HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

April 20, 2021

Lucite

Subject: April vibration report

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 don't hesitate to call if you have any comments or questions.

Sincerely,

David W. Shook
Senior Reliability Specialists
Hi-Speed **Industrial Service**
dshook@gohispeed.com

7030 Ryburn Drive
Millington, TN 38053
P. 901-873-5300
F. 901-873-5301

Detailed Defects

SAR 03 Turbine Compressor Main Blower
The 1x RPM vibration in the outboard bearing has been reduced substantially after shaft and impeller replacement. **Non-rated.**

SAR 63 EM Spent Acid Feed Pump E
The pump data indicates a large increase in non-synchronous vibrations that are most like bearing defects. Recommend inspecting the unit and changing the bearings at the next opportunity. The large change prompts us to rate this a **Class III Defect.**

Observations

SAR55A Neutralization Pump North
The data continues to indicate distress in the inboard motor bearing; however, the vibrations have dropped in vibration amplitude. We only see about 1.3 g's RMS overall for the horizontal measurement. We will keep an eye on this unit in the future. **Rated a Class I Defect.**

SAR55B Neutralization Pump South
The data continues to show signs of early distress in the inboard motor bearing We only see about 1.4 g's RMS overall for the horizontal measurement. We will keep an eye on this unit in the future. **Rated a Class I Defect.**

SAR 14 Combustion Air Fan West
The data indicates distress in the inboard motor bearing. We only see about 1.4 g's RMS overall for the horizontal measurements. We will keep an eye on this unit in the future. **Rated a Class I Defect.**

SAR 10 Process Air Fan E
The inboard fan bearing still has a raised noise floor in the acceleration spectrum. This could be distress in the bearings, lubrication, or some other anomaly issue. Inspect the unit and bearings as time allows. **Rated a Class I Defect.**

SAR 66A Vertical Cooling Tower Pump
This unit has high vibrations at above ½" per second velocity overall. Vertical pumps are susceptible to resonance. The sheet metal cover prevents good bearing data to be collected. Inspect units for fastener and structure issues. Trim balancing might help. **Rated a Class I Defect.**

ACN 14 ACH Off Grade Pump
The data still shows signs of slight distress in the motor bearings. We see 2 to 3 g's RMS overall for the horizontal measurements. There seems to be long intervals between collected data, and the defects seem to have been there for some time. We also see an elevated axial vibration in the motor at shaft speed above 0.4:/second velocity peak. Inspect the coupling and fasteners and have the alignment checked and adjusted if needed. **Rated a Class II Defect**

ACN 07B ACH Product Feed Pump Middle
Data shows possible pump vane pass. Check for process variables. **Rated a Class I Defect.**

ACN29C ACN Cooling Tower Pump South
Pump bearing data shows non-synchronous harmonic peaks in the spectrum. Vibrations are most likely low amplitude bearing defect frequencies. A more detailed analysis could be provided if we had the bearing numbers in the database. **Rated a Class I Defect.**

ACN13B #2 Kettle Circulation Pump
Motor bearing data still shows outer race defects in the inboard bearing. The vibrations have not changed much recently. We will watch this carefully going forward; however, in might be prudent to change this unit out as time allows. **Rated a Class II Defect.**

MON 63W LBS Side Stream Pump West
Vibration data still shows an increase in non-synchronous peaks in the spectrum for the outboard motor bearing. We suspect early bearing defect frequencies are present. Ensure adequate bearing lubrication if applicable. **Rated a Class I Defect.**

April 2021 data

Abbreviated Last Measurement Summary
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Database: Lucite Memphis MMA.rbm
Area: MMA
Report Date: 20-Apr-21 14:06

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	EQUIPMENT SPEED
0126 - Carrier Ref Unit	(28-Sep-20)		
	OVERALL LEVEL	1K-20kHz	
MOH	.025 In/Sec	.358 G-s	1780.0 RPM
MOP	.026 G-s		
MOV	.028 In/Sec	.091 G-s	
MOA	.028 In/Sec	.045 G-s	
MIH	.031 In/Sec	.396 G-s	
MIP	.031 G-s		
MIV	.022 In/Sec	.188 G-s	
MIA	.015 In/Sec	.123 G-s	
IIH	.176 In/Sec		
IIP	1.505 G-s		
IIV	.160 In/Sec		
IIA	.098 In/Sec		
OOH	.166 In/Sec		
OOP	2.072 G-s		
OOV	.196 In/Sec		
OOA	.098 In/Sec		
CIH	.085 In/Sec		
CIP	.622 G-s		
CIV	.088 In/Sec		
CIA	.063 In/Sec		
COH	.041 In/Sec		
COP	.245 G-s		
COV	.043 In/Sec		
COA	.048 In/Sec		
ACN04 - Topping Col Circ Pump	(30-Mar-21)		
	OVERALL LEVEL	1K-20kHz	
MOH	.033 In/Sec	.213 G-s	1175.0 RPM
MOP	.116 G-s		
MOV	.035 In/Sec	.065 G-s	
MOA	.034 In/Sec	.056 G-s	
MIH	.026 In/Sec	.511 G-s	
MIP	.364 G-s		
MIV	.027 In/Sec	.139 G-s	
MIA	.025 In/Sec	.082 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.117 In/Sec	.296 G-s	
PIP	.166 G-s		
PIV	.054 In/Sec	.235 G-s	
PIA	.054 In/Sec	.230 G-s	
POH	.047 In/Sec	.497 G-s	

	POP	.327 G-s		
	POV	.044 In/Sec	.200 G-s	
	POA	.058 In/Sec	.136 G-s	
ACN05B	- Topp Column Xfer Pmp E		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.068 In/Sec	.645 G-s	3575.0 RPM
	MOP	.081 G-s		
	MOV	.047 In/Sec	.159 G-s	
	MOA	.030 In/Sec	.077 G-s	
	MIH	.064 In/Sec	.719 G-s	
	MIP	.141 G-s		
	MIV	.051 In/Sec	.140 G-s	
	MIA	.036 In/Sec	.108 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.111 In/Sec	.852 G-s	
	PIP	.096 G-s		
	PIV	.129 In/Sec	.431 G-s	
	PIA	.063 In/Sec	.224 G-s	
ACN07B	- ACH Prod Feed Pump M		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.045 In/Sec	2.246 G-s	3575.0 RPM
	MOP	.180 G-s		
	MOV	.153 In/Sec	.279 G-s	
	MOA	.063 In/Sec	.121 G-s	
	MIH	.055 In/Sec	.939 G-s	
	MIP	.186 G-s		
	MIV	.089 In/Sec	.226 G-s	
	MIA	.089 In/Sec	.228 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.239 In/Sec	1.406 G-s	
	PIP	.306 G-s		
	PIV	.163 In/Sec	.683 G-s	
	PIA	.110 In/Sec	.507 G-s	
ACN08	- ACH Blend Tank		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.075 In/Sec	.284 G-s	3575.0 RPM
	MOP	.024 G-s		
	MOV	.119 In/Sec	.141 G-s	
	MOA	.108 In/Sec	.091 G-s	
	MIH	.042 In/Sec	.396 G-s	
	MIP	.037 G-s		
	MIV	.199 In/Sec	.176 G-s	
	MIA	.110 In/Sec	.098 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.080 In/Sec	.498 G-s	
	PIP	.204 G-s		
	PIV	.118 In/Sec	.185 G-s	
	PIA	.058 In/Sec	.172 G-s	
ACN09	- ACH Flash Tank Pump		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.144 In/Sec	.497 G-s	3575.0 RPM
	MOP	.136 G-s		
	MOV	.125 In/Sec	.279 G-s	

