

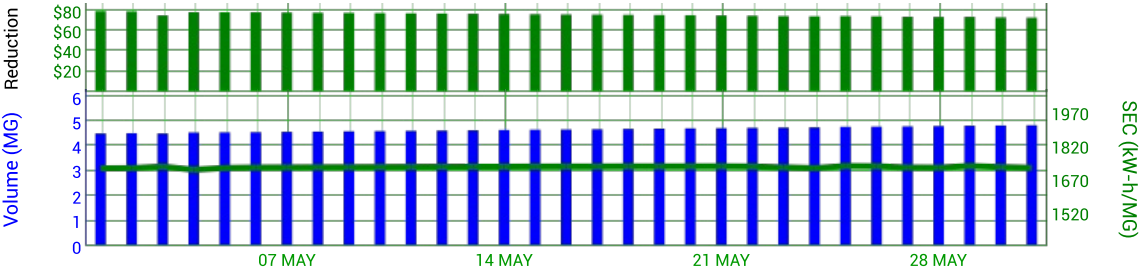
Monthly Pump Station Report for Water Utility

Sample Pump Station

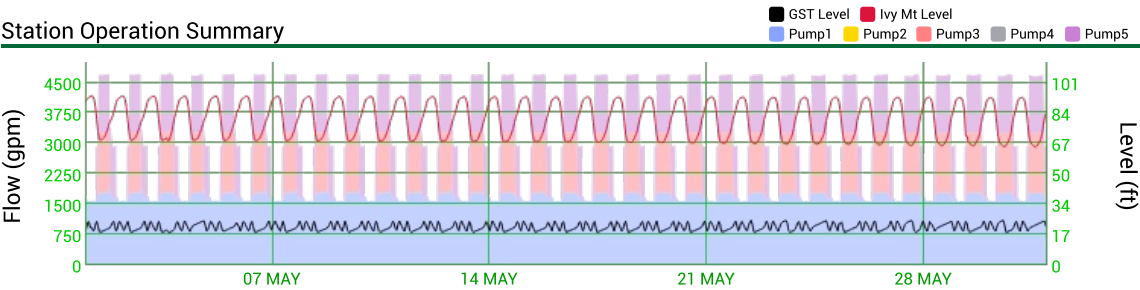
May, 2017

Time Period	General Usage Statistics			Optimization (DPO) Enabled			DPO Disabled		
	Volume	Energy Consumption		% Time	Energy Reduction		Lost Opportunity		
	MG	kW-h	Dollars		kW-h	Dollars	kW-h	Dollars	
Month <small>(Since 05/01/2017)</small>	145	250,008	\$18,751	100	31,498	\$2,362	0	\$0	M
Year-to-date <small>(Since 01/01/2017)</small>	629	1,061,380	\$79,604	100	171,554	\$12,867	0	\$0	Y
12 Months <small>(Since 06/01/2016)</small>	1,639	2,812,457	\$210,934	100	376,536	\$28,240	0	\$0	12
All Time <small>(Since 03/27/2011)</small>	8,287	14,205,200	\$1,065,390	73	1,712,210	\$128,416	643,214	\$48,241	All

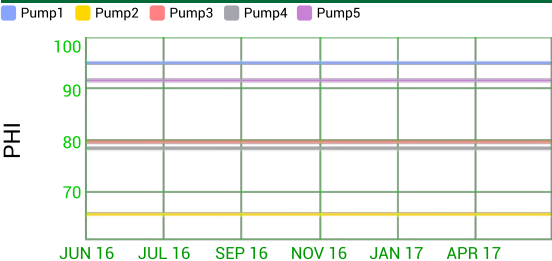
Daily Energy Reduction, Specific Energy Consumption, and Production



