October 4, 2021

Mitsubishi Chemicals

Subject: October 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,

David W. Shook
Senior Reliability Specialists
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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**

### ACN 08 ACH Blend Tank
Motor shows a slight increase in shaft speed vibration. Inspect for loose fasteners and coupling or alignment issues. **Rated a Class I Defect.**

### ACN 09 ACH Flash Tank Pump
Motor shows another increase in the shaft speed vibration. Inspect for loose fasteners and coupling or alignment issues. **Rated a Class II Defect.**

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

### ACN22 ACN Ref Booster Pump #2
The motor and pump axial vibrations are still elevated at 3x and 4x shaft speed. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. Also ensure the pump is operating properly in the correct point on the performance curve. **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.**

### ACN29A ACN Cooling Tower Pump North
Pump data continues to suggest cavitation. Check for proper pump operation. **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.**

**MON 32B ARC Reflux Pump South**
Pump vibration data for the inboard bearing overall has risen again and consists of a few harmonics of which the 5$^{th}$ is dominant and could indicate slight wear or flow issue. Sub-synchronous sidebands seem to also be present and surround the 5$^{th}$ harmonic. There are also a few non-synchronous peaks. We suspect bearing defects, and wear in the pump, possible even a loose impeller. Inspect as time allows. **Rated a Class II Defect.**

**MON 43B Amide Reactor Circulation Pump 2 South**
The pump inboard horizontal vibrations are still elevated. 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 50 MMA Decanter Feed Pump**
Pump vibration data for the inboard bearing overall has risen slightly and consists of a few harmonics and could indicate looseness in the bearing fits, or a flow issue. No immediate action required. **Rated a Class I 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 63E LBS Side Stream Pump East**
Unit has a 4x vibration but is dominant in the pump. It could be a coupling issue, but most likely a flow issue due to possible impeller pass. Inspect the coupling and check the pump operational parameters. **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. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. **Rated a Class I Defect.**

**MON 73W Skim Tub Transfer Pump W**
Motor shows early bearing distress. Lubricate if applicable. **Rated a Class I Defect.**

### SAR 03 Turbine Compressor Main Blower
Vibration overall has not changed recently. Data still consists of a dominant shaft speed vibration and multiple harmonics for the compressor shaft measurements. **Rated a Class I Defect.**

### SAR 10 Process Air Fan E
The fan bearings still show a raised noise floor in the acceleration spectrum and impacting in the time domain as well as a few harmonics of the fundamental speed. This could be distress in the bearings, lubrication, mechanical looseness, or some other anomaly issue. Inspect the unit and bearings in the near future. **Rated a Class II Defect.**

### SAR 14 Combustion Air Fan West
The data still indicates distress in the inboard motor bearing. We only see about 1.6 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.**

### SAR55A Neutralization Pump North
The data show a dramatic drop in motor vibrations. No further action is required.

### 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, E 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.**

### 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.**

### SAR78D Cooling Tower Fan #4
Motor speed vibration has increased significantly in the motor inboard vertical. Inspect the installation for issues in the structure, fasteners, coupling and alignment. We will watch carefully for changes going forward. **Rated a Class II Defect.**

**SAR 137A Contain Pit Pump North**
The 5x RPM vibration has increased somewhat 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.**

**ACN 05B ACH Top Column Transfer Pump E**
The vibration data shows an increase in what looks to be non-synchronous frequencies in the inboard pump bearings which are also most likely bearing defect harmonics. We will keep an eye on this unit in the future. No action is required at this time. **Rated a Class I Defect**

**ACN 07B ACH Product Feed Pump Middle**
Data shows possible pump vane pass and cavitation. Check for process variables. **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 3 to 4 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 axial 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**

**ACN36 ACN West Tank Circulation Pump**
The pump inboard horizontal 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 II 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.**

**MON132 Decanter Feed Pump Spare**

The pump inboard vertical and motor axial vibrations are elevated, especially at 1x shaft speed. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. Also ensure the pump is operating properly in the correct point on the performance curve. **Rated a Class II 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.**

### SAR55B Neutralization Pump South
The data continues to show signs of early distress in the inboard motor bearing. The motor also has a 1xRPM vibration that has generally been increasing since December. Inspect the unit for loose fasteners, alignment, and coupling wear at time allows. 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 161A North SAR Cooling Tower Fan West (September data was of poor quality), previous data showed:
The motor still has a 1xRPM vibration and two smaller harmonics. Check for loose fasteners, coupling and drive train issues if so equipped. **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.**