	MOA	.074 In/Sec	.227 G-s	
*	MIV	.068 In/Sec	.831 G-s	
*	MIA	.108 In/Sec	1.139 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.046 In/Sec	.226 G-s	
	PIP	.013 G-s		
	PIV	.074 In/Sec	.071 G-s	
	PIA	.052 In/Sec	.125 G-s	

ACN10 - #1 Kettle Circ Pmp (30-Mar-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.021 In/Sec	.431 G-s	1775.0 RPM
	MOP	.265 G-s		
	MOV	.034 In/Sec	.224 G-s	
	MOA	.035 In/Sec	.118 G-s	
	MIH	.021 In/Sec	.521 G-s	
	MIP	.285 G-s		
	MIV	.026 In/Sec	.163 G-s	
	MIA	.027 In/Sec	.184 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.040 In/Sec	.132 G-s	
	PIP	.094 G-s		
	PIV	.045 In/Sec	.070 G-s	
	PIA	.031 In/Sec	.074 G-s	

ACN11 - #2 Kettle Circ Pump (30-Mar-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.020 In/Sec	.439 G-s	1775.0 RPM
	MOP	.256 G-s		
	MOV	.043 In/Sec	.128 G-s	
	MOA	.038 In/Sec	.157 G-s	
	MIH	.023 In/Sec	.899 G-s	
	MIP	.461 G-s		
	MIV	.053 In/Sec	.082 G-s	
	MIA	.032 In/Sec	.067 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.038 In/Sec	.235 G-s	
	PIP	.138 G-s		
	PIV	.095 In/Sec	.222 G-s	
	PIA	.026 In/Sec	.169 G-s	
*	POV	.104 In/Sec	.200 G-s	
*	POA	.038 In/Sec	.253 G-s	

ACN12 - #1 Kettle Xfer Pump (30-Mar-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.055 In/Sec	.283 G-s	3575.0 RPM
	MOP	.034 G-s		
	MOV	.114 In/Sec	.164 G-s	
	MOA	.074 In/Sec	.110 G-s	
	MIH	.046 In/Sec	.453 G-s	
	MIP	.051 G-s		
	MIV	.069 In/Sec	.264 G-s	
	MIA	.054 In/Sec	.090 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.043 In/Sec	.082 G-s	
	PIP	.0056 G-s		
	PIV	.096 In/Sec	.164 G-s	

	PIA	.039 In/Sec	.161 G-s	
ACN13B	- #2 Kettle Xfer Pump S		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.051 In/Sec	1.938 G-s	3575.0 RPM
	MOP	.148 G-s		
	MOV	.057 In/Sec	.697 G-s	
	MOA	.040 In/Sec	.281 G-s	
	MIH	.074 In/Sec	3.695 G-s	
	MIP	.884 G-s		
	MIV	.058 In/Sec	.813 G-s	
	MIA	.045 In/Sec	.615 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.054 In/Sec	.729 G-s	
	PIP	.203 G-s		
	PIV	.046 In/Sec	.174 G-s	
	PIA	.054 In/Sec	.174 G-s	
ACN14	- ACH Off Grade Pump		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.259 In/Sec	2.989 G-s	3575.0 RPM
	MOP	.908 G-s		
	MOV	.087 In/Sec	.393 G-s	
	MOA	.349 In/Sec	.671 G-s	
	MIH	.293 In/Sec	3.236 G-s	
	MIP	.649 G-s		
	MIV	.312 In/Sec	1.223 G-s	
	MIA	.276 In/Sec	.484 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.187 In/Sec	.271 G-s	
	PIP	.035 G-s		
	PIV	.234 In/Sec	.110 G-s	
	PIA	.197 In/Sec	.112 G-s	
ACN16	- ACH Scrb Circ PumpN		(06-Jan-21)	
		OVERALL LEVEL	1K-20KHz	
*	POV	.132 In/Sec	.412 G-s	1780.0 RPM
*	POA	.202 In/Sec	.396 G-s	
AC17	- Carrier Ref Unit		(12-Apr-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.020 In/Sec	.140 G-s	1780.0 RPM
	MOP	.027 G-s		
	MOV	.024 In/Sec	.066 G-s	
	MOA	.017 In/Sec	.046 G-s	
	MIH	.027 In/Sec	.273 G-s	
	MIP	.034 G-s		
	MIV	.018 In/Sec	.080 G-s	
	MIA	.017 In/Sec	.108 G-s	
	IIH	.157 In/Sec		
	IIP	.863 G-s		
	IIV	.058 In/Sec		
	IIA	.077 In/Sec		
	OOH	.155 In/Sec		
	OOP	1.697 G-s		
	OOV	.057 In/Sec		
	OOA	.069 In/Sec		

	CIH	.070 In/Sec		
	CIP	.562 G-s		
	CIV	.075 In/Sec		
	CIA	.108 In/Sec		
	COH	.033 In/Sec		
	COP	.283 G-s		
	COV	.056 In/Sec		
	COA	.079 In/Sec		

ACN17DP - DP Comp (30-Mar-21)

	OVERALL LEVEL		
21	.029 Mils		1775.0 RPM
22	.138 Mils		
27	.012 Mils		
23	.061 Mils		
24	.036 Mils		

ACN23 - ACH Scrb Circ Pump S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.020 In/Sec	.304 G-s	1780.0 RPM
MOP	.158 G-s		
MOV	.037 In/Sec	.265 G-s	
MOA	.031 In/Sec	.271 G-s	
MIH	.017 In/Sec	.379 G-s	
MIP	.204 G-s		
MIV	.039 In/Sec	.306 G-s	
MIA	.029 In/Sec	.163 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.118 In/Sec	.314 G-s	
PIP	.249 G-s		
PIV	.089 In/Sec	.158 G-s	
PIA	.079 In/Sec	.154 G-s	

ACN28BDP - Cooling Twr Fan E (30-Mar-21)

	OVERALL LEVEL		
26	.043 Mils		1775.0 RPM

ACN28ADP - Cooling Twr Fan W (30-Mar-21)

	OVERALL LEVEL		
28	.245 Mils		1775.0 RPM

ACN29B - ACN Cool Twr Pump M (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.050 In/Sec	.747 G-s	1775.0 RPM
MOP	.349 G-s		
MOV	.060 In/Sec	.278 G-s	
MOA	.061 In/Sec	.196 G-s	
MIH	.048 In/Sec	2.132 G-s	
MIP	.586 G-s		
MIV	.068 In/Sec	.332 G-s	
MIA	.058 In/Sec	.425 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.106 In/Sec	.698 G-s	
PIP	.404 G-s		
PIV	.085 In/Sec	.263 G-s	
PIA	.097 In/Sec	.213 G-s	
POH	.072 In/Sec	.676 G-s	

