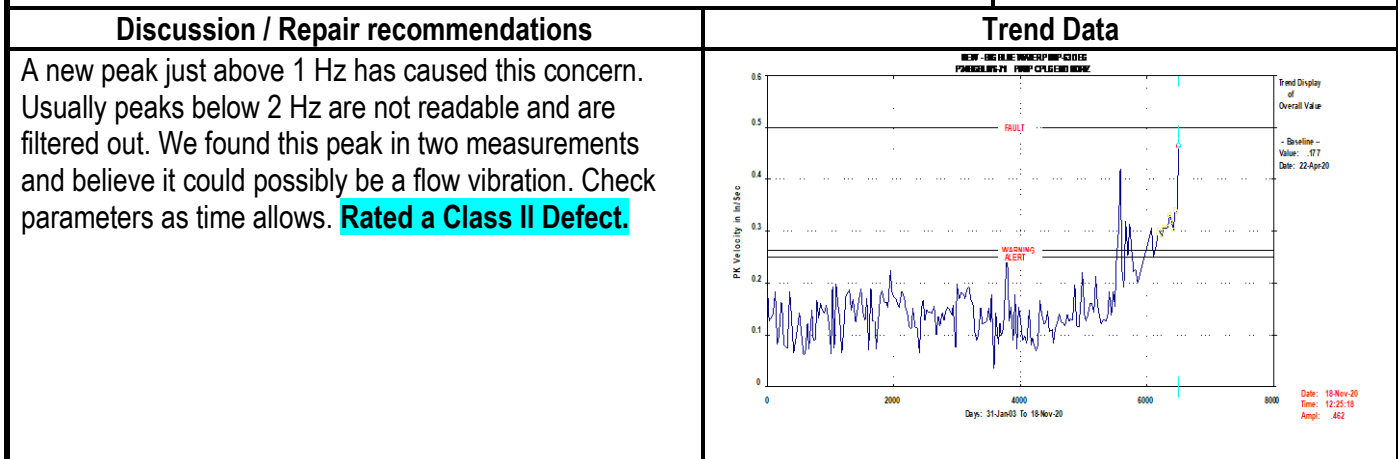
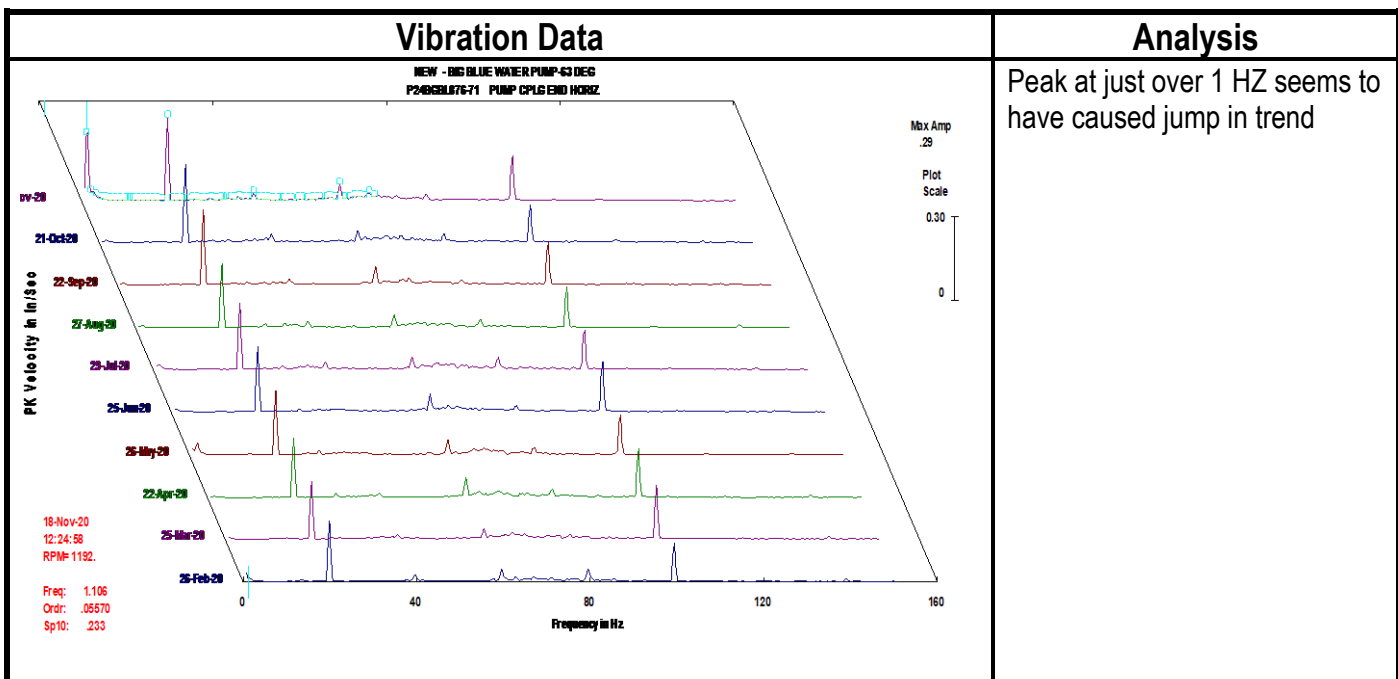




