HI-SPEED INDUSTRIAL SERVICE

MILLINGTON, TN

January 5, 2021

Mitsubishi Chemicals

Subject: January 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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Observations

ACN 07C ACH Product Feed Pump South
The vibration data still shows what looks to be outer race defects in the motor inboard bearing and non-synchronous frequencies in the inboard pump bearings which are also most likely bearing defect harmonics. There could be a little cavitation also. We will keep an eye on this unit in the future. No action is required at this time. **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. **Rated a Class II 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 vertical 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**

ACN22 ACN Ref Booster Pump #2
The motor and pump axial vibrations are still elevated 4x shaft speed. We suspect a pump issue. Ensure the pump is operating properly in the correct point on the performance curve. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. **Rated a Class I Defect.**

ACN28B ACN Fan East
The motor drive end vertical vibration is still elevated at shaft speed. Inspect for loose fasteners and coupling or alignment issues. **Rated a Class I Defect.**

ACN29C ACN Cooling Tower Pump South
Pump bearing data still 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.**

ACN36 ACN West Tank Circulation Pump
The pump inboard horizontal and axial vibrations are still elevated, especially at 4x shaft speed. We suspect an impeller vane pass vibration, or possibly a coupling issue. Check to make sure the pump flow and pressure are at design levels. Inspect the coupling also. **Rated a Class I Defect.**

MON 36 Irganox Mix/Feed Pump
Recent increase in harmonic vibrations in the pump. Need to confirm speed for further analysis. Inspect drivetrain. **Rated a Class II Defect.**

MON 40 Acetone Pump
The motor inboard bearing vibrations have increased but do not necessarily match database defect frequencies. We will keep a close eye on this unit. **Rated a Class I Defect.**

MON 63E LBS Side Stream Pump East
Data still shows non-synchronous harmonic vibration peaks in the ODE motor bearing. No immediate concern yet. **Rated a Class I Defect.**

MON 63W LBS Side Stream Pump West
Vibration data still shows synchronous and non-synchronous peaks in the spectrum for the motor bearings. We suspect bearing defects are present; however the database does not have the bearing defect frequencies in the analysis parameter fault frequency sets. Ensure adequate bearing lubrication if applicable. Prepare to change out the motor in the future. **Rated a Class II Defect.**

MON 65 Amide Reactor Circulation Primary
The motor is still showing a shaft speed vibration in the vertical measurements. Unit is mounted on spring isolators which could affect the amplitudes. No action required. **Rated a Class I Defect.**

MON 84 WCM Tails Pump South
The pump drive end vibrations are elevated at shaft speed. Inspect for loose fasteners and coupling or alignment issues. **Rated a Class I Defect.**

MON132 Decanter Feed Pump Spare
The pump inboard vertical inboard vibration is still slightly elevated 1x shaft speed. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. **Rated a Class I Defect.**

SAR 03 Turbine Compressor Main Blower
Vibrations in the compressor are normal. Nonrated this month.

SAR 10 Process Air Fan E
The fan bearings were recently replaced, and the high 1x RPM vibration has dropped significantly, however, the new bearings are showing excessive vibrations in the data. This could be due to many factors including excessive belt tension, sheave misalignment, cocked bearings, excessive axial loading, incorrect clearances, poor lubrication, lubrication contamination, improper lubrication, or possibly defective bearings. Inspect for these issues as time allows. **Rated a Class II Defect.**

SAR1 13 Combustion Air Fan East
The fan bearing data shows what looks to be shaft speed harmonics which could indicate possible looseness. We need to confirm the shaft speed. Check all fasteners and perform a lift check on the fan shaft. **Rated a Class I Defect.**

SAR 14 Combustion Air Fan West
The data still indicates distress in the inboard motor bearing. We only see about 1.5 g's RMS overall for the horizontal measurements. The fan bearings show a raised noise floor in the acceleration spectrum and impacting in the time domain as well as a few low amplitude harmonics of the fundamental speed. This could be distress in the bearings, lubrication, mechanical looseness, or some other anomaly. Ensure the bearings are lubricated if applicable. We will keep an eye on this unit in the future. No other action is required at this time. **Rated a Class I Defect.**

SAR 39A Boiler Feed Water Pump
The unit was replaced recently. We now see an elevated shaft speed vibration in the motor drive end vertical. Inspect all fasteners, coupling and shaft alignment. **Rated a Class I Defect.**

SAR 39D Boiler Feed Water Pump
Inboard motor bearing is in some distress. Ensure proper lubrication if applicable. **Rated a Class II Defect.**

SAR55B Neutralization Pump South
The data continues to show signs of early distress in the inboard motor bearing. Ensure the motor bearings are lubricated if applicable. We will keep an eye on this unit in the future. **Rated a Class I Defect.**

SAR 63 EM Spent Acid Feed Pump E
The pump inboard bearing vibration data still indicates slight issues that are most like bearing defects. Ensure the bearings are lubricated. **Rated a Class I Defect.**

SAR 66 B, C Vertical Cooling Tower Pumps
These units still have high vibrations at near ½" per second velocity overall. Vertical pumps are susceptible to imbalance and resonance. Some sheet metal covers prevent good bearing data to be collected. Inspect units for fastener and structure issues. Trim balancing might help. **Rated a Class I Defect.**

SAR78D Cooling Tower Fan #4
Motor speed vibration in the motor inboard vertical and axial has dropped. The acceleration in the outboard motor bearing has increased and could indicate early bearing distress. We will watch carefully for changes going forward. **Rated a Class I Defect.**

SAR 137A Contain Pit Pump North
The 5x RPM vibration has increased slightly in the motor. We suspect an impeller pass vibration due to wear or flow issues. Clean/inspect as time allows. **Rated a Class I Defect.**

SAR161A-N SAR Cool Tower Fan W
There has been a gradual increase in the motor axial vibration at 1x, 2x RPM of motor shaft speed. Check the coupling and alignment and all fasteners. **Rated a Class I Defect.**

Previously reported equipment but not running this survey

ACN 13A #2 Kettle Transfer Pump North
Vibration data still shows non-synchronous peaks in the spectrum for the motor bearings. We suspect race bearing defects are present since the frequencies match the overlay. Ensure adequate bearing lubrication if applicable. Prepare to change out the motor. **Rated a Class III Defect.**

ACN29A ACN Cooling Tower Pump North
Pump data continues to suggest cavitation. Check for proper pump operation. **Rated a Class I Defect.**

MON 45 EM ACH Ref Brine Pump East
Data for the motor outboard bearing shows possible outer race defects. We will watch this unit carefully going forward and recommend action as required. **Rated a Class II Defect.**

MON 55 MM Hut Pump Mid
Pump vibration data shows what looks to be cavitation. Check for proper operation. **Rated a Class I Defect.**

MON 85E Water Treatment Pump East
The pump inboard horizontal vibration is slightly elevated at 5x shaft speed. Ensure the pump is operating properly in the correct point on the performance curve. **Rated a Class I Defect.**

SAR 38 Drying Tower Pump-out
The pump inboard horizontal vibration is still slightly elevated, especially at 1x shaft speed. Inspect the unit for loose fasteners, alignment, and coupling wear as time allows. Also ensure the pump is operating properly in the correct point on the performance curve. **Rated a Class I Defect.**

SAR 39C Boiler Feed Water Pump Northeast
We still see a slight shaft speed vibration in the motor outboard. Inspect the motor and drivetrain as time allows. **Rated a Class I Defect.**

SAR 50A Drying Tower Circulation Pump West
We see a slight increase of the shaft speed vibration in the motor. Inspect the motor and motor cooling fan, and drivetrain as time allows. **Rated a Class I Defect.**

SAR78A Cooling Tower Fan #1
The motor continues have an elevated 1x RPM vibration in the axial measurements. Inspect the fasteners, structure, coupling and alignment as time allows. **Rated a Class I Defect.**

SAR222 Oleum Tower Drain Pump
Inboard pump bearing still has multiple synchronous and non-synchronous vibration peaks. Overall acceleration is over 3g's RMS. The bearing is in distress. Ensure they are lubricated properly. We will watch carefully going forward. **Rated a Class II Defect.**

January 2022 survey data

Abbreviated Last Measurement Summary
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Database: Lucite Memphis MMA.rbm
Area: MMA
Report Date: 05-Jan-22 08:16

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	(14-Dec-21)		
	OVERALL LEVEL	1K-20kHz	

