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Valero West Memphis Terminal West Memphis, AR

The following is a summary of findings from the August 2019 vibration survey at your facility. Please let us know if there are any questions or comments.

QualiTest® uses a four step rating system for defects.

<u>Class I:</u> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

<u>Class II</u>: Defect (s) present that may cause problem in long term (2-6 months). Repair during normal maintenance scheduling. Continue to monitor.

<u>Class III</u>; Defect (s) present that may cause failure in short term (less than 2 months). This should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.

<u>Class IV</u>; Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs

Hi-Speed Industrial Service tests and inspects industrial machinery and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information contained herein is provided as an opinion only, not as a guaranty or warranty of the matters discussed herein.

31-15-042 Short Horn Lateral Pump

Motor/Pump was not in service during this survey.

#1 Barge Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#2 Barge Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#3 Barge Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#4 Barge Loading Pump

Motor data is showing signs of defects in motor bearings. This issue appears to be getting worse. Motor needs to be repaired soon. Ensure motor has adequate lubrication for now as we will continue to monitor this issue closely. Rated as a **CLASS III** defect.

#8 LX Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#12 LX Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#13 XX Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#14 XX Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#17 LS Truck Loading Pump

Motor/Pump was not in service during this survey.

#15NL Truck Loading Pump

Pump data continues to show signs of bearing wear in the pump. We will continue to monitor this closely. Rated as a **CLASS II** defect.

#18 NL Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#6 Transfer Pump

Motor/Pump was not in service during this survey.

#5 Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#7 Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#43 Bio-Diesel Pump North

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#44 Bio-Diesel Pump Middle

Motor data is still showing a high 1 x rpm vibration especially in the inboard axial. Pump data also indicates some possible looseness type vibration in the DE of the pump. This could be coupling related or fit looseness of the pump. Inspect unit for these issues soon. We will monitor these issues closely. Rated as a **CLASS III** defect.

#45 Bio-Diesel Pump South

Overall vibration decreased this survey in the motor. Data of the motor still indicates possible misalignment or coupling issue. Rated as a **CLASS II** defect for now.

As always, it has been a pleasure to serve the Valero West Memphis Truck Terminal. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

Kevin W. Maruell

ISO Certified Vibration Analyst, Category III



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