

February 7, 2022

Dell Power AECI

Subject: Q1 February vibration service report

Most of the machines surveyed were found to be in good condition with the exception of the following: Supporting data included.

QualiTest® uses a four-step rating system for defects.

<u>Class I:</u> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

<u>Class II:</u> Defect (s) present that may cause problem in long term (2-6 months.). Repair during normal maintenance scheduling. Continue to monitor.

<u>Class III:</u> 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.

<u>Class IV;</u> 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 Senior Reliability Specialists

Hi-Speed Industrial Service

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Cooling Tower Area

Cooling tower fan 2

The motor data shows what looks to be non-synchronous vibrations that we suspect are early bearing defect frequencies. Ensure the motor bearings are lubricated if applicable. **Rated a Class II Defect.**

Cooling tower fan 8

Unit still has what looks to be elevated fan blade pass vibration or structural resonance in the motor. Inspect the unit fasteners and structures. Overall velocity has dropped a little. **Rated a Class I Defect.**

Cooling tower fan 10

Unit has what looks to be elevated fan blade pass vibration or structural resonance in the motor. Inspect the unit fasteners and structures. Overall velocity has dropped a little. **Rated a Class II Defect.**

Circulation Water Pump 2

The motor outboard (top) point MOH has increased at shaft speed to 0.319"/second velocity peak overall. There could bear slight wear, or possibly build up or debris on the impeller. Watch for changes. **Rated a Class I Defect.**

Gas Turbine Unit 1

Not in operation at time of the survey.

Gas Turbine Unit 2

LP recirc unit #2

The pump input vibrations are showing an increase in shaft speed harmonics which could indicate looseness in the bearings or bearing to shaft or housing fits. This could get worse quickly. Inspect in the near future. **Rated a Class II Defect.**

Steam Turbine Unit

Condensate Pump C

Motor top vibration overall has decreased and is under 0.4"/second velocity peak now and consists of a 1x shaft speed and 3x RPM vibration. No immediate concern yet. **Rated a Class I Defect.**

Vacuum pump 2

The pump data is still showing the fundamental vane pass and first harmonic in the outboard bearing and what looks to be cavitation. We recommend inspecting the unit and check that the pump is operating optimally. **Rated a Class I Defect.**

Service Water Pumps

Service water pump 1A

The pump vibrations seem to indicate cavitation in the pump plus possible non-synchronous peaks in the outboard axial that could indicate distress in that bearing. Check the operating parameters and ensure the bearings are lubricated. **Rated a Class II Defect.**

Deep Well Pump C

Vibration data peaks still match the defect frequency markers of the installed drive end bearing. The amplitudes do not warrant any immediate action as yet. **Rated a Class I Defect.**

Chiller Mod 1

Not in operation at time of the survey.

Chiller Mod 2

Not in operation at time of the survey.

Chiller Mod 3

Not in operation at time of the survey.

Abbreviated Last Measurement Summary ********

Database: AECI Dell Power Plant.rbm Area: Coooling Tower

	REMENT POINT	OVERALL LEVEL	HFD / VHFD	EQUIPMENT SPEED
CTW1	- Cooling	Tower Fan 1	(01-Feb-22)	
		OVERALL LEVEL		
	MOH		1.063 G-s	1780.0 RPM
	MOP	.036 G-s		
	MOV	.150 In/Sec .172 In/Sec	.468 G-s	
	MIH		.219 G-s	
	MIP	.108 G-s		
	MIV	.173 In/Sec		
	MIA	.256 In/Sec	.925 G-s	
CTW2	- Cooling	Tower Fan 2	(01-Feb-22)	
		OVERALL LEVEL		
	MOH	.096 In/Sec	.406 G-s	1780.0 RPM
	MOP	.059 G-s		
	MOV	.098 In/Sec .133 In/Sec	.353 G-s	
	MIH		1.518 G-s	
	MIP	.325 G-s		
	MIV	.083 In/Sec	.474 G-s	
	MIA	.153 In/Sec		
CTW3	- Cooling	Tower Fan 3 OVERALL LEVEL	(01-Feb-22)	
		OVERALL LEVEL	1K-20kHz	
	MOH		.231 G-s	1780.0 RPM
	MOP	.085 G-s		
	MOV	.067 In/Sec .111 In/Sec	.171 G-s	
	MIH		.914 G-s	
	MIP	.517 G-s .085 In/Sec	001 0	
	MIV	.085 In/Sec	.081 G-s	
	MIA	.125 In/Sec		
CTW4	- Cooling	Tower Fan 4	(01-Feb-22)	
		OVERALL LEVEL		
	MOH		.273 G-s	1780.0 RPM
	MOP	.118 G-s	484	
	MOV	.078 In/Sec .088 In/Sec	.171 G-s	
	MIH		.836 G-s	
	MIP	.418 G-s	1.00	
	MIV	.070 In/Sec		
	MIA	.103 In/Sec		
CTW6	- Cooling	Tower Fan 6 OVERALL LEVEL	(01-Feb-22)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.121 In/Sec	.198 G-s	1780.0 RPM
	MOP	.095 G-s		
	MOV	.082 In/Sec .121 In/Sec	.091 G-s	
	MIH	.121 In/Sec	.775 G-s	

