HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

February 3, 2021

Lucite

Subject: February 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,

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Detailed Defects

SAR 03 Turbine Compressor Main Blower
Proximity probe 12 data shows a shaft speed vibration. The vibration amplitude continues to slowly increase in amplitude. The impeller is scheduled to be cleaned at this time so we will compare the readings next survey.
Rated a Class II Defect.

SAR57B Oleum Tower Circulation Pump East
Current vibration data indicates motor replacement due to the elimination of defect frequencies seen in the previous survey. No further actions are required at this time. Non-Rated.

SAR 12 MMA Recycle Fan E
The fan shaft was serviced a few months ago. Fan vibrations increased after that maintenance. The bearing caps were adjusted which subsequently dropped the vibration. Harmonics are still present and are indicative of excessive clearances (looseness) or structure/fastener issue. We will watch for changes. **Rated a Class II Defect.**

ACN13B #2 Kettle Circulation Pump
Motor bearing data 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.**

Observations

ACN 07C ACH Product Feed Pump South
Data still indicates possible bearing cage defects as well as outer race defects present in the inboard motor bearing. Be prepared to change out the motor in the future. **Rated a Class II Defect.**

ACN 08 ACH Blend Tank Pump
The outboard motor vertical vibration is now slightly below 0.4”/sec velocity peak at the speed of the shaft. Still recommend inspecting the unit for loose fasteners and possible coupling issues. Check the shaft alignment as time allows. **Rated a Class I Defect.**

ACN 36 ACH Neutralizer Tank Circulation Pump
Pump has a 4x RPM overall vibration at almost 0.4”/sec velocity peak. We suspect process variables affect the values. Could be wear in the pump, or possibly a worn coupling. The motor spectrum has a raised noise floor which could indicate bearings distress and possibly a lubrication issue. Inspect as time allows. **Rated a Class II Defect.**

SAR 10 Process Air Fan E
The data still shows a fan speed vibration in the unit. We suspect a fan issue such as imbalance from either build up or damage from an impact. Possible belt issue also. Inspect the fan unit and drive components to correct the high vibrations. The fan bearings also have a raised noise floor in the acceleration spectrum. This could be distress in the bearings and/or a lubrication issue. Inspect the bearings also. **Rated a Class II Defect.**

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.**

SAR 137B Containment Pit Pump South
We have a bad reading on this unit this survey.
Last month's report stated: The unit seems to have a sub-synchronous vibration in the motor. Check all the fasteners. **Rated a Class I Defect.**

MON51 WCM Tails Swing/Spare Pump
The motor inboard bearing has an increase in the noise floor in the acceleration spectrum, which could indicate bearings distress and possibly a lubrication issue. Inspect as time allows. **Rated a Class I Defect.**

February 2021 data

Abbreviated Last Measurement Summary
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Database: Lucite Memphis MMA.rbm
Area: MMA
Report Date: 04-Feb-21 14:41

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 (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.030 In/Sec	.158 G-s	1175.0 RPM
MOP	.082 G-s		
MOV	.034 In/Sec	.049 G-s	
MOA	.029 In/Sec	.060 G-s	
MIH	.025 In/Sec	.289 G-s	
MIP	.198 G-s		
MIV	.028 In/Sec	.081 G-s	
MIA	.026 In/Sec	.063 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.101 In/Sec	.385 G-s	
PIP	.243 G-s		
PIV	.062 In/Sec	.287 G-s	
PIA	.061 In/Sec	.249 G-s	
POH	.046 In/Sec	.595 G-s	
POP	.374 G-s		
POV	.055 In/Sec	.189 G-s	
POA	.063 In/Sec	.128 G-s	

ACN05A - Topp Column Xfer Pmp W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.074 In/Sec	.821 G-s	3575.0 RPM
MOP	.134 G-s		
MOV	.054 In/Sec	.164 G-s	
MOA	.068 In/Sec	.157 G-s	
MIH	.086 In/Sec	.694 G-s	
MIP	.169 G-s		
MIV	.053 In/Sec	.126 G-s	
MIA	.096 In/Sec	.100 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.319 In/Sec	.585 G-s	
PIP	.138 G-s		
PIV	.137 In/Sec	.261 G-s	
PIA	.095 In/Sec	.319 G-s	

ACN07A - ACH Prod Feed Pump N (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.021 In/Sec	.072 G-s	3575.0 RPM

	MOP	.013 G-s		
	MOV	.049 In/Sec	.045 G-s	
	MOA	.040 In/Sec	.035 G-s	
	MIH	.027 In/Sec	.153 G-s	
	MIP	.030 G-s		
	MIV	.044 In/Sec	.032 G-s	
	MIA	.038 In/Sec	.047 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.083 In/Sec	.425 G-s	
	PIP	.072 G-s		
	PIV	.029 In/Sec	.142 G-s	
	PIA	.047 In/Sec	.158 G-s	

ACN07C - ACH Prod Feed Pump S (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.101 In/Sec	1.282 G-s	3575.0 RPM
	MOP	.504 G-s		
	MOV	.081 In/Sec	.583 G-s	
	MOA	.083 In/Sec	.497 G-s	
	MIH	.070 In/Sec	2.705 G-s	
	MIP	.772 G-s		
	MIV	.065 In/Sec	.649 G-s	
	MIA	.060 In/Sec	.426 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.153 In/Sec	2.020 G-s	
	PIP	.343 G-s		
	PIV	.166 In/Sec	1.238 G-s	
	PIA	.132 In/Sec	.656 G-s	

ACN08 - ACH Blend Tank (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.043 In/Sec	.506 G-s	3575.0 RPM
	MOP	.059 G-s		
	MOV	.362 In/Sec	.225 G-s	
	MOA	.222 In/Sec	.191 G-s	
	MIH	.091 In/Sec	.818 G-s	
	MIP	.131 G-s		
	MIV	.289 In/Sec	.331 G-s	
	MIA	.195 In/Sec	.148 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.123 In/Sec	.506 G-s	
	PIP	.197 G-s		
	PIV	.041 In/Sec	.140 G-s	
	PIA	.074 In/Sec	.109 G-s	

ACN09 - ACH Flash Tank Pump (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.088 In/Sec	.572 G-s	3575.0 RPM
	MOP	.075 G-s		
	MOV	.097 In/Sec	.227 G-s	
	MOA	.112 In/Sec	.177 G-s	
*	MIV	.068 In/Sec	.831 G-s	
*	MIA	.108 In/Sec	1.139 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.049 In/Sec	.202 G-s	
	PIP	.046 G-s		
	PIV	.053 In/Sec	.170 G-s	