### SAR231A Final Tower Circulation Pump North
Vibrations have dropped substantially. No further actions required.

# September 2021 survey data

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

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Database:  Lucite Memphis MMA.rbm
Area:      MMA
Report Date:  09-Sep-21   08:13
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| 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 | | (20-Aug-21) | |
| | OVERALL LEVEL | 1K-20kHz | |
| MOH | .033 In/Sec | .270 G-s | 1175.0 RPM |
| MOP | .146 G-s | | |
| MOV | .035 In/Sec | .085 G-s | |
| MOA | .034 In/Sec | .043 G-s | |
| MIH | .028 In/Sec | .426 G-s | |
| MIP | .264 G-s | | |
| MIV | .028 In/Sec | .184 G-s | |
| MIA | .024 In/Sec | .078 G-s | |
| | OVERALL LEVEL | 1K-20KHz | |
| PIH | .134 In/Sec | .394 G-s | |
| PIP | .250 G-s | | |
| PIV | .060 In/Sec | .205 G-s | |
| PIA | .062 In/Sec | .168 G-s | |
| POH | .049 In/Sec | .562 G-s | |

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           POP               .347 G-s
           POV               .058 In/Sec        .208 G-s
           POA               .068 In/Sec        .170 G-s


ACN05B       - Topp Column Xfer Pmp E        (20-Aug-21)
                          OVERALL LEVEL      1K-20kHz
           MOH               .072 In/Sec        .729 G-s          3575.0 RPM
           MOP               .154 G-s
           MOV               .042 In/Sec        .162 G-s
           MOA               .027 In/Sec        .097 G-s
           MIH               .065 In/Sec       1.268 G-s
           MIP               .146 G-s
           MIV               .048 In/Sec        .111 G-s
           MIA               .034 In/Sec        .055 G-s
                          OVERALL LEVEL      1K-20KHz
           PIH               .106 In/Sec       1.124 G-s
           PIP               .130 G-s
           PIV               .124 In/Sec        .502 G-s
           PIA               .085 In/Sec        .406 G-s


ACN07A       - ACH  Prod Feed Pump N        (02-Aug-21)
                          OVERALL LEVEL      1K-20kHz
           MOH               .036 In/Sec        .104 G-s          3575.0 RPM
           MOP               .012 G-s
           MOV               .112 In/Sec        .047 G-s
           MOA               .037 In/Sec        .027 G-s
           MIH               .060 In/Sec        .161 G-s
           MIP               .075 G-s
           MIV               .068 In/Sec        .044 G-s
           MIA               .031 In/Sec        .056 G-s
                          OVERALL LEVEL      1K-20KHz
           PIH               .108 In/Sec        .161 G-s
           PIP               .029 G-s
           PIV               .047 In/Sec        .178 G-s
           PIA               .087 In/Sec        .108 G-s


ACN07C       - ACH  Prod Feed Pump S        (20-Aug-21)
                          OVERALL LEVEL      1K-20kHz
           MOH               .100 In/Sec       1.221 G-s          3575.0 RPM
           MOP               .461 G-s
           MOV               .085 In/Sec        .600 G-s
           MOA               .069 In/Sec        .342 G-s
           MIH               .082 In/Sec       2.444 G-s
           MIP               .639 G-s
           MIV               .086 In/Sec        .689 G-s
           MIA               .051 In/Sec        .573 G-s
                          OVERALL LEVEL      1K-20KHz
           PIH               .176 In/Sec       1.599 G-s
           PIP               .190 G-s
           PIV               .227 In/Sec        .952 G-s
           PIA               .204 In/Sec       1.051 G-s


ACN08       - ACH Blend Tank              (20-Aug-21)
                          OVERALL LEVEL      1K-20kHz
           MOH               .047 In/Sec        .122 G-s          3575.0 RPM
           MOP              .0084 G-s
           MOV               .233 In/Sec        .078 G-s
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        MOA                .170 In/Sec        .039 G-s
        MIH                .058 In/Sec        .232 G-s
        MIP                .033 G-s
        MIV                .193 In/Sec        .067 G-s
        MIA                .157 In/Sec        .049 G-s
                           OVERALL LEVEL      1K-20KHz
        PIH                .113 In/Sec        .465 G-s
        PIP                .159 G-s
        PIV                .084 In/Sec        .186 G-s
        PIA                .068 In/Sec        .102 G-s