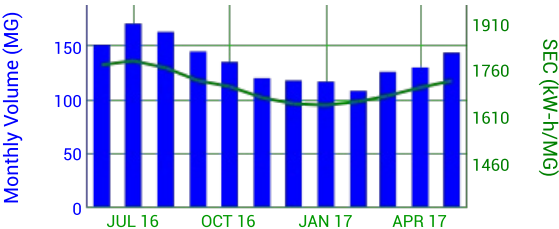
Station Operation Summary



Pump Health Indexes



Year In Review



Sample Pump Station - Pump1

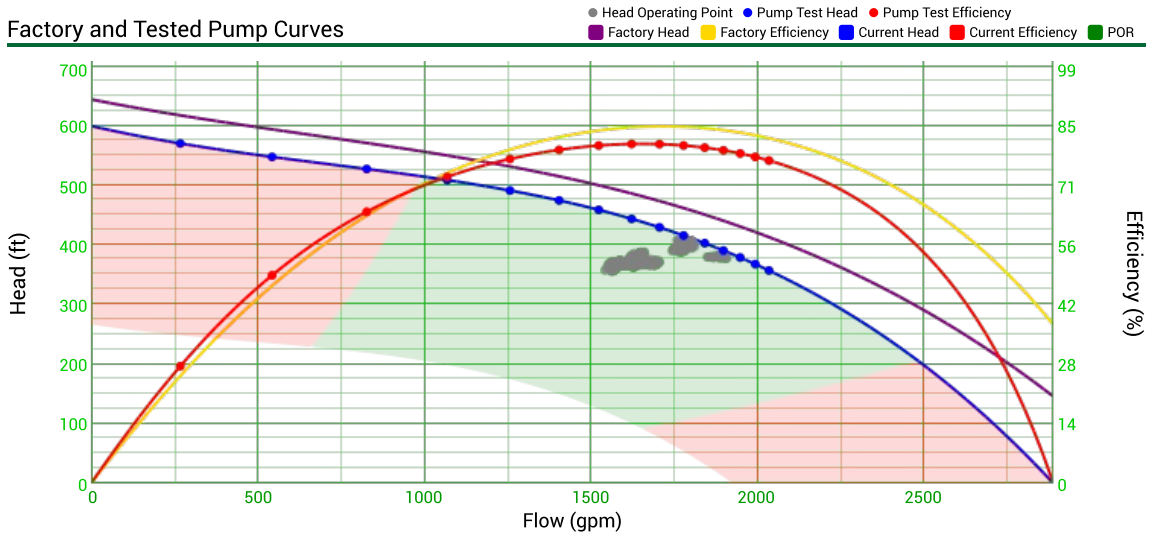
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Flowserve 5x 14EMM Vertical Turbine

Pump Health Index (PHI)	Days Since Curves Updated	Repair Net Present Value	Repair ROI	Reduced Capacity
95	701	\$15,281	61.1%	221.4 gpm

Factory and Tested Pump Curves



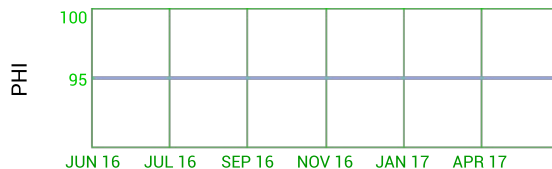
Monthly Operating Summary

Run Time:	738 hours
Run Time Outside of POR:	0 hours

Lifetime Operating Summary

Run Time:	33,115 hours
Run Time Outside of POR:	4 hours

Historical Pump Health Index (PHI)



Pump Repair Financial Factors

Pump Repair Cost:	\$25,000
Annual Discount Rate:	3%
Expected Pump Life:	10 years
Predicted Energy Reduction*:	\$4,722/yr

Pump Repair Financial Analysis

Present Value of Energy Reduction:	\$40,281
Pump Repair Cost:	\$-25,000
Net Present Value (NPV):	\$15,281
Return on Investment (ROI):	61.1%
Internal Rate of Return (IRR):	13.6%

*Predicted Energy Reduction is modeled using previous 12 months of hourly operating history.