	POP	.230 G-s		
	POV	.083 In/Sec	.315 G-s	
	POA	.064 In/Sec	.228 G-s	
ACN29C	- ACN Cool Twr Pump S		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.051 In/Sec	.728 G-s	1775.0 RPM
	MOP	.269 G-s		
	MOV	.081 In/Sec	.218 G-s	
	MOA	.040 In/Sec	.201 G-s	
	MIH	.034 In/Sec	.608 G-s	
	MIP	.297 G-s		
	MIV	.066 In/Sec	.320 G-s	
	MIA	.034 In/Sec	.344 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.118 In/Sec	1.180 G-s	
	PIP	.626 G-s		
	PIV	.122 In/Sec	.625 G-s	
	PIA	.138 In/Sec	.552 G-s	
	POH	.086 In/Sec	1.903 G-s	
	POP	.478 G-s		
	POV	.079 In/Sec	.664 G-s	
	POA	.087 In/Sec	.389 G-s	
ACN30	- ACH Scrubber Xfer Pmp		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.049 In/Sec	.331 G-s	1780.0 RPM
	MOP	.186 G-s		
	MOV	.068 In/Sec	.328 G-s	
	MOA	.116 In/Sec	.087 G-s	
	MIH	.068 In/Sec	.426 G-s	
	MIP	.263 G-s		
	MIV	.101 In/Sec	.160 G-s	
	MIA	.100 In/Sec	.186 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.067 In/Sec	.146 G-s	
	PIP	.093 G-s		
	PIV	.071 In/Sec	.138 G-s	
	PIA	.048 In/Sec	.061 G-s	
	POH	.060 In/Sec	.143 G-s	
	POP	.054 G-s		
	POV	.060 In/Sec	.056 G-s	
	POA	.055 In/Sec	.029 G-s	
ACN36	- ACH Neut Tank Circ Pmp		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MIH	.072 In/Sec	.284 G-s	3575.0 RPM
	MIP	.071 G-s		
	MIV	.100 In/Sec	.117 G-s	
	MIA	.098 In/Sec	.057 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.364 In/Sec	.225 G-s	
	PIP	.032 G-s		
	PIV	.225 In/Sec	.131 G-s	
	PIA	.437 In/Sec	.180 G-s	
MON 32A	- ARC Reflux Pmp N		(30-Mar-21)	

	OVERALL LEVEL	1K-20kHz	
M1V	.170 In/Sec	.164 G-s	3520.0 RPM
M1A	.064 In/Sec	.084 G-s	
M2H	.077 In/Sec	.343 G-s	
M2P	.028 G-s		
M2V	.135 In/Sec	.172 G-s	
M2A	.070 In/Sec	.077 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.065 In/Sec	.429 G-s	
P1P	.088 G-s		
P1V	.118 In/Sec	.290 G-s	
P1A	.110 In/Sec	.154 G-s	
P2H	.089 In/Sec	.451 G-s	
P2P	.085 G-s		
P2V	.116 In/Sec	.380 G-s	
P2A	.098 In/Sec	.131 G-s	
	OVERALL LEVEL	1K-20kHz	
M1H	.080 In/Sec	.320 G-s	
M1P	.065 G-s		

MON 32B - ARC Reflux Pmp S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.056 In/Sec	.184 G-s	3520.0 RPM
M1P	.032 G-s		
M1V	.073 In/Sec	.175 G-s	
M1A	.052 In/Sec	.051 G-s	
M2H	.054 In/Sec	.395 G-s	
M2P	.061 G-s		
M2V	.089 In/Sec	.130 G-s	
M2A	.073 In/Sec	.043 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.238 In/Sec	.387 G-s	
P1P	.047 G-s		
P1V	.151 In/Sec	.520 G-s	
P1A	.214 In/Sec	.432 G-s	
P2H	.247 In/Sec	.457 G-s	
P2P	.051 G-s		
P2V	.157 In/Sec	.515 G-s	
P2A	.218 In/Sec	.586 G-s	

MON36 - Irganox Mix/Feed Pump (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.056 In/Sec	.194 G-s	1750.0 RPM
MOP	.089 G-s		
MOV	.038 In/Sec	.071 G-s	
MOA	.037 In/Sec	.096 G-s	
* MIH	.059 In/Sec	.263 G-s	
* MIP	.185 G-s		
* MIV	.050 In/Sec	.388 G-s	
* MIA	.053 In/Sec	.378 G-s	
IIH	.050 In/Sec		
IIP	.359 G-s		
IIV	.031 In/Sec		
IIA	.058 In/Sec		
	OVERALL LEVEL	1K-20KHz	
POH	.049 In/Sec	.719 G-s	
POP	.598 G-s		

POV	.080 In/Sec	1.006 G-s	
POA	.083 In/Sec	.951 G-s	

MON38A - LBS Reflux Pmp S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.046 In/Sec	.170 G-s	3575.0 RPM
MOP	.018 G-s		
MOV	.036 In/Sec	.071 G-s	
MOA	.051 In/Sec	.037 G-s	
MIH	.051 In/Sec	.238 G-s	
MIP	.025 G-s		
MIV	.055 In/Sec	.084 G-s	
MIA	.031 In/Sec	.070 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.065 In/Sec	.734 G-s	
PIP	.098 G-s		
PIV	.055 In/Sec	.452 G-s	
PIA	.064 In/Sec	.291 G-s	

MON38B - LBS Reflux Pmp N (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.148 In/Sec	.530 G-s	3575.0 RPM
MOP	.150 G-s		
MOV	.118 In/Sec	.117 G-s	
MOA	.102 In/Sec	.147 G-s	
MIH	.117 In/Sec	.418 G-s	
MIP	.111 G-s		
MIV	.159 In/Sec	.085 G-s	
MIA	.099 In/Sec	.111 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.134 In/Sec	.953 G-s	
PIP	.057 G-s		
PIV	.152 In/Sec	.411 G-s	
PIA	.117 In/Sec	.313 G-s	

MON38CNM - LBS Tails Pump N (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.067 In/Sec	.340 G-s	3575.0 RPM
MOP	.050 G-s		
MOV	.108 In/Sec	.165 G-s	
MOA	.067 In/Sec	.098 G-s	
MIH	.060 In/Sec	.815 G-s	
MIP	.043 G-s		
MIV	.080 In/Sec	.286 G-s	
MIA	.073 In/Sec	.108 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.144 In/Sec	1.086 G-s	
PIP	.176 G-s		
PIV	.090 In/Sec	.561 G-s	
PIA	.075 In/Sec	.437 G-s	

MON38CSM - LBS Tails Pump S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.036 In/Sec	.247 G-s	3575.0 RPM
MOP	.033 G-s		
MOV	.036 In/Sec	.098 G-s	
MOA	.039 In/Sec	.078 G-s	

MIH	.051 In/Sec	.504 G-s	
MIP	.125 G-s		
MIV	.049 In/Sec	.145 G-s	
MIA	.040 In/Sec	.071 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.084 In/Sec	.307 G-s	
PIP	.042 G-s		
PIV	.059 In/Sec	.213 G-s	
PIA	.054 In/Sec	.130 G-s	

MON40 - Acetone Pump (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.027 In/Sec	.478 G-s	3575.0 RPM
MOP	.020 G-s		
MOV	.027 In/Sec	.158 G-s	
MOA	.024 In/Sec	.152 G-s	
MIH	.025 In/Sec	1.389 G-s	
MIP	.147 G-s		
MIV	.040 In/Sec	.143 G-s	
MIA	.025 In/Sec	.130 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.123 In/Sec	.703 G-s	
PIP	.166 G-s		
PIV	.098 In/Sec	.596 G-s	
PIA	.063 In/Sec	.536 G-s	

MON43A - Amide Reactor Circ Pmp #1N (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.086 In/Sec	1.027 G-s	1785.0 RPM
MOP	.070 G-s		
MOV	.082 In/Sec	.239 G-s	
MOA	.115 In/Sec	.096 G-s	
MIH	.085 In/Sec	.606 G-s	
MIP	.066 G-s		
MIV	.100 In/Sec	.210 G-s	
MIA	.117 In/Sec	.301 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.262 In/Sec	.438 G-s	
PIP	.226 G-s		
PIV	.187 In/Sec	.156 G-s	
PIA	.212 In/Sec	.144 G-s	