	PIA	.057 In/Sec	.221 G-s	
ACN10	- #1 Kettle Circ Pmp		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.038 In/Sec	.387 G-s	1775.0 RPM
	MOP	.176 G-s		
	MOV	.029 In/Sec	.125 G-s	
	MOA	.246 In/Sec	.173 G-s	
	MIH	.041 In/Sec	.559 G-s	
	MIP	.272 G-s		
	MIV	.025 In/Sec	.328 G-s	
	MIA	.071 In/Sec	.214 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.061 In/Sec	.124 G-s	
	PIP	.083 G-s		
	PIV	.043 In/Sec	.072 G-s	
	PIA	.037 In/Sec	.086 G-s	
ACN11	- #2 Kettle Circ Pump		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.018 In/Sec	.676 G-s	1775.0 RPM
	MOP	.275 G-s		
	MOV	.036 In/Sec	.157 G-s	
	MOA	.038 In/Sec	.234 G-s	
	MIH	.024 In/Sec	.582 G-s	
	MIP	.396 G-s		
	MIV	.043 In/Sec	.153 G-s	
	MIA	.051 In/Sec	.219 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.032 In/Sec	.230 G-s	
	PIP	.139 G-s		
	PIV	.101 In/Sec	.179 G-s	
	PIA	.023 In/Sec	.117 G-s	
*	POV	.104 In/Sec	.200 G-s	
*	POA	.038 In/Sec	.253 G-s	
ACN12	- #1 Kettle Xfer Pump		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.042 In/Sec	.478 G-s	3575.0 RPM
	MOP	.086 G-s		
	MOV	.048 In/Sec	.289 G-s	
	MOA	.058 In/Sec	.207 G-s	
	MIH	.057 In/Sec	1.086 G-s	
	MIP	.169 G-s		
	MIV	.059 In/Sec	.328 G-s	
	MIA	.046 In/Sec	.214 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.047 In/Sec	.098 G-s	
	PIP	.0082 G-s		
	PIV	.054 In/Sec	.144 G-s	
	PIA	.045 In/Sec	.168 G-s	
ACN13B	- #2 Kettle Xfer Pump S		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.056 In/Sec	1.452 G-s	3575.0 RPM
	MOP	.114 G-s		
	MOV	.044 In/Sec	.199 G-s	

	MOA	.040 In/Sec	.220 G-s	
	MIH	.072 In/Sec	3.031 G-s	
	MIP	.701 G-s		
	MIV	.061 In/Sec	.772 G-s	
	MIA	.041 In/Sec	.849 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.051 In/Sec	.540 G-s	
	PIP	.114 G-s		
	PIV	.053 In/Sec	.108 G-s	
	PIA	.055 In/Sec	.126 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 (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.021 In/Sec	.269 G-s	1780.0 RPM
	MOP	1.235 G-s		
	MOV	.096 In/Sec	.087 G-s	
	MOA	.019 In/Sec	.089 G-s	
	MIH	3.763 In/Sec	.282 G-s	
	MIP	.029 G-s		
	MIV	.021 In/Sec	.108 G-s	
	MIA	.091 In/Sec	.041 G-s	
	IIH	.181 In/Sec		
	IIP	1.112 G-s		
	IIV	.207 In/Sec		
	IIA	.122 In/Sec		
	OOH	.158 In/Sec		
	OOP	1.975 G-s		
	OOV	.200 In/Sec		
	OOA	.113 In/Sec		
	CIH	.076 In/Sec		
	CIP	.489 G-s		
	CIV	.096 In/Sec		
	CIA	.087 In/Sec		
	COH	.040 In/Sec		
	COP	.279 G-s		
	COV	.049 In/Sec		
	COA	.059 In/Sec		

ACN17DP - DP Comp (02-Feb-21)

	OVERALL LEVEL		
21	.029 Mils		1775.0 RPM
22	.159 Mils		
27	.014 Mils		
23	.064 Mils		
24	.036 Mils		

ACN23 - ACH Scrb Circ Pump S (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.017 In/Sec	.501 G-s	1780.0 RPM
	MOP	.246 G-s		
	MOV	.045 In/Sec	.249 G-s	
	MOA	.031 In/Sec	.203 G-s	

	MIH	.037 In/Sec	.631 G-s	
	MIP	.360 G-s		
	MIV	.048 In/Sec	.168 G-s	
	MIA	.029 In/Sec	.271 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.087 In/Sec	.231 G-s	
	PIP	.200 G-s		
	PIV	.109 In/Sec	.134 G-s	
	PIA	.059 In/Sec	.130 G-s	
ACN28B	- ACN Fan E		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.255 In/Sec	.683 G-s	1775.0 RPM
	MOP	.201 G-s		
	MOV	.184 In/Sec	.286 G-s	
	MOA	1.783 In/Sec	.147 G-s	
	MIH	.241 In/Sec	.846 G-s	
	MIP	.292 G-s		
	MIV	.475 In/Sec	.216 G-s	
	MIA	.180 In/Sec	.190 G-s	
ACN28BDP	- Cooling Twr Fan E		(02-Feb-21)	
		OVERALL LEVEL		
	26	.326 Mils		1775.0 RPM
ACN28ADP	- Cooling Twr Fan W		(02-Feb-21)	
		OVERALL LEVEL		
	28	.035 Mils		1775.0 RPM
ACN29B	- ACN Cool Twr Pump M		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.117 In/Sec	1.156 G-s	1775.0 RPM
	MOP	.639 G-s		
	MOV	.046 In/Sec	.246 G-s	
	MOA	.050 In/Sec	.218 G-s	
	MIH	.060 In/Sec	1.165 G-s	
	MIP	.316 G-s		
	MIV	.063 In/Sec	.170 G-s	
	MIA	.042 In/Sec	.122 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.116 In/Sec	.744 G-s	
	PIP	.511 G-s		
	PIV	.093 In/Sec	.335 G-s	
	PIA	.190 In/Sec	.250 G-s	
	POH	.075 In/Sec	.816 G-s	
	POP	.467 G-s		
	POV	.090 In/Sec	.294 G-s	
	POA	.103 In/Sec	.340 G-s	
ACN29C	- ACN Cool Twr Pump S		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.048 In/Sec	.519 G-s	1775.0 RPM
	MOP	.188 G-s		
	MOV	.067 In/Sec	.215 G-s	
	MOA	.040 In/Sec	.234 G-s	
	MIH	.043 In/Sec	.580 G-s	
	MIP	.159 G-s		

MIV	.061 In/Sec	.173 G-s	
MIA	.048 In/Sec	.177 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.119 In/Sec	1.222 G-s	
PIP	.663 G-s		
PIV	.133 In/Sec	.806 G-s	
PIA	.122 In/Sec	1.327 G-s	
POH	.091 In/Sec	1.204 G-s	
POP	.338 G-s		
POV	.081 In/Sec	.317 G-s	
POA	.087 In/Sec	.347 G-s	

ACN30 - ACH Scrubber Xfer Pmp (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.179 In/Sec	.282 G-s	1780.0 RPM
MOP	.149 G-s		
MOV	.067 In/Sec	.188 G-s	
MOA	.122 In/Sec	.123 G-s	
MIH	.068 In/Sec	.562 G-s	
MIP	.349 G-s		
MIV	.109 In/Sec	.226 G-s	
MIA	.106 In/Sec	.172 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.051 In/Sec	.096 G-s	
PIP	.063 G-s		
PIV	.073 In/Sec	.110 G-s	
PIA	.076 In/Sec	.068 G-s	
POH	.053 In/Sec	.102 G-s	
POP	.016 G-s		
POV	.051 In/Sec	.064 G-s	
POA	.039 In/Sec	.060 G-s	