ACN09      - ACH Flash Tank Pump              (20-Aug-21)
                           OVERALL LEVEL      1K-20kHz
        MOH                .128 In/Sec        .516 G-s         3575.0 RPM
        MOP                .018 G-s
        MOV                .276 In/Sec        .165 G-s
        MOA                .223 In/Sec        .112 G-s
      * MIV                .068 In/Sec        .831 G-s
      * MIA                .108 In/Sec       1.139 G-s
                           OVERALL LEVEL      1K-20KHz
        PIH                .091 In/Sec        .226 G-s
        PIP                .040 G-s
        PIV                .152 In/Sec        .208 G-s
        PIA                .061 In/Sec        .168 G-s


ACN10      - #1 Kettle Circ Pmp              (20-Aug-21)
                           OVERALL LEVEL      1K-20kHz
        MOH                .023 In/Sec        .326 G-s         1775.0 RPM
        MOP                .131 G-s
        MOV                .033 In/Sec        .126 G-s
        MOA                .027 In/Sec        .094 G-s
        MIH                .026 In/Sec        .585 G-s
        MIP                .296 G-s
        MIV                .026 In/Sec        .199 G-s
        MIA                .017 In/Sec        .154 G-s
                           OVERALL LEVEL      1K-20KHz
        PIH                .041 In/Sec        .293 G-s
        PIP                .188 G-s
        PIV                .044 In/Sec        .113 G-s
        PIA                .039 In/Sec        .180 G-s


ACN11      - #2 Kettle Circ Pump             (20-Aug-21)
                           OVERALL LEVEL      1K-20kHz
        MOH                .023 In/Sec        .375 G-s         1775.0 RPM
        MOP                .198 G-s
        MOV                .048 In/Sec        .133 G-s
        MOA                .043 In/Sec        .120 G-s
        MIH                .023 In/Sec        .733 G-s
        MIP                .423 G-s
        MIV                .054 In/Sec        .111 G-s
        MIA                .038 In/Sec        .133 G-s
                           OVERALL LEVEL      1K-20KHz
        PIH                .050 In/Sec        .210 G-s
        PIP                .114 G-s
        PIV                .098 In/Sec        .252 G-s
        PIA                .038 In/Sec        .142 G-s
      * POV                .104 In/Sec        .200 G-s
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        * POA                .038 In/Sec        .253 G-s


ACN12        - #1 Kettle Xfer Pump          (20-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH                .048 In/Sec        .249 G-s          3575.0 RPM
        MOP                .014 G-s
        MOV                .105 In/Sec        .136 G-s
        MOA                .062 In/Sec        .025 G-s
        MIH                .031 In/Sec        .270 G-s
        MIP                .029 G-s
        MIV                .076 In/Sec        .416 G-s
        MIA                .055 In/Sec        .124 G-s
                        OVERALL LEVEL    1K-20KHz
        PIH                .053 In/Sec        .112 G-s
        PIP                .017 G-s
        PIV                .100 In/Sec        .142 G-s
        PIA                .059 In/Sec        .046 G-s


ACN13A        - #2 Kettle Xfer Pump N        (20-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH                .126 In/Sec       1.203 G-s          3575.0 RPM
        MOP                .130 G-s
        MOV                .125 In/Sec        .836 G-s
        MOA                .080 In/Sec        .388 G-s
        MIH                .159 In/Sec       3.687 G-s
        MIP                .265 G-s
        MIV                .111 In/Sec       1.087 G-s
        MIA                .098 In/Sec        .854 G-s
                        OVERALL LEVEL    1K-20KHz
        PIH                .096 In/Sec        .508 G-s
        PIP                .056 G-s
        PIV                .119 In/Sec        .976 G-s
        PIA                .101 In/Sec        .811 G-s


ACN13B        - #2 Kettle Xfer Pump S        (02-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH                .044 In/Sec        .843 G-s          3575.0 RPM
        MOP                .048 G-s
        MOV                .056 In/Sec        .246 G-s
        MOA                .040 In/Sec        .200 G-s
        MIH                .068 In/Sec       2.913 G-s
        MIP                .645 G-s
        MIV                .060 In/Sec        .617 G-s
        MIA                .047 In/Sec        .729 G-s
                        OVERALL LEVEL    1K-20KHz
        PIH                .060 In/Sec        .631 G-s
        PIP                .112 G-s
        PIV                .065 In/Sec        .194 G-s
        PIA                .071 In/Sec        .131 G-s