MON43B - Amide Reactor Circ Pmp #2S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.181 In/Sec	.169 G-s	1785.0 RPM
MOP	.052 G-s		
MOV	.155 In/Sec	.066 G-s	
MOA	.102 In/Sec	.067 G-s	
MIH	.104 In/Sec	.088 G-s	
MIP	.0097 G-s		
MIV	.095 In/Sec	.022 G-s	
MIA	.072 In/Sec	.028 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.259 In/Sec	.287 G-s	
PIP	.154 G-s		
PIV	.185 In/Sec	.283 G-s	
PIA	.212 In/Sec	.123 G-s	

MON45EM - ACH Ref Brine Pump E (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.063 In/Sec	1.114 G-s	1750.0 RPM
MOP	.745 G-s		
MOV	.125 In/Sec	1.066 G-s	
MOA	.073 In/Sec	.558 G-s	
MIH	.060 In/Sec	.922 G-s	
MIP	.413 G-s		
MIV	.104 In/Sec	.765 G-s	
MIA	.085 In/Sec	.196 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.154 In/Sec	.692 G-s	
PIP	.484 G-s		
PIV	.109 In/Sec	.265 G-s	
PIA	.070 In/Sec	.238 G-s	
POH	.097 In/Sec	.850 G-s	
POP	.505 G-s		
POV	.088 In/Sec	.234 G-s	
POA	.075 In/Sec	.362 G-s	

MON50 - Decanter Feed Pump (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.049 In/Sec	.487 G-s	3575.0 RPM
MOP	.059 G-s		
MOV	.052 In/Sec	.296 G-s	
MOA	.172 In/Sec	.113 G-s	
MIH	.058 In/Sec	.534 G-s	
MIP	.062 G-s		
MIV	.084 In/Sec	.218 G-s	
MIA	.136 In/Sec	.113 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.264 In/Sec	.784 G-s	
PIP	.227 G-s		
PIV	.220 In/Sec	.409 G-s	
PIA	.202 In/Sec	.360 G-s	

MON 51 - WCM Tails Swing/Spare Pmp (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.077 In/Sec	.423 G-s	3530.0 RPM
M1P	.145 G-s		
M1V	.074 In/Sec	.116 G-s	
M1A	.087 In/Sec	.072 G-s	
M2H	.074 In/Sec	.805 G-s	
M2P	.187 G-s		
M2V	.069 In/Sec	.149 G-s	
M2A	.049 In/Sec	.053 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.071 In/Sec	.201 G-s	
P1P	.014 G-s		
P1V	.112 In/Sec	.172 G-s	
P1A	.159 In/Sec	.234 G-s	
P2H	.082 In/Sec	.211 G-s	
P2P	.015 G-s		
P2V	.070 In/Sec	.239 G-s	
P2A	.143 In/Sec	.089 G-s	

MON55SM - HUT Pump S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.098 In/Sec	.625 G-s	1775.0 RPM
MOP	.098 G-s		
MOV	.052 In/Sec	.599 G-s	
MOA	.039 In/Sec	.162 G-s	
MIH	.101 In/Sec	1.090 G-s	
MIP	.250 G-s		
MIV	.069 In/Sec	.291 G-s	
MIA	.041 In/Sec	.213 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.226 In/Sec	.480 G-s	
PIP	.327 G-s		
PIV	.184 In/Sec	.270 G-s	
PIA	.156 In/Sec	.244 G-s	
POH	.105 In/Sec	.750 G-s	
POP	.450 G-s		
POV	.097 In/Sec	.219 G-s	
POA	.149 In/Sec	.197 G-s	

MON 63E - LBS Side Stream Pump E (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.091 In/Sec	.649 G-s	3515.0 RPM
M1P	.061 G-s		
M1V	.151 In/Sec	.181 G-s	
M1A	.118 In/Sec	.123 G-s	
M2H	.095 In/Sec	.955 G-s	
M2P	.091 G-s		
M2V	.116 In/Sec	.278 G-s	
M2A	.120 In/Sec	.183 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.280 In/Sec	.508 G-s	
P1P	.054 G-s		
P1V	.097 In/Sec	.242 G-s	
P1A	.248 In/Sec	.174 G-s	
P2H	.139 In/Sec	.529 G-s	
P2P	.030 G-s		
P2V	.132 In/Sec	.238 G-s	
P2A	.136 In/Sec	.132 G-s	

MON 63W - LBS Side Stream Pump W (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.096 In/Sec	1.489 G-s	3515.0 RPM
M1P	.022 G-s		
M1V	.100 In/Sec	.694 G-s	
M1A	.088 In/Sec	.403 G-s	
M2H	.104 In/Sec	1.706 G-s	
M2P	.049 G-s		
M2V	.133 In/Sec	.518 G-s	
M2A	.052 In/Sec	.527 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.259 In/Sec	.614 G-s	
P1P	.185 G-s		
P1V	.145 In/Sec	1.088 G-s	
P1A	.193 In/Sec	.587 G-s	
P2H	.162 In/Sec	.434 G-s	
P2P	.046 G-s		

P2V	.170 In/Sec	.569 G-s	
P2A	.138 In/Sec	.448 G-s	

MON65 - Amide Reactor Circ Primary (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.197 In/Sec	.464 G-s	1180.0 RPM
MOP	.242 G-s		
MOV	.302 In/Sec	.135 G-s	
MOA	.097 In/Sec	.075 G-s	
MIH	.236 In/Sec	.838 G-s	
MIP	.542 G-s		
MIV	.373 In/Sec	.159 G-s	
MIA	.124 In/Sec	.119 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.154 In/Sec	.257 G-s	
PIP	.255 G-s		
PIV	.155 In/Sec	.131 G-s	
PIA	.096 In/Sec	.068 G-s	

MON67SM - PTZ Xfer Pump S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.133 In/Sec	.467 G-s	3575.0 RPM
MOP	.0037 G-s		
MOV	.104 In/Sec	.038 G-s	
MOA	.061 In/Sec	.071 G-s	
MIH	.140 In/Sec	.733 G-s	
MIP	.020 G-s		
MIV	.071 In/Sec	.302 G-s	
MIA	.086 In/Sec	.026 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.051 In/Sec	.441 G-s	
PIP	.034 G-s		
PIV	.036 In/Sec	.309 G-s	
PIA	.044 In/Sec	.311 G-s	

MON68A - #1 Reactor H2O Circ Pump (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.069 In/Sec	.351 G-s	1180.0 RPM
MOP	.111 G-s		
MOV	.037 In/Sec	.126 G-s	
MOA	.050 In/Sec	.021 G-s	
MIH	.061 In/Sec	.475 G-s	
MIP	.130 G-s		
MIV	.046 In/Sec	.090 G-s	
MIA	.043 In/Sec	.080 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.045 In/Sec	.163 G-s	
PIP	.085 G-s		
PIV	.036 In/Sec	.295 G-s	
PIA	.047 In/Sec	.177 G-s	

MON81 - Uninhibited Mon Tank Pump S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.056 In/Sec	.193 G-s	3575.0 RPM
MOP	.0094 G-s		
MOV	.042 In/Sec	.120 G-s	
MOA	.033 In/Sec	.041 G-s	

MIH	.073 In/Sec	.243 G-s	
MIP	.038 G-s		
MIV	.041 In/Sec	.064 G-s	
MIA	.050 In/Sec	.038 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.121 In/Sec	.691 G-s	
PIP	.071 G-s		
PIV	.126 In/Sec	.507 G-s	
PIA	.121 In/Sec	.295 G-s	
POH	.147 In/Sec	.562 G-s	
POP	.035 G-s		
POV	.155 In/Sec	.295 G-s	
POA	.131 In/Sec	.182 G-s	