MOH	.030 In/Sec	.261 G-s	1175.0 RPM
MOP	.136 G-s		
MOV	.034 In/Sec	.085 G-s	
MOA	.035 In/Sec	.023 G-s	
MIH	.025 In/Sec	.269 G-s	
MIP	.180 G-s		
MIV	.032 In/Sec	.147 G-s	
MIA	.027 In/Sec	.078 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.098 In/Sec	.707 G-s	
PIP	.655 G-s		
PIV	.078 In/Sec	.515 G-s	
PIA	.074 In/Sec	.521 G-s	
POH	.053 In/Sec	1.140 G-s	
POP	1.074 G-s		
POV	.086 In/Sec	.465 G-s	
POA	.067 In/Sec	.331 G-s	

ACN05B - Topp Column Xfer Pmp E (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.066 In/Sec	1.579 G-s	3575.0 RPM
MOP	.223 G-s		
MOV	.051 In/Sec	.339 G-s	
MOA	.032 In/Sec	.250 G-s	
MIH	.079 In/Sec	.988 G-s	
MIP	.085 G-s		
MIV	.061 In/Sec	.192 G-s	
MIA	.041 In/Sec	.072 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.127 In/Sec	1.183 G-s	
PIP	.308 G-s		
PIV	.131 In/Sec	.518 G-s	
PIA	.101 In/Sec	.381 G-s	

ACN07B - ACH Prod Feed Pump M (21-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.075 In/Sec	.871 G-s	3575.0 RPM
MOP	.107 G-s		
MOV	.094 In/Sec	.177 G-s	
MOA	.079 In/Sec	.132 G-s	
MIH	.083 In/Sec	1.047 G-s	
MIP	.096 G-s		
MIV	.072 In/Sec	.185 G-s	
MIA	.071 In/Sec	.171 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.232 In/Sec	1.567 G-s	
PIP	.304 G-s		
PIV	.182 In/Sec	.719 G-s	
PIA	.116 In/Sec	.785 G-s	

ACN07C - ACH Prod Feed Pump S (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.088 In/Sec	1.210 G-s	3575.0 RPM
MOP	.469 G-s		
MOV	.119 In/Sec	.567 G-s	
MOA	.124 In/Sec	.389 G-s	
MIH	.085 In/Sec	2.657 G-s	

	MIP	.660 G-s		
	MIV	.083 In/Sec	.806 G-s	
	MIA	.065 In/Sec	.624 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.185 In/Sec	2.037 G-s	
	PIP	.283 G-s		
	PIV	.197 In/Sec	.799 G-s	
	PIA	.149 In/Sec	1.155 G-s	

ACN08 - ACH Blend Tank (13-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.068 In/Sec	.697 G-s	3575.0 RPM
	MOP	.036 G-s		
	MOV	.168 In/Sec	.235 G-s	
	MOA	.126 In/Sec	.186 G-s	
	MIH	.046 In/Sec	1.125 G-s	
	MIP	.121 G-s		
	MIV	.158 In/Sec	.391 G-s	
	MIA	.098 In/Sec	.131 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.083 In/Sec	.469 G-s	
	PIP	.120 G-s		
	PIV	.057 In/Sec	.370 G-s	
	PIA	.071 In/Sec	.165 G-s	

ACN09 - ACH Flash Tank Pump (14-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.110 In/Sec	.525 G-s	3575.0 RPM
	MOP	.038 G-s		
	MOV	.085 In/Sec	.193 G-s	
	MOA	.088 In/Sec	.157 G-s	
*	MIV	.068 In/Sec	.831 G-s	
*	MIA	.108 In/Sec	1.139 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.057 In/Sec	.263 G-s	
	PIP	.049 G-s		
	PIV	.053 In/Sec	.294 G-s	
	PIA	.047 In/Sec	.184 G-s	

ACN10 - #1 Kettle Circ Pmp (14-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.022 In/Sec	.503 G-s	1775.0 RPM
	MOP	.267 G-s		
	MOV	.035 In/Sec	.289 G-s	
	MOA	.036 In/Sec	.189 G-s	
	MIH	.025 In/Sec	.613 G-s	
	MIP	.323 G-s		
	MIV	.038 In/Sec	.274 G-s	
	MIA	.014 In/Sec	.184 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.047 In/Sec	.455 G-s	
	PIP	.282 G-s		
	PIV	.068 In/Sec	.210 G-s	
	PIA	.049 In/Sec	.183 G-s	

ACN11 - #2 Kettle Circ Pump (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	

MOH	.023 In/Sec	.516 G-s	1775.0 RPM
MOP	.286 G-s		
MOV	.046 In/Sec	.133 G-s	
MOA	.045 In/Sec	.117 G-s	
MIH	.024 In/Sec	.926 G-s	
MIP	.547 G-s		
MIV	.053 In/Sec	.087 G-s	
MIA	.038 In/Sec	.107 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.045 In/Sec	.288 G-s	
PIP	.167 G-s		
PIV	.087 In/Sec	.227 G-s	
PIA	.030 In/Sec	.161 G-s	
* POV	.104 In/Sec	.200 G-s	
* POA	.038 In/Sec	.253 G-s	

ACN12 - #1 Kettle Xfer Pump (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.046 In/Sec	.262 G-s	3575.0 RPM
MOP	.014 G-s		
MOV	.044 In/Sec	.177 G-s	
MOA	.070 In/Sec	.068 G-s	
MIH	.047 In/Sec	.263 G-s	
MIP	.038 G-s		
MIV	.070 In/Sec	.234 G-s	
MIA	.054 In/Sec	.133 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.068 In/Sec	.156 G-s	
PIP	.017 G-s		
PIV	.121 In/Sec	.219 G-s	
PIA	.055 In/Sec	.222 G-s	

ACN13B - #2 Kettle Xfer Pump S (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.074 In/Sec	2.481 G-s	3575.0 RPM
MOP	.162 G-s		
MOV	.070 In/Sec	.742 G-s	
MOA	.044 In/Sec	.430 G-s	
MIH	.082 In/Sec	3.580 G-s	
MIP	1.057 G-s		
MIV	.098 In/Sec	.872 G-s	
MIA	.041 In/Sec	.847 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.071 In/Sec	.483 G-s	
PIP	.052 G-s		
PIV	.089 In/Sec	.117 G-s	
PIA	.058 In/Sec	.165 G-s	

ACN14 - ACH Off Grade Pump (21-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.142 In/Sec	2.093 G-s	3575.0 RPM
MOP	.469 G-s		
MOV	.207 In/Sec	.594 G-s	
MOA	.274 In/Sec	.432 G-s	
MIH	.193 In/Sec	2.962 G-s	
MIP	.157 G-s		
MIV	.397 In/Sec	.976 G-s	

	MIA	.276 In/Sec	1.273 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.227 In/Sec	.472 G-s	
	PIP	.065 G-s		
	PIV	.154 In/Sec	.098 G-s	
	PIA	.138 In/Sec	.136 G-s	
ACN16	- ACH Scrb Circ PumpN		(24-Nov-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		(15-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.018 In/Sec	.333 G-s	1780.0 RPM
	MOP	.027 G-s		
	MOV	.019 In/Sec	.153 G-s	
	MOA	.011 In/Sec	.035 G-s	
	MIH	.027 In/Sec	.318 G-s	
	MIP	.032 G-s		
	MIV	.022 In/Sec	.226 G-s	
	MIA	.014 In/Sec	.104 G-s	
	IIH	.185 In/Sec		
	IIP	.714 G-s		
	IIV	.095 In/Sec		
	IIA	.138 In/Sec		
	OOH	.184 In/Sec		
	OOP	1.346 G-s		
	OOV	.061 In/Sec		
	OOA	.109 In/Sec		
	CIH	.081 In/Sec		
	CIP	.566 G-s		
	CIV	.061 In/Sec		
	CIA	.117 In/Sec		
	COH	.050 In/Sec		
	COP	.303 G-s		
	COV	.055 In/Sec		
	COA	.095 In/Sec		
ACN17DP	- DP Comp		(10-Dec-21)	
		OVERALL LEVEL		
	21	.028 Mils		1775.0 RPM
	22	.186 Mils		
	27	.015 Mils		
	23	.070 Mils		
	24	.061 Mils		
ACN22	- ACN Ref Unit Booster #2		(15-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.098 In/Sec	.502 G-s	3575.0 RPM
	MOP	.034 G-s		
	MOV	.119 In/Sec	.099 G-s	
	MOA	.250 In/Sec	.065 G-s	
	MIH	.126 In/Sec	.295 G-s	
	MIP	.0098 G-s		
	MIV	.149 In/Sec	.136 G-s	
	MIA	.203 In/Sec	.061 G-s	

