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February 21, 2025

South Shelby RNG
Memphis, TN

The following is a summary of findings from the February 2025 monthly vibration survey that was performed on February 21, 2025.

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.

Defects

C-551A Vacuum Compressor A
Compressor amplitudes are higher than normal when compressor is under load. Harmonics of 4 x rpm can be seen. Data indicates some internal wear of the compressor may be present. Monitoring this closely. Rated as a **CLASS II** defect.

C-0600 A Feed Gas Compressor
Compressor data is shows some high 1 x input rpm vibration especially in the vertical direction. Check compressor fasteners and ensure compressor does not have a soft foot or piping strain. Rated as a **CLASS I** defect.

C-0600 C Feed Gas Compressor
Compressor data still shows an extreme amount of 1 x input rpm (drive side rotor 1800 rpm) vibration in the compressor. Overall amplitude is the highest on record as of this survey measuring 2.17 ips-pk. A hot alignment was just recently performed on this compressor and the motor does not have excessive vibration. The piping was also vibrating at the highest on record. The compressor shaft could have excessive deflection due to bent shaft or excessive shaft movement. Imbalance of the compressor rotor could also be suspect of the high 1 x rpm vibration. The 1 x rpm vibration could be caused by some type of piping strain or compressor soft foot. Because of the high amplitude it is recommended to inspect the compressor for these issues asap. Also check compressor fasteners asap as this high vibration could loosen the foot bolts. Rated as a **CLASS IV** defect.

BLR-0200 A, Blower MOTOR
Motor data is showing non-synchronous vibration, noise floor, and 1-20 kHz. amplitude. There are all indications of bearing issues in the motor. This could be a lube issue, but is more likely to be caused by defective motor bearings. Motor should be inspected as scheduling allows. Rated as a **CLASS II** defect.

C-1300 Sales Gas Compressor Stage 1
Compressor drive end data shows some high frequency vibration peaks in the spectra that may be related to gear mesh frequency of the internal mating gears. Amplitude is slightly lower this survey, but these peaks are still present. We would need more internal information such as gear ratio and number of gear teeth to confirm issue. Rated as a **CLASS I** defect for now.

Abbreviated Last Measurement Summary

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Database: South Shelby RNG.rbm
Area: SOUTH SHELBY PLANT

MEASUREMENT POINT	OVERALL LEVEL	HFD / VHFD
C-551B - C-551B VACUUM COMPRESSOR B (21-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.090 In/Sec	.922 G-s
MOV	.092 In/Sec	.394 G-s
MIH	.126 In/Sec	1.585 G-s
MIV	.118 In/Sec	.307 G-s
MIA	.083 In/Sec	.441 G-s
CIA	.193 In/Sec	2.631 G-s
CIH	.258 In/Sec	3.830 G-s
CIV	.310 In/Sec	.733 G-s
COH	.188 In/Sec	5.139 G-s
COV	.186 In/Sec	.955 G-s
COA	.135 In/Sec	1.633 G-s
C-551A - C-551A VACUUM COMPRESSOR A (21-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.067 In/Sec	2.630 G-s
MOV	.074 In/Sec	.512 G-s
MIH	.113 In/Sec	1.660 G-s
MIV	.065 In/Sec	.414 G-s
MIA	.064 In/Sec	.518 G-s
CIA	.222 In/Sec	3.792 G-s
CIH	.356 In/Sec	5.463 G-s
CIV	.352 In/Sec	1.133 G-s
COH	.311 In/Sec	5.860 G-s
COV	.247 In/Sec	.969 G-s
COA	.207 In/Sec	1.533 G-s
C-601B - C-601B N2 RECYCLE COMP B (21-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.100 In/Sec	.410 G-s
MOV	.029 In/Sec	.229 G-s
MIH	.121 In/Sec	.611 G-s
MIV	.056 In/Sec	.246 G-s
MIA	.036 In/Sec	.171 G-s
CIA	.114 In/Sec	.681 G-s
CIH	.122 In/Sec	2.006 G-s
CIV	.175 In/Sec	.673 G-s
COH	.183 In/Sec	2.537 G-s
COV	.131 In/Sec	.629 G-s
COA	.158 In/Sec	.878 G-s
C-601A - C-601A N2 RECYCLE COMP A (21-Feb-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.038 In/Sec	.792 G-s
MOV	.027 In/Sec	.409 G-s
MIH	.089 In/Sec	.876 G-s
MIV	.031 In/Sec	.339 G-s
MIA	.028 In/Sec	.297 G-s
CIA	.140 In/Sec	.869 G-s
CIH	.101 In/Sec	2.166 G-s
CIV	.129 In/Sec	.448 G-s
COH	.125 In/Sec	1.636 G-s
COV	.145 In/Sec	.516 G-s
COA	.178 In/Sec	.734 G-s

C-0600A - C-0600A FEED GAS COMP A (21-Feb-25)

	OVERALL LEVEL	1K-20KHz
MOH	.089 In/Sec	.648 G-s
MOV	.079 In/Sec	.151 G-s
MIH	.102 In/Sec	.472 G-s
MIV	.085 In/Sec	.267 G-s
MIA	.047 In/Sec	.196 G-s
CIA	.334 In/Sec	.513 G-s
CIH	.392 In/Sec	1.525 G-s
CIV	.784 In/Sec	.615 G-s
COH	.345 In/Sec	1.554 G-s
COV	.313 In/Sec	.571 G-s
COA	.255 In/Sec	.781 G-s