MON80 - Uninhibited Mon Tank Pump N (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.064 In/Sec	.146 G-s	3575.0 RPM
MOP	.013 G-s		
MOV	.062 In/Sec	.424 G-s	
MOA	.162 In/Sec	.124 G-s	
MIH	.130 In/Sec	.148 G-s	
MIP	.011 G-s		
MIV	.159 In/Sec	.099 G-s	
MIA	.224 In/Sec	.031 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.170 In/Sec	.135 G-s	
PIP	.018 G-s		
PIV	.055 In/Sec	.164 G-s	
PIA	.059 In/Sec	.086 G-s	
POH	.114 In/Sec	.076 G-s	
POP	.0097 G-s		
POV	.037 In/Sec	.070 G-s	
POA	.069 In/Sec	.040 G-s	

MON85E - Water Treatment Pmp E (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.137 In/Sec	.496 G-s	1775.0 RPM
MOP	.163 G-s		
MOV	.087 In/Sec	.191 G-s	
MOA	.133 In/Sec	.192 G-s	
MIH	.129 In/Sec	.459 G-s	
MIP	.239 G-s		
MIV	.146 In/Sec	.235 G-s	
MIA	.074 In/Sec	.271 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.400 In/Sec	.593 G-s	
PIP	.359 G-s		
PIV	.174 In/Sec	.448 G-s	
PIA	.181 In/Sec	.360 G-s	
POH	.237 In/Sec	.458 G-s	
POP	.234 G-s		
POV	.110 In/Sec	.351 G-s	
POA	.147 In/Sec	.190 G-s	

MON85W - Water Treatment Pmp W (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.052 In/Sec	.596 G-s	1775.0 RPM

	MOP	.339 G-s		
	MOV	.088 In/Sec	.167 G-s	
	MOA	.081 In/Sec	.128 G-s	
	MIH	.068 In/Sec	.632 G-s	
	MIP	.345 G-s		
	MIV	.120 In/Sec	.378 G-s	
	MIA	.066 In/Sec	.322 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.120 In/Sec	.770 G-s	
	PIP	.495 G-s		
	PIV	.101 In/Sec	.373 G-s	
	PIA	.083 In/Sec	.285 G-s	
	POH	.069 In/Sec	.860 G-s	
	POP	.564 G-s		
	POV	.105 In/Sec	.391 G-s	
	POA	.077 In/Sec	.264 G-s	
MON118	- Tempered H20 Pmp		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.044 In/Sec	.230 G-s	865.0 RPM
	MOP	.144 G-s		
	MOV	.045 In/Sec	.081 G-s	
	MOA	.052 In/Sec	.044 G-s	
	MIH	.058 In/Sec	.140 G-s	
	MIP	.073 G-s		
	MIV	.023 In/Sec	.113 G-s	
	MIA	.046 In/Sec	.060 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.045 In/Sec	.058 G-s	
	PIP	.036 G-s		
	PIV	.024 In/Sec	.019 G-s	
	PIA	.034 In/Sec	.025 G-s	
	POH	.038 In/Sec	.071 G-s	
	POP	.040 G-s		
	POV	.023 In/Sec	.020 G-s	
	POA	.034 In/Sec	.022 G-s	
MON168	- A/B Booster Pump E		(12-Apr-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.109 In/Sec	.293 G-s	1040.0 RPM
	MOP	.169 G-s		
	MOV	.061 In/Sec	.290 G-s	
	MOA	.112 In/Sec	.105 G-s	
	MIH	.203 In/Sec	.369 G-s	
	MIP	.181 G-s		
	MIV	.093 In/Sec	.220 G-s	
	MIA	.181 In/Sec	.179 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.376 In/Sec	.145 G-s	
	PIP	.083 G-s		
	PIV	.172 In/Sec	.127 G-s	
	PIA	.121 In/Sec	.089 G-s	
SAR03	- Turb Comp Main Blower		(12-Apr-21)	
		OVERALL LEVEL		
	5	.245 Mils		4045.0 RPM
	6	.242 Mils		

7	.155 Mils			
8	.243 Mils			
9	.386 Mils			
10	.301 Mils			
11	.282 Mils			
12	.321 Mils			
15	.012 Mils			
16	.016 Mils			

SAR10 - Process Air Fan E (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.228 In/Sec	.273 G-s	1775.0 RPM
MOP	.109 G-s		
MOV	.053 In/Sec	.267 G-s	
MOA	.123 In/Sec	.200 G-s	
MIH	.184 In/Sec	.526 G-s	
MIP	.304 G-s		
MIV	.101 In/Sec	.259 G-s	
MIA	.107 In/Sec	.250 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.271 In/Sec	3.797 G-s	
FIP	1.906 G-s		
FIV	.145 In/Sec	1.712 G-s	
FIA	.116 In/Sec	.759 G-s	
FOH	.232 In/Sec	2.106 G-s	
FOP	1.259 G-s		
FOV	.129 In/Sec	1.005 G-s	
FOA	.139 In/Sec	.872 G-s	

SAR11 - Recycle Fan W (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.042 In/Sec	.303 G-s	1775.0 RPM
MOP	.071 G-s		
MOV	.037 In/Sec	.063 G-s	
MOA	.051 In/Sec	.056 G-s	
MIH	.029 In/Sec	.269 G-s	
MIP	.169 G-s		
MIV	.056 In/Sec	.215 G-s	
MIA	.052 In/Sec	.151 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.017 In/Sec	.015 G-s	
FIP	.0084 G-s		
FIV	.013 In/Sec	.0091 G-s	
FIA	.014 In/Sec	.0088 G-s	
FOH	.019 In/Sec	.015 G-s	
FOP	.0082 G-s		
FOV	.011 In/Sec	.015 G-s	
FOA	.015 In/Sec	.0050 G-s	

SAR12 - Recycle Fan E (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.042 In/Sec	.181 G-s	1775.0 RPM
MOP	.058 G-s		
MOV	.053 In/Sec	.161 G-s	
MOA	.061 In/Sec	.075 G-s	
MIH	.044 In/Sec	1.108 G-s	
MIP	.719 G-s		

MIV	.065 In/Sec	.790 G-s	
MIA	.043 In/Sec	.299 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.024 In/Sec	.159 G-s	
FIP	.080 G-s		
FIV	.026 In/Sec	.190 G-s	
FIA	.034 In/Sec	.083 G-s	
FOH	.035 In/Sec	.155 G-s	
FOP	.052 G-s		
FOV	.046 In/Sec	.294 G-s	
FOA	.046 In/Sec	.250 G-s	

SAR13 - Combustion Air Fan E (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.078 In/Sec	.685 G-s	1120.0 RPM
MOP	.421 G-s		
MOV	.048 In/Sec	.421 G-s	
MOA	.086 In/Sec	.193 G-s	
MIH	.080 In/Sec	.385 G-s	
MIP	.259 G-s		
MIV	.064 In/Sec	.201 G-s	
MIA	.093 In/Sec	.270 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.094 In/Sec	.220 G-s	
FIP	.105 G-s		
FIV	.104 In/Sec	.431 G-s	
FIA	.074 In/Sec	.312 G-s	
FOH	.071 In/Sec	.348 G-s	
FOP	.114 G-s		
FOV	.105 In/Sec	.105 G-s	
FOA	.310 In/Sec	.078 G-s	