	MED	227 0 -		
	MIP MIV	.237 G-s .077 In/Sec	060 C -	
	MIA	.090 In/Sec	.068 G-S	
CTW7	- Co	ooling Tower Fan 7	(01-Fob-22)	
CIWI	- 00	OVERALL LEVEL	1K-20kum	
	MOH	.129 In/Sec	.247 G-s	1780 0 PDM
	MOP	.030 G-s	.247 G-S	1700.0 RPM
	MOV	.124 In/Sec	177 C-s	
	MIH	.116 In/Sec		
	MIP	.622 G-s	.907 G-S	
	MIV	.022 G-S .148 In/Sec	207.0	
	MIA	.178 In/Sec		
	MIA	.176 III/Sec	.004 G-S	
CTW8	- Co	ooling Tower Fan 8	(01-Feb-22)	
		OVERALL LEVEL	1K-20kHz	
	MOH		1.677 G-s	1780.0 RPM
	MOP	.179 G-s		
	MOV	.191 In/Sec	1.056 G-s	
	MIH	.176 In/Sec	.287 G-s	
	MIP	.121 G-s	.207 3 5	
	MIV	.244 In/Sec	560 C-s	
	MIA	.370 In/Sec		
	MIA	.570 III/Bec	.501 G 5	
CTW9	- Co	ooling Tower Fan 9	(01-Feb-22)	
		OVERALL LEVEL		
	MOH	.289 In/Sec	.267 G-s	1780.0 RPM
	MOP	.044 G-s	120. 0 0	
	MOV	.103 In/Sec	.146 G-s	
	MIH	.230 In/Sec		
	MIP	.262 G-s		
	MIV	.107 In/Sec	162 G-s	
	MIA	.155 In/Sec		
		, 100 111, 000		
CTW10	- Co	oling Tower Fan 10	(01-Feb-22)	
		OVERALL LEVEL		
	MOH		2.034 G-s	1780.0 RPM
	MOP	.070 G-s		
	MOV	.292 In/Sec	.579 G-s	
	MIH	.170 In/Sec		
	MIP	.441 G-s		
	MIV	.221 In/Sec	.688 G-s	
	MIA	.394 In/Sec		
		·		
CTW11	- Co	ooling Tower Fan 11	(01-Feb-22)	
		OVERALL LEVEL		
	MOH	.215 In/Sec	.185 G-s	1780.0 RPM
	MOP	.083 G-s		
	MOV	.147 In/Sec	.202 G-s	
	MIH	.097 In/Sec	.078 G-s	
	MIP	.013 G-s		
	MIV	.086 In/Sec		
	MIA	.118 In/Sec	.021 G-s	
CTW12	- Co	oling Tower Fan 12	(01-Feb-22)	
		OVERALL LEVEL	1K-20kHz	
	MOH	.093 In/Sec	.199 G-s	1780.0 RPM