		OVERALL LEVEL	1K-20KHz	
	PIH	.074 In/Sec	.541 G-s	
	PIP	.224 G-s		
	PIV	.229 In/Sec	.508 G-s	
	PIA	.294 In/Sec	.315 G-s	
	POH	.132 In/Sec	.413 G-s	
	POP	.079 G-s		
	POV	.155 In/Sec	.384 G-s	
	POA	.270 In/Sec	.188 G-s	
ACN23	- ACH Scrb Circ Pump S		(14-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.025 In/Sec	.293 G-s	1780.0 RPM
	MOP	.143 G-s		
	MOV	.039 In/Sec	.316 G-s	
	MOA	.032 In/Sec	.237 G-s	
	MIH	.021 In/Sec	.446 G-s	
	MIP	.239 G-s		
	MIV	.050 In/Sec	.474 G-s	
	MIA	.028 In/Sec	.294 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.084 In/Sec	.363 G-s	
	PIP	.295 G-s		
	PIV	.112 In/Sec	.174 G-s	
	PIA	.064 In/Sec	.203 G-s	
ACN28B	- ACN Fan E		(13-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.231 In/Sec	.956 G-s	1775.0 RPM
	MOP	.310 G-s		
	MOV	.223 In/Sec	.236 G-s	
	MOA	.171 In/Sec	.214 G-s	
	MIH	.324 In/Sec	1.131 G-s	
	MIP	.360 G-s		
	MIV	.549 In/Sec	.192 G-s	
	MIA	.133 In/Sec	.101 G-s	
ACN28BDP	- Cooling Twr Fan E		(10-Dec-21)	
		OVERALL LEVEL		
	26	.338 Mils		1775.0 RPM
ACN29A	- ACN Cool Twr Pump N		(13-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.063 In/Sec	1.035 G-s	1775.0 RPM
	MOP	.153 G-s		
	MOV	.050 In/Sec	.434 G-s	
	MOA	.037 In/Sec	.305 G-s	
	MIH	.067 In/Sec	1.030 G-s	
	MIP	.124 G-s		
	MIV	.085 In/Sec	1.141 G-s	
	MIA	.062 In/Sec	.548 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.234 In/Sec	.730 G-s	
	PIP	.195 G-s		
	PIV	.098 In/Sec	.345 G-s	
	PIA	.113 In/Sec	.264 G-s	
	POH	.098 In/Sec	1.131 G-s	

	POP	.760 G-s		
	POV	.083 In/Sec	.317 G-s	
	POA	.122 In/Sec	.340 G-s	
ACN28ADP	- Cooling Twr Fan W		(10-Dec-21)	
		OVERALL LEVEL		
	28	.027 Mils		1775.0 RPM
ACN29B	- ACN Cool Twr Pump M		(13-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.054 In/Sec	.740 G-s	1775.0 RPM
	MOP	.340 G-s		
	MOV	.062 In/Sec	.277 G-s	
	MOA	.054 In/Sec	.195 G-s	
	MIH	.056 In/Sec	.917 G-s	
	MIP	.288 G-s		
	MIV	.071 In/Sec	.259 G-s	
	MIA	.052 In/Sec	.162 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.132 In/Sec	.774 G-s	
	PIP	.490 G-s		
	PIV	.080 In/Sec	.302 G-s	
	PIA	.103 In/Sec	.196 G-s	
	POH	.085 In/Sec	.984 G-s	
	POP	.799 G-s		
	POV	.100 In/Sec	.348 G-s	
	POA	.097 In/Sec	.383 G-s	
ACN29C	- ACN Cool Twr Pump S		(13-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.053 In/Sec	.556 G-s	1775.0 RPM
	MOP	.192 G-s		
	MOV	.094 In/Sec	.193 G-s	
	MOA	.044 In/Sec	.131 G-s	
	MIH	.044 In/Sec	.482 G-s	
	MIP	.213 G-s		
	MIV	.075 In/Sec	.254 G-s	
	MIA	.042 In/Sec	.321 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.155 In/Sec	1.034 G-s	
	PIP	.572 G-s		
	PIV	.161 In/Sec	1.031 G-s	
	PIA	.155 In/Sec	1.880 G-s	
	POH	.096 In/Sec	2.087 G-s	
	POP	.493 G-s		
	POV	.113 In/Sec	.567 G-s	
	POA	.111 In/Sec	.468 G-s	
ACN30	- ACH Scrubber Xfer Pmp		(14-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.060 In/Sec	.317 G-s	1780.0 RPM
	MOP	.211 G-s		
	MOV	.067 In/Sec	.239 G-s	
	MOA	.149 In/Sec	.126 G-s	
	MIH	.077 In/Sec	.706 G-s	
	MIP	.424 G-s		
	MIV	.120 In/Sec	.269 G-s	

MIA	.125 In/Sec	.176 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.068 In/Sec	.122 G-s	
PIP	.074 G-s		
PIV	.078 In/Sec	.094 G-s	
PIA	.057 In/Sec	.114 G-s	
POH	.051 In/Sec	.160 G-s	
POP	.107 G-s		
POV	.052 In/Sec	.127 G-s	
POA	.072 In/Sec	.026 G-s	

ACN36 - ACH Neut Tank Circ Pmp (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MIH	.064 In/Sec	.755 G-s	3575.0 RPM
MIP	.147 G-s		
MIV	.097 In/Sec	.249 G-s	
MIA	.070 In/Sec	.186 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.335 In/Sec	.197 G-s	
PIP	.061 G-s		
PIV	.129 In/Sec	.280 G-s	
PIA	.477 In/Sec	.134 G-s	

MON 32A - ARC Reflux Pmp N (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
M1V	.131 In/Sec	.210 G-s	3520.0 RPM
M1A	.061 In/Sec	.061 G-s	
M2H	.063 In/Sec	.372 G-s	
M2P	.037 G-s		
M2V	.103 In/Sec	.195 G-s	
M2A	.070 In/Sec	.067 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.073 In/Sec	.582 G-s	
P1P	.050 G-s		
P1V	.141 In/Sec	.315 G-s	
P1A	.119 In/Sec	.279 G-s	
P2H	.115 In/Sec	.318 G-s	
P2P	.052 G-s		
P2V	.142 In/Sec	.233 G-s	
P2A	.121 In/Sec	.209 G-s	
	OVERALL LEVEL	1K-20kHz	
M1H	.100 In/Sec	.350 G-s	
M1P	.039 G-s		

MON 32B - ARC Reflux Pmp S (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.061 In/Sec	.288 G-s	3520.0 RPM
M1P	.091 G-s		
M1V	.076 In/Sec	.209 G-s	
M1A	.051 In/Sec	.080 G-s	
M2H	.043 In/Sec	.318 G-s	
M2P	.075 G-s		
M2V	.079 In/Sec	.112 G-s	
M2A	.048 In/Sec	.053 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.243 In/Sec	.551 G-s	
P1P	.087 G-s		

	P1V	.181 In/Sec	.593 G-s	
	P1A	.147 In/Sec	.719 G-s	
	P2H	.156 In/Sec	.772 G-s	
	P2P	.110 G-s		
	P2V	.192 In/Sec	.543 G-s	
	P2A	.274 In/Sec	.510 G-s	

MON36 - Irganox Mix/Feed Pump (15-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.096 In/Sec	.244 G-s	1750.0 RPM
	MOP	.103 G-s		
	MOV	.054 In/Sec	.200 G-s	
	MOA	.044 In/Sec	.327 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	.093 In/Sec		
	IIP	.314 G-s		
	IIV	.067 In/Sec		
	IIA	.059 In/Sec		
		OVERALL LEVEL	1K-20KHz	
	POH	.121 In/Sec	.962 G-s	
	POP	.640 G-s		
	POV	.137 In/Sec	1.438 G-s	
	POA	.135 In/Sec	.887 G-s	

MON38A - LBS Reflux Pmp S (15-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.039 In/Sec	.288 G-s	3575.0 RPM
	MOP	.033 G-s		
	MOV	.039 In/Sec	.143 G-s	
	MOA	.042 In/Sec	.059 G-s	
	MIH	.030 In/Sec	.568 G-s	
	MIP	.088 G-s		
	MIV	.066 In/Sec	.093 G-s	
	MIA	.039 In/Sec	.062 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.066 In/Sec	.674 G-s	
	PIP	.109 G-s		
	PIV	.066 In/Sec	.618 G-s	
	PIA	.063 In/Sec	.248 G-s	

MON38B - LBS Reflux Pmp N (15-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.182 In/Sec	.641 G-s	3575.0 RPM
	MOP	.082 G-s		
	MOV	.124 In/Sec	.150 G-s	
	MOA	.069 In/Sec	.134 G-s	
	MIH	.131 In/Sec	.516 G-s	
	MIP	.060 G-s		
	MIV	.118 In/Sec	.073 G-s	
	MIA	.059 In/Sec	.062 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.111 In/Sec	.815 G-s	
	PIP	.161 G-s		
	PIV	.134 In/Sec	.493 G-s	