ACN36 - ACH Neut Tank Circ Pmp (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MIH	.084 In/Sec	1.248 G-s	3575.0 RPM
MIP	.326 G-s		
MIV	.094 In/Sec	.366 G-s	
MIA	.090 In/Sec	.194 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.412 In/Sec	.223 G-s	
PIP	.079 G-s		
PIV	.130 In/Sec	.165 G-s	
PIA	.109 In/Sec	.182 G-s	

ACN44 - ACN Ref Unit Booster #3 (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.119 In/Sec	2.127 G-s	3575.0 RPM
MOP	.086 G-s		
MOV	.104 In/Sec	.476 G-s	
MOA	.119 In/Sec	.409 G-s	
MIH	.118 In/Sec	.519 G-s	
MIP	.038 G-s		
MIV	.118 In/Sec	.271 G-s	
MIA	.114 In/Sec	.347 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.100 In/Sec	1.125 G-s	
PIP	.600 G-s		

PIV	.175 In/Sec	.551 G-s	
PIA	.129 In/Sec	.378 G-s	
POH	.097 In/Sec	.492 G-s	
POP	.130 G-s		
POV	.132 In/Sec	.426 G-s	
POA	.189 In/Sec	.183 G-s	

MON 32A - ARC Reflux Pmp N (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
M1V	.229 In/Sec	.177 G-s	3520.0 RPM
M1A	.113 In/Sec	.085 G-s	
M2H	.067 In/Sec	.256 G-s	
M2P	.044 G-s		
M2V	.114 In/Sec	.124 G-s	
M2A	.088 In/Sec	.079 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.073 In/Sec	.275 G-s	
P1P	.031 G-s		
P1V	.184 In/Sec	.257 G-s	
P1A	.106 In/Sec	.415 G-s	
P2H	.076 In/Sec	.399 G-s	
P2P	.127 G-s		
P2V	.274 In/Sec	.463 G-s	
P2A	.095 In/Sec	.281 G-s	
	OVERALL LEVEL	1K-20kHz	
M1H	.075 In/Sec	.706 G-s	
M1P	.060 G-s		

MON 32B - ARC Reflux Pmp S (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.052 In/Sec	.276 G-s	3520.0 RPM
M1P	.026 G-s		
M1V	.094 In/Sec	.208 G-s	
M1A	.074 In/Sec	.107 G-s	
M2H	.064 In/Sec	.373 G-s	
M2P	.039 G-s		
M2V	.146 In/Sec	.165 G-s	
M2A	.131 In/Sec	.116 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.198 In/Sec	.712 G-s	
P1P	.055 G-s		
P1V	.210 In/Sec	.613 G-s	
P1A	.235 In/Sec	.827 G-s	
P2H	.166 In/Sec	.809 G-s	
P2P	.087 G-s		
P2V	.214 In/Sec	.965 G-s	
P2A	.231 In/Sec	.782 G-s	

MON36 - Irganox Mix/Feed Pump (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.062 In/Sec	.165 G-s	1750.0 RPM
MOP	.062 G-s		
MOV	.041 In/Sec	.139 G-s	
MOA	.033 In/Sec	.233 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	.048 In/Sec		
	IIP	.204 G-s		
	IIV	.036 In/Sec		
	IIA	.039 In/Sec		
		OVERALL LEVEL	1K-20KHz	
	POH	.060 In/Sec	.425 G-s	
	POP	.284 G-s		
	POV	.069 In/Sec	.863 G-s	
	POA	.081 In/Sec	.948 G-s	

MON38A - LBS Reflux Pmp S (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.058 In/Sec	.319 G-s	3575.0 RPM
	MOP	.063 G-s		
	MOV	.027 In/Sec	.096 G-s	
	MOA	.056 In/Sec	.092 G-s	
	MIH	.040 In/Sec	.438 G-s	
	MIP	.089 G-s		
	MIV	.053 In/Sec	.150 G-s	
	MIA	.039 In/Sec	.129 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.058 In/Sec	1.002 G-s	
	PIP	.256 G-s		
	PIV	.057 In/Sec	.534 G-s	
	PIA	.055 In/Sec	.437 G-s	

MON38B - LBS Reflux Pmp N (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.040 In/Sec	.542 G-s	3575.0 RPM
	MOP	.154 G-s		
	MOV	.116 In/Sec	.171 G-s	
	MOA	.041 In/Sec	.164 G-s	
	MIH	.043 In/Sec	.411 G-s	
	MIP	.129 G-s		
	MIV	.095 In/Sec	.101 G-s	
	MIA	.036 In/Sec	.122 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.090 In/Sec	.833 G-s	
	PIP	.120 G-s		
	PIV	.101 In/Sec	.364 G-s	
	PIA	.111 In/Sec	.323 G-s	

MON38CNM - LBS Tails Pump N (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.111 In/Sec	.706 G-s	3575.0 RPM
	MOP	.174 G-s		
	MOV	.103 In/Sec	.355 G-s	
	MOA	.066 In/Sec	.224 G-s	
	MIH	.101 In/Sec	.998 G-s	
	MIP	.166 G-s		
	MIV	.064 In/Sec	.281 G-s	
	MIA	.091 In/Sec	.213 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.238 In/Sec	1.283 G-s	
	PIP	.244 G-s		
	PIV	.083 In/Sec	.627 G-s	

	PIA	.085 In/Sec	.499 G-s	
MON38CSM	- LBS Tails Pump S		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.070 In/Sec	.279 G-s	3575.0 RPM
	MOP	.069 G-s		
	MOV	.037 In/Sec	.112 G-s	
	MOA	.066 In/Sec	.150 G-s	
	MIH	.105 In/Sec	.614 G-s	
	MIP	.113 G-s		
	MIV	.078 In/Sec	.158 G-s	
	MIA	.062 In/Sec	.129 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.098 In/Sec	.342 G-s	
	PIP	.077 G-s		
	PIV	.137 In/Sec	.251 G-s	
	PIA	.056 In/Sec	.129 G-s	
MON40	- Acetone Pump		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.035 In/Sec	.606 G-s	3575.0 RPM
	MOP	.078 G-s		
	MOV	.051 In/Sec	.280 G-s	
	MOA	.063 In/Sec	.207 G-s	
	MIH	.061 In/Sec	1.246 G-s	
	MIP	.237 G-s		
	MIV	.045 In/Sec	.352 G-s	
	MIA	.137 In/Sec	.151 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.103 In/Sec	.847 G-s	
	PIP	.312 G-s		
	PIV	.088 In/Sec	.661 G-s	
	PIA	.064 In/Sec	.457 G-s	
MON43A	- Amide Reactor Circ Pmp #1N		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.086 In/Sec	1.007 G-s	1785.0 RPM
	MOP	.045 G-s		
	MOV	.079 In/Sec	.339 G-s	
	MOA	.095 In/Sec	.214 G-s	
	MIH	.063 In/Sec	.310 G-s	
	MIP	.019 G-s		
	MIV	.094 In/Sec	.110 G-s	
	MIA	.100 In/Sec	.125 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.262 In/Sec	.543 G-s	
	PIP	.322 G-s		
	PIV	.150 In/Sec	.235 G-s	
	PIA	.214 In/Sec	.217 G-s	
MON43B	- Amide Reactor Circ Pmp #2S		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.095 In/Sec	.191 G-s	1785.0 RPM
	MOP	.028 G-s		
	MOV	.072 In/Sec	.092 G-s	
	MOA	.082 In/Sec	.047 G-s	
	MIH	.116 In/Sec	.078 G-s	