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.060 G-s
        MOP
                          .075 In/Sec .057 G-s
        MOV
                          .084 In/Sec
        MIH
                                              .210 G-s
        MIP
                          .123 G-s
                                            .135 G-s
                          .066 In/Sec
.084 In/Sec
        MIV
        MIA
                                              .031 G-s
 3CW-P-001 - Circ Water Pump 1
                                               (01-Feb-22)
                        OVERALL LEVEL 1K-20kHz
                          .119 In/Sec
        MOH
                                             .183 G-s
                                                                507.0 RPM
        MOP
                          .104 G-s
                          .049 In/Sec
.078 In/Sec
        MOV
                                             .244 G-s
        MIH
                                             .224 G-s
                          .132 G-s
        MIP
                         .040 In/Sec .288 G-s
.029 In/Sec .341 G-s
OVERALL LEVEL 1K-20KHz
.037 In/Sec .195 G-s
        MIV
        MIA
        PIH
        PIP
                           .036 G-s
                        er Pump 2 (01-Feb-22)

OVERALL LEVEL 1K-20kHz

.319 In/Sec .155 G-s 507.0 RPM
                                              (01-Feb-22)
 3CW-P-002 - Circ Water Pump 2
        MOH
                          .080 G-s
        MOP
                          .145 In/Sec
                                            .253 G-s
.190 G-s
        MOV
                          .179 In/Sec
        MIH
                          .089 G-s
        MIP
                        .049 In/Sec .250 G-s
.056 In/Sec .119 G-s
OVERALL LEVEL 1K-20KHz
        MIV
        MIA
                          .038 In/Sec
        PIH
                                            .080 G-s
                         .0048 G-s
        PIP
 LFAA1 - LFAA 1A
                                               (01-Feb-22)
                         OVERALL LEVEL 1K-20kHz
.167 In/Sec .573 G-s
        MOH
                                            .573 G-s
                                                             1770.0 RPM
                          .268 G-s
        MOP
                          .210 In/Sec
.079 In/Sec
                                            .420 G-s
.382 G-s
        MOV
        MIH
                          .248 G-s
        MIP
                        .106 In/Sec .277 G-s
.050 In/Sec .139 G-s
OVERALL LEVEL 1K-20KHz
.013 In/Sec .061 G-s
        MIV
        MIA
        PIH
                          .012 G-s
        PIP
   Clarification Of Vibration Units:
      Acc --> G-s RMS
Vel --> In/Sec PK
                                                          Abbreviated Last Measurement
Summary
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Database: AECI Dell Power Plant.rbm