PIA	.099 In/Sec	.351 G-s	

MON38CNM - LBS Tails Pump N (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.050 In/Sec	.459 G-s	3575.0 RPM
MOP	.061 G-s		
MOV	.057 In/Sec	.182 G-s	
MOA	.054 In/Sec	.106 G-s	
MIH	.051 In/Sec	.914 G-s	
MIP	.151 G-s		
MIV	.053 In/Sec	.238 G-s	
MIA	.045 In/Sec	.135 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.065 In/Sec	.586 G-s	
PIP	.059 G-s		
PIV	.058 In/Sec	.397 G-s	
PIA	.055 In/Sec	.273 G-s	

MON38CSM - LBS Tails Pump S (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.038 In/Sec	.302 G-s	3575.0 RPM
MOP	.043 G-s		
MOV	.044 In/Sec	.072 G-s	
MOA	.034 In/Sec	.063 G-s	
MIH	.040 In/Sec	.555 G-s	
MIP	.073 G-s		
MIV	.037 In/Sec	.168 G-s	
MIA	.029 In/Sec	.140 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.099 In/Sec	.364 G-s	
PIP	.072 G-s		
PIV	.068 In/Sec	.251 G-s	
PIA	.055 In/Sec	.115 G-s	

MON40 - Acetone Pump (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.034 In/Sec	1.097 G-s	3575.0 RPM
MOP	.161 G-s		
MOV	.055 In/Sec	.474 G-s	
MOA	.045 In/Sec	.383 G-s	
MIH	.067 In/Sec	2.599 G-s	
MIP	.494 G-s		
MIV	.065 In/Sec	.373 G-s	
MIA	.060 In/Sec	.230 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.170 In/Sec	.731 G-s	
PIP	.108 G-s		
PIV	.136 In/Sec	.592 G-s	
PIA	.127 In/Sec	.563 G-s	

MON43A - Amide Reactor Circ Pmp #1N (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.066 In/Sec	.645 G-s	1785.0 RPM
MOP	.163 G-s		
MOV	.092 In/Sec	.400 G-s	
MOA	.115 In/Sec	.206 G-s	
MIH	.096 In/Sec	.481 G-s	

MIP	.042 G-s		
MIV	.121 In/Sec	.104 G-s	
MIA	.126 In/Sec	.188 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.198 In/Sec	.325 G-s	
PIP	.168 G-s		
PIV	.212 In/Sec	.410 G-s	
PIA	.171 In/Sec	.137 G-s	

MON43B - Amide Reactor Circ Pmp #2S (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.146 In/Sec	.164 G-s	1785.0 RPM
MOP	.035 G-s		
MOV	.203 In/Sec	.077 G-s	
MOA	.102 In/Sec	.052 G-s	
MIH	.082 In/Sec	.112 G-s	
MIP	.017 G-s		
MIV	.104 In/Sec	.054 G-s	
MIA	.099 In/Sec	.024 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.270 In/Sec	.388 G-s	
PIP	.248 G-s		
PIV	.154 In/Sec	.248 G-s	
PIA	.157 In/Sec	.119 G-s	

MON45EM - ACH Ref Brine Pump E (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.066 In/Sec	.309 G-s	1750.0 RPM
MOP	.137 G-s		
MOV	.044 In/Sec	.240 G-s	
MOA	.044 In/Sec	.254 G-s	
MIH	.058 In/Sec	.885 G-s	
MIP	.249 G-s		
MIV	.064 In/Sec	.252 G-s	
MIA	.044 In/Sec	.149 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.103 In/Sec	.810 G-s	
PIP	.492 G-s		
PIV	.128 In/Sec	.632 G-s	
PIA	.063 In/Sec	.407 G-s	
POH	.076 In/Sec	1.214 G-s	
POP	.584 G-s		
POV	.106 In/Sec	.542 G-s	
POA	.063 In/Sec	.303 G-s	

MON50 - Decanter Feed Pump (21-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.055 In/Sec	.371 G-s	3575.0 RPM
MOP	.018 G-s		
MOV	.088 In/Sec	.085 G-s	
MOA	.124 In/Sec	.069 G-s	
MIH	.077 In/Sec	.286 G-s	
MIP	.016 G-s		
MIV	.155 In/Sec	.146 G-s	
MIA	.166 In/Sec	.096 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.193 In/Sec	.440 G-s	

PIP	.077 G-s		
PIV	.286 In/Sec	.262 G-s	
PIA	.084 In/Sec	.191 G-s	

MON55NM - HUT Pump N (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.020 In/Sec	.414 G-s	1775.0 RPM
MOP	.161 G-s		
MOV	.037 In/Sec	.292 G-s	
MOA	.023 In/Sec	.265 G-s	
MIH	.026 In/Sec	.368 G-s	
MIP	.103 G-s		
MIV	.038 In/Sec	.139 G-s	
MIA	.023 In/Sec	.090 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.066 In/Sec	.611 G-s	
PIP	.347 G-s		
PIV	.080 In/Sec	.291 G-s	
PIA	.045 In/Sec	.171 G-s	
POH	.040 In/Sec	.964 G-s	
POP	.477 G-s		
POV	.069 In/Sec	.302 G-s	
POA	.048 In/Sec	.272 G-s	

MON56 - Inhibited Mon Xfer Pump E (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.066 In/Sec	.351 G-s	3575.0 RPM
MOP	.087 G-s		
MOV	.053 In/Sec	.089 G-s	
MOA	.050 In/Sec	.119 G-s	
MIH	.074 In/Sec	.410 G-s	
MIP	.081 G-s		
MIV	.050 In/Sec	.084 G-s	
MIA	.057 In/Sec	.033 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.070 In/Sec	.542 G-s	
PIP	.093 G-s		
PIV	.046 In/Sec	.349 G-s	
PIA	.068 In/Sec	.277 G-s	

MON 63E - LBS Side Stream Pump E (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.115 In/Sec	1.089 G-s	3515.0 RPM
M1P	.020 G-s		
M1V	.105 In/Sec	.372 G-s	
M1A	.112 In/Sec	.234 G-s	
M2H	.071 In/Sec	.988 G-s	
M2P	.057 G-s		
M2V	.095 In/Sec	.289 G-s	
M2A	.080 In/Sec	.184 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.222 In/Sec	.575 G-s	
P1P	.061 G-s		
P1V	.132 In/Sec	.380 G-s	
P1A	.234 In/Sec	.167 G-s	
P2H	.218 In/Sec	.517 G-s	
P2P	.039 G-s		

P2V	.091 In/Sec	.214 G-s	
P2A	.179 In/Sec	.246 G-s	

MON 63W - LBS Side Stream Pump W (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.083 In/Sec	1.516 G-s	3515.0 RPM
M1P	.033 G-s		
M1V	.096 In/Sec	.730 G-s	
M1A	.092 In/Sec	.653 G-s	
M2H	.084 In/Sec	1.884 G-s	
M2P	.071 G-s		
M2V	.146 In/Sec	.668 G-s	
M2A	.104 In/Sec	.544 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.234 In/Sec	.541 G-s	
P1P	.171 G-s		
P1V	.128 In/Sec	.878 G-s	
P1A	.143 In/Sec	.575 G-s	
P2H	.132 In/Sec	.639 G-s	
P2P	.045 G-s		
P2V	.134 In/Sec	.597 G-s	
P2A	.152 In/Sec	.425 G-s	

MON65 - Amide Reactor Circ Primary (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.128 In/Sec	.360 G-s	1180.0 RPM
MOP	.205 G-s		
MOV	.357 In/Sec	.178 G-s	
MOA	.102 In/Sec	.117 G-s	
MIH	.086 In/Sec	.470 G-s	
MIP	.217 G-s		
MIV	.192 In/Sec	.121 G-s	
MIA	.088 In/Sec	.084 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.197 In/Sec	.097 G-s	
PIP	.051 G-s		
PIV	.116 In/Sec	.079 G-s	
PIA	.104 In/Sec	.044 G-s	

MON67SM - PTZ Xfer Pump S (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.135 In/Sec	.723 G-s	3575.0 RPM
MOP	.0021 G-s		
MOV	.163 In/Sec	.200 G-s	
MOA	.086 In/Sec	.135 G-s	
MIH	.145 In/Sec	.345 G-s	
MIP	.050 G-s		
MIV	.068 In/Sec	.047 G-s	
MIA	.065 In/Sec	.058 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.053 In/Sec	.315 G-s	
PIP	.031 G-s		
PIV	.045 In/Sec	.403 G-s	
PIA	.052 In/Sec	.401 G-s	