Sample Pump Station - Pump2

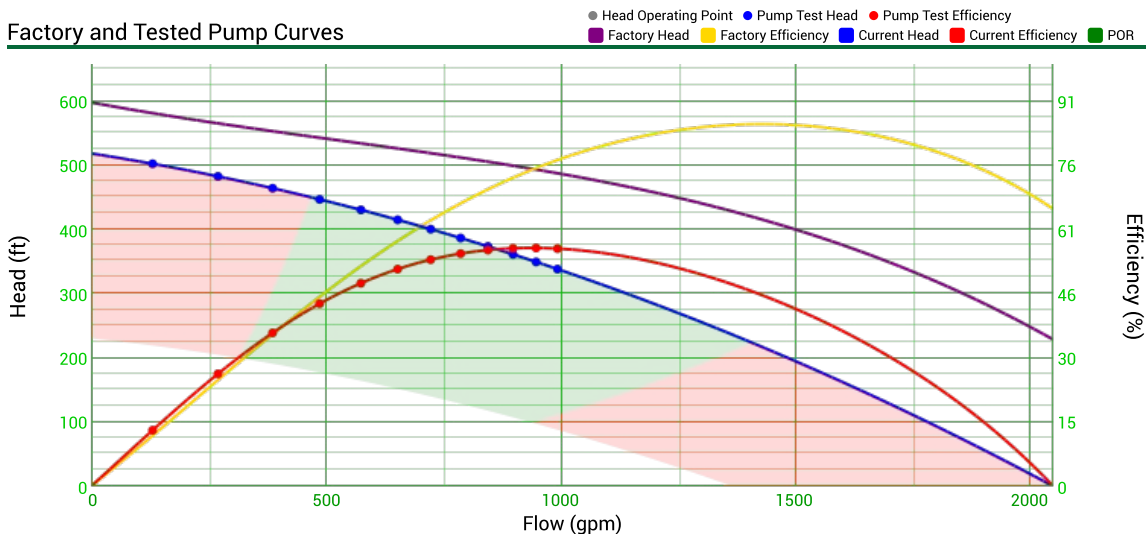
May, 2017

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Byron Jackson 13"MQ-H Type Imp. Vertical Turbine

Pump Health Index (PHI)	Days Since Curves Updated	Repair Net Present Value	Repair ROI	Reduced Capacity
66	701	\$79,748	318.9%	746.5 gpm

Factory and Tested Pump Curves



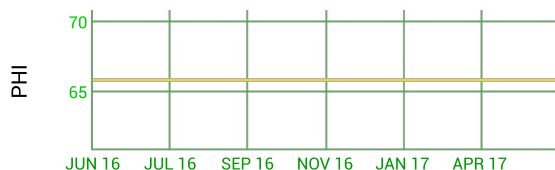
Monthly Operating Summary

Run Time:	0 hours
Run Time Outside of POR:	0 hours

Lifetime Operating Summary

Run Time:	2,093 hours
Run Time Outside of POR:	3 hours

Historical Pump Health Index (PHI)



Pump Repair Financial Factors

Pump Repair Cost:	\$25,000
Annual Discount Rate:	3%
Expected Pump Life:	10 years
Predicted Energy Reduction*:	\$12,280/yr

Pump Repair Financial Analysis

Present Value of Energy Reduction:	\$104,748
Pump Repair Cost:	\$-25,000
Net Present Value (NPV):	\$79,748
Return on Investment (ROI):	318.9%
Internal Rate of Return (IRR):	48.2%

*Predicted Energy Reduction is modeled using previous 12 months of hourly operating history.

Sample Pump Station - Pump3

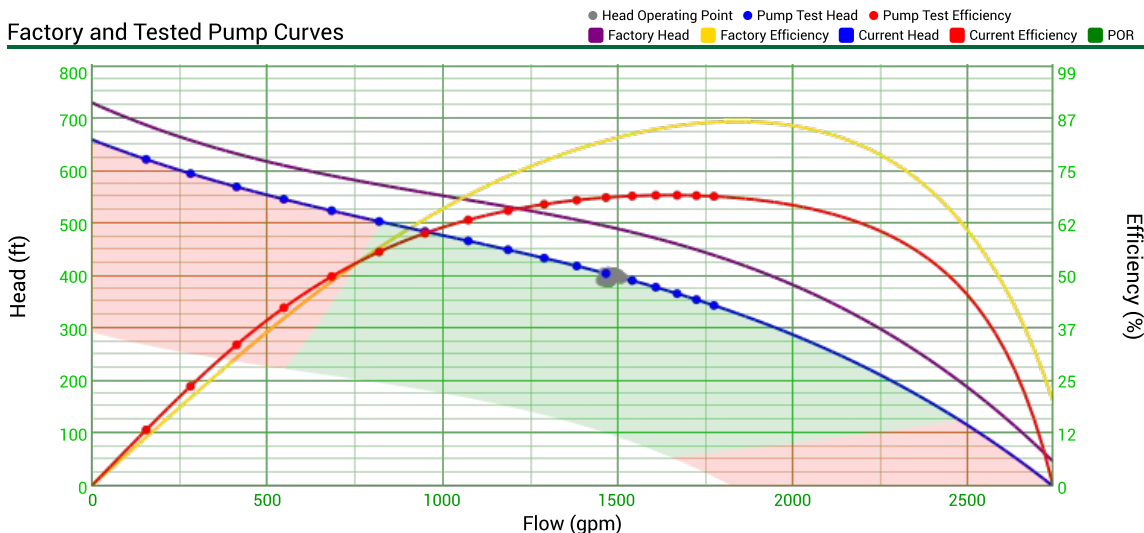
May, 2017

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Byron Jackson 15"MQ-L Type Imp. Vertical Turbine

