HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

November 5, 2021

IFF

Subject: October 800 Ton Grinding South Utilities vibration report (data up to 10-29-21)

Most of the machines surveyed were found to be in good condition with the exception of the following:

QualiTest® uses a four step rating system for defects.

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

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

Class III; 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.

Class IV; 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.

This completes our assessment of your equipment for this survey. Thank you for your business and feel free to call if you have any comments or questions.

Sincerely,

David W Shook

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800 T GRINDING

14-3008-GRINDER SURGE BIN ASP FAN
Motor data still shows a slight fan speed fundamental and first harmonic. Inspect unit fasteners and drive train components for wear, run out, and alignment only if time allows. **Rated a Class I Defect.**

15-3043 N GRIND MILL RECEIVER ASP FAN
Data still shows a large fan speed vibration in the motor and fan. Motor is higher. Vibration dropped in early October but is back up again. Inspect the unit for loose fasteners, structural defects, shaft or sheave run out, sheave alignment, belt tension, and build up or damage on the fan wheel. Pay special attention to the base spring isolators. Trim balancing might be needed. **Rated a Class III Defect.**

15-3048 S GRIND MILL RECEIVER ASP FAN
Data still shows a strong fan speed vibration in the motor vertical. Inspect the unit for loose fasteners, motor and fan base structural defects, shaft or sheave run out, sheave alignment, belt tension, and build up or damage on the fan wheel. Check for proper air flow parameters. Trim balancing might be needed. **Rated a Class II Defect.**

14-3016 MSP N FLAKE GRINDING MILL
Motor and fan speed vibrations in multiple points. Inspect the unit for wear and alignment in the drive train components. Inboard grinder bearing data shows possible early bearing defect frequencies. Ensure the grinder bearings have proper lubrication. **Rated a Class I Defect.**

14-3029 MSP S FLAKE GRINDING MILL
Motor and fan speed vibrations in multiple points. Inspect for drive train wear, run out, and alignment. Grinding mill bearings show slight elevation in spectral noise. Could be a lubrication issue or signs of early bearing defects. Ensure the grinder bearings have proper lubrication. **Rated a Class I Defect.**

15-3034 GROUND FLAKE TRANSFER BLOWER
Possible bad data due to low amplitude readings.

22-5031 W 800T TRANS DIS BLOWER
Possible bad data due to low amplitude readings.

22-5032 E 800T BIN TRANS DIS BLOWER
Possible bad data due to low amplitude readings.

22-0614 S FLAKE BLOWER @ TRACK #1
Motor still has 1x RPM vibration. Inspect all fasteners and structures, and drive train for alignment and worn components. **Rated a Class I Defect.**

22-0604 N FLAKE BLOWER @ TRACK 1
Vibration data for the motor, spindle and blower show elevated vibrations at 1x, 2x and 3x RPM of each shaft at different points. The unit highest overall is over 0.9"/second velocity peak. The spindle bearings also have 3x -10x harmonics which indicate possible mechanical looseness in the bearings. Inspect the drive train for alignment and worn components. As always check all fasteners and structures. **Rated a Class III Defect.**

SOUTH PLANT UTILITIES

15-4111 COOLING TOWER E WATER PUMP
Possible bad data due to low amplitude readings.

14-4160 MSP #3 CHILL WATER SUPPLY PUMP
Unit was worked on during the TAR. November data should reduce the vibrations. We expect it to be taken off the report.

14-4161 #2CHILL WATER SUPPLY PUMP S-B
Unit was worked on during the TAR. November data should reduce the vibrations. We expect it to be taken off the report.

14-4162 #1 CHILL WATER SUPPLY PUMP
Vibration data has not changed and is relatively low. We are removing this unit from the report for now.

15-4162 E CHILLED WATER SUPPLY PUMP (October 7 data) TAR repair after ?
Motor vibration data still shows an elevated 1x, 2x and 3x RPM vibrations. Inspect the drive train for wear and alignment. Check the structure and fasteners. **Rated a Class II Defect.**