MON68A - #1 Reactor H2O Circ Pump (15-Dec-21)

	OVERALL LEVEL	1K-20kHz

MOH	.112 In/Sec	.381 G-s	1180.0 RPM
MOP	.099 G-s		
MOV	.078 In/Sec	.152 G-s	
MOA	.101 In/Sec	.039 G-s	
MIH	.107 In/Sec	.249 G-s	
MIP	.095 G-s		
MIV	.085 In/Sec	.098 G-s	
MIA	.103 In/Sec	.085 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.097 In/Sec	.208 G-s	
PIP	.117 G-s		
PIV	.070 In/Sec	.274 G-s	
PIA	.112 In/Sec	.180 G-s	

MON73W - Skim Tub Xfer Pmp W (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.053 In/Sec	.229 G-s	1050.0 RPM
MOP	.073 G-s		
MOV	.081 In/Sec	.142 G-s	
MOA	.084 In/Sec	.038 G-s	
MIH	.050 In/Sec	.418 G-s	
MIP	.236 G-s		
MIV	.072 In/Sec	.273 G-s	
MIA	.089 In/Sec	.159 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.060 In/Sec	.122 G-s	
PIP	.075 G-s		
PIV	.036 In/Sec	.073 G-s	
PIA	.047 In/Sec	.064 G-s	

MON81 - Uninhibited Mon Tank Pump S (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.065 In/Sec	.179 G-s	3575.0 RPM
MOP	.0095 G-s		
MOV	.051 In/Sec	.066 G-s	
MOA	.072 In/Sec	.044 G-s	
MIH	.061 In/Sec	.289 G-s	
MIP	.027 G-s		
MIV	.048 In/Sec	.066 G-s	
MIA	.057 In/Sec	.030 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.215 In/Sec	.899 G-s	
PIP	.087 G-s		
PIV	.088 In/Sec	.495 G-s	
PIA	.087 In/Sec	.341 G-s	
POH	.120 In/Sec	.568 G-s	
POP	.046 G-s		
POV	.202 In/Sec	.257 G-s	
POA	.106 In/Sec	.133 G-s	

MON80 - Uninhibited Mon Tank Pump N (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.076 In/Sec	.187 G-s	3575.0 RPM
MOP	.014 G-s		
MOV	.082 In/Sec	.456 G-s	
MOA	.183 In/Sec	.061 G-s	
MIH	.173 In/Sec	.182 G-s	

MIP	.021 G-s		
MIV	.197 In/Sec	.113 G-s	
MIA	.141 In/Sec	.081 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.234 In/Sec	.150 G-s	
PIP	.0057 G-s		
PIV	.075 In/Sec	.118 G-s	
PIA	.068 In/Sec	.090 G-s	
POH	.161 In/Sec	.070 G-s	
POP	.0024 G-s		
POV	.054 In/Sec	.074 G-s	
POA	.075 In/Sec	.026 G-s	

MON84 - WCM Tails Pump S (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.072 In/Sec	.688 G-s	3575.0 RPM
MOP	.025 G-s		
MOV	.050 In/Sec	.135 G-s	
MOA	.204 In/Sec	.065 G-s	
MIH	.028 In/Sec	.266 G-s	
MIP	.078 G-s		
MIV	.064 In/Sec	.074 G-s	
MIA	.153 In/Sec	.058 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.298 In/Sec	.914 G-s	
PIP	.106 G-s		
PIV	.342 In/Sec	.513 G-s	
PIA	.344 In/Sec	.457 G-s	

MON85E - Water Treatment Pmp E (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.121 In/Sec	.510 G-s	1775.0 RPM
MOP	.160 G-s		
MOV	.078 In/Sec	.150 G-s	
MOA	.073 In/Sec	.194 G-s	
MIH	.131 In/Sec	.401 G-s	
MIP	.200 G-s		
MIV	.145 In/Sec	.362 G-s	
MIA	.077 In/Sec	.223 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.184 In/Sec	.479 G-s	
PIP	.280 G-s		
PIV	.117 In/Sec	.300 G-s	
PIA	.116 In/Sec	.317 G-s	
POH	.120 In/Sec	.413 G-s	
POP	.245 G-s		
POV	.110 In/Sec	.355 G-s	
POA	.113 In/Sec	.254 G-s	

MON85W - Water Treatment Pmp W (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.063 In/Sec	.441 G-s	1775.0 RPM
MOP	.183 G-s		
MOV	.094 In/Sec	.136 G-s	
MOA	.069 In/Sec	.148 G-s	
MIH	.062 In/Sec	.554 G-s	
MIP	.316 G-s		

MIV	.086 In/Sec	.316 G-s	
MIA	.057 In/Sec	.362 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.106 In/Sec	.786 G-s	
PIP	.503 G-s		
PIV	.109 In/Sec	.377 G-s	
PIA	.075 In/Sec	.268 G-s	
POH	.076 In/Sec	.760 G-s	
POP	.471 G-s		
POV	.118 In/Sec	.340 G-s	
POA	.112 In/Sec	.106 G-s	

MON118 - Tempered H20 Pmp (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.069 In/Sec	.275 G-s	865.0 RPM
MOP	.176 G-s		
MOV	.062 In/Sec	.078 G-s	
MOA	.062 In/Sec	.033 G-s	
MIH	.060 In/Sec	.152 G-s	
MIP	.073 G-s		
MIV	.038 In/Sec	.107 G-s	
MIA	.054 In/Sec	.061 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.081 In/Sec	.075 G-s	
PIP	.046 G-s		
PIV	.066 In/Sec	.058 G-s	
PIA	.070 In/Sec	.046 G-s	
POH	.049 In/Sec	.087 G-s	
POP	.045 G-s		
POV	.048 In/Sec	.081 G-s	
POA	.065 In/Sec	.061 G-s	

MON132 - Decanter Feed Pmp Spare (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.068 In/Sec	.266 G-s	3575.0 RPM
MOP	.015 G-s		
MOV	.125 In/Sec	.094 G-s	
MOA	.112 In/Sec	.086 G-s	
MIH	.047 In/Sec	.329 G-s	
MIP	.034 G-s		
MIV	.107 In/Sec	.099 G-s	
MIA	.108 In/Sec	.079 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.204 In/Sec	.517 G-s	
PIP	.102 G-s		
PIV	.310 In/Sec	.374 G-s	
PIA	.116 In/Sec	.196 G-s	

MON169 - A/B Booster Pump W (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.036 In/Sec	.315 G-s	1050.0 RPM
MOP	.182 G-s		
MOV	.022 In/Sec	.144 G-s	
MOA	.031 In/Sec	.095 G-s	
MIH	.030 In/Sec	.351 G-s	
MIP	.194 G-s		
MIV	.021 In/Sec	.198 G-s	

	MIA	.042 In/Sec	.123 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.038 In/Sec	.063 G-s	
	PIP	.054 G-s		
	PIV	.018 In/Sec	.062 G-s	
	PIA	.032 In/Sec	.033 G-s	
SAR03	- Turb Comp Main Blower		(10-Dec-21)	
		OVERALL LEVEL		
	5	.299 Mils		4698.0 RPM
	6	.307 Mils		
	7	.212 Mils		
	8	.280 Mils		
	9	.198 Mils		
	10	.176 Mils		
	11	.218 Mils		
	12	.212 Mils		
	15	.012 Mils		
	16	.027 Mils		
SAR10	- Process Air Fan E		(20-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.084 In/Sec	.340 G-s	1775.0 RPM
	MOP	.131 G-s		
	MOV	.052 In/Sec	.430 G-s	
	MOA	.070 In/Sec	.218 G-s	
	MIH	.064 In/Sec	1.174 G-s	
	MIP	.828 G-s		
	MIV	.075 In/Sec	.218 G-s	
	MIA	.055 In/Sec	.226 G-s	
		OVERALL LEVEL	1K-20KHz	
	FIH	.080 In/Sec	3.922 G-s	
	FIP	2.057 G-s		
	FIV	.082 In/Sec	1.497 G-s	
	FIA	.093 In/Sec	.971 G-s	
	FOH	.104 In/Sec	5.265 G-s	
	FOP	3.034 G-s		
	FOV	.073 In/Sec	2.035 G-s	
	FOA	.126 In/Sec	1.120 G-s	
SAR11	- Recycle Fan W		(14-Dec-21)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.053 In/Sec	.454 G-s	1775.0 RPM
	MOP	.035 G-s		
	MOV	.059 In/Sec	.050 G-s	
	MOA	.062 In/Sec	.055 G-s	
	MIH	.037 In/Sec	.728 G-s	
	MIP	.479 G-s		
	MIV	.054 In/Sec	.352 G-s	
	MIA	.049 In/Sec	.169 G-s	
		OVERALL LEVEL	1K-20KHz	
	FIH	.023 In/Sec	.013 G-s	
	FIP	.0081 G-s		
	FIV	.013 In/Sec	.0088 G-s	
	FIA	.016 In/Sec	.0052 G-s	
	FOH	.021 In/Sec	.018 G-s	
	FOP	.012 G-s		

