



MILLINGTON, TN

July 23, 2021

Blues City Brewery

Subject: July vibration service

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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*

David W. Shook  
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## **Reportable equipment**

### **Boiler Feed Water Pumps #1 South & #2 Middle**

The pump shaft speed vibrations are interacting and causing a destructive beat vibration as they come into phase seen in both units above 0.5"/second velocity peak. We suspect wear in the pumps, debris/build up/damage, pipe strain, or possibly a coupling issue. Inspect as time allows. **Rated a Class II Defect.**

### **Boiler Fan 2**

Motor vibrations are still high for the motor. Velocity overall is still over 1"/second peak. Ensure all foot bolts on the motor and all fan bearing bolts are torqued and there is no soft foot. This is more than likely a fan imbalance that is transferring through the motor. Still recommend having fan pulled and shop balanced on a balance stand. **Rated as a Class III Defect.**

### **Service Water Pump 8**

The high shaft speed vibrations reported last month have dropped in half but are still reportable. There are still signs of loose fasteners, structural looseness, possible misalignment, bent shaft, or coupling defects. **Rated a Class II Defect.**

### **Service Water Pump 5**

The unit still has signs of possible misalignment or coupling defects. Check in the near future. The pump also has multiple non-synchronous vibration peaks in the upper frequencies, which we believe to be bearing defects. **Rated a Class II Defect.**

### **RO Water Pump 2**

This unit still has a vibration at what appears to be vane pass, (5x RPM, 122 HZ). The vibrations are still almost 0.5"/sec velocity peak in the time waveform now. There could be wear in the pump, or there could be a flow issue. We recommend further inspection and adjustments of flow related controls, filters, screens, or piping. **Rated a Class II Defect.**

### **2nd Floor South Hot Water Pump**

Shaft speed vibration still dominates the motor vibration data at near 0.4" per second velocity peak. A 2x RPM vibration is also present. Inspect the unit base, structure, coupling and fasteners for issues. Have the shaft alignment checked too. **Rated a Class I Defect.**

### **Sugar Tank Viking Pump #3**

The pump data shows non-synchronous harmonic peaks in the data. This could indicate distress in the unit bearings. We will watch for changes. **Rated a Class I Defect.**

### **Filter Cellar Chill Water Circulator Pump 1**

Vibrations are still at 2x line frequency. Unbalanced electrical phases or poor connections can cause the vibration since it changes in amplitude over time. Perform a motor phase and voltage analysis up to and including PDMA if necessary. **Rated a Class II Defect.**

### **G Cellar Cold Glycol Pump #2**

Motor has a dominant shaft speed vibration. Check the motor cooling fan as well as the coupling and alignment. Ensure all fasteners are tight. **Rated a Class II Defect.**

### **G Cellar Cold Glycol Pump #5**

Motor still has a dominant vibration at 4X shaft speed with sidebands or shaft speed harmonics. Inspect for loose fasteners, coupling, and alignment issues. Could be a pump issue too if it has 4 flutes in the impeller. **Rated a Class II Defect.**

### **Administration HVAC Hot Water Pump**

Motor and pump vibration is near 1/2"/second velocity peak overall. There could still be an alignment or coupling issue. Inspect the coupling and check the shaft alignment. **Rated a Class II Defect.**

### **Units previously reported but not running this survey**

#### **Boiler 3 Fan, Motor Bearings**

Bearing defect frequencies are present in the motor vibration data. The acceleration trend has increased this survey. The overalls are above 3 g's RMS. Expect to change out the bearings in the future. **Rated a Class II Defect.**

#### **Boiler 3 Fan, Fan Bearings**

The inboard fan bearing shows strong peaks in the acceleration spectrum up around 2500 Hz with peaks around 114 Hz apart. Vibrations are over 4 g's RMS. Expect to change out the bearings in the future. **Rated a Class II Defect.**

### **G Cellar 128 NANO Pump**

Vibrations at shaft speed are still excessive. Ensure all fasteners are tight and support structure is sound. Check for pipe strain. Make sure coupling is in good shape and shaft alignment is precise. **Rated a Class II Defect.**

### **G Cellar 129 NANO Pump**

Motor bearings have signs of early defects. No action required at this time other than ensuring the bearings have lubrication. **Rated a Class I Defect.**

## Gallery DA Vacuum Pump Skid 1

We see a large shaft speed vibration at near 1/2"/second velocity peak in the pump. Inspect the unit fasteners and structure for issues. Check the coupling for defects and have the alignment checked.