SAR14 - Combustion Air Fan W (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.093 In/Sec	.919 G-s	1120.0 RPM
MOP	.307 G-s		
MOV	.047 In/Sec	.505 G-s	
MOA	.044 In/Sec	.455 G-s	
MIH	.091 In/Sec	1.493 G-s	
MIP	.842 G-s		
MIV	.058 In/Sec	.733 G-s	
MIA	.046 In/Sec	1.407 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.094 In/Sec	1.273 G-s	
FIP	.621 G-s		
FIV	.039 In/Sec	.564 G-s	
FIA	.049 In/Sec	.320 G-s	
FOH	.109 In/Sec	.848 G-s	
FOP	.563 G-s		
FOV	.087 In/Sec	.613 G-s	
FOA	.075 In/Sec	.664 G-s	

SAR15 - Process Air Fan W (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.062 In/Sec	.491 G-s	1180.0 RPM
MOP	.238 G-s		
MOV	.050 In/Sec	.360 G-s	

MOA	.054 In/Sec	.276 G-s	
MIH	.054 In/Sec	1.188 G-s	
MIP	.312 G-s		
MIV	.054 In/Sec	.466 G-s	
MIA	.055 In/Sec	.455 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.060 In/Sec	.511 G-s	
FIP	.301 G-s		
FIV	.031 In/Sec	.781 G-s	
FIA	.057 In/Sec	.716 G-s	
FOH	.063 In/Sec	1.698 G-s	
FOP	.958 G-s		
FOV	.043 In/Sec	.716 G-s	
FOA	.041 In/Sec	.518 G-s	

SAR37B - Interpass Twr Circ Pump S (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.058 In/Sec	1.017 G-s	1775.0 RPM
MOP	.340 G-s		
MOV	.108 In/Sec	.471 G-s	
MOA	.054 In/Sec	.245 G-s	
MIH	.064 In/Sec	1.020 G-s	
MIP	.376 G-s		
MIV	.063 In/Sec	.394 G-s	
MIA	.065 In/Sec	.198 G-s	

SAR39B - Boiler Feed H2O Pmp SW (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.038 In/Sec	.309 G-s	3575.0 RPM
MOP	.029 G-s		
MOV	.033 In/Sec	.284 G-s	
MOA	.030 In/Sec	.165 G-s	
MIH	.032 In/Sec	.483 G-s	
MIP	.039 G-s		
MIV	.023 In/Sec	.279 G-s	
MIA	.031 In/Sec	.105 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.031 In/Sec	.386 G-s	
PIP	.172 G-s		
PIV	.082 In/Sec	.223 G-s	
PIA	.082 In/Sec	.152 G-s	
POH	.024 In/Sec	.409 G-s	
POP	.142 G-s		
POV	.053 In/Sec	.278 G-s	
POA	.072 In/Sec	.158 G-s	

SAR39C - Boiler Feed H2O Pmp NE (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.216 In/Sec	.582 G-s	3575.0 RPM
MOP	.017 G-s		
MOV	.079 In/Sec	.307 G-s	
MOA	.087 In/Sec	.539 G-s	
MIH	.145 In/Sec	.445 G-s	
MIP	.029 G-s		
MIV	.091 In/Sec	.472 G-s	
MIA	.081 In/Sec	.402 G-s	
	OVERALL LEVEL	1K-20KHz	

	PIH	.102 In/Sec	.395 G-s	
	PIP	.040 G-s		
	PIV	.133 In/Sec	.150 G-s	
	PIA	.052 In/Sec	.165 G-s	
	POH	.155 In/Sec	1.034 G-s	
	POP	.389 G-s		
	POV	.074 In/Sec	.462 G-s	
	POA	.089 In/Sec	.182 G-s	

SAR39D - Boiler Feed H2O Pmp SE (26-Mar-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.103 In/Sec	2.279 G-s	3575.0 RPM
	MOP	.858 G-s		
	MOV	.074 In/Sec	.504 G-s	
	MOA	.036 In/Sec	.360 G-s	
	MIH	.115 In/Sec	4.133 G-s	
	MIP	.275 G-s		
	MIV	.087 In/Sec	.513 G-s	
	MIA	.052 In/Sec	.758 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.123 In/Sec	.767 G-s	
	PIP	.081 G-s		
	PIV	.071 In/Sec	.548 G-s	
	PIA	.061 In/Sec	.466 G-s	
	POH	.189 In/Sec	.442 G-s	
	POP	.038 G-s		
	POV	.061 In/Sec	.351 G-s	
	POA	.046 In/Sec	.097 G-s	

SAR50A - Drying Tower Circ Pump W (19-Apr-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.179 In/Sec	.805 G-s	1775.0 RPM
	MOP	.078 G-s		
	MOV	.148 In/Sec	.233 G-s	
	MOA	.105 In/Sec	.131 G-s	
	MIH	.134 In/Sec	.825 G-s	
	MIP	.192 G-s		
	MIV	.122 In/Sec	.573 G-s	
	MIA	.099 In/Sec	.340 G-s	
		OVERALL LEVEL	1K-20KHz	
*	PIV	.129 In/Sec	.0021 G-s	
		OVERALL LEVEL	1K-20kHz	
*	PIA	.783 In/Sec	.0024 G-s	

SAR50B - Drying Tower Circ Pump E (30-Mar-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.105 In/Sec	.976 G-s	1775.0 RPM
	MOP	.408 G-s		
	MOV	.147 In/Sec	.254 G-s	
	MOA	.227 In/Sec	.234 G-s	
	MIH	.082 In/Sec	1.047 G-s	
	MIP	.528 G-s		
	MIV	.113 In/Sec	.224 G-s	
	MIA	.159 In/Sec	.166 G-s	
		OVERALL LEVEL	1K-20KHz	
*	POV	.108 In/Sec	.283 G-s	
*	POA	.192 In/Sec	.208 G-s	

SAR55A	- Neutralization Pump N		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.064 In/Sec	.306 G-s	3575.0 RPM
	MOP	.042 G-s		
	MOV	.094 In/Sec	.089 G-s	
	MOA	.072 In/Sec	.093 G-s	
	MIH	.074 In/Sec	1.489 G-s	
	MIP	.417 G-s		
	MIV	.102 In/Sec	.281 G-s	
	MIA	.075 In/Sec	.289 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.054 In/Sec	.288 G-s	
	PIP	.043 G-s		
	PIV	.046 In/Sec	.240 G-s	
	PIA	.045 In/Sec	.185 G-s	
SAR55B	- Neutralization Pump S		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.043 In/Sec	1.008 G-s	3575.0 RPM
	MOP	.185 G-s		
	MOV	.199 In/Sec	.303 G-s	
	MOA	.158 In/Sec	.360 G-s	
	MIH	.154 In/Sec	1.501 G-s	
	MIP	.288 G-s		
	MIV	.145 In/Sec	.390 G-s	
	MIA	.147 In/Sec	.326 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.170 In/Sec	.544 G-s	
	PIP	.366 G-s		
	PIV	.144 In/Sec	.143 G-s	
	PIA	.136 In/Sec	.099 G-s	
SAR59A	- Scrub Twr Circ Pmp W		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.029 In/Sec	.273 G-s	1775.0 RPM
	MOP	.126 G-s		
	MOV	.044 In/Sec	.084 G-s	
	MOA	.032 In/Sec	.166 G-s	
	MIH	.032 In/Sec	.364 G-s	
	MIP	.181 G-s		
	MIV	.045 In/Sec	.148 G-s	
	MIA	.038 In/Sec	.085 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.126 In/Sec	.476 G-s	
	PIP	.327 G-s		
	PIV	.083 In/Sec	.227 G-s	
	PIA	.098 In/Sec	.161 G-s	
	POH	.093 In/Sec	.344 G-s	
	POP	.154 G-s		
	POV	.085 In/Sec	.169 G-s	
	POA	.097 In/Sec	.118 G-s	
SAR59B	- Scrub Twr Circ Pmp M		(30-Mar-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.036 In/Sec	.516 G-s	1775.0 RPM
	MOP	.222 G-s		

