at Sample Site 24<sup>th</sup> Feb to 25<sup>th</sup> June 2001

Water leakage has been estimated using the lowest value recorded on any particular day (the "zero level"). This is assumed to be a background level of leakage which is carried on throughout the relevant 24 hour period, as illustrated in the following chart section.



It is recognised that values should be viewed with some caution, especially when at low levels. For example, an individual reading of one gallon may well indicate that a few pigs were drinking even in the "zero" time, and a small volume may be sufficient to push the meter from one gallon to the next. This is particularly an issue in meters which measure only in whole gallons. ( UK meters typically read per half litre - under 1/7<sup>th</sup> of a US gallon.)

In the chart shown above (from this site), it can be seen that the zero level is relatively consistent over this period, suggesting regular leakage.

The alternative explanation - that there is no actual zero period of consumption - would be more rather than less worrying. This would suggest that pigs as a group have poor social synchronisation, with lack of circadian cycle cues, or competition for resources.

For the purpose of this immediate analysis, however, it is assumed that non zero levels represent a reasonably projection of leakage rates.

After some time, it appears that drinkers were replaced, as there was a significant improvement in leakage rates.

Cost estimates are based on 0.5c per gallon for additional slurry disposal costs.

Summary		
Number of animals	~940	
Period	~21 to 138 days	
Total water use (galls)	123,405	131.1 /pig
Actual water use estimate (galls)	91,314	97.2 /pig
Leakage estimate (galls)	32,064	34.1 /pig
Leakage cost	\$160.32	17c /pig
Saving achieved after drinker replacement	~\$49.95	
Projected annual value of new drinkers	~\$540	~\$5.70 /drinker