The unit rotor could also be out of balance due to wear. **Rated a Class II Defect.**

### Abbreviated Last Measurement Summary \*\*\*\*\*

Database: Blues\_city.rbm  
Station: POWER HOUSE  
Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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AIR COMP 3 - COMPRESSOR #3 - 250HP		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.135 In/Sec	.857 G-s	1792.0 RPM
12	.155 In/Sec	1.646 G-s	
13	.079 In/Sec	.606 G-s	
21	.109 In/Sec	.940 G-s	
22	.136 In/Sec	.825 G-s	
23	.130 In/Sec	1.248 G-s	
71	.133 In/Sec	.686 G-s	3655.7 RPM
72	.069 In/Sec	.722 G-s	
73	.143 In/Sec	.749 G-s	
81	.087 In/Sec	.562 G-s	
82	.104 In/Sec	.721 G-s	
83	.122 In/Sec	1.082 G-s	
AIR COMP 4 - COMPRESSOR #4 - 150HP		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.056 In/Sec	.498 G-s	1788.0 RPM
12	.129 In/Sec	.642 G-s	
13	.248 In/Sec	.493 G-s	
21	.110 In/Sec	1.093 G-s	
22	.423 In/Sec	.717 G-s	
23	.180 In/Sec	.753 G-s	
71	.093 In/Sec	1.096 G-s	1785.0 RPM
72	.335 In/Sec	.652 G-s	
73	.226 In/Sec	.264 G-s	
81	.095 In/Sec	.824 G-s	
82	.315 In/Sec	.791 G-s	
83	.149 In/Sec	1.452 G-s	
AIR COMP 5 - COMPRESSOR #5		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.163 In/Sec	.419 G-s	1788.0 RPM
12	.084 In/Sec	.949 G-s	
13	.095 In/Sec	.234 G-s	
21	.139 In/Sec	.427 G-s	
22	.078 In/Sec	.432 G-s	

23	.107 In/Sec	.437 G-s	
71	.143 In/Sec	.856 G-s	1785.0 RPM
72	.110 In/Sec	.561 G-s	
73	.142 In/Sec	.547 G-s	
81	.117 In/Sec	.860 G-s	
82	.047 In/Sec	.812 G-s	
83	.091 In/Sec	.095 G-s	

AIR COMP 6 - COMPRESSOR #6 (23-Jul-21)

	OVERALL LEVEL	1-20 KHZ	
11	.179 In/Sec	.605 G-s	1788.0 RPM
12	.123 In/Sec	.495 G-s	
13	.086 In/Sec	.311 G-s	
21	.141 In/Sec	.399 G-s	
22	.105 In/Sec	.499 G-s	
23	.104 In/Sec	.250 G-s	
71	.127 In/Sec	1.204 G-s	1785.0 RPM
72	.133 In/Sec	.665 G-s	
73	.182 In/Sec	.742 G-s	
81	.119 In/Sec	.739 G-s	
82	.050 In/Sec	.608 G-s	
83	.129 In/Sec	.077 G-s	

BFWPMIDDLE2 - BOILER FEED WATER PUMP MID 2 (23-Jul-21)

	OVERALL LEVEL	1-20 KHZ	
11	.245 In/Sec	.481 G-s	3540.0 RPM
12	.101 In/Sec	.172 G-s	
21	.172 In/Sec	.542 G-s	
22	.102 In/Sec	.405 G-s	
23	.108 In/Sec	.333 G-s	
71	.539 In/Sec	1.131 G-s	
72	.208 In/Sec	.541 G-s	
73	.080 In/Sec	1.422 G-s	
81	.512 In/Sec	1.337 G-s	
82	.077 In/Sec	.758 G-s	