MIP	.012 G-s		
MIV	.103 In/Sec	.015 G-s	
MIA	.082 In/Sec	.013 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.282 In/Sec	.252 G-s	
PIP	.128 G-s		
PIV	.167 In/Sec	.322 G-s	
PIA	.199 In/Sec	.123 G-s	

MON45EM - ACH Ref Brine Pump E (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.060 In/Sec	.983 G-s	1750.0 RPM
MOP	.532 G-s		
MOV	.128 In/Sec	1.324 G-s	
MOA	.095 In/Sec	.659 G-s	
MIH	.057 In/Sec	1.262 G-s	
MIP	.704 G-s		
MIV	.097 In/Sec	.952 G-s	
MIA	.095 In/Sec	.578 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.115 In/Sec	.830 G-s	
PIP	.488 G-s		
PIV	.085 In/Sec	.336 G-s	
PIA	.072 In/Sec	.296 G-s	
POH	.077 In/Sec	1.023 G-s	
POP	.536 G-s		
POV	.079 In/Sec	.262 G-s	
POA	.069 In/Sec	.236 G-s	

MON50 - Decanter Feed Pump (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.061 In/Sec	.427 G-s	3575.0 RPM
MOP	.087 G-s		
MOV	.080 In/Sec	.335 G-s	
MOA	.145 In/Sec	.160 G-s	
MIH	.058 In/Sec	.597 G-s	
MIP	.058 G-s		
MIV	.103 In/Sec	.205 G-s	
MIA	.092 In/Sec	.089 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.236 In/Sec	.495 G-s	
PIP	.197 G-s		
PIV	.182 In/Sec	.268 G-s	
PIA	.172 In/Sec	.657 G-s	

MON 51 - WCM Tails Swing/Spare Pmp (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.080 In/Sec	.506 G-s	3530.0 RPM
M1P	.043 G-s		
M1V	.041 In/Sec	.265 G-s	
M1A	.036 In/Sec	.228 G-s	
M2H	.102 In/Sec	1.461 G-s	
M2P	.286 G-s		
M2V	.051 In/Sec	.347 G-s	
M2A	.034 In/Sec	.282 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.125 In/Sec	.194 G-s	

P1P	.015 G-s		
P1V	.066 In/Sec	.211 G-s	
P1A	.076 In/Sec	.111 G-s	
P2H	.124 In/Sec	.224 G-s	
P2P	.013 G-s		
P2V	.058 In/Sec	.168 G-s	
P2A	.071 In/Sec	.124 G-s	

MON 63E - LBS Side Stream Pump E (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.150 In/Sec	.923 G-s	3515.0 RPM
M1P	.014 G-s		
M1V	.102 In/Sec	.156 G-s	
M1A	.195 In/Sec	.358 G-s	
M2H	.095 In/Sec	1.316 G-s	
M2P	.073 G-s		
M2V	.119 In/Sec	.372 G-s	
M2A	.109 In/Sec	.249 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.228 In/Sec	.580 G-s	
P1P	.073 G-s		
P1V	.142 In/Sec	.403 G-s	
P1A	.107 In/Sec	.243 G-s	

MON 63W - LBS Side Stream Pump W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.114 In/Sec	.844 G-s	3515.0 RPM
M1P	.047 G-s		
M1V	.083 In/Sec	.380 G-s	
M1A	.116 In/Sec	.528 G-s	
M2H	.094 In/Sec	1.151 G-s	
M2P	.063 G-s		
M2V	.118 In/Sec	.404 G-s	
M2A	.158 In/Sec	.373 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.248 In/Sec	.524 G-s	
P1P	.213 G-s		
P1V	.137 In/Sec	.734 G-s	
P1A	.203 In/Sec	.609 G-s	

MON65 - Amide Reactor Circ Primary (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.177 In/Sec	.391 G-s	1180.0 RPM
MOP	.209 G-s		
MOV	.234 In/Sec	.079 G-s	
MOA	.089 In/Sec	.072 G-s	
MIH	.131 In/Sec	.695 G-s	
MIP	.448 G-s		
MIV	.220 In/Sec	.163 G-s	
MIA	.084 In/Sec	.139 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.098 In/Sec	.684 G-s	
PIP	.384 G-s		
PIV	.165 In/Sec	.117 G-s	
PIA	.050 In/Sec	.110 G-s	

MON67NM - PTZ Xfer Pump N (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.070 In/Sec	.204 G-s	3575.0 RPM
MOP	.038 G-s		
MOV	.067 In/Sec	.052 G-s	
MOA	.036 In/Sec	.095 G-s	
MIH	.063 In/Sec	.384 G-s	
MIP	.086 G-s		
MIV	.051 In/Sec	.147 G-s	
MIA	.037 In/Sec	.102 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.057 In/Sec	.841 G-s	
PIP	.096 G-s		
PIV	.052 In/Sec	.259 G-s	
PIA	.063 In/Sec	.323 G-s	

MON68A - #1 Reactor H2O Circ Pump (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.074 In/Sec	.399 G-s	1180.0 RPM
MOP	.125 G-s		
MOV	.043 In/Sec	.158 G-s	
MOA	.043 In/Sec	.033 G-s	
MIH	.058 In/Sec	.237 G-s	
MIP	.093 G-s		
MIV	.041 In/Sec	.039 G-s	
MIA	.047 In/Sec	.035 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.043 In/Sec	.202 G-s	
PIP	.110 G-s		
PIV	.037 In/Sec	.230 G-s	
PIA	.043 In/Sec	.131 G-s	

MON73W - Skim Tub Xfer Pmp W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.027 In/Sec	.437 G-s	1110.0 RPM
MOP	.146 G-s		
MOV	.032 In/Sec	.467 G-s	
MOA	.042 In/Sec	.287 G-s	
MIH	.052 In/Sec	.423 G-s	
MIP	.243 G-s		
MIV	.031 In/Sec	.171 G-s	
MIA	.041 In/Sec	.191 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.033 In/Sec	.094 G-s	
PIP	.043 G-s		
PIV	.093 In/Sec	.040 G-s	
PIA	.024 In/Sec	.037 G-s	

MON81 - Uninhibited Mon Tank Pump S (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.861 In/Sec	.238 G-s	3575.0 RPM
MOP	.0075 G-s		
MOV	.048 In/Sec	.065 G-s	
MOA	.033 In/Sec	.044 G-s	
MIH	.060 In/Sec	.216 G-s	
MIP	.027 G-s		
MIV	.087 In/Sec	.070 G-s	
MIA	.073 In/Sec	.032 G-s	

	OVERALL LEVEL	1K-20KHz	
PIH	.181 In/Sec	.597 G-s	
PIP	.062 G-s		
PIV	.111 In/Sec	.419 G-s	
PIA	.145 In/Sec	.360 G-s	
POH	.161 In/Sec	.610 G-s	
POP	.040 G-s		
POV	.199 In/Sec	.408 G-s	
POA	.189 In/Sec	.256 G-s	