ACN16        - ACH Scrb Circ PumpN          (24-May-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            (20-Aug-21)
                        OVERALL LEVEL    1K-20kHz
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        MOH              .019 In/Sec       .116 G-s        1780.0 RPM
        MOP              .022 G-s
        MOV              .019 In/Sec       .045 G-s
        MOA              .014 In/Sec       .023 G-s
        MIH              .024 In/Sec       .114 G-s
        MIP              .024 G-s
        MIV              .018 In/Sec       .085 G-s
        MIA              .016 In/Sec       .047 G-s
        IIH              .195 In/Sec
        IIP              .969 G-s
        IIV              .138 In/Sec
        IIA              .184 In/Sec
        OOH              .181 In/Sec
        OOP             1.333 G-s
        OOV              .055 In/Sec
        OOA              .132 In/Sec
        CIH              .080 In/Sec
        CIP              .785 G-s
        CIV              .123 In/Sec
        CIA              .196 In/Sec
        COH              .072 In/Sec
        COP              .334 G-s
        COV              .056 In/Sec
        COA              .101 In/Sec


ACN17DP     - DP Comp                       (19-Aug-21)
                        OVERALL LEVEL
        21               .026 Mils                        1775.0 RPM
        22               .174 Mils
        27               .013 Mils
        23               .057 Mils
        24               .036 Mils


ACN22       - ACN Ref Unit Booster #2       (30-Aug-21)
                        OVERALL LEVEL      1K-20kHz
        MOH              .117 In/Sec       .414 G-s        3575.0 RPM
        MOP              .013 G-s
        MOV              .211 In/Sec       .143 G-s
        MOA              .415 In/Sec       .064 G-s
        MIH              .099 In/Sec       .277 G-s
        MIP              .021 G-s
        MIV              .156 In/Sec       .090 G-s
        MIA              .313 In/Sec       .067 G-s
                        OVERALL LEVEL      1K-20KHz
        PIH              .060 In/Sec       .435 G-s
        PIP              .102 G-s
        PIV              .134 In/Sec       .309 G-s
        PIA              .148 In/Sec       .160 G-s
        POH              .359 In/Sec       .401 G-s
        POP              .056 G-s
        POV              .099 In/Sec       .364 G-s
        POA              .214 In/Sec       .202 G-s


ACN23       - ACH Scrb Circ Pump S         (20-Aug-21)
                        OVERALL LEVEL      1K-20kHz
        MOH              .026 In/Sec       .401 G-s        1780.0 RPM
        MOP              .201 G-s
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MOV                .041 In/Sec        .173 G-s
MOA                .034 In/Sec        .237 G-s
MIH                .022 In/Sec        .546 G-s
MIP                .314 G-s
MIV                .047 In/Sec        .367 G-s
MIA                .030 In/Sec        .207 G-s
                   OVERALL LEVEL      1K-20KHz
PIH                .091 In/Sec        .309 G-s
PIP                .225 G-s
PIV                .114 In/Sec        .152 G-s
PIA                .061 In/Sec        .111 G-s


ACN28A      - ACN Fan W                      (22-Jul-21)
                   OVERALL LEVEL      1K-20kHz
MOH                .124 In/Sec        .993 G-s        1775.0 RPM
MOP                .221 G-s
MOV                .188 In/Sec        .403 G-s
MOA                .195 In/Sec        .098 G-s
MIH                .196 In/Sec       2.058 G-s
MIP                .244 G-s
MIV                .178 In/Sec        .690 G-s
MIA                .179 In/Sec        .187 G-s


ACN28B      - ACN Fan E                      (20-Aug-21)
                   OVERALL LEVEL      1K-20kHz
MOH               2.815 In/Sec        .753 G-s        1775.0 RPM
MOP                .196 G-s
MOV                .240 In/Sec        .168 G-s
MOA                .164 In/Sec        .110 G-s
MIH               1.540 In/Sec        .733 G-s
MIP                .166 G-s
MIV               1.734 In/Sec        .347 G-s
MIA               1.486 In/Sec        .159 G-s


ACN28BDP    - Cooling Twr Fan E              (19-Aug-21)
                   OVERALL LEVEL
26                 .339 Mils                          1775.0 RPM


