HI-SPEED INDUSTRIAL SERVICE QualiTest® Diagnostics

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Terry,

The following is a summary of findings from the September 2024 monthly vibration survey at the USG Greenville, MS Plant.

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

Defects

Perlite

#5 Combustion Blower
A high sub-synchronous vibration remains in the motor axial. Amplitude was lower this survey but still remains high at .75 ips-pk. Check belts and sheaves for wear and misalignment soon. DE fan bearing data is also showing signs of bearing defects/wear in the higher frequency range of the spectrum. Check fan bearings also. Rated as a **CLASS II** defect.

#8 Combustion Blower
Machine was not in service during survey; however, the following most likely still applies: 1/3 rpm harmonics are present in the fan spectra. This signifies looseness of the fits l(likely shaft or bearing fit wear). Check fan bearings/shaft for looseness and wear as scheduling allows. Rated as a **CLASS II** defect.

#5 Expander Dust Collector
Motor and fan both have high vibration at fan speed. This may be due to fan imbalance but could also be a sheave or base issue. Check sheave alignment ensuring sheaves are aligned properly for offset and angularity. Check face run-out on motor sheave. There should not be no more than .003" face run-out. Check all fasteners and ensure motor base is not defective. Inspect fan wheel for build-up and signs of damage. Rated as a **CLASS II** defect.

#7 Expander Dust Collector
Fan has high vibration. The fan shaft is bent at the ODE fan bearing. The fan also has warped bladed and a warped backplate. Fan needs attention very soon. Rated as a **HIGH CLASS III** defect.

Hydropulper
Machine was not in service during survey; however, the following most likely still applies: Gearbox and motor have elevated vibration. Gearbox spectral data shows gear mesh harmonics with sidebands of output rpm indicating wear in the gearbox. There may also be an issue with the fluid coupling assembly. Gearbox and coupling assembly should be inspected as scheduling allows. Rated as a **CLASS II** defect.

Mix-up/Reclaim

#1 White Water Loop Pump
Motor data shows signs of bearing defects. Motor will need attention in the next few months. Rated as a **CLASS II** defect.

Beater Tank Transfer Pump
Motor was not running this survey; however, the following likely still applies: The motor data shows motor to have bearing defects. There are two pumps by the beater. This motor is the newer looking motor with the newer pump. Motor needs to swapped out as time allows. Rated as a **CLASS II** defect.

Fiberglass

#1 Oven Circ. Fan
The motor and fan inboard side has high vibration at fan speed. This may be due to some type of sheave issue and/or structural flexibility. Inspect sheaves and belts soon. Ensure sheaves do not have face run-out and offset and angularity alignment is good. Ensure belts are tensioned properly. Rated as **CLASS II** defect.

#2 Oven Circ Fan
NEW SHAFT GUARD NEEDS TO BE MODIFIED TO GAIN ACCESS TO FAN BEARINGS. Data shows some 1, 2, and 3 x rpm vibrations present in the fan. The motor also has high vibration at 1 x fan rpm. Fan bearing fits may be bad and fan shaft may be bent and or worn. Fan may also have some imbalance due to build-up on fan blades. Rated as a **CLASS II** defect.

Board Line 3

Vacuum Pump MOTORS (2, and 3)
We are still seeing some mid to high frequency noise floor in the motor spectra on the vac pump motors. This issue appears to be stable; however, we suspect possible fluting of the motor bearings may be starting to develop. This is a common issue with AC motors being operated by VFD's that do not having grounding protection. We recommend installing an Aegis Grounding ring inside the motor at the drive end and installing an insulated bearing on the outboard end of the motor. **Rated as CLASS I defect.**

Wet End Combustion Blower
Blower bearings are trending upward on defect frequency vibration. Acceleration has had a steady increase in amplitude. These are signs of bearing defects/wear. Bearings should be scheduled for replacement as soon as scheduling allows**.** Rated as a **CLASS II** defect.

Wet End Circulation Fan
Fan has some slight 1 x rpm vibration likely due to fan imbalance or shaft run out. A trim balance may be needed at some point; however, amplitudes are low at this time. Rated as a **CLASS I** defect.

Finishing

Finishing Grinder #1
Motor and grinder IB bearing has elevated vibration. Spectral data shows looseness likely present in grinder. Check drive end grinder bearing and bearing housing for looseness. Ensure all fasteners are tight. Rated as a **CLASS II** defect.

Blue Oven 1 Zone 1 Circulation Fan 1
Fan end fan bearing (outboard) data is showing signs of defects/wear. Motor and fan also have some 1 x rpm vibrations. Fan bearings will need attention soon. Also, ensure sheaves are aligned properly and belts are in good shape and properly tightened. Rated as a **CLASS II** defect.