MON80 - Uninhibited Mon Tank Pump N (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.076 In/Sec	.138 G-s	3575.0 RPM
MOP	.023 G-s		
MOV	.064 In/Sec	.159 G-s	
MOA	.160 In/Sec	.193 G-s	
MIH	.129 In/Sec	.132 G-s	
MIP	.015 G-s		
MIV	.145 In/Sec	.066 G-s	
MIA	.149 In/Sec	.038 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.168 In/Sec	.071 G-s	
PIP	.0029 G-s		
PIV	.066 In/Sec	.064 G-s	
PIA	.072 In/Sec	.052 G-s	
POH	.095 In/Sec	.082 G-s	
POP	.0032 G-s		
POV	.044 In/Sec	.066 G-s	
POA	.086 In/Sec	.053 G-s	

MON85E - Water Treatment Pmp E (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.151 In/Sec	.599 G-s	1775.0 RPM
MOP	.180 G-s		
MOV	.095 In/Sec	.217 G-s	
MOA	.128 In/Sec	.096 G-s	
MIH	.121 In/Sec	.514 G-s	
MIP	.317 G-s		
MIV	.166 In/Sec	.299 G-s	
MIA	.100 In/Sec	.353 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.302 In/Sec	.574 G-s	
PIP	.365 G-s		
PIV	.167 In/Sec	.380 G-s	
PIA	.150 In/Sec	.263 G-s	
POH	.211 In/Sec	.453 G-s	
POP	.278 G-s		
POV	.126 In/Sec	.249 G-s	
POA	.136 In/Sec	.215 G-s	

MON85W - Water Treatment Pmp W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.078 In/Sec	.523 G-s	1775.0 RPM
MOP	.110 G-s		
MOV	.089 In/Sec	.213 G-s	
MOA	.096 In/Sec	.108 G-s	
MIH	.056 In/Sec	.524 G-s	

MIP	.327 G-s		
MIV	.088 In/Sec	.278 G-s	
MIA	.076 In/Sec	.214 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.097 In/Sec	.828 G-s	
PIP	.601 G-s		
PIV	.104 In/Sec	.360 G-s	
PIA	.069 In/Sec	.231 G-s	
POH	.079 In/Sec	.793 G-s	
POP	.563 G-s		
POV	.107 In/Sec	.384 G-s	
POA	.066 In/Sec	.212 G-s	

MON118 - Tempered H20 Pmp (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.089 In/Sec	.267 G-s	865.0 RPM
MOP	.150 G-s		
MOV	.080 In/Sec	.047 G-s	
MOA	.077 In/Sec	.049 G-s	
MIH	.101 In/Sec	.170 G-s	
MIP	.097 G-s		
MIV	.027 In/Sec	.087 G-s	
MIA	.068 In/Sec	.066 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.079 In/Sec	.037 G-s	
PIP	.019 G-s		
PIV	.054 In/Sec	.019 G-s	
PIA	.061 In/Sec	.015 G-s	
POH	.058 In/Sec	.050 G-s	
POP	.030 G-s		
POV	.054 In/Sec	.019 G-s	
POA	.056 In/Sec	.015 G-s	

MON169 - A/B Booster Pump W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.043 In/Sec	.208 G-s	1140.0 RPM
MOP	.087 G-s		
MOV	.035 In/Sec	.089 G-s	
MOA	.061 In/Sec	.077 G-s	
MIH	.033 In/Sec	.422 G-s	
MIP	.257 G-s		
MIV	.026 In/Sec	.198 G-s	
MIA	.052 In/Sec	.110 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.033 In/Sec	.066 G-s	
PIP	.040 G-s		
PIV	.042 In/Sec	.046 G-s	
PIA	.048 In/Sec	.044 G-s	

SAR03 - Turb Comp Main Blower (02-Feb-21)

	OVERALL LEVEL	
5	.365 Mils	3803.0 RPM
6	.355 Mils	
7	.180 Mils	
8	.252 Mils	
9	.464 Mils	
10	.411 Mils	

11	1.499 Mils		
12	1.517 Mils		
15	.041 Mils		
16	.066 Mils		

SAR10 - Process Air Fan E (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.345 In/Sec	.403 G-s	1775.0 RPM
MOP	.235 G-s		
MOV	.060 In/Sec	.299 G-s	
MOA	.199 In/Sec	.136 G-s	
MIH	.248 In/Sec	.997 G-s	
MIP	.686 G-s		
MIV	.180 In/Sec	.214 G-s	
MIA	.164 In/Sec	.200 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.498 In/Sec	2.789 G-s	
FIP	1.491 G-s		
FIV	.206 In/Sec	1.469 G-s	
FIA	.196 In/Sec	.789 G-s	
FOH	.363 In/Sec	2.959 G-s	
FOP	1.894 G-s		
FOV	.124 In/Sec	1.001 G-s	
FOA	.199 In/Sec	.575 G-s	

SAR11 - Recycle Fan W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.048 In/Sec	.503 G-s	1775.0 RPM
MOP	.024 G-s		
MOV	.042 In/Sec	.084 G-s	
MOA	.056 In/Sec	.060 G-s	
MIH	.024 In/Sec	.390 G-s	
MIP	.196 G-s		
MIV	.048 In/Sec	.168 G-s	
MIA	.041 In/Sec	.084 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	4.081 In/Sec	.013 G-s	
FIP	.0067 G-s		
FIV	.011 In/Sec	.0097 G-s	
FIA	.020 In/Sec	.0070 G-s	
FOH	.016 In/Sec	.015 G-s	
FOP	.0089 G-s		
FOV	.011 In/Sec	.013 G-s	
FOA	.019 In/Sec	.0064 G-s	

SAR12 - Recycle Fan E (29-Jan-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.146 In/Sec	.691 G-s	1775.0 RPM
MOP	.074 G-s		
MOV	.099 In/Sec	.322 G-s	
MOA	.186 In/Sec	.165 G-s	
MIH	.140 In/Sec	1.528 G-s	
MIP	.786 G-s		
MIV	.150 In/Sec	.906 G-s	
MIA	.116 In/Sec	.425 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.157 In/Sec	.271 G-s	

FIP	.225 G-s			
FIV	.097 In/Sec	.353 G-s		
FIA	.257 In/Sec	.182 G-s		
FOH	.186 In/Sec	.256 G-s		
FOP	.132 G-s			
FOV	.191 In/Sec	.291 G-s		
FOA	.193 In/Sec	.373 G-s		

SAR13 - Combustion Air Fan E (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.098 In/Sec	1.235 G-s	1120.0 RPM
MOP	.229 G-s		
MOV	.060 In/Sec	.290 G-s	
MOA	.110 In/Sec	.138 G-s	
MIH	.094 In/Sec	.680 G-s	
MIP	.375 G-s		
MIV	.069 In/Sec	.297 G-s	
MIA	.073 In/Sec	.423 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.080 In/Sec	.559 G-s	
FIP	.314 G-s		
FIV	.086 In/Sec	.467 G-s	
FIA	.081 In/Sec	.134 G-s	
FOH	.072 In/Sec	.452 G-s	
FOP	.194 G-s		
FOV	.334 In/Sec	.508 G-s	
FOA	.101 In/Sec	.410 G-s	