MOV	.060 In/Sec	.207 G-s	
MOA	.068 In/Sec	.153 G-s	
MIH	.052 In/Sec	.987 G-s	
MIP	.510 G-s		
MIV	.055 In/Sec	.540 G-s	
MIA	.036 In/Sec	.437 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.235 In/Sec	.947 G-s	
PIP	.641 G-s		
PIV	.073 In/Sec	.378 G-s	
PIA	.093 In/Sec	.333 G-s	
POH	.198 In/Sec	.475 G-s	
POP	.219 G-s		
POV	.112 In/Sec	.168 G-s	
POA	.123 In/Sec	.100 G-s	

SAR59C - Scrub Twr Circ Pmp E (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.023 In/Sec	.212 G-s	1775.0 RPM
MOP	.092 G-s		
MOV	.047 In/Sec	.070 G-s	
MOA	.035 In/Sec	.097 G-s	
MIH	.028 In/Sec	.808 G-s	
MIP	.310 G-s		
MIV	.031 In/Sec	.217 G-s	
MIA	.021 In/Sec	.070 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.096 In/Sec	.454 G-s	
PIP	.275 G-s		
PIV	.065 In/Sec	.338 G-s	
PIA	.054 In/Sec	.178 G-s	
POH	.112 In/Sec	.280 G-s	
POP	.152 G-s		
POV	.066 In/Sec	.158 G-s	
POA	.061 In/Sec	.160 G-s	

SAR54C - Weak Acid Xfer Pump S (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.159 In/Sec	.106 G-s	3575.0 RPM
MOP	.012 G-s		
MOV	.069 In/Sec	.049 G-s	
MOA	.085 In/Sec	.038 G-s	
MIH	.177 In/Sec	.194 G-s	
MIP	.038 G-s		
MIV	.135 In/Sec	.077 G-s	
MIA	.106 In/Sec	.053 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.195 In/Sec	.180 G-s	
PIP	.0042 G-s		
PIV	.062 In/Sec	.117 G-s	
PIA	.070 In/Sec	.089 G-s	

SAR54B - Weak Acid Xfer Pump N (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.183 In/Sec	.345 G-s	3575.0 RPM
MOP	.139 G-s		
MOV	.060 In/Sec	.116 G-s	

MOA	.090 In/Sec	.151 G-s	
MIH	.156 In/Sec	.421 G-s	
MIP	.043 G-s		
MIV	.096 In/Sec	.062 G-s	
MIA	.106 In/Sec	.148 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.150 In/Sec	.658 G-s	
PIP	.116 G-s		
PIV	.072 In/Sec	.478 G-s	
PIA	.110 In/Sec	.467 G-s	

SAR 56B - M Oleum Storage Tank Feed (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.126 In/Sec	.291 G-s	1775.0 RPM
M1P	.098 G-s		
M1V	.142 In/Sec	.055 G-s	
M1A	.047 In/Sec	.039 G-s	
M2H	.064 In/Sec	.618 G-s	
M2P	.059 G-s		
M2V	.091 In/Sec	.201 G-s	
M2A	.047 In/Sec	.059 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.097 In/Sec	.070 G-s	
P1P	.031 G-s		
P1V	.071 In/Sec	.043 G-s	
P1A	.039 In/Sec	.020 G-s	
P2H	.082 In/Sec	.149 G-s	
P2P	.029 G-s		
P2V	.030 In/Sec	.057 G-s	
P2A	.045 In/Sec	.024 G-s	

SAR 56C - S Oleum Storage Tank Feed (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.105 In/Sec	.178 G-s	1775.0 RPM
M1P	.082 G-s		
M1V	.051 In/Sec	.596 G-s	
M1A	.054 In/Sec	.177 G-s	
M2H	.017 In/Sec	.245 G-s	
M2P	.200 G-s		
M2V	.042 In/Sec	.143 G-s	
M2A	.030 In/Sec	.205 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.135 In/Sec	.081 G-s	
P1P	.025 G-s		
P1V	.051 In/Sec	.046 G-s	
P1A	.036 In/Sec	.015 G-s	
P2H	.154 In/Sec	.152 G-s	
P2P	.098 G-s		
P2V	.050 In/Sec	.084 G-s	
P2A	.041 In/Sec	.069 G-s	

SAR57B - Oleum Twr Circ Pump E (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.047 In/Sec	.439 G-s	1775.0 RPM
MOP	.239 G-s		
MOV	.068 In/Sec	.108 G-s	
MOA	.063 In/Sec	.070 G-s	

MIH	.039 In/Sec	.369 G-s	
MIP	.161 G-s		
MIV	.066 In/Sec	.195 G-s	
MIA	.055 In/Sec	.096 G-s	

SAR61NM - Spent Acid Circ Pmp N (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MIH	.020 In/Sec	.220 G-s	1775.0 RPM
MIP	.087 G-s		
MIV	.054 In/Sec	.108 G-s	
MIA	.049 In/Sec	.107 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.016 In/Sec	.096 G-s	
PIP	.077 G-s		
PIV	.023 In/Sec	.123 G-s	
PIA	.022 In/Sec	.082 G-s	

SAR63EM - Spent Acid Feed Pmp E (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.050 In/Sec	.321 G-s	3575.0 RPM
MOP	.043 G-s		
MOV	.065 In/Sec	.068 G-s	
MOA	.074 In/Sec	.044 G-s	
MIH	.041 In/Sec	.421 G-s	
MIP	.159 G-s		
MIV	.065 In/Sec	.108 G-s	
MIA	.057 In/Sec	.091 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.108 In/Sec	2.342 G-s	
PIP	.231 G-s		
PIV	.077 In/Sec	.744 G-s	
PIA	.088 In/Sec	1.017 G-s	
POH	.093 In/Sec	2.032 G-s	
POP	.095 G-s		
POV	.081 In/Sec	.929 G-s	
POA	.072 In/Sec	.517 G-s	

SAR63WM - Spent Acid Feed Pmp W (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.060 In/Sec	.172 G-s	3575.0 RPM
MOP	.0071 G-s		
MOV	.049 In/Sec	.039 G-s	
MOA	.082 In/Sec	.055 G-s	
MIH	.071 In/Sec	.681 G-s	
MIP	.022 G-s		
MIV	.057 In/Sec	.179 G-s	
MIA	.049 In/Sec	.104 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.072 In/Sec	.724 G-s	
PIP	.054 G-s		
PIV	.061 In/Sec	.355 G-s	
PIA	.054 In/Sec	.389 G-s	

SAR66A - Vertical Cool Twr Pump #1 (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.687 In/Sec	.155 G-s	1195.0 RPM
MOP	.075 G-s		

MOV	.246 In/Sec	.083 G-s	
MOA	.634 In/Sec	.061 G-s	
MIH	.286 In/Sec	.118 G-s	
MIP	.067 G-s		
MIV	.316 In/Sec	.073 G-s	
MIA	.215 In/Sec	.065 G-s	