FOV	.012 In/Sec	.014 G-s	
FOA	.019 In/Sec	.0053 G-s	

SAR12 - Recycle Fan E (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.041 In/Sec	.116 G-s	1775.0 RPM
MOP	.018 G-s		
MOV	.050 In/Sec	.184 G-s	
MOA	.044 In/Sec	.087 G-s	
MIH	.049 In/Sec	.917 G-s	
MIP	.457 G-s		
MIV	.047 In/Sec	.583 G-s	
MIA	.037 In/Sec	.215 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.031 In/Sec	.150 G-s	
FIP	.093 G-s		
FIV	.022 In/Sec	.101 G-s	
FIA	.029 In/Sec	.132 G-s	
FOH	.035 In/Sec	.123 G-s	
FOP	.058 G-s		
FOV	.024 In/Sec	.127 G-s	
FOA	.030 In/Sec	.042 G-s	

SAR13 - Combustion Air Fan E (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.070 In/Sec	.816 G-s	1050.0 RPM
MOP	.426 G-s		
MOV	.117 In/Sec	.413 G-s	
MOA	.164 In/Sec	.211 G-s	
MIH	.066 In/Sec	.491 G-s	
MIP	.214 G-s		
MIV	.067 In/Sec	.209 G-s	
MIA	.053 In/Sec	.290 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.069 In/Sec	.660 G-s	
FIP	.342 G-s		
FIV	.074 In/Sec	.439 G-s	
FIA	.066 In/Sec	.307 G-s	
FOH	.089 In/Sec	.629 G-s	
FOP	.289 G-s		
FOV	.085 In/Sec	.383 G-s	
FOA	.092 In/Sec	.181 G-s	

SAR14 - Combustion Air Fan W (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.114 In/Sec	1.352 G-s	1050.0 RPM
MOP	.168 G-s		
MOV	.063 In/Sec	.645 G-s	
MOA	.044 In/Sec	.402 G-s	
MIH	.110 In/Sec	1.693 G-s	
MIP	.848 G-s		
MIV	.056 In/Sec	.847 G-s	
MIA	.043 In/Sec	.745 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.116 In/Sec	1.872 G-s	
FIP	1.064 G-s		
FIV	.048 In/Sec	.935 G-s	

	FIA	.080 In/Sec	.372 G-s	
	FOH	.134 In/Sec	1.029 G-s	
	FOP	.632 G-s		
	FOV	.072 In/Sec	.467 G-s	
	FOA	.039 In/Sec	.238 G-s	

SAR15 - Process Air Fan W (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.077 In/Sec	.712 G-s	1180.0 RPM
MOP	.427 G-s		
MOV	.066 In/Sec	.665 G-s	
MOA	.064 In/Sec	.220 G-s	
MIH	.072 In/Sec	1.523 G-s	
MIP	.384 G-s		
MIV	.058 In/Sec	.339 G-s	
MIA	.061 In/Sec	.252 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.073 In/Sec	.288 G-s	
FIP	.167 G-s		
FIV	.033 In/Sec	.539 G-s	
FIA	.057 In/Sec	.369 G-s	
FOH	.079 In/Sec	.520 G-s	
FOP	.300 G-s		
FOV	.046 In/Sec	.475 G-s	
FOA	.041 In/Sec	.186 G-s	

SAR37A - Interpass Twr Circ Pump N (14-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.060 In/Sec	.582 G-s	1775.0 RPM
MOP	.316 G-s		
MOV	.049 In/Sec	.213 G-s	
MOA	.062 In/Sec	.118 G-s	
MIH	.045 In/Sec	.894 G-s	
MIP	.359 G-s		
MIV	.043 In/Sec	.148 G-s	
MIA	.043 In/Sec	.229 G-s	

SAR37B - Interpass Twr Circ Pump S (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.061 In/Sec	1.168 G-s	1775.0 RPM
MOP	.519 G-s		
MOV	.050 In/Sec	.506 G-s	
MOA	.099 In/Sec	.417 G-s	
MIH	.053 In/Sec	.877 G-s	
MIP	.313 G-s		
MIV	.045 In/Sec	.213 G-s	
MIA	.065 In/Sec	.227 G-s	

SAR39A - Boiler Feed H2O Pmp NW (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.117 In/Sec	.449 G-s	3575.0 RPM
MOP	.055 G-s		
MOV	.223 In/Sec	.257 G-s	
MOA	.121 In/Sec	.093 G-s	
MIH	.095 In/Sec	.384 G-s	
MIP	.032 G-s		
MIV	.407 In/Sec	.159 G-s	

MIA	.075 In/Sec	.134 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.068 In/Sec	.528 G-s	
PIP	.036 G-s		
PIV	.087 In/Sec	.319 G-s	
PIA	.043 In/Sec	.221 G-s	
POH	.038 In/Sec	.497 G-s	
POP	.011 G-s		
POV	.066 In/Sec	.184 G-s	
POA	.039 In/Sec	.270 G-s	

SAR39B - Boiler Feed H2O Pmp SW (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.083 In/Sec	.625 G-s	3575.0 RPM
MOP	.077 G-s		
MOV	.064 In/Sec	.687 G-s	
MOA	.054 In/Sec	.468 G-s	
MIH	.090 In/Sec	.886 G-s	
MIP	.061 G-s		
MIV	.090 In/Sec	1.245 G-s	
MIA	.054 In/Sec	1.378 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.146 In/Sec	.978 G-s	
PIP	.374 G-s		
PIV	.231 In/Sec	.649 G-s	
PIA	.108 In/Sec	.328 G-s	
POH	.077 In/Sec	.660 G-s	
POP	.193 G-s		
POV	.129 In/Sec	.567 G-s	
POA	.079 In/Sec	.287 G-s	

SAR39D - Boiler Feed H2O Pmp SE (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.094 In/Sec	2.269 G-s	3575.0 RPM
MOP	.135 G-s		
MOV	.060 In/Sec	.928 G-s	
MOA	.055 In/Sec	.775 G-s	
MIH	.086 In/Sec	2.757 G-s	
MIP	1.590 G-s		
MIV	.129 In/Sec	1.911 G-s	
MIA	.089 In/Sec	1.202 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.032 In/Sec	.244 G-s	
PIP	.020 G-s		
PIV	.037 In/Sec	.144 G-s	
PIA	.031 In/Sec	.126 G-s	
POH	.028 In/Sec	.219 G-s	
POP	.067 G-s		
POV	.053 In/Sec	.194 G-s	
POA	.050 In/Sec	.086 G-s	

SAR50A - Drying Tower Circ Pump W (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.111 In/Sec	.407 G-s	1775.0 RPM
MOP	.110 G-s		
MOV	.164 In/Sec	.225 G-s	
MOA	.112 In/Sec	.178 G-s	

	MIH	.092 In/Sec	.738 G-s	
	MIP	.419 G-s		
	MIV	.182 In/Sec	.592 G-s	
	MIA	.119 In/Sec	.186 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 (24-Nov-21)

		OVERALL LEVEL	1K-20KHz	
*	POV	.108 In/Sec	.283 G-s	1775.0 RPM
*	POA	.192 In/Sec	.208 G-s	

SAR55A - Neutralization Pump N (10-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.110 In/Sec	.476 G-s	3575.0 RPM
	MOP	.018 G-s		
	MOV	.102 In/Sec	.141 G-s	
	MOA	.150 In/Sec	.146 G-s	
	MIH	.080 In/Sec	.562 G-s	
	MIP	.120 G-s		
	MIV	.116 In/Sec	.243 G-s	
	MIA	.132 In/Sec	.187 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.112 In/Sec	.395 G-s	
	PIP	.055 G-s		
	PIV	.100 In/Sec	.142 G-s	
	PIA	.094 In/Sec	.356 G-s	

SAR55B - Neutralization Pump S (10-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.116 In/Sec	.963 G-s	3575.0 RPM
	MOP	.166 G-s		
	MOV	.086 In/Sec	.317 G-s	
	MOA	.088 In/Sec	.334 G-s	
	MIH	.110 In/Sec	1.127 G-s	
	MIP	.275 G-s		
	MIV	.088 In/Sec	.510 G-s	
	MIA	.091 In/Sec	.217 G-s	
		OVERALL LEVEL	1K-20KHz	
	PIH	.100 In/Sec	.757 G-s	
	PIP	.094 G-s		
	PIV	.097 In/Sec	.369 G-s	
	PIA	.093 In/Sec	.374 G-s	