SAR14 - Combustion Air Fan W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.086 In/Sec	1.010 G-s	1120.0 RPM
MOP	.654 G-s		
MOV	.096 In/Sec	.436 G-s	
MOA	.059 In/Sec	.421 G-s	
MIH	.086 In/Sec	1.479 G-s	
MIP	.759 G-s		
MIV	.098 In/Sec	.508 G-s	
MIA	.087 In/Sec	.570 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.084 In/Sec	1.735 G-s	
FIP	.912 G-s		
FIV	.046 In/Sec	.705 G-s	
FIA	.064 In/Sec	.491 G-s	
FOH	.093 In/Sec	1.811 G-s	
FOP	.994 G-s		
FOV	.038 In/Sec	.886 G-s	
FOA	.048 In/Sec	.398 G-s	

SAR15 - Process Air Fan W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.065 In/Sec	.679 G-s	1180.0 RPM
MOP	.252 G-s		
MOV	.051 In/Sec	.233 G-s	
MOA	.049 In/Sec	.142 G-s	
MIH	1.274 In/Sec	1.969 G-s	
MIP	.568 G-s		
MIV	.050 In/Sec	.546 G-s	

	MIA	.107 In/Sec	.217 G-s	
		OVERALL LEVEL	1K-20KHz	
	FIH	.063 In/Sec	.543 G-s	
	FIP	.311 G-s		
	FIV	.033 In/Sec	.699 G-s	
	FIA	.054 In/Sec	.675 G-s	
	FOH	.107 In/Sec	1.597 G-s	
	FOP	.860 G-s		
	FOV	.050 In/Sec	.855 G-s	
	FOA	.047 In/Sec	.358 G-s	
SAR37A	- Interpass Twr Circ Pump N		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.070 In/Sec	.533 G-s	1775.0 RPM
	MOP	.302 G-s		
	MOV	.095 In/Sec	.228 G-s	
	MOA	.097 In/Sec	.132 G-s	
	MIH	.054 In/Sec	.639 G-s	
	MIP	.274 G-s		
	MIV	.097 In/Sec	.308 G-s	
	MIA	.065 In/Sec	.211 G-s	
SAR39B	- Boiler Feed H2O Pmp SW		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.041 In/Sec	.401 G-s	3575.0 RPM
	MOP	.051 G-s		
	MOV	.061 In/Sec	.241 G-s	
	MOA	.033 In/Sec	.090 G-s	
	MIH	.094 In/Sec	.810 G-s	
	MIP	.107 G-s		
	MIV	.051 In/Sec	.401 G-s	
	MIA	.032 In/Sec	.374 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.062 In/Sec	.557 G-s	
	PIP	.262 G-s		
	PIV	.072 In/Sec	.275 G-s	
	PIA	.067 In/Sec	.290 G-s	
	POH	.048 In/Sec	.452 G-s	
	POP	.162 G-s		
	POV	.046 In/Sec	.280 G-s	
	POA	.073 In/Sec	.176 G-s	
SAR39D	- Boiler Feed H2O Pmp SE		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.082 In/Sec	.228 G-s	3575.0 RPM
	MOP	.087 G-s		
	MOV	.043 In/Sec	.147 G-s	
	MOA	.049 In/Sec	.124 G-s	
	MIH	.099 In/Sec	.945 G-s	
	MIP	.056 G-s		
	MIV	.086 In/Sec	.176 G-s	
	MIA	.058 In/Sec	.307 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.147 In/Sec	.381 G-s	
	PIP	.044 G-s		
	PIV	.074 In/Sec	.180 G-s	
	PIA	.066 In/Sec	.177 G-s	

	POH	.138 In/Sec	.306 G-s	
	POP	.035 G-s		
	POV	.075 In/Sec	.192 G-s	
	POA	.239 In/Sec	.158 G-s	

SAR50A - Drying Tower Circ Pump W (28-Sep-20)

		OVERALL LEVEL	1K-20KHz	
*	PIV	.129 In/Sec	.0021 G-s	1775.0 RPM
		OVERALL LEVEL	1K-20kHz	
*	PIA	.783 In/Sec	.0024 G-s	

SAR50B - Drying Tower Circ Pump E (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.138 In/Sec	1.171 G-s	1775.0 RPM
	MOP	.674 G-s		
	MOV	.148 In/Sec	.364 G-s	
	MOA	.201 In/Sec	.257 G-s	
	MIH	.098 In/Sec	.561 G-s	
	MIP	.276 G-s		
	MIV	.180 In/Sec	.226 G-s	
	MIA	.169 In/Sec	.110 G-s	
		OVERALL LEVEL	1K-20KHz	
*	POV	.108 In/Sec	.283 G-s	
*	POA	.192 In/Sec	.208 G-s	

SAR55A - Neutralization Pump N (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.098 In/Sec	1.305 G-s	3575.0 RPM
	MOP	.117 G-s		
	MOV	.181 In/Sec	.097 G-s	
	MOA	.148 In/Sec	.437 G-s	
	MIH	.057 In/Sec	1.175 G-s	
	MIP	.524 G-s		
	MIV	.071 In/Sec	.269 G-s	
	MIA	.091 In/Sec	.196 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.105 In/Sec	.238 G-s	
	PIP	.038 G-s		
	PIV	.069 In/Sec	.159 G-s	
	PIA	.044 In/Sec	.211 G-s	

SAR55B - Neutralization Pump S (01-Feb-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.047 In/Sec	.994 G-s	3575.0 RPM
	MOP	.205 G-s		
	MOV	.269 In/Sec	.331 G-s	
	MOA	.097 In/Sec	.479 G-s	
	MIH	.082 In/Sec	1.481 G-s	
	MIP	.212 G-s		
	MIV	.101 In/Sec	.438 G-s	
	MIA	.098 In/Sec	.215 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.108 In/Sec	.256 G-s	
	PIP	.088 G-s		
	PIV	.101 In/Sec	.192 G-s	
	PIA	.148 In/Sec	.098 G-s	

SAR59A	- Scrub Twr Circ Pmp W		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.033 In/Sec	.357 G-s	1775.0 RPM
	MOP	.159 G-s		
	MOV	.048 In/Sec	.128 G-s	
	MOA	.039 In/Sec	.211 G-s	
	MIH	.030 In/Sec	.364 G-s	
	MIP	.215 G-s		
	MIV	.048 In/Sec	.222 G-s	
	MIA	.037 In/Sec	.119 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.111 In/Sec	.443 G-s	
	PIP	.355 G-s		
	PIV	.066 In/Sec	.254 G-s	
	PIA	.086 In/Sec	.151 G-s	
	POH	.069 In/Sec	.372 G-s	
	POP	.117 G-s		
	POV	.091 In/Sec	.077 G-s	
	POA	.094 In/Sec	.084 G-s	
SAR59B	- Scrub Twr Circ Pmp M		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.050 In/Sec	.522 G-s	1775.0 RPM
	MOP	.302 G-s		
	MOV	.049 In/Sec	.274 G-s	
	MOA	.049 In/Sec	.189 G-s	
	MIH	.050 In/Sec	1.154 G-s	
	MIP	.649 G-s		
	MIV	.057 In/Sec	.433 G-s	
	MIA	.041 In/Sec	.537 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.145 In/Sec	1.029 G-s	
	PIP	.594 G-s		
	PIV	.071 In/Sec	.734 G-s	
	PIA	.088 In/Sec	.582 G-s	
	POH	.162 In/Sec	.451 G-s	
	POP	.207 G-s		
	POV	.099 In/Sec	.202 G-s	
	POA	.095 In/Sec	.189 G-s	
SAR59C	- Scrub Twr Circ Pmp E		(01-Feb-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.031 In/Sec	.344 G-s	1775.0 RPM
	MOP	.018 G-s		
	MOV	.032 In/Sec	.101 G-s	
	MOA	.048 In/Sec	.029 G-s	
	MIH	.023 In/Sec	.520 G-s	
	MIP	.259 G-s		
	MIV	.031 In/Sec	.160 G-s	
	MIA	.032 In/Sec	.051 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.096 In/Sec	.516 G-s	
	PIP	.295 G-s		
	PIV	.052 In/Sec	.335 G-s	
	PIA	.054 In/Sec	.249 G-s	
	POH	.091 In/Sec	.384 G-s	
	POP	.185 G-s		