SAR66B - Vertical Cool Twr Pump #2 (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.208 In/Sec	.129 G-s	1195.0 RPM
MOP	.057 G-s		
MOV	.150 In/Sec	.203 G-s	
MOA	.462 In/Sec	.091 G-s	
MIH	.131 In/Sec	.181 G-s	
MIP	.095 G-s		
MIV	.189 In/Sec	.123 G-s	
MIA	.193 In/Sec	.068 G-s	

SAR66C - Vertical Cool Twr Pump #3 (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.414 In/Sec	.103 G-s	1195.0 RPM
MOP	.054 G-s		
MOV	.132 In/Sec	.059 G-s	
MOA	.251 In/Sec	.040 G-s	
MIH	.172 In/Sec	.051 G-s	
MIP	.030 G-s		
MIV	.132 In/Sec	.050 G-s	
MIA	.097 In/Sec	.044 G-s	

SAR66D - Vertical Cool Twr Pump #4 (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.171 In/Sec	.089 G-s	1195.0 RPM
MOP	.045 G-s		
MOV	.077 In/Sec	.071 G-s	
MOA	.133 In/Sec	.056 G-s	
MIH	.072 In/Sec	.066 G-s	
MIP	.041 G-s		
MIV	.094 In/Sec	.045 G-s	
MIA	.074 In/Sec	.031 G-s	

SAR78A - Cooling Tower Fan #1 (19-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.188 In/Sec	.319 G-s	1775.0 RPM
MOP	.127 G-s		
MOV	.322 In/Sec	.390 G-s	
MOA	.363 In/Sec	.304 G-s	
MIH	.101 In/Sec	.454 G-s	
MIP	.179 G-s		
MIV	.282 In/Sec	.273 G-s	
MIA	.372 In/Sec	.145 G-s	

SAR78B - Cooling Tower Fan #2 (19-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.064 In/Sec	.792 G-s	1775.0 RPM
MOP	.094 G-s		
MOV	.061 In/Sec	.207 G-s	
MOA	.162 In/Sec	.148 G-s	

MIH	.101 In/Sec	1.584 G-s		
MIP	.497 G-s			
MIV	.120 In/Sec	.923 G-s		
MIA	.162 In/Sec	.189 G-s		

SAR78C - Cooling Tower Fan #3 (29-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.094 In/Sec	.634 G-s	1775.0 RPM
MOP	.237 G-s		
MOV	.071 In/Sec	.464 G-s	
MOA	.114 In/Sec	.192 G-s	
MIH	.105 In/Sec	1.018 G-s	
MIP	.250 G-s		
MIV	.113 In/Sec	.789 G-s	
MIA	.203 In/Sec	.493 G-s	

SAR78D - Cooling Tower Fan #4 (29-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.517 In/Sec	.490 G-s	1775.0 RPM
MOP	.367 G-s		
MOV	.513 In/Sec	.288 G-s	
MOA	.793 In/Sec	.141 G-s	
MIH	.407 In/Sec	.354 G-s	
MIP	.270 G-s		
MIV	.497 In/Sec	.238 G-s	
MIA	.783 In/Sec	.135 G-s	

SAR128 - Oleum Fume Scrub Blwr (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MIH	.069 In/Sec	.458 G-s	3575.0 RPM
MIP	.037 G-s		
MIV	.064 In/Sec	.192 G-s	
MIA	.065 In/Sec	.064 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.084 In/Sec	.291 G-s	
FIP	.020 G-s		
FIV	.038 In/Sec	.252 G-s	
FIA	.076 In/Sec	.073 G-s	
FOH	.119 In/Sec	.547 G-s	
FOP	.056 G-s		
FOV	.111 In/Sec	.241 G-s	
FOA	.179 In/Sec	.193 G-s	

SAR135 - Spent Acid Circ Pmp E (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.028 In/Sec	.182 G-s	1775.0 RPM
MOP	.077 G-s		
MOV	.039 In/Sec	.129 G-s	
MOA	.061 In/Sec	.039 G-s	
MIH	.039 In/Sec	.285 G-s	
MIP	.144 G-s		
MIV	.052 In/Sec	.049 G-s	
MIA	.056 In/Sec	.043 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.029 In/Sec	.192 G-s	
PIP	.142 G-s		
PIV	.024 In/Sec	.081 G-s	

PIA	.022 In/Sec	.081 G-s	
POH	.025 In/Sec	.097 G-s	
POP	.080 G-s		
POV	.022 In/Sec	.124 G-s	
POA	.027 In/Sec	.071 G-s	

SAR137B - Contain Pit PumpS (30-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.068 In/Sec	.316 G-s	1775.0 RPM
MOP	.158 G-s		
MOV	.066 In/Sec	.122 G-s	
MOA	.093 In/Sec	.224 G-s	

SAR156 - Spent Acid Feed Booster N (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MIH	.013 In/Sec	.172 G-s	1030.0 RPM
MIP	.105 G-s		
MIV	.021 In/Sec	.101 G-s	
MIA	.022 In/Sec	.106 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.024 In/Sec	.036 G-s	
PIP	.019 G-s		
PIV	.019 In/Sec	.019 G-s	
PIA	.022 In/Sec	.017 G-s	

SAR161B - N SAR Cool Twr Fan Middle (19-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.112 In/Sec	.834 G-s	1775.0 RPM
MOP	.237 G-s		
MOV	.151 In/Sec	.600 G-s	
MOA	.170 In/Sec	.342 G-s	
MIH	.174 In/Sec	1.219 G-s	
MIP	.286 G-s		
MIV	.134 In/Sec	.286 G-s	
MIA	.167 In/Sec	.172 G-s	

SAR222 - Oleum Twr Drain Pmp (08-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.066 In/Sec	.550 G-s	3575.0 RPM
MOP	.0022 G-s		
MOV	.077 In/Sec	.361 G-s	
MOA	.052 In/Sec	.305 G-s	
MIH	.050 In/Sec	.384 G-s	
MIP	.014 G-s		
MIV	.103 In/Sec	.677 G-s	
MIA	.061 In/Sec	.226 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.339 In/Sec	6.163 G-s	
PIP	.0076 G-s		
PIV	.115 In/Sec	1.522 G-s	
* POH	.157 In/Sec	2.925 G-s	
* POP	.018 G-s		
* POV	.150 In/Sec	2.260 G-s	

SAR231A - Final Twr Circ Pump N (12-Apr-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.319 In/Sec	.858 G-s	1775.0 RPM

MOP	.332 G-s			
MOV	.086 In/Sec	.493 G-s		
MOA	.485 In/Sec	.386 G-s		
MIH	.166 In/Sec	.859 G-s		
MIP	.398 G-s			
MIV	.072 In/Sec	.444 G-s		
MIA	.331 In/Sec	.317 G-s		

SAR233 - InterpassTwr Drain Pmp1 (08-Mar-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.043 In/Sec	.097 G-s	3575.0 RPM
MOP	.0015 G-s		
MOV	.077 In/Sec	.301 G-s	
MOA	.042 In/Sec	.115 G-s	
MIH	.042 In/Sec	.136 G-s	
MIP	.011 G-s		
MIV	.045 In/Sec	.181 G-s	
MIA	.032 In/Sec	.082 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.037 In/Sec	.041 G-s	
PIP	.0020 G-s		
PIV	.034 In/Sec	.178 G-s	
PIA	.041 In/Sec	.043 G-s	
* POH	.034 In/Sec	.181 G-s	
* POP	.015 G-s		
* POV	.030 In/Sec	.202 G-s	

Clarification Of Vibration Units:

Acc	-->	G-s	RMS
Vel	-->	In/Sec	PK
Dsp	-->	Mils	P-P

* - Indicates Data Has Date/Time Different From Equipment Date/Time