ACN29A      - ACN Cool Twr Pump N            (20-Aug-21)
                   OVERALL LEVEL      1K-20kHz
MOH                .063 In/Sec        .971 G-s        1775.0 RPM
MOP                .191 G-s
MOV                .052 In/Sec        .404 G-s
MOA                .043 In/Sec        .252 G-s
MIH                .052 In/Sec        .768 G-s
MIP                .184 G-s
MIV                .094 In/Sec       1.353 G-s
MIA                .074 In/Sec        .700 G-s
                   OVERALL LEVEL      1K-20KHz
PIH                .226 In/Sec        .679 G-s
PIP                .480 G-s
PIV                .143 In/Sec        .372 G-s
PIA                .158 In/Sec        .273 G-s
POH                .122 In/Sec       1.567 G-s
POP               1.084 G-s
POV                .123 In/Sec        .566 G-s
POA                .155 In/Sec        .560 G-s
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ACN28ADP   - Cooling Twr Fan W            (19-Aug-21)
                    OVERALL LEVEL
      28                 .247 Mils                               1775.0 RPM


ACN29B      - ACN Cool Twr Pump M         (20-Aug-21)
                    OVERALL LEVEL    1K-20kHz
      MOH                .046 In/Sec      .775 G-s         1775.0 RPM
      MOP                .260 G-s
      MOV                .068 In/Sec      .430 G-s
      MOA                .068 In/Sec      .203 G-s
      MIH                .057 In/Sec     1.448 G-s
      MIP                .492 G-s
      MIV                .062 In/Sec      .498 G-s
      MIA                .058 In/Sec      .927 G-s
                    OVERALL LEVEL    1K-20KHz
      PIH                .123 In/Sec      .817 G-s
      PIP                .537 G-s
      PIV                .091 In/Sec      .231 G-s
      PIA                .153 In/Sec      .163 G-s
      POH                .080 In/Sec     1.261 G-s
      POP                .643 G-s
      POV                .086 In/Sec      .302 G-s
      POA                .093 In/Sec      .467 G-s


ACN29C      - ACN Cool Twr Pump S         (20-Aug-21)
                    OVERALL LEVEL    1K-20kHz
      MOH                .047 In/Sec      .557 G-s         1775.0 RPM
      MOP                .208 G-s
      MOV                .071 In/Sec      .212 G-s
      MOA                .051 In/Sec      .168 G-s
      MIH                .040 In/Sec      .534 G-s
      MIP                .258 G-s
      MIV                .069 In/Sec      .554 G-s
      MIA                .050 In/Sec      .381 G-s
                    OVERALL LEVEL    1K-20KHz
      PIH                .149 In/Sec     1.182 G-s
      PIP                .646 G-s
      PIV                .126 In/Sec     1.126 G-s
      PIA                .116 In/Sec      .905 G-s
      POH                .109 In/Sec     2.931 G-s
      POP                .778 G-s
      POV                .082 In/Sec      .691 G-s
      POA                .098 In/Sec      .467 G-s


ACN30       - ACH Scrubber Xfer Pmp       (20-Aug-21)
                    OVERALL LEVEL    1K-20kHz
      MOH                .051 In/Sec      .274 G-s         1780.0 RPM
      MOP                .157 G-s
      MOV                .068 In/Sec      .290 G-s
      MOA                .128 In/Sec      .111 G-s
      MIH                .066 In/Sec      .537 G-s
      MIP                .370 G-s
      MIV                .095 In/Sec      .254 G-s
      MIA                .114 In/Sec      .102 G-s
                    OVERALL LEVEL    1K-20KHz
      PIH                .062 In/Sec      .146 G-s
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        PIP                 .108 G-s
        PIV                 .074 In/Sec        .117 G-s
        PIA                 .047 In/Sec        .057 G-s
        POH                 .046 In/Sec        .113 G-s
        POP                 .041 G-s
        POV                 .048 In/Sec        .111 G-s
        POA                 .048 In/Sec        .023 G-s


ACN36        - ACH Neut Tank Circ Pmp        (02-Aug-21)
                    OVERALL LEVEL    1K-20kHz
        MIH                 .077 In/Sec        .308 G-s        3575.0 RPM
        MIP                 .068 G-s
        MIV                 .102 In/Sec        .130 G-s
        MIA                 .107 In/Sec        .081 G-s
                    OVERALL LEVEL    1K-20KHz
        PIH                 .472 In/Sec        .179 G-s
        PIP                 .032 G-s
        PIV                 .164 In/Sec        .276 G-s
        PIA                 .154 In/Sec        .068 G-s