POV	.060 In/Sec	.209 G-s	
POA	.047 In/Sec	.195 G-s	

SAR54C - Weak Acid Xfer Pump S (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.197 In/Sec	.031 G-s	3575.0 RPM
MOP	.0033 G-s		
MOV	.084 In/Sec	.016 G-s	
MOA	.239 In/Sec	.025 G-s	
MIH	.204 In/Sec	.315 G-s	
MIP	.099 G-s		
MIV	.191 In/Sec	.126 G-s	
MIA	.213 In/Sec	.077 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.154 In/Sec	.262 G-s	
PIP	.0054 G-s		
PIV	.080 In/Sec	.099 G-s	
PIA	.069 In/Sec	.151 G-s	

SAR54B - Weak Acid Xfer Pump N (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.108 In/Sec	.312 G-s	3575.0 RPM
MOP	.189 G-s		
MOV	.051 In/Sec	.204 G-s	
MOA	.082 In/Sec	.165 G-s	
MIH	.098 In/Sec	.427 G-s	
MIP	.060 G-s		
MIV	.084 In/Sec	.135 G-s	
MIA	.136 In/Sec	.069 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.120 In/Sec	.586 G-s	
PIP	.115 G-s		
PIV	.085 In/Sec	.514 G-s	
PIA	.106 In/Sec	.351 G-s	

SAR 56A - N Oleum Storage Tank Feed (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.073 In/Sec	.092 G-s	1775.0 RPM
M1P	.016 G-s		
M1V	.085 In/Sec	.056 G-s	
M1A	.081 In/Sec	.032 G-s	
M2H	.073 In/Sec	.277 G-s	
M2P	.106 G-s		
M2V	.063 In/Sec	.082 G-s	
M2A	.068 In/Sec	.039 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.179 In/Sec	.208 G-s	
P1P	.120 G-s		
P1V	.029 In/Sec	.081 G-s	
P1A	.064 In/Sec	.082 G-s	
P2H	.084 In/Sec	.143 G-s	
P2P	.078 G-s		
P2V	.030 In/Sec	.077 G-s	
P2A	.079 In/Sec	.079 G-s	

SAR 56B - M Oleum Storage Tank Feed (01-Feb-21)

	OVERALL LEVEL	1K-20kHz

M1H	.097 In/Sec	.159 G-s	1775.0 RPM
M1P	.077 G-s		
M1V	.187 In/Sec	.052 G-s	
M1A	.120 In/Sec	.069 G-s	
M2H	.093 In/Sec	.334 G-s	
M2P	.080 G-s		
M2V	.143 In/Sec	.093 G-s	
M2A	.129 In/Sec	.062 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.134 In/Sec	.173 G-s	
P1P	.111 G-s		
P1V	.083 In/Sec	.055 G-s	
P1A	.070 In/Sec	.060 G-s	
P2H	.073 In/Sec	.108 G-s	
P2P	.019 G-s		
P2V	.089 In/Sec	.029 G-s	
P2A	.064 In/Sec	.026 G-s	

SAR 56C - S Oleum Storage Tank Feed (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.078 In/Sec	.275 G-s	1775.0 RPM
M1P	.075 G-s		
M1V	.039 In/Sec	.286 G-s	
M1A	.054 In/Sec	.110 G-s	
M2H	.041 In/Sec	.293 G-s	
M2P	.321 G-s		
M2V	.059 In/Sec	.113 G-s	
M2A	.063 In/Sec	.246 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.115 In/Sec	.098 G-s	
P1P	.054 G-s		
P1V	.048 In/Sec	.053 G-s	
P1A	.038 In/Sec	.045 G-s	
P2H	.150 In/Sec	.119 G-s	
P2P	.055 G-s		
P2V	.049 In/Sec	.097 G-s	
P2A	.040 In/Sec	.079 G-s	

SAR57B - Oleum Twr Circ Pump E (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.068 In/Sec	.263 G-s	1775.0 RPM
MOP	.130 G-s		
MOV	.068 In/Sec	.111 G-s	
MOA	.079 In/Sec	.037 G-s	
MIH	.051 In/Sec	.414 G-s	
MIP	.221 G-s		
MIV	.076 In/Sec	.212 G-s	
MIA	.069 In/Sec	.082 G-s	

SAR61NM - Spent Acid Circ Pmp N (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MIH	.014 In/Sec	.149 G-s	1775.0 RPM
MIP	.054 G-s		
MIV	.039 In/Sec	.061 G-s	
MIA	.025 In/Sec	.048 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.017 In/Sec	.069 G-s	

PIP	.022 G-s		
PIV	.044 In/Sec	.128 G-s	
PIA	.027 In/Sec	.057 G-s	

SAR63EM - Spent Acid Feed Pmp E (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.038 In/Sec	.256 G-s	3575.0 RPM
MOP	.124 G-s		
MOV	.047 In/Sec	.103 G-s	
MOA	.040 In/Sec	.052 G-s	
MIH	.042 In/Sec	.354 G-s	
MIP	.140 G-s		
MIV	.067 In/Sec	.081 G-s	
MIA	.039 In/Sec	.088 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.067 In/Sec	.178 G-s	
PIP	.0053 G-s		
PIV	.060 In/Sec	.121 G-s	
PIA	.034 In/Sec	.077 G-s	
POH	.057 In/Sec	.594 G-s	
POP	.043 G-s		
POV	.065 In/Sec	.339 G-s	
POA	.046 In/Sec	.298 G-s	

SAR63WM - Spent Acid Feed Pmp W (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.030 In/Sec	.245 G-s	3575.0 RPM
MOP	.013 G-s		
MOV	.028 In/Sec	.084 G-s	
MOA	.017 In/Sec	.053 G-s	
MIH	.030 In/Sec	.265 G-s	
MIP	.017 G-s		
MIV	.040 In/Sec	.046 G-s	
MIA	.019 In/Sec	.042 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.053 In/Sec	.297 G-s	
PIP	.058 G-s		
PIV	.053 In/Sec	.216 G-s	
PIA	.049 In/Sec	.306 G-s	