BFWPSOUTH1 - BOILER FEED WATER PUMP S 1 (23-Jul-21)

	OVERALL LEVEL	1-20 KHZ	
11	.109 In/Sec	.274 G-s	3540.0 RPM
12	.118 In/Sec	.397 G-s	
21	.068 In/Sec	.383 G-s	
22	.139 In/Sec	.507 G-s	
23	.088 In/Sec	.110 G-s	
71	.512 In/Sec	1.248 G-s	
72	.167 In/Sec	1.149 G-s	
73	.059 In/Sec	1.137 G-s	
81	.553 In/Sec	.948 G-s	
82	.067 In/Sec	.755 G-s	

BOILERFAN1 - BOILER FAN #1 (23-Jul-21)

	OVERALL LEVEL	1-20 KHZ	
11	.199 In/Sec	.289 G-s	1750.0 RPM
12	.307 In/Sec	.037 G-s	
21	.104 In/Sec	.634 G-s	
22	.095 In/Sec	.536 G-s	
23	.275 In/Sec	.298 G-s	
71	.146 In/Sec	.079 G-s	

72	.194 In/Sec	.103 G-s	
BOILERFAN2 - BOILER FAN #2 (23-Jul-21)			
	OVERALL LEVEL	1-20 KHZ	
11	.710 In/Sec	.206 G-s	1780.0 RPM
12	.639 In/Sec	.078 G-s	
21	.786 In/Sec	.287 G-s	
22	1.304 In/Sec	.130 G-s	
23	1.028 In/Sec	.231 G-s	
CR PUMP 1 - CARBON RECIRC PUMP (23-Jul-21)			
	OVERALL LEVEL	1-20 KHZ	
11	.045 In/Sec	.142 G-s	3545.0 RPM
12	.046 In/Sec	.111 G-s	
21	.043 In/Sec	.137 G-s	
22	.056 In/Sec	.117 G-s	
23	.078 In/Sec	.070 G-s	
71	.039 In/Sec	.170 G-s	
72	.032 In/Sec	.184 G-s	
73	.058 In/Sec	.082 G-s	
81	.464 In/Sec	.134 G-s	
82	.029 In/Sec	.066 G-s	
MAKEUP #3 - CHILLED WATER MAKEUP PUMP 3 (23-Jul-21)			
	OVERALL LEVEL	1-20 KHZ	
11	.154 In/Sec	.400 G-s	3600.0 RPM
12	.134 In/Sec	.237 G-s	
21	.194 In/Sec	.455 G-s	
22	.152 In/Sec	.313 G-s	
23	.156 In/Sec	.283 G-s	
71	.408 In/Sec	.617 G-s	
72	.279 In/Sec	.620 G-s	
73	.339 In/Sec	.133 G-s	
81	.365 In/Sec	.245 G-s	
82	.172 In/Sec	.265 G-s	
SW PUMP 8 - SERVICE WATER PUMP 8 (23-Jul-21)			
	OVERALL LEVEL	1-20 KHZ	
11	.151 In/Sec	.313 G-s	3545.0 RPM
12	.413 In/Sec	.526 G-s	
21	.109 In/Sec	.736 G-s	
22	.398 In/Sec	.583 G-s	
23	.568 In/Sec	.426 G-s	
71	.276 In/Sec	.469 G-s	
72	.173 In/Sec	.574 G-s	
73	.129 In/Sec	.615 G-s	
81	.121 In/Sec	.996 G-s	
82	.104 In/Sec	.845 G-s	
SW PUMP 5 - SERVICE WATER PUMP 5 (23-Jul-21)			
	OVERALL LEVEL	1-20 KHZ	
11	.500 In/Sec	.974 G-s	3545.0 RPM
12	.323 In/Sec	.800 G-s	
21	.424 In/Sec	1.314 G-s	
22	.341 In/Sec	1.004 G-s	
23	.142 In/Sec	.787 G-s	
71	.336 In/Sec	3.350 G-s	

