

Pump Operation

Eliminating manual analyses tasks provides actionable data when it's needed

The Problem

A common challenge faced by asset teams is ensuring assets are operated within guidelines set down by asset managers. These guidelines help to preserve and prolong the life of valuable assets by for example by implementing maximum starts and minimum run times for pumps.

This is sometimes done using large and complex spreadsheets (often evolved over a long time) to capture source data and perform a variety of analyses to provide operational insight.

This approach is problematic because of:

- The time it takes and opportunity for errors
- Decisions being made retrospectively because it takes so long to derive useful information
- The risk associated with only a few people actually knowing how to use the spreadsheet and because
- The data can't be trusted (is it current, where did the source data come from, who defined the calculations and how do we alter them)

The challenge is to show that all of these issues can be avoided by capturing the raw operational data and targets. Then performing automated analysis and displaying operational and compliance data in real time, with no manual effort.

The GTS Application

Great efficiency can be gained simply by automating manual processes using the PI System. In the case of pump operation, we simply took pump status from local control systems and captured the targets provided by asset managers.

We configured simple analyses to calculate total starts and run time metrics from the pump status.

We then compared actual operation with recommended parameters to determine whether the pump was being operated within guidelines.

The results were presented in real time using web-based dashboards.

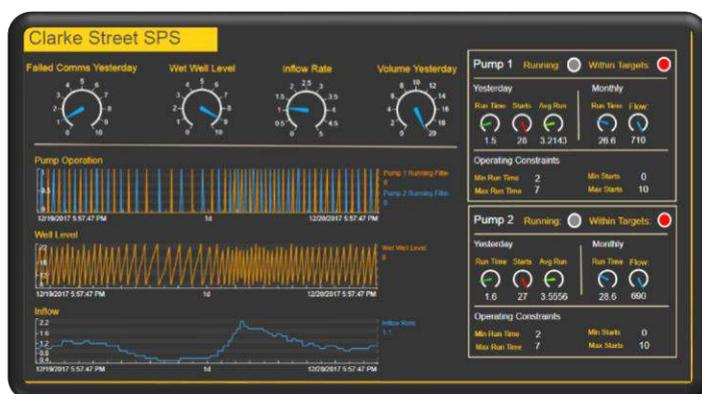
The Benefits

An obvious benefit is the substantial time saving in taking a manual process and automating it.

The dashboards also provided a clearer and richer way to see and interact with the data (for example panning through different time periods)

Having the data available anytime, anywhere also provides operators with the information needed to make fact-based operational decisions. It also drives improved alignment with operational guidelines.

Ultimately this will reduce maintenance costs and extend the life of the asset, significantly reducing capital replacement costs.



The solution originally developed for the IWN Trial overwhelmingly showed the benefits of automating manual processes substantially reducing manual effort, in some cases by several weeks each year.