Pump Health Index (PHI)	Days Since Curves Updated	Repair Net Present Value	Repair ROI	Reduced Capacity
80	701	\$79,890	319.5%	378.5 gpm

Factory and Tested Pump Curves



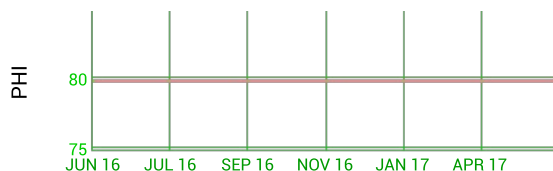
Monthly Operating Summary

Run Time:	304 hours
Run Time Outside of POR:	3 hours

Lifetime Operating Summary

Run Time:	10,753 hours
Run Time Outside of POR:	38 hours

Historical Pump Health Index (PHI)



Pump Repair Financial Factors

Pump Repair Cost:	\$25,000
Annual Discount Rate:	3%
Expected Pump Life:	10 years
Predicted Energy Reduction*:	\$12,296/yr

Pump Repair Financial Analysis

Present Value of Energy Reduction:	\$104,890
Pump Repair Cost:	\$-25,000
Net Present Value (NPV):	\$79,890
Return on Investment (ROI):	319.5%
Internal Rate of Return (IRR):	48.2%

*Predicted Energy Reduction is modeled using previous 12 months of hourly operating history.

Sample Pump Station - Pump4

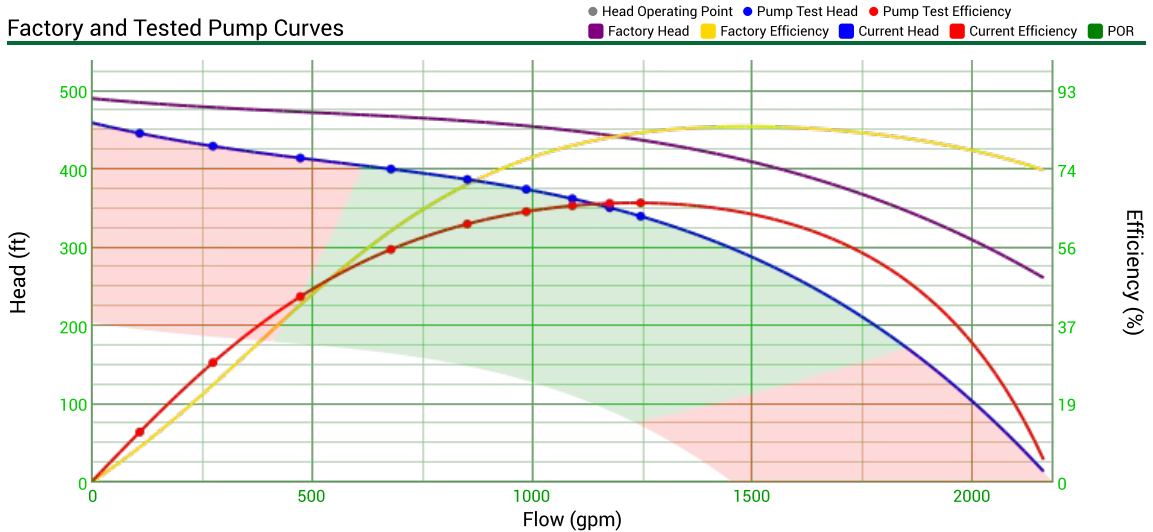
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Fairbanks Morse Enclosed Imp. T7FA92 Vertical Turbine

Pump Health Index (PHI)	Days Since Curves Updated	Repair Net Present Value	Repair ROI	Reduced Capacity
79	701	\$79,980	319.9%	675.7 gpm

Factory and Tested Pump Curves



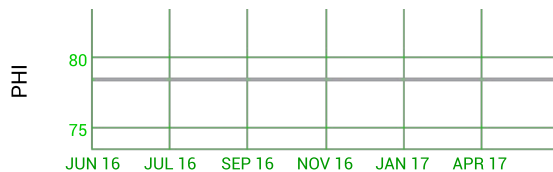
Monthly Operating Summary

Run Time:	0 hours
Run Time Outside of POR:	0 hours

Lifetime Operating Summary

Run Time:	4,575 hours
Run Time Outside of POR:	0 hours

Historical Pump Health Index (PHI)