72	.221 In/Sec	2.426 G-s
73	.324 In/Sec	1.295 G-s
81	.361 In/Sec	6.415 G-s
82	.175 In/Sec	2.720 G-s

RO 2            - RO WATER PUMP 2            (23-Jul-21)

	OVERALL LEVEL	1-20 KHZ	
11	.069 In/Sec	.448 G-s	3545.0 RPM
12	.104 In/Sec	.584 G-s	
21	.079 In/Sec	.762 G-s	
22	.096 In/Sec	.689 G-s	
23	.075 In/Sec	.328 G-s	
71	.431 In/Sec	.316 G-s	
72	.130 In/Sec	.313 G-s	
73	.139 In/Sec	.323 G-s	
81	.237 In/Sec	.830 G-s	
82	.218 In/Sec	.797 G-s	

AMMCOMP 1    - AMMONIA COMP #1            (23-Jul-21)

	OVERALL LEVEL	1-20 KHZ	
11	.108 In/Sec	.113 G-s	3592.0 RPM
12	.146 In/Sec	.114 G-s	
13	.171 In/Sec	.085 G-s	
21	.156 In/Sec	.062 G-s	
22	.170 In/Sec	.168 G-s	
23	.151 In/Sec	.029 G-s	
71	.086 In/Sec	1.278 G-s	
72	.149 In/Sec	1.401 G-s	
73	.253 In/Sec	.782 G-s	
81	.095 In/Sec	.899 G-s	
82	.123 In/Sec	.625 G-s	
83	.183 In/Sec	1.206 G-s	
71F	.136 In/Sec	1.424 G-s	
72F	.111 In/Sec	.814 G-s	
73F	.203 In/Sec	.919 G-s	
81F	.098 In/Sec	.825 G-s	
82F	.074 In/Sec	1.128 G-s	
83F	.221 In/Sec	.958 G-s	

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Clarification Of Vibration Units:

Acc	-->	G-s	PK
Vel	-->	In/Sec	PK

Abbreviated Last Measurement

Summary

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Database: Blues\_city.rbm  
 Station: UPPER FLOORS  
 Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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2SHWP            - 2ND FLOOR S. HOT WATER PUMP		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.147 In/Sec	.235 G-s	3545.0 RPM
12	.299 In/Sec	1.189 G-s	

21	.162 In/Sec	.633 G-s
22	.255 In/Sec	.532 G-s
23	.386 In/Sec	.441 G-s
71	.108 In/Sec	.806 G-s
72	.130 In/Sec	.630 G-s
73	.139 In/Sec	1.548 G-s
81	.093 In/Sec	1.502 G-s
82	.111 In/Sec	1.075 G-s

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Clarification Of Vibration Units:

Acc --> G-s PK

Vel --> In/Sec PK

Abbreviated Last Measurement

Summary

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Database: Blues\_city.rbm  
Station: BREWING 1ST FLOOR  
Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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\*\*\* NO DATA Was Found That Meets the Report Specification \*\*\*  
Abbreviated Last Measurement Summary

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Database: Blues\_city.rbm  
Station: BREWING BASEMENT  
Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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\*\*\* NO DATA Was Found That Meets the Report Specification \*\*\*  
Abbreviated Last Measurement Summary

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Database: Blues\_city.rbm  
Station: GRAIN TRANSFER  
Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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\*\*\* NO DATA Was Found That Meets the Report Specification \*\*\*  
Abbreviated Last Measurement Summary

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Database: Blues\_city.rbm  
Station: SUGAR PUMPS  
Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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V3 - SUGAR TANK VIKING PUMP #3 (23-Jul-21)