Blue Oven 1 Zone 1 Circulation Fan 2

Fan end fan bearing (outboard) data is showing signs of defects/wear. Motor and fan also have some 1 x rpm vibrations. Fan bearings will need attention soon. Also, ensure sheaves are aligned properly and belts are in good shape and properly tightened. Rated as a **CLASS II** defect.

Blue Oven 1 Zone 2 Circulation Fan 1 and 2

Motor and fan vibrations remain high at well over 1.2 inches/second peak velocity. Vibration is at fan speed in the motor and fan. This may be due to build-up on the fan. Inspect fan wheel for build- up and damage ASAP. Inspect sheaves and belts as well. Ensure fan bearings have adequate grease. Rated as a **CLASS III** defect.

#1 Finishing Baghouse Dust Collector

Fan data still shows some 1 x rpm vibration with a small 2 and 3 x rpm vibration. Fan bearing fits and or shaft may have some wear. Fan likely has imbalance as well. Rated as a **CLASS II** defect.

#3 Finishing Baghouse Dust Collector

Vertical data of the motor and fan also indicate some possible drivetrain issues such as sheave misalignment and or belt issues. For now, inspect, sheaves and belts as scheduling allows. Ensure sheaves do not have face run-out and are aligned to spec. Check base springs to ensure they are in good shape and set properly. Rated as a **CLASS II** defect.

Abbreviated Last Measurement Summary
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Database: USG.rbm
Area: PERLITE

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
B2EXD02FAN - #5 COMBUSTION BLOWER	(19-Nov-24)	
	OVERALL LEVEL	1K-20KHz
MOH	.259 In/Sec	.261 G-s
MOV	.648 In/Sec	.062 G-s
MIH	.186 In/Sec	.192 G-s
MIV	.430 In/Sec	.042 G-s
MIA	.752 In/Sec	.030 G-s
BIH	.683 In/Sec	1.410 G-s
BIV	.375 In/Sec	.346 G-s
BIA	.409 In/Sec	.172 G-s
BOH	.547 In/Sec	1.327 G-s
BOV	.572 In/Sec	.381 G-s
B2EXD06FAN - #6 COMBUSTION BLOWER	(19-Nov-24)	
	OVERALL LEVEL	1K-20KHz
MOH	.068 In/Sec	.253 G-s
MOV	.174 In/Sec	.141 G-s
MIH	.074 In/Sec	.306 G-s
MIV	.186 In/Sec	.065 G-s
MIA	.136 In/Sec	.084 G-s
BIH	.240 In/Sec	1.103 G-s
BIV	.117 In/Sec	.130 G-s
BIA	.241 In/Sec	.117 G-s
BOH	.195 In/Sec	.968 G-s
BOV	.086 In/Sec	.137 G-s

B2EXD02-5 - #5 EXPANDER DUST COLLECTOR (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.433 In/Sec	.638 G-s
MOV	.437 In/Sec	.167 G-s
MIH	.403 In/Sec	1.022 G-s
MIV	.353 In/Sec	.233 G-s
MIA	.063 In/Sec	.219 G-s
FIH	.336 In/Sec	1.615 G-s
FIV	.169 In/Sec	.787 G-s
FIA	.155 In/Sec	.241 G-s

B2EXD0306 - #6 EXPANDER DUST COLLECTOR (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.056 In/Sec	1.280 G-s
MOV	.066 In/Sec	.474 G-s
MIH	.074 In/Sec	1.322 G-s
MIV	.051 In/Sec	.403 G-s
MIA	.059 In/Sec	.565 G-s
FIH	.121 In/Sec	2.235 G-s
FIV	.191 In/Sec	.491 G-s
FIA	.177 In/Sec	.287 G-s
FOH	.104 In/Sec	1.270 G-s
FOV	.161 In/Sec	.661 G-s

Area: MIX UP/RECLAIM

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD

1WWLOOPPMP - #1 WHITE WATER LOOP PUMP (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.510 In/Sec	1.581 G-s
MOV	.527 In/Sec	.579 G-s
MIH	.574 In/Sec	2.740 G-s
MIV	.554 In/Sec	.479 G-s
MIA	.219 In/Sec	.495 G-s
PIH	.153 In/Sec	.215 G-s
PIV	.093 In/Sec	.070 G-s
PIA	.204 In/Sec	.084 G-s
POH	.160 In/Sec	.176 G-s
POV	.164 In/Sec	.062 G-s

2WWLOOPPMP - #2 WHITE WATER LOOP PUMP (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.176 In/Sec	.575 G-s
MOV	.238 In/Sec	.324 G-s
MIH	.121 In/Sec	.656 G-s
MIV	.147 In/Sec	.044 G-s
MIA	.143 In/Sec	.024 G-s

WWMIXUPPMP - WHITE WATER MIX-UP PUMP (08-Oct-24)