Pump Repair Financial Factors

Pump Repair Cost:	\$25,000
Annual Discount Rate:	3%
Expected Pump Life:	10 years
Predicted Energy Reduction*:	\$12,307/yr

Pump Repair Financial Analysis

Present Value of Energy Reduction:	\$104,980
Pump Repair Cost:	\$-25,000
Net Present Value (NPV):	\$79,980
Return on Investment (ROI):	319.9%
Internal Rate of Return (IRR):	48.3%

Recommendation

This analysis concludes that repairing Pump4 is in the owner's economic interest. The repair will also regain 876.4 gpm of lost pumping capacity.

*Predicted Energy Reduction is modeled using previous 12 months of hourly operating history.

Sample Pump Station - Pump5

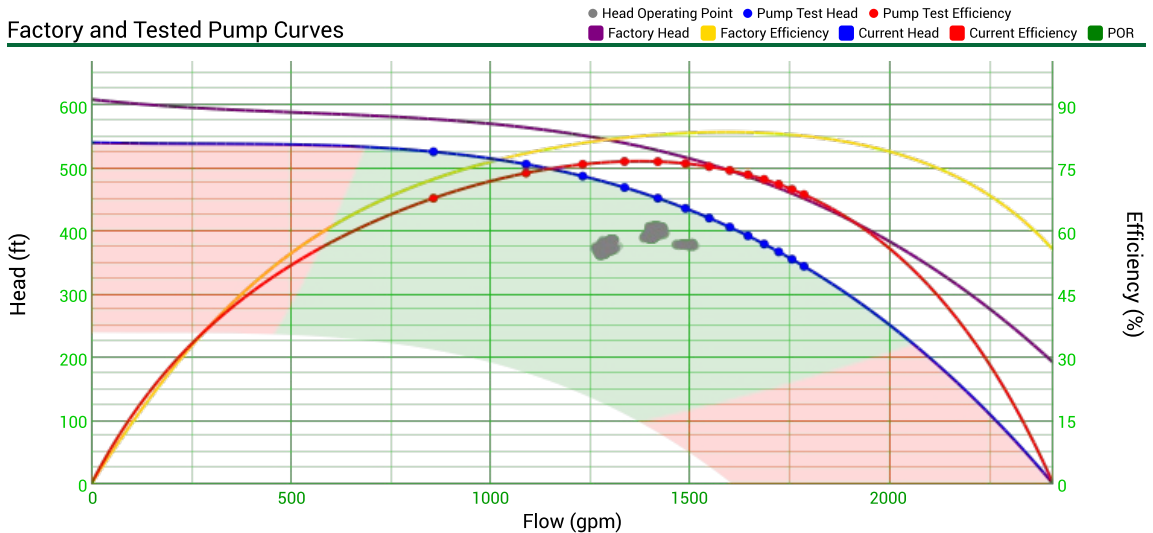
May, 2017

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Fairbanks Morse 14M.3+ Vertical Turbine

Pump Health Index (PHI)	Days Since Curves Updated	Repair Net Present Value	Repair ROI	Reduced Capacity
92	701	\$55,783	223.1%	316.6 gpm

Factory and Tested Pump Curves



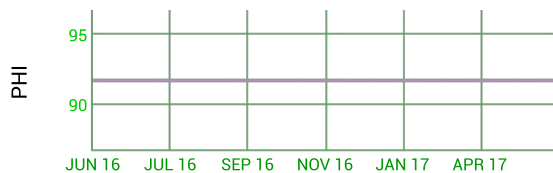
Monthly Operating Summary

Run Time:	499 hours
Run Time Outside of POR:	2 hours

Lifetime Operating Summary

Run Time:	20,193 hours
Run Time Outside of POR:	39 hours

Historical Pump Health Index (PHI)



Pump Repair Financial Factors

Pump Repair Cost:	\$25,000
Annual Discount Rate:	3%
Expected Pump Life:	10 years
Predicted Energy Reduction*:	\$9,470/yr

Pump Repair Financial Analysis

Present Value of Energy Reduction:	\$80,783
Pump Repair Cost:	\$-25,000
Net Present Value (NPV):	\$55,783
Return on Investment (ROI):	223.1%
Internal Rate of Return (IRR):	36.2%

*Predicted Energy Reduction is modeled using previous 12 months of hourly operating history.