Client	PennAKem	Survey Date	11-18-20
Location	Memphis, TN	Report Date	11-18-20
Machine	Bib Blue Water Pump	QMS No.	143842
Component		Analyst	DWS

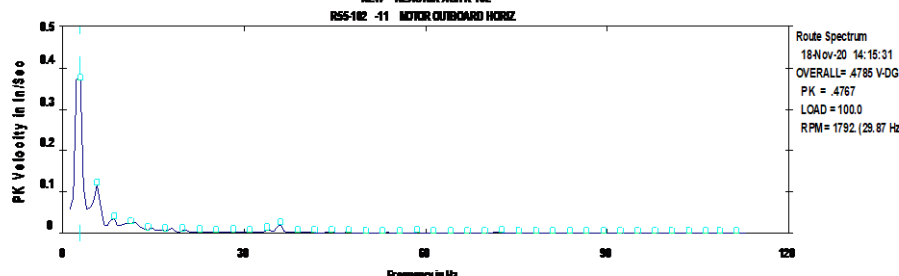
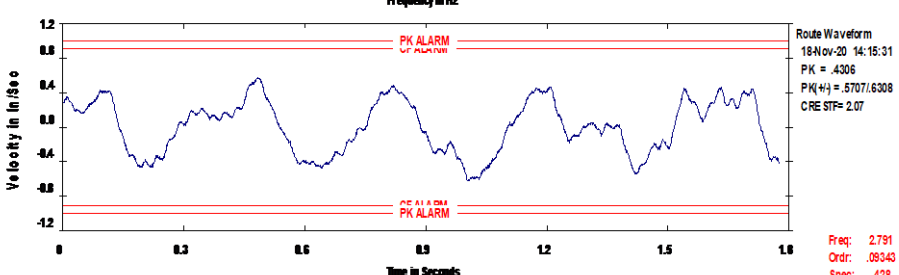
Defect Rating for this machine	<b>CLASS II</b>
Defect Rating System	
<b>Class I:</b> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue normal monitoring.	<b>Class III:</b> Defect (s) present that may cause failure in short term (less than 2 mos.). Should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.
<b>Class II:</b> Defect (s) present that may cause problem in long term (2-6 mos.). Repair during normal maintenance scheduling. Continue to monitor.	<b>Class IV:</b> Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. <b>Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs.</b>

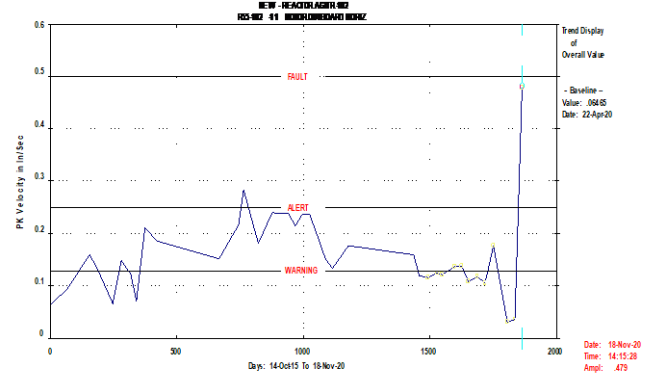




Client	PennAKem	Survey Date	11-18-20
Location	Memphis, TN	Report Date	11-18-20
Machine	R55 102 Reactor Agitator	QMS No.	143842
Component		Analyst	DWS

Defect Rating for this machine	<b>CLASS II</b>
Defect Rating System	
<b>Class I:</b> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue normal monitoring.	<b>Class III:</b> Defect (s) present that may cause failure in short term (less than 2 mos.). Should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.
<b>Class II:</b> Defect (s) present that may cause problem in long term (2-6 mos.). Repair during normal maintenance scheduling. Continue to monitor.	<b>Class IV:</b> Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. <b>Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs.</b>