	OVERALL LEVEL	1-20 KHZ	
11	.113 In/Sec	.132 G-s	1750.0 RPM
12	.096 In/Sec	.155 G-s	
21	.070 In/Sec	.581 G-s	
22	.109 In/Sec	.264 G-s	
23	.132 In/Sec	.355 G-s	
31	.158 In/Sec	1.975 G-s	
32	.141 In/Sec	.345 G-s	
33	.133 In/Sec	1.749 G-s	
61	.150 In/Sec	1.219 G-s	
62	.118 In/Sec	.935 G-s	
63	.104 In/Sec	.680 G-s	
71	.195 In/Sec	.194 G-s	

V4 - SUGAR TANK VIKING PUMP #4 (23-Jul-21)

	OVERALL LEVEL	1-20 KHZ	
11	.035 In/Sec	.120 G-s	1750.0 RPM
12	.049 In/Sec	.205 G-s	
21	.041 In/Sec	.647 G-s	
22	.051 In/Sec	.643 G-s	
23	.084 In/Sec	.942 G-s	
31	.053 In/Sec	.273 G-s	
32	.072 In/Sec	.180 G-s	
33	.112 In/Sec	.411 G-s	
61	.044 In/Sec	.606 G-s	
62	.069 In/Sec	.365 G-s	
63	.080 In/Sec	.047 G-s	
71	.127 In/Sec	.403 G-s	

V5 - SUGAR TANK VIKING PUMP #5 (23-Jul-21)

	OVERALL LEVEL	1-20 KHZ	
11	.101 In/Sec	.150 G-s	1175.0 RPM
12	.025 In/Sec	.223 G-s	
21	.105 In/Sec	.248 G-s	
22	.031 In/Sec	.131 G-s	
23	.051 In/Sec	.150 G-s	
71	.059 In/Sec	.501 G-s	
72	.065 In/Sec	.540 G-s	

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Clarification Of Vibration Units:

Acc	-->	G-s	PK	
Vel	-->	In/Sec	PK	Abbreviated Last Measurement

Summary

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Database: Blues\_city.rbm  
 Station: ALCOHOL PUMP ROOM  
 Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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\*\*\* NO DATA Was Found That Meets the Report Specification \*\*\*

Abbreviated Last Measurement Summary

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Database: Blues\_city.rbm  
 Station: ADMINISTRATIVE AREA  
 Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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HVAC COLD - HVAC COLD GLYCOL CIRC PUMP		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.066 In/Sec	.381 G-s	3600.0 RPM
12	.058 In/Sec	.323 G-s	
21	.102 In/Sec	.375 G-s	
22	.056 In/Sec	.316 G-s	
23	.078 In/Sec	.168 G-s	
71	.150 In/Sec	.295 G-s	
72	.134 In/Sec	.349 G-s	
73	.066 In/Sec	.349 G-s	
81	.217 In/Sec	.405 G-s	
82	.111 In/Sec	.228 G-s	
HVAC HOT - HVAC HOT WATER CIRC PUMP		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.225 In/Sec	.280 G-s	3600.0 RPM
12	.276 In/Sec	.308 G-s	
21	.209 In/Sec	.465 G-s	
22	.386 In/Sec	.659 G-s	
23	.356 In/Sec	.331 G-s	
71	.293 In/Sec	.591 G-s	
72	.474 In/Sec	.531 G-s	
73	.161 In/Sec	.212 G-s	
81	.216 In/Sec	.236 G-s	
82	.165 In/Sec	.264 G-s	

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 Clarification Of Vibration Units:

Acc --> G-s PK  
 Vel --> In/Sec PK  
 Summary  
 Abbreviated Last Measurement

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Database: Blues\_city.rbm  
 Station: FILTER CELLAR  
 Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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CHILL 1 - CHILL WATER CIRC PUMP #1		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.272 In/Sec	.507 G-s	3600.0 RPM
12	.086 In/Sec	.528 G-s	
21	.283 In/Sec	.834 G-s	
22	.188 In/Sec	.435 G-s	
23	.208 In/Sec	1.017 G-s	
71	.144 In/Sec	1.034 G-s	
72	.120 In/Sec	.650 G-s	