	OVERALL LEVEL	1K-20KHz
MOH	.364 In/Sec	.694 G-s
MOV	.224 In/Sec	.212 G-s
MIH	.246 In/Sec	.771 G-s
MIV	.303 In/Sec	.226 G-s
MIA	.329 In/Sec	.184 G-s
PIH	.100 In/Sec	.302 G-s
PIV	.145 In/Sec	.072 G-s
PIA	.102 In/Sec	.064 G-s
POH	.100 In/Sec	.234 G-s
POV	.117 In/Sec	.078 G-s

B2WEL1PMP1 - #1 EAST WELL WATER PUMP (08-Oct-24)

	OVERALL LEVEL	1K-20KHz
MOH	.190 In/Sec	.301 G-s
MOV	.160 In/Sec	.125 G-s
MIH	.291 In/Sec	1.338 G-s
MIV	.426 In/Sec	.311 G-s

MIA	.280 In/Sec	.377 G-s
PIH	.055 In/Sec	.815 G-s
PIV	.046 In/Sec	.241 G-s
PIA	.164 In/Sec	.191 G-s
POH	.143 In/Sec	1.302 G-s
POV	.105 In/Sec	.177 G-s

Area: FIBERGLASS

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD

F1T1DCRFAN - FIBERGLASS DC FAN NEW LINE (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.078 In/Sec	.200 G-s
MOV	.073 In/Sec	.181 G-s
MIH	.081 In/Sec	.312 G-s
MIV	.074 In/Sec	.078 G-s
MIA	.090 In/Sec	.055 G-s
FIH	.050 In/Sec	.273 G-s
FIV	.074 In/Sec	.132 G-s
FIA	.120 In/Sec	.057 G-s
FOH	.060 In/Sec	.239 G-s
FOV	.084 In/Sec	.115 G-s

1PPDEF - 1ST PASS PAINT DRY EXH FAN (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.064 In/Sec	.103 G-s
MOV	.048 In/Sec	.034 G-s
MIH	.058 In/Sec	.115 G-s
MIV	.050 In/Sec	.035 G-s
MIA	.046 In/Sec	.020 G-s
FIH	.072 In/Sec	.365 G-s
FIV	.059 In/Sec	.135 G-s
FIA	.226 In/Sec	.108 G-s
FOH	.053 In/Sec	.186 G-s
FOV	.082 In/Sec	.100 G-s

F1T1EDG41M - 2ND PASS PAINT DRYING EX FAN (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.111 In/Sec	.113 G-s
MOV	.175 In/Sec	.067 G-s
MIH	.126 In/Sec	.123 G-s
MIV	.244 In/Sec	.059 G-s
MIA	.065 In/Sec	.038 G-s
FIH	.065 In/Sec	.415 G-s
FIV	.075 In/Sec	.155 G-s
FIA	.258 In/Sec	.138 G-s
FOH	.065 In/Sec	.386 G-s
FOV	.073 In/Sec	.162 G-s

1FOCF - #1 OVEN CIRC FAN (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.153 In/Sec	.155 G-s
MOV	.979 In/Sec	.053 G-s
MIH	.352 In/Sec	.347 G-s
MIV	1.461 In/Sec	.107 G-s
MIA	.414 In/Sec	.062 G-s
FIH	.254 In/Sec	.586 G-s
FIV	1.213 In/Sec	.109 G-s
FIA	.553 In/Sec	.088 G-s
FOH	.148 In/Sec	1.396 G-s
FOV	.560 In/Sec	.206 G-s

1FOEF - #1 OVEN EXH FAN (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.085 In/Sec	.134 G-s
MOV	.046 In/Sec	.037 G-s
MIH	.079 In/Sec	.252 G-s

	MIV	.057 In/Sec	.055 G-s
	MIA	.053 In/Sec	.040 G-s
	FIH	.166 In/Sec	.015 G-s
	FIV	.067 In/Sec	.011 G-s
	FIA	.110 In/Sec	.011 G-s
	FOH	.173 In/Sec	.020 G-s
	FOV	.110 In/Sec	.044 G-s

2FOCF - #2 OVEN CIRC FAN (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.221 In/Sec	.145 G-s
MOV	.586 In/Sec	.048 G-s
MIH	.237 In/Sec	.325 G-s
MIV	.729 In/Sec	.134 G-s
MIA	.322 In/Sec	.078 G-s

2FOEF - #2 OVEN EXH FAN (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.046 In/Sec	.123 G-s
MOV	.047 In/Sec	.037 G-s
MIH	.045 In/Sec	.169 G-s
MIV	.048 In/Sec	.028 G-s
MIA	.027 In/Sec	.033 G-s
FIH	.079 In/Sec	.014 G-s
FIV	.044 In/Sec	.068 G-s
FIA	.069 In/Sec	.017 G-s
FOH	.088 In/Sec	.062 G-s
FOV	.073 In/Sec	.133 G-s