Area: UNIT 1

LP #1	MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	EQUIPMENT SPEED
MOH	LP #1 - LP rec	irc unit #1	(06-Oct-21)	
MOP		OVERALL LEVEL	1K-20kHz	
MOV	MOH	.088 In/Sec	.179 G-s	3565.0 RPM
MITH	MOP	.037 G-s		
MIP	MOV	.076 In/Sec	.159 G-s	
MIV	MIH	.096 In/Sec	.231 G-s	
MIA	MIP	.077 G-s		
MIA	MIV	.143 In/Sec	.441 G-s	
PIH	MIA			
PIP		OVERALL LEVEL	1K-20KHz	
PIV	PIH	.245 In/Sec	.246 G-s	
POH	PIP	.098 G-s		
POP	PIV	.136 In/Sec	.218 G-s	
POV	POH	.111 In/Sec	.253 G-s	
FOA .094 In/Sec .140 G-s	POP	.029 G-s		
NOTE	POV	.076 In/Sec		
MOH	POA	.094 In/Sec	.140 G-s	
MOH	1FD-P-001A - Boiler	Feed Water 1A	(06-Oct-21)	
MOH		OVERALL LEVEL	1K-20KHz	
MOP			.801 G-s	3567.0 RPM
MOV				
MIH			.780 G-s	
MIP				
MIV			.201 0 0	
MIA .075 In/Sec .465 G-s			.366 G-s	
OVERALL LEVEL 1K-20kHz NIA .243 In/Sec 1.384 G-s NIH .097 In/Sec .781 G-s NIV .084 In/Sec .701 G-s NOV .128 In/Sec 1.149 G-s NOH .147 In/Sec .663 G-s NOA .305 In/Sec .832 G-s OVERALL LEVEL 1K-20kHz BFA .060 In/Sec .163 G-s PIV .066 In/Sec .153 G-s PIV .066 In/Sec .094 G-s POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) MOH .073 In/Sec .327 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIV .044 In/Sec .288 G-s MIV .044 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
NIA .243 In/Sec 1.384 G-s NIH .097 In/Sec .781 G-s NIV .084 In/Sec .701 G-s NOV .128 In/Sec 1.149 G-s NOH .147 In/Sec .663 G-s NOA .305 In/Sec .832 G-s OVERALL LEVEL 1K-20KHz BFA .060 In/Sec .163 G-s PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POV .051 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL .173 G-s				
NIH	NTA			
NIV .084 In/Sec .701 G-s NOV .128 In/Sec .1.149 G-s NOH .147 In/Sec .663 G-s NOA .305 In/Sec .832 G-s OVERALL LEVEL 1K-20KHz BFA .060 In/Sec .205 G-s PIH .060 In/Sec .163 G-s PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s .3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz			.781 G-s	
NOV .128 In/Sec 1.149 G-s NOH .147 In/Sec .663 G-s NOA .305 In/Sec .832 G-s OVERALL LEVEL 1K-20KHz BFA .060 In/Sec .205 G-s PIH .060 In/Sec .163 G-s PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POV .051 In/Sec .128 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .327 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIV .044 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
NOH .147 In/Sec .663 G-s NOA .305 In/Sec .832 G-s OVERALL LEVEL 1K-20KHz BFA .060 In/Sec .205 G-s PIH .060 In/Sec .163 G-s PIV .066 In/Sec .163 G-s PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s .3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
NOA .305 In/Sec .832 G-s OVERALL LEVEL 1K-20KHz BFA .060 In/Sec .205 G-s PIH .060 In/Sec .163 G-s PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
OVERALL LEVEL 1K-20KHz BFA .060 In/Sec .205 G-s PIH .060 In/Sec .163 G-s PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
BFA .060 In/Sec .205 G-s PIH .060 In/Sec .163 G-s PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
PIH .060 In/Sec .163 G-s PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz	BFA			
PIV .066 In/Sec .153 G-s POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
POV .051 In/Sec .094 G-s POH .072 In/Sec .128 G-s CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
CT2 - CT Lube Oil Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
OVERALL LEVEL 1K-20kHz MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz				
MOH .073 In/Sec .240 G-s 3570.0 RPM MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz	CT2 - CT Lub	oe Oil Pump 2	(06-Oct-21)	
MOP .076 G-s MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz		OVERALL LEVEL	1K-20kHz	
MOV .075 In/Sec .327 G-s MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz	MOH	.073 In/Sec	.240 G-s	3570.0 RPM
MIH .053 In/Sec .327 G-s MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz	MOP	.076 G-s		
MIP .046 G-s MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz	MOV	.075 In/Sec	.327 G-s	
MIV .044 In/Sec .288 G-s MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz	MIH		.327 G-s	
MIA .051 In/Sec .173 G-s CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz	MIP			
CTHYD !1 - CT Hyd Pump 2 (06-Oct-21) OVERALL LEVEL 1K-20kHz	MIV			
OVERALL LEVEL 1K-20kHz	MIA	.051 In/Sec	.173 G-s	
OVERALL LEVEL 1K-20kHz	CTHYD !1 - CT Hvd	l Pump 2	(06-Oct-21)	
	2	•		
	MOH	.055 In/Sec	.157 G-s	1780.0 RPM

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.018 G-s
.091 In/Sec .236 G-s
.041 In/Sec .318 G-s
MOP
MOV
MIH
MIP
                      .042 G-s
.031 In/Sec .273 G-s
.078 In/Sec .269 G-s
OVERALL LEVEL 1K-20KHz
.086 In/Sec 2.268 G-s
                         .042 G-s
MIV
MIA
PIH
PIP
                      1.254 G-s
                         .115 In/Sec 1.990 G-s
.112 In/Sec 1.232 G-s
PIV
PIA
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Clarification Of Vibration Units:

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

Abbreviated Last Measurement

Summary

Database: AECI Dell Power Plant.rbm Area: UNIT 2

MEASUREMENT POINT	OVERALL LEVEL		EQUIPMENT SPEED
LP #2 - LP rec	irc unit #2	(01-Feb-22)	
LP #2 - LP rec	OVERALL LEVEL	1K-20kHz	
MOH	.186 In/Sec	.548 G-s	3565.0 RPM
MOP	.056 G-s		
MOV	.144 In/Sec	.322 G-s	
MIH	.224 In/Sec	.633 G-s	
MIP	.318 G-s		
MIV	.192 In/Sec	.731 G-s	
MIA	.189 In/Sec		
	OVERALL LEVEL	1K-20KHz	
PIH	.326 In/Sec	.868 G-s	
PIP	.499 G-s		
PIV	.286 In/Sec	.919 G-s	
POH	.120 In/Sec	.364 G-s	
POP	.037 G-s		
POV	.219 In/Sec		
POA	.258 In/Sec	.338 G-s	
2FD-P-002B - Boiler	Feed Water 2B	(01-Feb-22)	
	OVERALL LEVEL	1K-20KHz	
MOH	.025 In/Sec	.102 G-s	3567.0 RPM
MOP	.046 G-s		
MOV	.033 In/Sec	.111 G-s	
MIH	.032 In/Sec	.329 G-s	
MIP	.169 G-s		
MIV	.052 In/Sec		
MIA	.042 In/Sec		
	OVERALL LEVEL		
NIA	.173 In/Sec		
NIH	.122 In/Sec		
NIV	.128 In/Sec	.363 G-s	

```
NOV
                       .102 In/Sec
                                         .266 G-s
                       .156 In/Sec .182 G-s
       NOH
       NOA
                        .161 In/Sec
                                          .336 G-s
                      OVERALL LEVEL 1K-20KHz
                       .038 In/Sec .278 G-s
.088 In/Sec .166 G-s
.111 In/Sec .186 G-s
.130 In/Sec .145 G-s
                                        .278 G-s
       PIH
       PIV
       POH
CT2
       - CT Lube Oil Pump 2
                                          (01-Feb-22)
                      OVERALL LEVEL 1K-20kHz
       MOH
                        .042 In/Sec
                                        .225 G-s
                                                        3570.0 RPM
                        .061 G-s
       MOP
                       .063 In/Sec
.046 In/Sec
       MOV
                                         .079 G-s
       MIH
                                         .187 G-s
       MIP
                       .060 G-s
                                        .087 G-s
                       .032 In/Sec
       MIV
       MIA
                        .048 In/Sec
                                         .137 G-s
CTHYD !1 - CT Hyd Pump 2
                       OVERALL LEVEL 1K-20kHz
.053 In/Sec .154 G-s
.024 G-s
                                          (01-Feb-22)
                                                    1780.0 RPM
       MOH
       MOP
                        .024 G-s
                       .071 In/Sec .099 G-s
.031 In/Sec .368 G-s
       MOV
       MIH
                       .164 G-s
       MIP
                     .038 In/Sec .663 G-s
.038 In/Sec .063 G-s
OVERALL LEVEL 1K-20KHz
       MIV
       MIA
                                       1.207 G-s
       PIH
                       .073 In/Sec
                       .582 G-s
       PIP
                       .141 In/Sec 1.803 G-s
.092 In/Sec 2.554 G-s
       PIV
       PIA
ABF
       - Aux Boiler Fan
                                          (01-Feb-22)
                     OVERALL LEVEL 1K-20kHz
.135 In/Sec .111 G-s
       MOH
                                         .111 G-s
                                                        3550.0 RPM
                        .019 G-s
       MOP
       MOV
                        .285 In/Sec
                                         .254 G-s
                        .065 In/Sec
       MIH
                                          .297 G-s
       MIP
                       .079 G-s
                       .053 In/Sec
       MIV
                                         .190 G-s
                       .223 In/Sec
       MIA
                                         .154 G-s
   Clarification Of Vibration Units:
     Acc --> G-s RMS
Vel --> In/Sec PK
                                                    Abbreviated Last Measurement
Summary
                     **********
              Database: AECI Dell Power Plant.rbm
              Area: UNIT STEAM TURBINE
```