SAR59A - Scrub Twr Circ Pmp W (10-Dec-21)

		OVERALL LEVEL	1K-20kHz	
	MOH	.033 In/Sec	.327 G-s	1775.0 RPM
	MOP	.149 G-s		
	MOV	.038 In/Sec	.084 G-s	
	MOA	.029 In/Sec	.133 G-s	
	MIH	.034 In/Sec	.527 G-s	
	MIP	.256 G-s		
	MIV	.029 In/Sec	.172 G-s	
	MIA	.026 In/Sec	.200 G-s	
		OVERALL LEVEL	1K-20KHz	

PIH	.122 In/Sec	.553 G-s	
PIP	.405 G-s		
PIV	.077 In/Sec	.273 G-s	
PIA	.090 In/Sec	.169 G-s	
POH	.093 In/Sec	.511 G-s	
POP	.249 G-s		
POV	.086 In/Sec	.201 G-s	
POA	.091 In/Sec	.175 G-s	

SAR59B - Scrub Twr Circ Pmp M (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.053 In/Sec	.560 G-s	1775.0 RPM
MOP	.157 G-s		
MOV	.065 In/Sec	.221 G-s	
MOA	.071 In/Sec	.105 G-s	
MIH	.069 In/Sec	1.060 G-s	
MIP	.683 G-s		
MIV	.070 In/Sec	.659 G-s	
MIA	.063 In/Sec	.446 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.262 In/Sec	.621 G-s	
PIP	.380 G-s		
PIV	.090 In/Sec	.544 G-s	
PIA	.116 In/Sec	.221 G-s	
POH	.194 In/Sec	.582 G-s	
POP	.320 G-s		
POV	.085 In/Sec	.247 G-s	
POA	.134 In/Sec	.272 G-s	

SAR59C - Scrub Twr Circ Pmp E (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.025 In/Sec	.173 G-s	1775.0 RPM
MOP	.057 G-s		
MOV	.046 In/Sec	.045 G-s	
MOA	.038 In/Sec	.031 G-s	
MIH	.033 In/Sec	.795 G-s	
MIP	.323 G-s		
MIV	.031 In/Sec	.237 G-s	
MIA	.022 In/Sec	.066 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.161 In/Sec	.514 G-s	
PIP	.300 G-s		
PIV	.071 In/Sec	.313 G-s	
PIA	.066 In/Sec	.228 G-s	
POH	.156 In/Sec	.317 G-s	
POP	.170 G-s		
POV	.096 In/Sec	.110 G-s	
POA	.066 In/Sec	.101 G-s	

SAR54C - Weak Acid Xfer Pump S (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.044 In/Sec	.155 G-s	3575.0 RPM
MOP	.030 G-s		
MOV	.044 In/Sec	.057 G-s	
MOA	.045 In/Sec	.055 G-s	
MIH	.049 In/Sec	.290 G-s	
MIP	.089 G-s		

MIV	.034 In/Sec	.134 G-s	
MIA	.028 In/Sec	.093 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.084 In/Sec	.487 G-s	
PIP	.014 G-s		
PIV	.051 In/Sec	.153 G-s	
PIA	.055 In/Sec	.115 G-s	

SAR54B - Weak Acid Xfer Pump N (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.102 In/Sec	.338 G-s	3575.0 RPM
MOP	.059 G-s		
MOV	.087 In/Sec	.219 G-s	
MOA	.051 In/Sec	.127 G-s	
MIH	.136 In/Sec	.571 G-s	
MIP	.047 G-s		
MIV	.071 In/Sec	.122 G-s	
MIA	.089 In/Sec	.069 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.078 In/Sec	.204 G-s	
PIP	.022 G-s		
PIV	.058 In/Sec	.173 G-s	
PIA	.067 In/Sec	.115 G-s	

SAR 56A - N Oleum Storage Tank Feed (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.078 In/Sec	.090 G-s	1775.0 RPM
M1P	.018 G-s		
M1V	.067 In/Sec	.051 G-s	
M1A	.072 In/Sec	.025 G-s	
M2H	.075 In/Sec	.232 G-s	
M2P	.124 G-s		
M2V	.059 In/Sec	.062 G-s	
M2A	.063 In/Sec	.076 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.068 In/Sec	.206 G-s	
P1P	.134 G-s		
P1V	.049 In/Sec	.093 G-s	
P1A	.057 In/Sec	.067 G-s	
P2H	.066 In/Sec	.178 G-s	
P2P	.132 G-s		
P2V	.035 In/Sec	.060 G-s	
P2A	.063 In/Sec	.034 G-s	

SAR 56B - M Oleum Storage Tank Feed (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.045 In/Sec	.275 G-s	1775.0 RPM
M1P	.146 G-s		
M1V	.102 In/Sec	.090 G-s	
M1A	.075 In/Sec	.106 G-s	
M2H	.113 In/Sec	.508 G-s	
M2P	.056 G-s		
M2V	.173 In/Sec	.171 G-s	
M2A	.074 In/Sec	.046 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.166 In/Sec	.162 G-s	
P1P	.086 G-s		

P1V	.121 In/Sec	.095 G-s	
P1A	.056 In/Sec	.080 G-s	
P2H	.076 In/Sec	.127 G-s	
P2P	.060 G-s		
P2V	.074 In/Sec	.059 G-s	
P2A	.050 In/Sec	.026 G-s	

SAR 56C - S Oleum Storage Tank Feed (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
M1H	.052 In/Sec	.229 G-s	1775.0 RPM
M1P	.112 G-s		
M1V	.057 In/Sec	.635 G-s	
M1A	.037 In/Sec	.193 G-s	
M2H	.026 In/Sec	.246 G-s	
M2P	.209 G-s		
M2V	.034 In/Sec	.252 G-s	
M2A	.032 In/Sec	.106 G-s	
	OVERALL LEVEL	1K-20KHz	
P1H	.122 In/Sec	.174 G-s	
P1P	.101 G-s		
P1V	.042 In/Sec	.125 G-s	
P1A	.035 In/Sec	.091 G-s	
P2H	.186 In/Sec	.231 G-s	
P2P	.163 G-s		
P2V	.058 In/Sec	.076 G-s	
P2A	.078 In/Sec	.059 G-s	

SAR57B - Oleum Twr Circ Pump E (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.109 In/Sec	.365 G-s	1775.0 RPM
MOP	.192 G-s		
MOV	.080 In/Sec	.123 G-s	
MOA	.146 In/Sec	.050 G-s	
MIH	.108 In/Sec	.429 G-s	
MIP	.256 G-s		
MIV	.074 In/Sec	.114 G-s	
MIA	.124 In/Sec	.114 G-s	

SAR63EM - Spent Acid Feed Pmp E (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.040 In/Sec	.280 G-s	3575.0 RPM
MOP	.055 G-s		
MOV	.068 In/Sec	.141 G-s	
MOA	.096 In/Sec	.090 G-s	
MIH	.046 In/Sec	.312 G-s	
MIP	.067 G-s		
MIV	.052 In/Sec	.116 G-s	
MIA	.087 In/Sec	.093 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.073 In/Sec	1.056 G-s	
PIP	.051 G-s		
PIV	.091 In/Sec	.758 G-s	
PIA	.083 In/Sec	.481 G-s	
POH	.067 In/Sec	1.006 G-s	
POP	.048 G-s		
POV	.087 In/Sec	.748 G-s	
POA	.065 In/Sec	.561 G-s	

SAR63WM - Spent Acid Feed Pmp W (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.032 In/Sec	.277 G-s	3575.0 RPM
MOP	.0021 G-s		
MOV	.027 In/Sec	.038 G-s	
MOA	.018 In/Sec	.043 G-s	
MIH	.029 In/Sec	.261 G-s	
MIP	.0072 G-s		
MIV	.052 In/Sec	.069 G-s	
MIA	.027 In/Sec	.095 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.088 In/Sec	.545 G-s	
PIP	.156 G-s		
PIV	.056 In/Sec	.223 G-s	
PIA	.074 In/Sec	.240 G-s	

SAR66A - Vertical Cool Twr Pump #1 (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.090 In/Sec	.189 G-s	1195.0 RPM
MOP	.101 G-s		
MOV	.050 In/Sec	.326 G-s	
MOA	.083 In/Sec	.393 G-s	
MIH	.142 In/Sec	.811 G-s	
MIP	.456 G-s		
MIV	.129 In/Sec	1.721 G-s	
MIA	.070 In/Sec	.554 G-s	