Area: BOARD LINE 3

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD

B3TFM05PMP - #3 MACHINE WHITE WATER PUMP (07-Oct-24)

	OVERALL LEVEL	1K-20KHz
MOH	.339 In/Sec	1.067 G-s
MOV	.288 In/Sec	.287 G-s
MIH	.603 In/Sec	.747 G-s
MIV	.711 In/Sec	.145 G-s
MIA	.450 In/Sec	.261 G-s
PIH	.145 In/Sec	.555 G-s
PIV	.190 In/Sec	.104 G-s
PIA	.148 In/Sec	.084 G-s
POH	.096 In/Sec	.282 G-s
POV	.107 In/Sec	.069 G-s

B3TFM3PMPA - MACHINE CHEST PUMP 3A (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.138 In/Sec	.960 G-s
MOV	.063 In/Sec	.500 G-s
MIH	.153 In/Sec	1.215 G-s
MIV	.103 In/Sec	.379 G-s
MIA	.078 In/Sec	.274 G-s
PIH	.038 In/Sec	.148 G-s
PIV	.034 In/Sec	.025 G-s
PIA	.028 In/Sec	.021 G-s
POH	.039 In/Sec	.085 G-s
POV	.034 In/Sec	.028 G-s

B3-VAC-01 - LINE 3 VACUUM PUMP #1 (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.067 In/Sec	.886 G-s
MOV	.082 In/Sec	.267 G-s
MIH	.073 In/Sec	1.729 G-s
MIV	.079 In/Sec	.289 G-s
MIA	.040 In/Sec	.354 G-s
PIH	.079 In/Sec	.075 G-s
PIV	.072 In/Sec	.013 G-s

PIA	.073 In/Sec	.013 G-s
POH	.106 In/Sec	.051 G-s
POV	.091 In/Sec	.017 G-s

B3-VAC-02 - LINE 3 VACUUM PUMP #2 (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.135 In/Sec	4.017 G-s
MOV	.070 In/Sec	.571 G-s
MIH	.096 In/Sec	1.130 G-s
MIV	.104 In/Sec	.351 G-s
MIA	.056 In/Sec	.432 G-s
PIH	.095 In/Sec	.082 G-s
PIV	.069 In/Sec	.020 G-s
PIA	.099 In/Sec	.025 G-s
POH	.156 In/Sec	.057 G-s
POV	.095 In/Sec	.015 G-s

B3-VAC-03 - LINE 3 VACUUM PUMP #3 (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.069 In/Sec	1.399 G-s
MOV	.083 In/Sec	.519 G-s
MIH	.073 In/Sec	1.810 G-s
MIV	.074 In/Sec	.380 G-s
MIA	.050 In/Sec	.413 G-s
PIH	.064 In/Sec	.184 G-s
PIV	.066 In/Sec	.078 G-s
PIA	.071 In/Sec	.101 G-s
POH	.108 In/Sec	.111 G-s
POV	.098 In/Sec	.030 G-s

LOWVACFAN - LOW VACUUM FAN (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.243 In/Sec	.923 G-s
MOV	.557 In/Sec	.358 G-s
MIH	.163 In/Sec	1.814 G-s
MIV	.221 In/Sec	.313 G-s
MIA	.224 In/Sec	.618 G-s
FIH	.146 In/Sec	2.489 G-s
FIV	.228 In/Sec	.255 G-s
FIA	.076 In/Sec	.155 G-s
FOH	.068 In/Sec	.749 G-s
FOV	.121 In/Sec	.202 G-s

B3-VAC-06B - #1 FORMER WHITE WTR PIT PMP (07-Oct-24)

	OVERALL LEVEL	1K-20KHz
MOH	.147 In/Sec	.354 G-s
MOV	.208 In/Sec	.071 G-s
MIH	.140 In/Sec	.474 G-s
MIV	.145 In/Sec	.214 G-s
MIA	.140 In/Sec	.153 G-s
PIH	.036 In/Sec	.067 G-s
PIV	.054 In/Sec	.017 G-s
PIA	.151 In/Sec	.020 G-s
POH	.090 In/Sec	.062 G-s
POV	.076 In/Sec	.048 G-s

B3-VAC-06A - #2 FORMER WHITE WTR PIT PMP (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.307 In/Sec	.741 G-s
MOV	.813 In/Sec	.156 G-s
MIH	.511 In/Sec	.810 G-s
MIV	.334 In/Sec	.223 G-s
MIA	.499 In/Sec	.355 G-s
PIH	.150 In/Sec	.081 G-s
PIV	.472 In/Sec	.018 G-s
PIA	.203 In/Sec	.023 G-s
POH	.189 In/Sec	.048 G-s
POV	.168 In/Sec	.011 G-s

