

October 2020

COMPUTERIZED MAINTENANCE MANAGEMENT SOFTWARE UPDATE

Predictive and Preventative Maintenance Enhancements

- Increased the frequency and scope of electrical testing of equipment.
 - Ability to trend values and predict failure. Using amp and insulation readings compared to the baseline reading.
 - Identify areas where efficiency can be improved. If difference of efficiency greater than 5% of comparable equipment then it will trigger further evaluation and possible reconditioning.

Initial Discoveries

- Effluent 75 horsepower motor #2 is showing signs of age. The insulation of the motor windings were compared to the baseline and determined that the motor needs reconditioning. This will prevent an unplanned failure and the cost is less to recondition.
- The maintenance shop sump pump was close to failure and replaced.

Next Steps

- Trend pump efficiency of pumps that have flow indication and utilize data to update maintenance schedule. Examples would be reclamation and influent pumps.
- Efficiency testing is performed on a 3-month interval.

Electric Motor and Pump Testing			
Voltage		Amps	Equipment # <input type="text"/>
A-B	<input type="text"/>	Phase A	Date <input type="text"/>
A-C	<input type="text"/>	Phase B	
B-C	<input type="text"/>	Phase C	
A-G	<input type="text"/>		
B-G	<input type="text"/>		
C-G	<input type="text"/>		
Insulation Resistance		Winding Continuity	
A-G	<input type="text"/>	A-B	<input type="text"/>
B-G	<input type="text"/>	A-C	<input type="text"/>
C-G	<input type="text"/>	B-C	<input type="text"/>
		PSI to Feet	PSI x 2.3067
Flow at max speed	<input type="text"/>	GPM	
Total Static Head	<input type="text"/>	Feet	PSI x 2.31
HP output	head x flow x 8.333 x 1		<input type="text"/> Divided by 33,000 <input type="text"/> HP Out
HP Nameplate	<input type="text"/>		
Water HP	HP Out/HP Nameplate	<input type="text"/>	Pump Efficiency %

Implementing Mainsaver at the Pump Stations

- Pump station inspection rounds are completed every week on Mondays and Fridays.
- Maintenance department will perform pump station inspection rounds on Mondays while collections department will continue with Friday inspections. This is in support of CCTV inspection goal.
- Preventative maintenance (PM) is performed weekly and recorded monthly in Mainsaver.
- Updated checklist is in development based on initial pump station inspection that was performed on 10/26/20.

Reporting of data

- New software tool is in progress to generate reports on Mainsaver data.
- Reports will provide better visibility into work orders associated with each process area or pump stations.
- Reports will provide ability to generate summary reports by purchase order line item detail.