MEASUREMENT POINT OVERALL LEVEL HFD / VHFD EQUIPMENT SPEED

0CC-P-002 -	CLosed Cooling Water 2 OVERALL LEVEL	(01-Feb-22)	
MOH	.092 In/Sec	.413 G-s	1775.0 RPM
MOP	.024 G-s		
MOV	.042 In/Sec	.299 G-s	
MIH	.097 In/Sec	.735 G-s	
MIP	.438 G-s		
MIV	.027 In/Sec	.328 G-s	
MIA	.037 In/Sec	.336 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.070 In/Sec	.360 G-s	
PIP	.203 G-s		
PIV	.066 In/Sec	.391 G-s	
POH	.088 In/Sec	.240 G-s	
POP	.066 G-s		
POV	.075 In/Sec	.255 G-s	
POA	.091 In/Sec	.442 G-s	
3CH-P-001A -	Condensate Pump A	(01-Feb-22)	
	OVERALL LEVEL	1K-20kHz	
MOH	.166 In/Sec	.168 G-s	1780.0 RPM
MOP	.039 G-s		
MOV	.168 In/Sec	.230 G-s	
MIH	.078 In/Sec	.207 G-s	
MIP	.081 G-s		
MIV	.062 In/Sec	.453 G-s	
MIA	.055 In/Sec	.255 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.030 In/Sec	.139 G-s	
PIP	.042 G-s		
3CH-P-001C -	Condensate PumpC	(01-Feb-22)	
	OVERALL LEVEL	1K-20kHz	
MOH	.324 In/Sec	.236 G-s	1780.0 RPM
MOP	.045 G-s		
MOV	.363 In/Sec	.460 G-s	
MIH	.167 In/Sec	.267 G-s	
MIP	.100 G-s		
MIV	.150 In/Sec	.751 G-s	
MIA	.119 In/Sec	.064 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.032 In/Sec	.612 G-s	
PIP	.263 G-s		
3AE-P-002 -	Vacuum Pump 2	(01-Feb-22)	
	OVERALL LEVEL	1K-20kHz	
MOH	.144 In/Sec	.391 G-s	1185.0 RPM
MOP	.115 G-s		
MOV		.438 G-s	
	.160 In/Sec		
MIH	.160 In/Sec .183 In/Sec	.438 G-S .257 G-S	
	.183 In/Sec .059 G-s		
MIH	.183 In/Sec		
MIH MIP	.183 In/Sec .059 G-s	.257 G-s	
MIH MIP MIV	.183 In/Sec .059 G-s .245 In/Sec .168 In/Sec OVERALL LEVEL	.257 G-s .250 G-s .156 G-s 1K-20KHz	
MIH MIP MIV	.183 In/Sec .059 G-s .245 In/Sec .168 In/Sec	.257 G-s .250 G-s .156 G-s	

```
PIV
                   .262 In/Sec .630 G-s
      POH
                   .241 In/Sec
                                    .403 G-s
                    .327 G-s
      POP
                    .237 In/Sec
                                   .661 G-s
                    .359 In/Sec
      POV
      POA
                                    .190 G-s
STG1
      - STG Lube Oil Pump 1
                                    (01-Feb-22)
                  OVERALL LEVEL 1K-20kHz
                    .081 In/Sec
                                                 3560.0 RPM
     MOH
                                   .110 G-s
     MOP
                    .025 G-s
     MOV
                    .050 In/Sec
                                   .416 G-s
                    .035 In/Sec
     MIH
                                   .191 G-s
     MIP
                    .044 G-s
                    .034 In/Sec
     MIV
                                   .146 G-s
                                   .217 G-s
     MIA
                    .098 In/Sec
STGHyd2 - STG Hyd Pump 2
                                    (01-Feb-22)
             G Hyd Pump 2 (01-Feb-2

OVERALL LEVEL 1K-20kHz

.143 In/Sec .788 G-s
                                             1770.0 RPM
     MOH
                   MOP
     MOV
     MIH
     MIV
     MIA
                  OVERALL LEVEL 1K-20KHz
                                  .288 G-s
.374 G-s
                   .174 In/Sec
.122 In/Sec
     PIH
     PIV
                   .202 In/Sec
     PIA
                                  .569 G-s
                   .175 In/Sec
     POH
                                   .420 G-s
                   .188 G-s
     POP
                    .150 In/Sec
     POV
                                   .573 G-s
```

Clarification Of Vibration Units:

Acc --> G-s RMS

Vel --> In/Sec PK Abbreviated Last Measurement

Summary

Database: AECI Dell Power Plant.rbm
Area: WATER PUMPS AND VACUUM PUMPS

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	EQUIPMENT SPEED
OSW-P-001A - Service	•	(01-Feb-22)	
	OVERALL LEVEL	1K-20kHz	
MOH	.068 In/Sec	.086 G-s	1780.0 RPM
MOP	.018 G-s		
MOV	.038 In/Sec	.238 G-s	
MIH	.067 In/Sec	.384 G-s	
MIP	.231 G-s		
MIV	.046 In/Sec	.198 G-s	
MIA	.061 In/Sec	.858 G-s	
	OVERALL LEVEL	1K-20KHz	
PIH	.280 In/Sec	.702 G-s	

```
.307 G-s
        PIP
                        .279 In/Sec .679 G-s
.238 In/Sec .715 G-s
        PIV
        POH
        POP
                         .154 G-s
                         .203 In/Sec
.224 In/Sec
        POV
                                          1.071 G-s
                                          2.193 G-s
        POA
ORW-P-001B - Deep Well Pump B
                                            (01-Feb-22)
                        OVERALL LEVEL 1K-20kHz
                         .228 In/Sec
        MOH
                                           .225 G-s
                                                           1780.0 RPM
        MOP
                         .072 G-s
                         .198 In/Sec
.074 In/Sec
        MOV
                                           .122 G-s
        MIH
                                           .148 G-s
                         .052 G-s
        MIP
                        .105 In/Sec .077 G-s
.038 In/Sec .053 G-s
OVERALL LEVEL 1K-20KHz
.075 In/Sec .051 G-s
        MIV
        MIA
        PIH
        PIP
                        .0060 G-s
                        Pump C (01-Feb-22)

OVERALL LEVEL 1K-20kHz

.148 In/Sec .285 G-s 1780.0 RPM
                                            (01-Feb-22)
ORW-P-001C - Deep Well Pump C
        MOH
                         .140 G-s
        MOP
                        .126 In/Sec .343 G-s
.069 In/Sec 1.615 G-s
        MOV
                                           .343 G-s
        MIH
                        .986 G-s
        MIP
                      .960 G S

.054 In/Sec .968 G-s

.041 In/Sec .356 G-s

OVERALL LEVEL 1K-20KHz
                                          .968 G-s
        MIV
        MIA
                                            .356 G-s
                                          .379 G-s
        PIH
                       .050 In/Sec
                         .177 G-s
        PIP
   Clarification Of Vibration Units:
     Acc --> G-s RMS
              --> In/Sec PK
     Vel
                                                       Abbreviated Last Measurement
Summary
                      *********
               Database: AECI Dell Power Plant.rbm
               Area: Chiller Module 1
               Report Date: 07-Feb-22 10:27
MEASUREMENT POINT
                      OVERALL LEVEL HFD / VHFD EQUIPMENT SPEED
```

TWP 102 - Chiller Cooling Tower Pump 2 (06-Oct-21)

OVERALL LEVEL 1K-20kHz

MOH .413 In/Sec .619 G-s 1185.0 RPM

MOP .204 G-s

MOV .376 In/Sec .332 G-s

MIH .148 In/Sec .142 G-s

MIV .121 In/Sec .177 G-s

MIA .054 In/Sec .227 G-s

OVERALL LEVEL 1K-20KHz

PIH .142 In/Sec .253 G-s

```
.166 G-s
       PIP
                      .051 In/Sec
                                       .235 G-s
       PIV
 CHWP 102 - Chilled Water Pump 2
                                        (06-Oct-21)
                     OVERALL LEVEL 1K-20kHz
                       .125 In/Sec
       MOH
                                      .466 G-s
                                                      1780.0 RPM
       MOP
                       .025 G-s
                      .138 In/Sec
.136 In/Sec
                                      .512 G-s
.178 G-s
       MOV
       MIH
                      .104 G-s
       MIP
                    .239 G-s
.052 In/Sec .286 G-s
OVERALL LEVEL 1K-20KHz
.059 In/Sec .112 C
.014 G-s
                                      .239 G-s
       MIV
       MIA
                                       .286 G-s
                                      .112 G-s
       PIH
       PIP
       PIV
                      .058 In/Sec
                                      .079 G-s
Comp Mtr B - Chiller compressor Mtr. B (06-Oct OVERALL LEVEL 1K-20kHz M1H .103 In/Sec .815 G-s
                                        (06-Oct-21)
                                      .815 G-s
                                                 3564.0 RPM
       M1P
                       .187 G-s
                      .092 In/Sec 1.003 G-s
.058 In/Sec .250 G-s
       M1V
       M2H
                    .0081 G-s
       M2P
                     .042 In/Sec .544 G-s
.058 In/Sec 1.406 G-s
       M2V
       M2A
                      .052 In/Sec
       C1H
                      .058 G-s
       C1P
                      .033 In/Sec
       C1V
                      .040 In/Sec
       C1A
                      .037 In/Sec
       C2H
                      .221 G-s
       C2P
       C2V
                      .045 In/Sec
______
  Clarification Of Vibration Units:
     Acc --> G-s RMS
             --> In/Sec PK
     Vel
                                                 Abbreviated Last Measurement
Summary
                    *********
              Database: AECI Dell Power Plant.rbm
             Area: Chiller Module 2
             Report Date: 07-Feb-22 10:27
MEASUREMENT POINT
                    OVERALL LEVEL HFD / VHFD EQUIPMENT SPEED
 TWP 201 - Chiller Cooling Tower Pump 1 (06-Oct-21)
                      OVERALL LEVEL 1K-20kHz
.122 In/Sec 1.196 G-s
```