B3-VAC-10 - SEAL WATER RETURN PUMP (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.041 In/Sec	.495 G-s
	MOV	.033 In/Sec	.104 G-s
	MIH	.040 In/Sec	.791 G-s
	MIV	.056 In/Sec	.235 G-s
	MIA	.087 In/Sec	.142 G-s
	PIH	.047 In/Sec	.340 G-s
	PIV	.031 In/Sec	.241 G-s
	PIA	.042 In/Sec	.149 G-s
	POH	.039 In/Sec	.426 G-s
	POV	.033 In/Sec	.144 G-s

B3FRM7SHW - HIGH PRESSURE SHOWER PUMP (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.063 In/Sec	.510 G-s
	MOV	.158 In/Sec	.222 G-s
	MIH	.117 In/Sec	.828 G-s
	MIV	.189 In/Sec	.134 G-s
	MIA	.137 In/Sec	.217 G-s
	PIH	.136 In/Sec	1.567 G-s
	PIV	.178 In/Sec	.477 G-s
	PIA	.098 In/Sec	.306 G-s
	POH	.126 In/Sec	1.488 G-s
	POV	.181 In/Sec	.304 G-s

3 - #3 TOP PRESS ROLL DRIVE (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.046 In/Sec	.200 G-s
	MOV	.128 In/Sec	.064 G-s
	MIH	.063 In/Sec	1.138 G-s
	MIV	.173 In/Sec	.227 G-s
	MIA	.168 In/Sec	.260 G-s
	GIH	.060 In/Sec	.059 G-s
	GIV	.160 In/Sec	.016 G-s
	GIA	.024 In/Sec	.0090 G-s
	GOH	.037 In/Sec	.018 G-s
	GOV	.101 In/Sec	.0045 G-s
	GOA	.034 In/Sec	.0049 G-s

3b - #3 BOTTOM PRESS ROLL DRIVE (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.048 In/Sec	.535 G-s
	MOV	.119 In/Sec	.118 G-s
	MIH	.069 In/Sec	.552 G-s
	MIV	.102 In/Sec	.136 G-s
	MIA	.059 In/Sec	.148 G-s
	GIH	.026 In/Sec	.016 G-s
	GIV	.022 In/Sec	.0066 G-s
	GIA	.013 In/Sec	.0052 G-s
	GOH	.023 In/Sec	.015 G-s
	GOV	.019 In/Sec	.0059 G-s
	GOA	.014 In/Sec	.0041 G-s

B3FRM8ROLA - #2 TOP PRESS ROLL DRIVE (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.080 In/Sec	.236 G-s
	MOV	.071 In/Sec	.048 G-s
	MIH	.068 In/Sec	.265 G-s
	MIV	.067 In/Sec	.091 G-s
	MIA	.072 In/Sec	.052 G-s
	GIH	.044 In/Sec	.090 G-s
	GIV	.049 In/Sec	.012 G-s
	GIA	.023 In/Sec	.021 G-s
	GOH	.030 In/Sec	.045 G-s
	GOV	.039 In/Sec	.0068 G-s
	GOA	.026 In/Sec	.0067 G-s

B3FRM8ROLB - #2 BOTTOM PRESS ROLL DRIVE (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.044 In/Sec	.311 G-s
	MOV	.122 In/Sec	.112 G-s
	MIH	.054 In/Sec	.520 G-s
	MIV	.110 In/Sec	.097 G-s
	MIA	.052 In/Sec	.101 G-s
	GIH	.037 In/Sec	.021 G-s
	GIV	.040 In/Sec	.0082 G-s
	GIA	.017 In/Sec	.0084 G-s
	GOH	.044 In/Sec	.026 G-s
	GOV	.032 In/Sec	.0072 G-s
	GOA	.017 In/Sec	.0059 G-s

1 - #1 TOP PRESS ROLL DRIVE (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.067 In/Sec	.392 G-s
	MOV	.150 In/Sec	.089 G-s
	MIH	.070 In/Sec	.592 G-s
	MIV	.077 In/Sec	.115 G-s
	MIA	.150 In/Sec	.113 G-s
	GIH	.052 In/Sec	.040 G-s
	GIV	.033 In/Sec	.012 G-s
	GIA	.023 In/Sec	.013 G-s
	GOH	.028 In/Sec	.021 G-s
	GOV	.028 In/Sec	.0077 G-s
	GOA	.026 In/Sec	.010 G-s