C-0600C - C-0600C FEED GAS COMP C (21-Feb-25)

	OVERALL LEVEL	1K-20KHz
MOH	.190 In/Sec	.475 G-s
MOV	.126 In/Sec	.078 G-s
MIH	.206 In/Sec	.462 G-s
MIV	.089 In/Sec	.135 G-s
MIA	.093 In/Sec	.232 G-s
CIA	.685 In/Sec	.716 G-s
CIH	2.104 In/Sec	6.198 G-s
CIV	1.297 In/Sec	.747 G-s
COH	1.399 In/Sec	2.670 G-s
COV	1.542 In/Sec	.764 G-s
COA	.343 In/Sec	.962 G-s

BLR-0200B - BLR-0200B LFG BLOWER B (21-Feb-25)

	OVERALL LEVEL	1K-20KHz
MOH	.237 In/Sec	1.937 G-s
MOV	.198 In/Sec	.512 G-s
MIH	.315 In/Sec	3.293 G-s
MIV	.271 In/Sec	.469 G-s
MIA	.080 In/Sec	1.031 G-s
BIA	.123 In/Sec	.385 G-s
BIH	.169 In/Sec	1.613 G-s
BIV	.305 In/Sec	.477 G-s
BOH	.111 In/Sec	2.020 G-s
BOV	.571 In/Sec	.301 G-s
BOA	.094 In/Sec	.518 G-s

BLR-0200C - BLR-0200C LFG BLOWER C (21-Feb-25)

	OVERALL LEVEL	1K-20KHz
MOH	.214 In/Sec	.974 G-s
MOV	.161 In/Sec	.196 G-s
MIH	.258 In/Sec	.853 G-s
MIV	.252 In/Sec	.183 G-s
MIA	.150 In/Sec	.281 G-s
BIA	.191 In/Sec	2.094 G-s
BIH	.392 In/Sec	10.47 G-s
BIV	.257 In/Sec	2.281 G-s
BOH	.342 In/Sec	7.886 G-s
BOV	.299 In/Sec	2.249 G-s
BOA	.217 In/Sec	2.125 G-s

BLR-0200D - BLR-0200D LFG BLOWER D (21-Feb-25)

	OVERALL LEVEL	1K-20KHz
MOH	.270 In/Sec	1.539 G-s
MOV	.133 In/Sec	.608 G-s
MIH	.201 In/Sec	2.122 G-s
MIV	.164 In/Sec	.313 G-s
MIA	.095 In/Sec	.614 G-s
BIA	.216 In/Sec	2.285 G-s
BIH	.332 In/Sec	13.68 G-s
BIV	.186 In/Sec	2.439 G-s
BOH	.375 In/Sec	15.11 G-s
BOV	.285 In/Sec	2.162 G-s
BOA	.161 In/Sec	2.364 G-s

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C-1300      - C-1300 SALES GAS COMP STG 1   (21-Feb-25)
                                OVERALL LEVEL      1K-20KHz
          MOH                    .075 In/Sec        .329 G-s
          MOV                    .202 In/Sec        .070 G-s
          MIH                    .064 In/Sec        .903 G-s
          MIV                    .205 In/Sec        .183 G-s
          MIA                    .188 In/Sec        .178 G-s
          CIA                    .219 In/Sec        .602 G-s
          CIH                    .257 In/Sec       3.013 G-s
          CIV                    .414 In/Sec        .799 G-s
          COH                    .144 In/Sec       1.747 G-s
          COV                    .302 In/Sec        .575 G-s
          COA                    .198 In/Sec        .962 G-s

C-1304      - C-1304 SALES GAS COMP STG 2   (21-Feb-25)
                                OVERALL LEVEL      1K-20KHz
          MOH                    .126 In/Sec        .936 G-s
          MOV                    .064 In/Sec       1.124 G-s
          MIH                    .143 In/Sec       1.350 G-s
          MIV                    .070 In/Sec        .792 G-s
          MIA                    .084 In/Sec        .371 G-s
          CIA                    .108 In/Sec        .196 G-s
          CIH                    .157 In/Sec        .512 G-s
          CIV                    .106 In/Sec        .119 G-s
          COH                    .192 In/Sec        .339 G-s
          COV                    .098 In/Sec        .162 G-s
          COA                    .088 In/Sec        .183 G-s
          1SH                    .144 In/Sec        .649 G-s
          1SV                    .161 In/Sec        .112 G-s
          1SA                    .226 In/Sec        .131 G-s
          2SH                    .147 In/Sec        .510 G-s
          2SV                    .162 In/Sec        .166 G-s
          2SA                    .229 In/Sec        .222 G-s

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   Clarification Of Vibration Units:
      Acc       -->  G-s       RMS
      Vel       -->  In/Sec    PK
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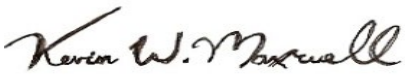
As always, it has been a pleasure to serve South Shelby RNG. If there are any comments or questions, do not hesitate to contact us.

Sincerely,



ISO Certified Vibration Analyst, Category III

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