73	.194 In/Sec	.595 G-s
81	.074 In/Sec	.680 G-s
82	.052 In/Sec	.518 G-s

WARM GLY 1 - WARM GLYCOL PUMP #1		(23-Jul-21)
	OVERALL LEVEL	1-20 KHZ
11	.039 In/Sec	.378 G-s
12	.032 In/Sec	.239 G-s
21	.079 In/Sec	.294 G-s
22	.092 In/Sec	.298 G-s
23	.119 In/Sec	.163 G-s
71	.280 In/Sec	.108 G-s
72	.185 In/Sec	.187 G-s
73	.121 In/Sec	.289 G-s
81	.110 In/Sec	.115 G-s
82	.104 In/Sec	.243 G-s

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Clarification Of Vibration Units:

Acc	-->	G-s	PK	
Vel	-->	In/Sec	PK	Abbreviated Last Measurement

Summary

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Database: Blues\_city.rbm  
 Station: GOVERNMENT CELLAR  
 Report Date: 23-Jul-21 12:11

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	MACHINE SPEED
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COLD GLY 2 - COLD GLYCOL PUMP #2		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.515 In/Sec	.040 G-s	3600.0 RPM
12	.211 In/Sec	.238 G-s	
21	.446 In/Sec	.426 G-s	
22	.179 In/Sec	.328 G-s	
23	.179 In/Sec	.230 G-s	
71	.096 In/Sec	.329 G-s	
72	.115 In/Sec	.327 G-s	
73	.061 In/Sec	.162 G-s	
81	.074 In/Sec	.224 G-s	
82	.090 In/Sec	.401 G-s	
COLD GLY 3 - COLD GLYCOL PUMP #3		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.045 In/Sec	.103 G-s	3600.0 RPM
12	.048 In/Sec	.031 G-s	
21	.050 In/Sec	.200 G-s	
22	.050 In/Sec	.257 G-s	
23	.067 In/Sec	.086 G-s	
71	.153 In/Sec	.201 G-s	
72	.069 In/Sec	.193 G-s	
73	.060 In/Sec	.147 G-s	
81	.105 In/Sec	.163 G-s	
82	.057 In/Sec	.257 G-s	

COLD GLY 4 - COLD GLYCOL PUMP #4		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.139 In/Sec	.442 G-s	3600.0 RPM
12	.044 In/Sec	.490 G-s	
21	.096 In/Sec	.523 G-s	
22	.074 In/Sec	.499 G-s	
23	.069 In/Sec	.155 G-s	
71	.070 In/Sec	.530 G-s	
72	.061 In/Sec	.476 G-s	
73	.060 In/Sec	.318 G-s	
81	.037 In/Sec	.226 G-s	
82	.033 In/Sec	.187 G-s	
COLD GLY 5 - COLD GLYCOL PUMP #5		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.413 In/Sec	.188 G-s	3600.0 RPM
12	.225 In/Sec	.197 G-s	
21	.415 In/Sec	.425 G-s	
22	.213 In/Sec	.360 G-s	
23	.432 In/Sec	.158 G-s	
71	.165 In/Sec	.153 G-s	
72	.038 In/Sec	.201 G-s	
73	.086 In/Sec	.168 G-s	
81	.108 In/Sec	.086 G-s	
82	.057 In/Sec	.062 G-s	
PACK GLY 2 - PACKAGING COLD GLYCOL PUMP 2		(23-Jul-21)	
	OVERALL LEVEL	1-20 KHZ	
11	.033 In/Sec	.594 G-s	3600.0 RPM
12	.025 In/Sec	.716 G-s	
21	.186 In/Sec	.870 G-s	
22	.035 In/Sec	.981 G-s	
23	.045 In/Sec	.767 G-s	
71	.045 In/Sec	.508 G-s	
72	.025 In/Sec	.164 G-s	
73	.045 In/Sec	.472 G-s	
81	.032 In/Sec	.386 G-s	
82	.020 In/Sec	.297 G-s	

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Clarification Of Vibration Units:

Acc	-->	G-s	PK
Vel	-->	In/Sec	