1b - #1 BOTTOM PRESS ROLL DRIVE (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.128 In/Sec	.406 G-s
	MOV	.101 In/Sec	.156 G-s
	MIH	.072 In/Sec	.351 G-s
	MIV	.089 In/Sec	.141 G-s
	MIA	.170 In/Sec	.079 G-s
	GIH	.026 In/Sec	.051 G-s
	GIV	.047 In/Sec	.025 G-s
	GIA	.014 In/Sec	.014 G-s
	GOH	.028 In/Sec	.020 G-s
	GOV	.032 In/Sec	.018 G-s
	GOA	.019 In/Sec	.018 G-s

B3-FRM-11 - #3 BOARD LINE DRIVE (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.050 In/Sec	.893 G-s
	MOV	.099 In/Sec	.205 G-s
	MIH	.046 In/Sec	.411 G-s
	MIV	.144 In/Sec	.284 G-s
	MIA	.057 In/Sec	.269 G-s
	G1I	.0095 In/Sec	.072 G-s
	GIV	.015 In/Sec	.059 G-s
	G1A	.015 In/Sec	.042 G-s
	G1O	.010 In/Sec	.043 G-s
	G2O	.011 In/Sec	.035 G-s
	GOV	.027 In/Sec	.066 G-s
	G2I	.014 In/Sec	.052 G-s
	G2A	.019 In/Sec	.024 G-s

B3-KBS-02 - WET END CIRCULATION FAN (18-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.115 In/Sec	.594 G-s
	MOV	.024 In/Sec	.073 G-s
	MIH	.098 In/Sec	.351 G-s
	MIV	.031 In/Sec	.065 G-s
	MIA	.037 In/Sec	.098 G-s
	FIH	.102 In/Sec	.053 G-s
	FIV	.030 In/Sec	.052 G-s
	FIA	.100 In/Sec	.033 G-s
	FOH	.091 In/Sec	.025 G-s
	FOV	.044 In/Sec	.011 G-s
	FOA	.057 In/Sec	.0066 G-s

B3KBS01BLW - WET END COMBUSTION BLOWER (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.056 In/Sec	.421 G-s
MOV	.067 In/Sec	.084 G-s
MIH	.082 In/Sec	.789 G-s
MIV	.250 In/Sec	.165 G-s
MIA	.066 In/Sec	.126 G-s
BIH	.098 In/Sec	1.332 G-s
BIV	.078 In/Sec	.468 G-s
BIA	.092 In/Sec	.264 G-s
BOH	.083 In/Sec	1.998 G-s
BOV	.085 In/Sec	.618 G-s

B3-KBS-05 - DRY END CIRCULATION FAN (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.077 In/Sec	.697 G-s
MOV	.123 In/Sec	.088 G-s
MIH	.074 In/Sec	.503 G-s
MIV	.090 In/Sec	.122 G-s
MIA	.089 In/Sec	.109 G-s
FIH	.062 In/Sec	.210 G-s
FIV	.024 In/Sec	.158 G-s
FIA	.045 In/Sec	.197 G-s
FOH	.059 In/Sec	.062 G-s
FOV	.022 In/Sec	.050 G-s
FOA	.033 In/Sec	.028 G-s

B3KBS04BLW - DRY END COMBUSTION BLOWER (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.053 In/Sec	.445 G-s
MOV	.116 In/Sec	.074 G-s
MIH	.049 In/Sec	.455 G-s
MIV	.090 In/Sec	.104 G-s
MIA	.054 In/Sec	.083 G-s
BIH	.117 In/Sec	.770 G-s
BIV	.040 In/Sec	.105 G-s
BIA	.176 In/Sec	.117 G-s
BOH	.088 In/Sec	.417 G-s
BOV	.139 In/Sec	.120 G-s

B3-KBS-07 - LINE 3 KILN EXHAUST FAN (18-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.029 In/Sec	.866 G-s
MOV	.067 In/Sec	.212 G-s
MIH	.044 In/Sec	.852 G-s
MIV	.057 In/Sec	.262 G-s
MIA	.031 In/Sec	.291 G-s
FIH	.017 In/Sec	.0090 G-s
FIV	.015 In/Sec	.0071 G-s
FIA	.020 In/Sec	.0049 G-s
FOH	.015 In/Sec	.0018 G-s
FOV	.015 In/Sec	.0029 G-s
FOA	.027 In/Sec	.0025 G-s

Area: LINE 3 FINISHING

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD

HIPRSWTRP - HI-PRESSURE WATER PUMP (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.139 In/Sec	1.445 G-s
MOV	.278 In/Sec	.288 G-s
MIH	.099 In/Sec	1.460 G-s
MIV	.294 In/Sec	.326 G-s
MIA	.103 In/Sec	.423 G-s
P1H	.513 In/Sec	.927 G-s
P1V	.329 In/Sec	.272 G-s

P1A	.232 In/Sec	.271 G-s
P2H	.223 In/Sec	1.349 G-s
P2V	.641 In/Sec	.480 G-s
P2A	.242 In/Sec	.423 G-s

