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July 21st, 2025

South Shelby RNG
Memphis, TN

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

Defects

C-551A Vacuum Compressor A
Compressor amplitudes are slightly 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. We remain to monitor this closely. Rated as a **CLASS II** defect.

C-0600 B Feed Gas Compressor
Compressor data is shows some high 1 x input rpm vibration 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
Overall compressor vibration remains lower than previously; however, data still shows a 1 x input rpm (drive side rotor 1800 rpm) vibration in the compressor. Overall amplitude is lower than last month, but still well above 1 ips-pk overall in the vertical direction. 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. Also check compressor fasteners asap as this high vibration could loosen the foot bolts. Rated as a **CLASS III** defect.

BLR-0200 A and B, LFG Blower MOTORS
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.

BLR-0200 C and D LFG BLOWERS
Blower data indicates possible internal wear of the blowers. A and B have much less acceleration amplitudes and much less noise floor in spectral data. C and D have high acceleration amplitudes and high noise floor in spectra. Blowers may need attention in the next few months. Monitoring this closely. 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-Jul-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.083 In/Sec	1.486 G-s
MOV	.072 In/Sec	.432 G-s
MIH	.121 In/Sec	.479 G-s
MIV	.114 In/Sec	.308 G-s
MIA	.078 In/Sec	.192 G-s
CIA	.260 In/Sec	.996 G-s
CIH	.152 In/Sec	2.115 G-s
CIV	.270 In/Sec	.897 G-s
COH	.171 In/Sec	4.413 G-s
COV	.153 In/Sec	1.135 G-s
COA	.129 In/Sec	1.370 G-s
C-551A - C-551A VACUUM COMPRESSOR A (21-Jul-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.064 In/Sec	1.152 G-s
MOV	.069 In/Sec	.180 G-s
MIH	.091 In/Sec	.849 G-s
MIV	.078 In/Sec	.297 G-s
MIA	.073 In/Sec	.221 G-s
CIA	.191 In/Sec	1.177 G-s
CIH	.242 In/Sec	2.869 G-s
CIV	.317 In/Sec	1.447 G-s
COH	.255 In/Sec	3.867 G-s
COV	.312 In/Sec	.964 G-s
COA	.270 In/Sec	.985 G-s
C-601B - C-601B N2 RECYCLE COMP B (21-Jul-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.114 In/Sec	1.149 G-s
MOV	.023 In/Sec	.256 G-s
MIH	.097 In/Sec	.905 G-s
MIV	.050 In/Sec	.209 G-s
MIA	.031 In/Sec	.173 G-s
CIA	.073 In/Sec	.632 G-s
CIH	.095 In/Sec	1.733 G-s
CIV	.108 In/Sec	.384 G-s
COH	.138 In/Sec	2.694 G-s
COV	.122 In/Sec	.840 G-s
COA	.118 In/Sec	.764 G-s
C-601A - C-601A N2 RECYCLE COMP A (21-Jul-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.046 In/Sec	1.287 G-s
MOV	.027 In/Sec	.573 G-s
MIH	.085 In/Sec	1.660 G-s
MIV	.035 In/Sec	.257 G-s
MIA	.035 In/Sec	.278 G-s
CIA	.129 In/Sec	.679 G-s
CIH	.087 In/Sec	1.320 G-s
CIV	.161 In/Sec	.547 G-s
COH	.227 In/Sec	2.082 G-s
COV	.205 In/Sec	.535 G-s
COA	.227 In/Sec	.772 G-s
C-0600A - C-0600A FEED GAS COMP A (21-Jul-25)		
	OVERALL LEVEL	1K-20KHz
MOH	.099 In/Sec	.642 G-s
MOV	.091 In/Sec	.203 G-s
MIH	.106 In/Sec	.502 G-s

MIV	.076 In/Sec	.103 G-s
MIA	.043 In/Sec	.237 G-s
CIA	.246 In/Sec	.520 G-s
CIH	.307 In/Sec	1.835 G-s
CIV	.544 In/Sec	.618 G-s
COH	.262 In/Sec	2.150 G-s
COV	.442 In/Sec	.485 G-s
COA	.214 In/Sec	.869 G-s

C-0600B - C-0600B FEED GAS COMP B (21-Jul-25)

	OVERALL LEVEL	1K-20KHz
MOH	.069 In/Sec	.437 G-s
MOV	.059 In/Sec	.224 G-s
MIH	.091 In/Sec	.250 G-s
MIV	.073 In/Sec	.079 G-s
MIA	.059 In/Sec	.132 G-s
CIA	.383 In/Sec	.780 G-s
CIH	.289 In/Sec	1.918 G-s
CIV	.685 In/Sec	.543 G-s
COH	.345 In/Sec	3.007 G-s
COV	.605 In/Sec	.531 G-s
COA	.369 In/Sec	.981 G-s