MOH MOP

MOV MIH MIV MIA

.551 G-s

.085 In/Sec .762 G-s .059 In/Sec .364 G-s .050 In/Sec .253 G-s .046 In/Sec .557 G-s OVERALL LEVEL 1K-20KHz

1185.0 RPM

```
PIH
                                        .236 G-s
                       .045 In/Sec
                      .169 G-s
       PIP
                       .039 In/Sec
       PIV
                                         .250 G-s
CHWP 201 - Chilled Water Pump 1
                                          (06-Oct-21)
                      OVERALL LEVEL 1K-20kHz .110 In/Sec .453 G-s
                                                        1780.0 RPM
       MOH
                                        .453 G-s
                        .112 G-s
       MOP
       MOV
                       .147 In/Sec
                                        .426 G-s
                       .089 In/Sec
       MIH
                                         .327 G-s
       MIP
                       .099 G-s
                                        .123 G-s
                       .133 In/Sec
       MIV
                     .049 In/Sec .314 G-s
OVERALL LEVEL 1K-20KHz
.066 In/Sec .085 G-s
       MIA
       PIH
                       .031 G-s
       PIP
                       .055 In/Sec .092 G-s
       PIV
Comp A - Chiller compressor Mtr. A (06-Oct-)
OVERALL LEVEL 1K-20kHz
M1H .062 In/Sec .242 G-s
                                         (06-Oct-21)
                                                   3564.0 RPM
       M1P
                       .023 G-s
                      .065 In/Sec .202 G-s
.037 In/Sec .313 G-s
       M1V
       M2H
       M2P
                       .017 G-s
                      .032 In/Sec .314 G-s
.032 In/Sec .162 G-s
       M2V
       M2A
       C1H
                       .040 In/Sec
                       .044 G-s
       C1P
                      .045 In/Sec
       C1V
                       .042 In/Sec
       C1A
  Clarification Of Vibration Units:
     Acc --> G-s RMS
             --> In/Sec PK
     Vel
                                                   Abbreviated Last Measurement
Summary
                     *********
              Database: AECI Dell Power Plant.rbm
              Area: Chiller Module 3
              Report Date: 07-Feb-22 10:27
```

MEASUREMENT POINT OVERALL LEVEL HFD / VHFD EQUIPMENT SPEED

*** NO DATA Was Found That Meets the Report Specification *** Abbreviated Last Measurement Summary

Database: AECI Dell Power Plant.rbm
Area: Liquid Fuel NOX AND LP REC PUMP

Report Date: 07-Feb-22 10:27

MEASUREMENT POINT OVERALL LEVEL HFD / VHFD EQUIPMENT SPEED

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

Database: AECI Dell Power Plant.rbm Area: OLD BOILER DO NOT USE Report Date: 07-Feb-22 10:27

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD	EQUIPMENT SPEED
2FD-P-002B - Boiler	Feed Water 2B	(31-May-18)	
	OVERALL LEVEL	1K-20KHz	
MOH	.089 In/Sec	1.086 G-s	3567.0 RPM
MOP	1.862 G-s		
MOV	.211 In/Sec	2.391 G-s	
MIH	.107 In/Sec	.336 G-s	
MIP	.307 G-s		
MIV	.232 In/Sec	.504 G-s	
MIA	.218 In/Sec	.582 G-s	

Clarification Of Vibration Units:

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