FINSHSHRD - FINISHING SHEDDER (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.115 In/Sec	.337 G-s
MOV	.135 In/Sec	.107 G-s
MIH	.184 In/Sec	.697 G-s
MIV	.131 In/Sec	.154 G-s
MIA	.063 In/Sec	.090 G-s
GH	.154 In/Sec	.192 G-s
GV	.099 In/Sec	.031 G-s
GA	.063 In/Sec	.036 G-s
SH	.070 In/Sec	.105 G-s
SV	.068 In/Sec	.022 G-s
SA	.054 In/Sec	.041 G-s

F3-GRD-01 - LINE 3 FINISH GRINDER #1 (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.431 In/Sec	.452 G-s
MOV	.327 In/Sec	.123 G-s
MIH	.178 In/Sec	.226 G-s
MIV	.245 In/Sec	.076 G-s
MIA	.139 In/Sec	.130 G-s
GIH	.154 In/Sec	.175 G-s
GIV	.160 In/Sec	.046 G-s
GIA	.110 In/Sec	.052 G-s

F3-GRD-02 - LINE 3 FINISH GRINDER #2 (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.261 In/Sec	.908 G-s
MOV	.187 In/Sec	.267 G-s
MIH	.148 In/Sec	.447 G-s
MIV	.134 In/Sec	.094 G-s
MIA	.096 In/Sec	.178 G-s
GIH	.078 In/Sec	.215 G-s
GIV	.096 In/Sec	.082 G-s
GIA	.082 In/Sec	.059 G-s

F3-GRD-03 - LINE 3 FINISH GRINDER #3 (08-Oct-24)

	OVERALL LEVEL	1K-20KHz
MOH	.221 In/Sec	1.555 G-s
MOV	.237 In/Sec	.479 G-s
MIH	.225 In/Sec	.466 G-s
MIV	.133 In/Sec	.182 G-s
MIA	.156 In/Sec	.193 G-s
GIH	.053 In/Sec	.166 G-s
GIV	.053 In/Sec	.071 G-s
GIA	.087 In/Sec	.053 G-s

F3-GRD-04 - LINE 3 FINISH GRINDER #4 (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.378 In/Sec	.014 G-s
MOV	.379 In/Sec	.0079 G-s
MIH	.207 In/Sec	.041 G-s
MIV	.217 In/Sec	.0067 G-s
MIA	.097 In/Sec	.0056 G-s
GIH	.074 In/Sec	.047 G-s
GIV	.067 In/Sec	.012 G-s
GIA	.068 In/Sec	.013 G-s

F3-GRD-05 - LINE 3 GRINDER DRIVE (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.075 In/Sec	.762 G-s
MOV	.126 In/Sec	.313 G-s
MIH	.082 In/Sec	1.035 G-s
MIV	.124 In/Sec	.265 G-s
MIA	.100 In/Sec	.169 G-s

	G1I	.100 In/Sec	1.112 G-s
	GIV	.079 In/Sec	.391 G-s
	G1A	.058 In/Sec	.561 G-s
	G2O	.057 In/Sec	.571 G-s
	GOV	.082 In/Sec	.141 G-s
	G2A	.066 In/Sec	.227 G-s

B3-KFS-04 - LINE 3 KILN DRIVE (19-Nov-24)

		OVERALL LEVEL	1K-20KHz
	MOH	.028 In/Sec	.186 G-s
	MIH	.027 In/Sec	.104 G-s
	MIA	.031 In/Sec	.090 G-s
*	G1I	.073 In/Sec	.157 G-s
	GIV	.059 In/Sec	.057 G-s
	G1A	.050 In/Sec	.045 G-s
	G2O	.055 In/Sec	.0045 G-s
*	G2A	.075 In/Sec	.229 G-s

B3KFS4LUBP - L3 KILN GEARBOX LUBE OIL PMP (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.108 In/Sec	.264 G-s
MOV	.086 In/Sec	.213 G-s
MIH	.065 In/Sec	.684 G-s
MIV	.093 In/Sec	.145 G-s
MIA	.072 In/Sec	.201 G-s
GH	.069 In/Sec	.504 G-s
GV	.068 In/Sec	.135 G-s
GA	.048 In/Sec	.168 G-s
PH	.217 In/Sec	.192 G-s
PV	.168 In/Sec	.097 G-s
PA	.275 In/Sec	.208 G-s

F3-PAD-06 - BLUE OVEN 1 ZONE1 CIRC FAN 1 (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.309 In/Sec	.579 G-s
MOV	.273 In/Sec	.155 G-s
MIH	.714 In/Sec	.605 G-s
MIV	.356 In/Sec	.186 G-s
MIA	.578 In/Sec	.288 G-s
FIH	.647 In/Sec	1.008 G-s
FIV	.443 In/Sec	.268 G-s
FIA	.227 In/Sec	.240 G-s
FOH	.213 In/Sec	1.960 G-s
FOV	.315 In/Sec	.678 G-s