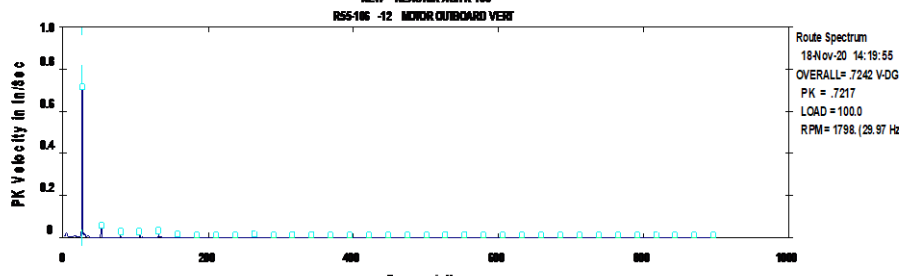
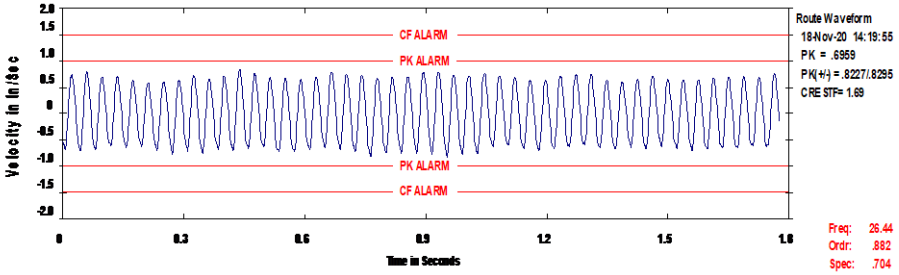
Vibration Data	Analysis
<p>NEW - REACTOR AGITR-102 R55-102 -11 MOTOR OUTBOARD HORIZ</p>  	<p>Low frequency peak near 2.7 Hz.</p>

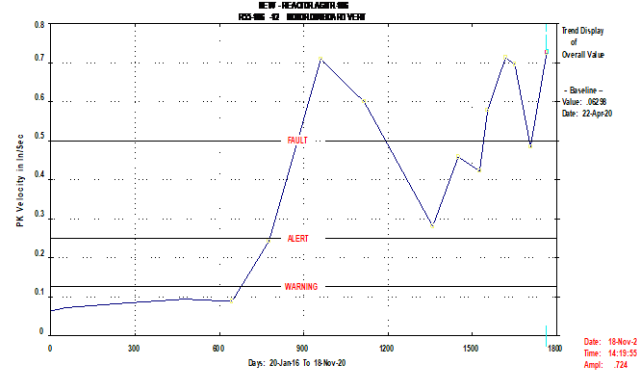
Discussion / Repair recommendations	Trend Data
<p>Low frequency peak in the data. Rubbing noise too. Inspect full drivetrain, especially the agitator shaft for eccentricity. <b>Rated a Class II Defect.</b></p>	



Client	PennAKem	Survey Date	11-18-20
Location	Memphis, TN	Report Date	11-18-20
Machine	R55 106 Reactor Agitator	QMS No.	143842
Component		Analyst	DWS

Defect Rating for this machine	<b>CLASS II</b>
Defect Rating System	
<b>Class I:</b> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue normal monitoring.	<b>Class III:</b> Defect (s) present that may cause failure in short term (less than 2 mos.). Should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.
<b>Class II:</b> Defect (s) present that may cause problem in long term (2-6 mos.). Repair during normal maintenance scheduling. Continue to monitor.	<b>Class IV:</b> Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. <b>Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs.</b>

Vibration Data	Analysis
<p>NEW - REACTOR AGITR-106 R55-106 -12 MOTOR OUTBOARD VERT</p>  <p>Route Spectrum 18-Nov-20 14:19:55 OVERALL=.7242 V-DG PK = .7217 LOAD = 100.0 RPM = 1798. (29.97 Hz)</p>  <p>Route Waveform 18-Nov-20 14:19:55 PK = .6969 PK(4+) = .8227/.8295 CRE STF= 1.69</p> <p>Freq: 28.44 Ordr: .882 Spec: .704</p>	<p>Strong vibration seems to be at motor speed.</p>

Discussion / Repair recommendations	Trend Data
<p>The unit still seems to have a motor speed issue. Inspect the motor and drivetrain for defects. <b>Rated a Class II Defect.</b></p>	 <p>Trend Display of Overall Value - Baseline - Value: .0828 Date: 22-Apr-20</p> <p>Alert Warning</p> <p>Date: 18-Nov-20 Time: 14:19:55 Ampl: .724</p>