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

	OVERALL LEVEL	1K-20KHz
MOH	.173 In/Sec	.267 G-s
MOV	.143 In/Sec	.082 G-s
MIH	.228 In/Sec	.321 G-s
MIV	.102 In/Sec	.052 G-s
MIA	.093 In/Sec	.143 G-s
CIA	.452 In/Sec	1.278 G-s
CIH	1.061 In/Sec	5.426 G-s
CIV	1.169 In/Sec	.924 G-s
COH	.624 In/Sec	2.434 G-s
COV	.928 In/Sec	.435 G-s
COA	.699 In/Sec	.733 G-s

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

	OVERALL LEVEL	1K-20KHz
MOH	.128 In/Sec	2.398 G-s
MOV	.247 In/Sec	.493 G-s
MIH	.136 In/Sec	3.792 G-s
MIV	.338 In/Sec	.477 G-s
MIA	.206 In/Sec	.854 G-s
BIA	.253 In/Sec	1.542 G-s
BIH	.551 In/Sec	6.130 G-s
BIV	.698 In/Sec	1.583 G-s
BOH	.413 In/Sec	7.523 G-s
BOV	.682 In/Sec	.895 G-s
BOA	.330 In/Sec	2.219 G-s

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

	OVERALL LEVEL	1K-20KHz
MOH	.073 In/Sec	1.319 G-s
MOV	.109 In/Sec	.213 G-s
MIH	.070 In/Sec	1.516 G-s
MIV	.089 In/Sec	.161 G-s
MIA	.054 In/Sec	.468 G-s
BIA	.299 In/Sec	3.638 G-s
BIV	.438 In/Sec	3.652 G-s
BOV	.444 In/Sec	4.061 G-s
BOA	.326 In/Sec	3.214 G-s

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

	OVERALL LEVEL	1K-20KHz
MOH	.068 In/Sec	1.590 G-s
MOV	.073 In/Sec	.543 G-s
MIH	.085 In/Sec	2.680 G-s
MIV	.164 In/Sec	.344 G-s
MIA	.060 In/Sec	.943 G-s

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            BIA                      .232 In/Sec      3.683 G-s
            BIV                      .502 In/Sec      3.004 G-s
            BOV                      .409 In/Sec      2.641 G-s
            BOA                      .211 In/Sec      3.514 G-s

      C-1300     - C-1300 SALES GAS COMP STG 1   (21-Jul-25)
                                     OVERALL LEVEL     1K-20KHz
            MOH                      .071 In/Sec       .549 G-s
            MOV                      .066 In/Sec       .060 G-s
            MIH                      .057 In/Sec       .284 G-s
            MIV                      .299 In/Sec       .065 G-s
            MIA                      .117 In/Sec       .157 G-s
            CIA                      .261 In/Sec       .417 G-s
            CIH                      .327 In/Sec      2.718 G-s
            CIV                      .413 In/Sec       .542 G-s
            COH                      .264 In/Sec      2.520 G-s
            COV                      .304 In/Sec       .407 G-s
            COA                      .261 In/Sec       .817 G-s

      C-1304     - C-1304 SALES GAS COMP STG 2   (21-Jul-25)
                                     OVERALL LEVEL     1K-20KHz
            MOH                      .163 In/Sec       .679 G-s
            MOV                      .111 In/Sec       .479 G-s
            MIH                      .172 In/Sec      1.342 G-s
            MIV                      .108 In/Sec       .487 G-s
            MIA                      .092 In/Sec       .240 G-s
            CIA                      .175 In/Sec       .241 G-s
            CIH                      .281 In/Sec       .657 G-s
            CIV                      .154 In/Sec       .160 G-s
            COH                      .226 In/Sec       .516 G-s
            COV                      .154 In/Sec       .207 G-s
            COA                      .176 In/Sec       .194 G-s
            1SH                      .185 In/Sec      1.052 G-s
            1SV                      .286 In/Sec       .161 G-s
            1SA                      .294 In/Sec       .185 G-s
            2SH                      .289 In/Sec      1.283 G-s
            2SV                      .252 In/Sec       .314 G-s
            2SA                      .284 In/Sec       .233 G-s

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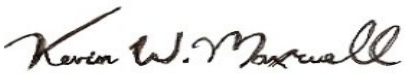
As always, it has been a pleasure to serve South Shelby RNG. If there are any comments or questions, do not hesitate to contact us.

Sincerely,



ISO Certified Vibration Analyst, Category III

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