OVN1ZNE1F2 - BLUE OVEN 1 ZONE1 CIRC FAN 2 (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.144 In/Sec	.660 G-s
MOV	.179 In/Sec	.153 G-s
MIH	.174 In/Sec	.657 G-s
MIV	.329 In/Sec	.072 G-s
MIA	.290 In/Sec	.067 G-s
FIH	.162 In/Sec	.891 G-s
FIV	.297 In/Sec	.218 G-s
FIA	.301 In/Sec	.116 G-s
FOH	.121 In/Sec	.624 G-s
FOV	.189 In/Sec	.191 G-s

F3PAD06EX - BLUE OVEN 1 EXHAUST FAN (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.200 In/Sec	.204 G-s
MOV	.227 In/Sec	.043 G-s
MIH	.229 In/Sec	.306 G-s
MIV	.235 In/Sec	.093 G-s
MIA	.144 In/Sec	.071 G-s
FIH	.102 In/Sec	.045 G-s
FIV	.151 In/Sec	.242 G-s
FIA	.126 In/Sec	.193 G-s
FOH	.068 In/Sec	.027 G-s
FOV	.169 In/Sec	.190 G-s

OVN1ZNE2F1 - BLUE OVEN 1 ZONE2 CIRC FAN 1 (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.305 In/Sec	1.312 G-s
MOV	.561 In/Sec	.321 G-s
MIH	1.098 In/Sec	.523 G-s
MIV	1.125 In/Sec	.407 G-s
MIA	1.892 In/Sec	.156 G-s
FIH	.762 In/Sec	.947 G-s
FIV	1.322 In/Sec	.210 G-s
FIA	.786 In/Sec	.151 G-s
FOH	.252 In/Sec	.851 G-s
FOV	.181 In/Sec	.130 G-s

OVN1ZNE2F2 - BLUE OVEN 1 ZONE2 CIRC FAN 2 (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.505 In/Sec	.878 G-s
MOV	1.098 In/Sec	.179 G-s
MIH	.755 In/Sec	.982 G-s
MIV	2.042 In/Sec	.268 G-s
MIA	.427 In/Sec	.334 G-s
FIH	.876 In/Sec	.837 G-s
FIV	1.774 In/Sec	.094 G-s
FIA	.785 In/Sec	.118 G-s
FOH	.311 In/Sec	3.404 G-s
FOV	.185 In/Sec	.929 G-s

D1DCR02EXH - #1 GRINDER BAGHOUSE DC FAN (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.172 In/Sec	.497 G-s
MOV	.312 In/Sec	.276 G-s
MIH	.133 In/Sec	.697 G-s
MIV	.344 In/Sec	.099 G-s
MIA	.247 In/Sec	.082 G-s
FIH	.396 In/Sec	.401 G-s
FIV	.361 In/Sec	1.492 G-s
FIA	.838 In/Sec	.316 G-s
FOH	.391 In/Sec	.367 G-s
FOV	.290 In/Sec	1.775 G-s

D1DCR03EXH - #2 FINISHING DUST COLLECTOR (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.265 In/Sec	.832 G-s
MOV	.191 In/Sec	.345 G-s
MIH	.163 In/Sec	3.240 G-s
MIV	.289 In/Sec	.865 G-s
MIA	.314 In/Sec	.544 G-s
FIH	.230 In/Sec	3.774 G-s
FIV	.259 In/Sec	.570 G-s
FIA	.379 In/Sec	.426 G-s
FOH	.208 In/Sec	1.316 G-s
FOV	.148 In/Sec	.440 G-s

D1DCR01EXH - #3 FINISHING DUST COLLECTOR (19-Nov-24)

	OVERALL LEVEL	1K-20KHz
MOH	.285 In/Sec	1.318 G-s
MOV	.808 In/Sec	.411 G-s
MIH	.119 In/Sec	.953 G-s
MIV	.837 In/Sec	.227 G-s
MIA	.182 In/Sec	.413 G-s
FIH	.442 In/Sec	.530 G-s
FIV	.231 In/Sec	.265 G-s
FIA	.396 In/Sec	.167 G-s
FOH	.357 In/Sec	1.079 G-s
FOV	.160 In/Sec	.262 G-s

Clarification Of Vibration Units:

Acc --> G-s RMS

Vel --> In/Sec PK

As always, it has been a pleasure to serve USG Greenville, MS. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

Senior Reliability Specialist
ISO Certified Vibration Analyst, Category III

HI-SPEED INDUSTRIAL SERVICE

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