SAR66B - Vertical Cool Twr Pump #2 (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.241 In/Sec	.143 G-s	1195.0 RPM
MOP	.075 G-s		
MOV	.193 In/Sec	.114 G-s	
MOA	.487 In/Sec	.097 G-s	
MIH	.139 In/Sec	.169 G-s	
MIP	.095 G-s		
MIV	.201 In/Sec	.087 G-s	
MIA	.200 In/Sec	.080 G-s	

SAR66C - Vertical Cool Twr Pump #3 (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.404 In/Sec	.090 G-s	1195.0 RPM
MOP	.048 G-s		
MOV	.136 In/Sec	.040 G-s	
MOA	.245 In/Sec	.034 G-s	
MIH	.186 In/Sec	.094 G-s	
MIP	.041 G-s		
MIV	.138 In/Sec	.042 G-s	
MIA	.078 In/Sec	.031 G-s	

SAR66D - Vertical Cool Twr Pump #4 (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.209 In/Sec	.087 G-s	1195.0 RPM
MOP	.041 G-s		
MOV	.075 In/Sec	.074 G-s	
MOA	.145 In/Sec	.073 G-s	
MIH	.086 In/Sec	.062 G-s	

	MIP	.034 G-s		
	MIV	.084 In/Sec	.035 G-s	
	MIA	.067 In/Sec	.056 G-s	

SAR66E - Vertical Cool Twr Pump #5 (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.129 In/Sec	.274 G-s	1195.0 RPM
MOP	.139 G-s		
MOV	.146 In/Sec	.485 G-s	
MOA	.236 In/Sec	.445 G-s	
MIH	.052 In/Sec	.681 G-s	
MIP	.386 G-s		
MIV	.139 In/Sec	.707 G-s	
MIA	.216 In/Sec	.531 G-s	

SAR78B - Cooling Tower Fan #2 (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.088 In/Sec	.979 G-s	1775.0 RPM
MOP	.111 G-s		
MOV	.067 In/Sec	.250 G-s	
MOA	.180 In/Sec	.133 G-s	
MIH	.115 In/Sec	2.003 G-s	
MIP	.382 G-s		
MIV	.147 In/Sec	.568 G-s	
MIA	.161 In/Sec	.460 G-s	

SAR78C - Cooling Tower Fan #3 (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.114 In/Sec	.808 G-s	1775.0 RPM
MOP	.379 G-s		
MOV	.077 In/Sec	.583 G-s	
MOA	.194 In/Sec	.435 G-s	
MIH	.089 In/Sec	1.413 G-s	
MIP	.305 G-s		
MIV	.140 In/Sec	.535 G-s	
MIA	.156 In/Sec	.260 G-s	

SAR78D - Cooling Tower Fan #4 (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.113 In/Sec	1.751 G-s	1775.0 RPM
MOP	1.079 G-s		
MOV	.209 In/Sec	.615 G-s	
MOA	.239 In/Sec	.369 G-s	
MIH	.112 In/Sec	.958 G-s	
MIP	.556 G-s		
MIV	.310 In/Sec	.419 G-s	
MIA	.230 In/Sec	.289 G-s	

SAR128 - Oleum Fume Scrub Blwr (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MIH	.052 In/Sec	.450 G-s	3575.0 RPM
MIP	.036 G-s		
MIV	.085 In/Sec	.110 G-s	
MIA	.144 In/Sec	.086 G-s	
	OVERALL LEVEL	1K-20KHz	
FIH	.036 In/Sec	.332 G-s	
FIP	.033 G-s		

FIV	.027 In/Sec	.218 G-s	
FIA	.046 In/Sec	.085 G-s	
FOH	.052 In/Sec	.737 G-s	
FOP	.160 G-s		
FOV	.069 In/Sec	.416 G-s	
FOA	.083 In/Sec	.111 G-s	

SAR135 - Spent Acid Circ Pmp E (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.033 In/Sec	.199 G-s	1775.0 RPM
MOP	.033 G-s		
MOV	.041 In/Sec	.096 G-s	
MOA	.066 In/Sec	.023 G-s	
MIH	.048 In/Sec	.213 G-s	
MIP	.108 G-s		
MIV	.051 In/Sec	.055 G-s	
MIA	.066 In/Sec	.044 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.019 In/Sec	.114 G-s	
PIP	.095 G-s		
PIV	.033 In/Sec	.059 G-s	
PIA	.030 In/Sec	.087 G-s	
POH	.016 In/Sec	.096 G-s	
POP	.016 G-s		
POV	.022 In/Sec	.030 G-s	
POA	.021 In/Sec	.036 G-s	

SAR137A - Contain Pit Pump N (13-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.089 In/Sec	.325 G-s	1775.0 RPM
MOP	.137 G-s		
MOV	.360 In/Sec	.115 G-s	
MOA	.105 In/Sec	.104 G-s	

SAR157 - Spent Acid Feed Booster S (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MIH	.034 In/Sec	.110 G-s	1100.0 RPM
MIP	.056 G-s		
MIV	.042 In/Sec	.051 G-s	
MIA	.051 In/Sec	.018 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.058 In/Sec	.103 G-s	
PIP	.056 G-s		
PIV	.031 In/Sec	.051 G-s	
PIA	.059 In/Sec	.045 G-s	

SAR161A - N SAR Cool Twr Fan W (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.168 In/Sec	.940 G-s	1775.0 RPM
MOP	.356 G-s		
MOV	.282 In/Sec	.619 G-s	
MOA	.380 In/Sec	.584 G-s	
MIH	.177 In/Sec	.834 G-s	
MIP	.368 G-s		
MIV	.210 In/Sec	.833 G-s	
MIA	.343 In/Sec	.668 G-s	

SAR161B - N SAR Cool Twr Fan Middle (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.101 In/Sec	1.072 G-s	1775.0 RPM
MOP	.388 G-s		
MOV	.142 In/Sec	.530 G-s	
MOA	.153 In/Sec	.320 G-s	
MIH	.155 In/Sec	1.382 G-s	
MIP	.609 G-s		
MIV	.134 In/Sec	.706 G-s	
MIA	.155 In/Sec	.831 G-s	

SAR161C - N SAR Cool Twr Fan E (15-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.136 In/Sec	.356 G-s	1775.0 RPM
MOP	.121 G-s		
MOV	.127 In/Sec	.112 G-s	
MOA	.251 In/Sec	.065 G-s	
MIH	.227 In/Sec	.403 G-s	
MIP	.132 G-s		
MIV	.162 In/Sec	.196 G-s	
MIA	.283 In/Sec	.128 G-s	

SAR222 - Oleum Twr Drain Pmp (30-Aug-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.047 In/Sec	.473 G-s	3575.0 RPM
MOP	.013 G-s		
MOV	.092 In/Sec	.951 G-s	
MOA	.076 In/Sec	.693 G-s	
MIH	.048 In/Sec	.514 G-s	
MIP	.017 G-s		
MIV	.101 In/Sec	.560 G-s	
MIA	.064 In/Sec	.253 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.203 In/Sec	3.247 G-s	
PIP	.014 G-s		
PIV	.181 In/Sec	1.417 G-s	
* POH	.157 In/Sec	2.925 G-s	
* POP	.018 G-s		
* POV	.150 In/Sec	2.260 G-s	
POA	.140 In/Sec	1.249 G-s	

SAR231A - Final Twr Circ Pump N (21-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.150 In/Sec	.836 G-s	1775.0 RPM
MOP	.372 G-s		
MOV	.043 In/Sec	.507 G-s	
MOA	.157 In/Sec	.332 G-s	
MIH	.098 In/Sec	.770 G-s	
MIP	.403 G-s		
MIV	.032 In/Sec	.353 G-s	
MIA	.099 In/Sec	.342 G-s	

SAR231B - Final Twr Circ Pump S (10-Dec-21)

	OVERALL LEVEL	1K-20kHz	
MOH	.068 In/Sec	.340 G-s	1775.0 RPM
MOP	.126 G-s		
MOV	.050 In/Sec	.173 G-s	

MOA	.106 In/Sec	.114 G-s	
MIH	.048 In/Sec	.523 G-s	
MIP	.286 G-s		
MIV	.042 In/Sec	.196 G-s	
MIA	.038 In/Sec	.183 G-s	

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

	OVERALL LEVEL	1K-20KHz	
* POH	.034 In/Sec	.181 G-s	3575.0 RPM
* 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

Abbreviated Last Measurement Summary

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Database: Lucite Memphis MMA.rbm
Area: Acrylic Sheeting
Report Date: 05-Jan-22 08:16

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	EQUIPMENT SPEED

*** NO DATA Was Found That Meets the Report Specification ***