SAR66A - Vertical Cool Twr Pump #1 (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.456 In/Sec	.203 G-s	1195.0 RPM
MOP	.094 G-s		
MOV	.230 In/Sec	.101 G-s	
MOA	.523 In/Sec	.092 G-s	
MIH	.202 In/Sec	.136 G-s	
MIP	.080 G-s		
MIV	.258 In/Sec	.058 G-s	
MIA	.191 In/Sec	.055 G-s	

SAR66B - Vertical Cool Twr Pump #2 (01-Feb-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.241 In/Sec	.148 G-s	1195.0 RPM
MOP	.072 G-s		
MOV	.165 In/Sec	.137 G-s	
MOA	.451 In/Sec	.119 G-s	

	MIH	.121 In/Sec	.194 G-s	
	MIP	.095 G-s		
	MIV	.170 In/Sec	.125 G-s	
	MIA	.167 In/Sec	.077 G-s	
SAR66C	- Vertical Cool Twr Pump #3	(01-Feb-21)		
		OVERALL LEVEL	1K-20kHz	
	MOH	.416 In/Sec	.113 G-s	1195.0 RPM
	MOP	.049 G-s		
	MOV	.102 In/Sec	.028 G-s	
	MOA	.257 In/Sec	.048 G-s	
	MIH	.177 In/Sec	.059 G-s	
	MIP	.033 G-s		
	MIV	.127 In/Sec	.036 G-s	
	MIA	.089 In/Sec	.058 G-s	
SAR66D	- Vertical Cool Twr Pump #4	(01-Feb-21)		
		OVERALL LEVEL	1K-20kHz	
	MOH	.095 In/Sec	.074 G-s	1195.0 RPM
	MOP	.039 G-s		
	MOV	.068 In/Sec	.055 G-s	
	MOA	.084 In/Sec	.082 G-s	
	MIH	.055 In/Sec	.061 G-s	
	MIP	.031 G-s		
	MIV	.068 In/Sec	.053 G-s	
	MIA	.065 In/Sec	.036 G-s	
SAR78B	- Cooling Tower Fan #2	(02-Feb-21)		
		OVERALL LEVEL	1K-20kHz	
	MOV	.076 In/Sec	.139 G-s	1775.0 RPM
	MOA	.200 In/Sec	.135 G-s	
SAR128	- Oleum Fume Scrub Blwr	(01-Feb-21)		
		OVERALL LEVEL	1K-20kHz	
	MIH	.091 In/Sec	.204 G-s	3575.0 RPM
	MIP	.013 G-s		
	MIV	.056 In/Sec	.131 G-s	
	MIA	.031 In/Sec	.074 G-s	
		OVERALL LEVEL	1K-20KHz	
	FIH	.088 In/Sec	.320 G-s	
	FIP	.047 G-s		
	FIV	.036 In/Sec	.270 G-s	
	FIA	.065 In/Sec	.134 G-s	
	FOH	.094 In/Sec	.499 G-s	
	FOP	.075 G-s		
	FOV	.117 In/Sec	.207 G-s	
	FOA	.191 In/Sec	.101 G-s	
SAR135	- Spent Acid Circ Pmp E	(01-Feb-21)		
		OVERALL LEVEL	1K-20kHz	
	MOH	.041 In/Sec	.192 G-s	1775.0 RPM
	MOP	.090 G-s		
	MOV	.037 In/Sec	.085 G-s	
	MOA	.069 In/Sec	.025 G-s	
	MIH	.037 In/Sec	.180 G-s	
	MIP	.080 G-s		
	MIV	.039 In/Sec	.056 G-s	

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       MIA              .059 In/Sec       .033 G-s
                       OVERALL LEVEL     1K-20KHz
       PIH              .094 In/Sec       .134 G-s
       PIP              .095 G-s
       PIV              .035 In/Sec       .087 G-s
       PIA              .057 In/Sec       .087 G-s
       POH              .118 In/Sec       .128 G-s
       POP              .023 G-s
       POV              .035 In/Sec       .058 G-s
       POA              .036 In/Sec       .053 G-s

SAR137B    - Contain Pit PumpS             (01-Feb-21)
                       OVERALL LEVEL     1K-20kHz
       MOH             1.347 In/Sec       .269 G-s        1775.0 RPM
       MOP              .140 G-s
       MOV              .121 In/Sec       .140 G-s
       MOA              .120 In/Sec       .098 G-s
     * MIH              .050 In/Sec       .217 G-s
     * MIP              .116 G-s
     * MIV              .147 In/Sec       .087 G-s
     * MIA              .079 In/Sec       .128 G-s

SAR156     - Spent Acid Feed Booster N     (01-Feb-21)
                       OVERALL LEVEL     1K-20kHz
       MIH              .025 In/Sec       .187 G-s        1140.0 RPM
       MIP              .114 G-s
       MIV              .028 In/Sec       .070 G-s
       MIA              .030 In/Sec       .078 G-s
                       OVERALL LEVEL     1K-20KHz
       PIH              .109 In/Sec       .060 G-s
       PIP              .057 G-s
       PIV              .016 In/Sec       .024 G-s
       PIA              .068 In/Sec       .028 G-s

SAR222     - Oleum Twr Drain Pmp           (21-Aug-20)
                       OVERALL LEVEL     1K-20kHz
       MOH              .071 In/Sec       .494 G-s        3575.0 RPM
       MOP             .0064 G-s
       MOV              .098 In/Sec       .378 G-s
       MOA              .088 In/Sec       .496 G-s
       MIH              .059 In/Sec       .526 G-s
       MIP              .013 G-s
       MIV              .065 In/Sec       .341 G-s
       MIA              .078 In/Sec       .428 G-s
                       OVERALL LEVEL     1K-20KHz
       PIH              .216 In/Sec      3.263 G-s
       PIP              .021 G-s
       PIV              .182 In/Sec      2.081 G-s
     * POH              .157 In/Sec      2.925 G-s
     * POP              .018 G-s
     * POV              .150 In/Sec      2.260 G-s
       POA              .265 In/Sec      2.767 G-s

SAR231A    - Final Twr Circ Pump N         (01-Feb-21)
                       OVERALL LEVEL     1K-20kHz
       MOH              .078 In/Sec       .944 G-s        1775.0 RPM
       MOP              .349 G-s
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MOV	.065 In/Sec	.427 G-s	
MOA	.128 In/Sec	.235 G-s	
MIH	.050 In/Sec	.788 G-s	
MIP	.261 G-s		
MIV	.052 In/Sec	.189 G-s	
MIA	.105 In/Sec	.242 G-s	

SAR233 - InterpassTwr Drain Pmp1 (21-Aug-20)

	OVERALL LEVEL	1K-20kHz	
MOH	.074 In/Sec	.101 G-s	3575.0 RPM
MOP	.0016 G-s		
MOV	.089 In/Sec	.054 G-s	
MOA	.032 In/Sec	.106 G-s	
MIH	.070 In/Sec	.080 G-s	
MIP	.0029 G-s		
MIV	.066 In/Sec	.042 G-s	
MIA	.039 In/Sec	.136 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.026 In/Sec	.027 G-s	
PIP	.0016 G-s		
PIV	.030 In/Sec	.055 G-s	
PIA	.032 In/Sec	.031 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