ACN44        - ACN Ref Unit Booster #3        (20-Aug-21)
                    OVERALL LEVEL    1K-20kHz
        MOH                 .138 In/Sec        2.883 G-s        3575.0 RPM
        MOP                 .049 G-s
        MOV                 .133 In/Sec        1.108 G-s
        MOA                 .100 In/Sec        .472 G-s
        MIH                 .143 In/Sec        .701 G-s
        MIP                 .044 G-s
        MIV                 .139 In/Sec        .352 G-s
        MIA                 .135 In/Sec        .301 G-s
                    OVERALL LEVEL    1K-20KHz
        PIH                 .113 In/Sec        .829 G-s
        PIP                 .258 G-s
        PIV                 .173 In/Sec        1.121 G-s
        PIA                 .179 In/Sec        .715 G-s
        POH                 .095 In/Sec        .541 G-s
        POP                 .061 G-s
        POV                 .154 In/Sec        .755 G-s
        POA                 .135 In/Sec        .361 G-s


MON 32A    - ARC Reflux Pmp N        (19-Aug-21)
                    OVERALL LEVEL    1K-20kHz
        M1V                 .173 In/Sec        .271 G-s        3520.0 RPM
        M1A                 .082 In/Sec        .056 G-s
        M2H                 .056 In/Sec        .324 G-s
        M2P                 .049 G-s
        M2V                 .147 In/Sec        .200 G-s
        M2A                 .092 In/Sec        .067 G-s
                    OVERALL LEVEL    1K-20KHz
        P1H                 .070 In/Sec        .666 G-s
        P1P                 .121 G-s
        P1V                 .078 In/Sec        .252 G-s
        P1A                 .094 In/Sec        .212 G-s
        P2H                 .092 In/Sec        1.190 G-s
        P2P                 .135 G-s
        P2V                 .095 In/Sec        .298 G-s
        P2A                 .091 In/Sec        .145 G-s
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                      OVERALL LEVEL     1K-20kHz
        M1H             .075 In/Sec       .319 G-s
        M1P             .053 G-s


MON 32B     - ARC Reflux Pmp S          (19-Aug-21)
                      OVERALL LEVEL     1K-20kHz
        M1H             .063 In/Sec       .231 G-s        3520.0 RPM
        M1P             .064 G-s
        M1V             .080 In/Sec       .211 G-s
        M1A             .070 In/Sec       .060 G-s
        M2H             .038 In/Sec       .348 G-s
        M2P             .092 G-s
        M2V             .092 In/Sec       .137 G-s
        M2A             .051 In/Sec       .035 G-s
                      OVERALL LEVEL     1K-20KHz
        P1H             .338 In/Sec       .706 G-s
        P1P             .025 G-s
        P1V             .278 In/Sec       .324 G-s
        P1A             .289 In/Sec       .791 G-s
        P2H             .218 In/Sec       .724 G-s
        P2P             .054 G-s
        P2V             .193 In/Sec       .488 G-s
        P2A             .261 In/Sec      1.222 G-s


MON36       - Irganox Mix/Feed Pump     (19-Aug-21)
                      OVERALL LEVEL     1K-20kHz
        MOH             .055 In/Sec       .217 G-s        1750.0 RPM
        MOP             .047 G-s
        MOV             .038 In/Sec       .104 G-s
        MOA             .038 In/Sec       .083 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             .049 In/Sec
        IIP             .179 G-s
        IIV             .057 In/Sec
        IIA             .041 In/Sec
                      OVERALL LEVEL     1K-20KHz
        POH             .087 In/Sec       .384 G-s
        POP             .283 G-s
        POV             .080 In/Sec       .841 G-s
        POA             .096 In/Sec       .640 G-s


MON38A      - LBS Reflux Pmp S          (19-Aug-21)
                      OVERALL LEVEL     1K-20kHz
        MOH             .039 In/Sec       .352 G-s        3575.0 RPM
        MOP             .031 G-s
        MOV             .035 In/Sec       .138 G-s
        MOA             .038 In/Sec       .078 G-s
        MIH             .038 In/Sec       .780 G-s
        MIP             .094 G-s
        MIV             .074 In/Sec       .129 G-s
        MIA             .047 In/Sec       .165 G-s
                      OVERALL LEVEL     1K-20KHz
        PIH             .075 In/Sec       .818 G-s
        PIP             .081 G-s
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        PIV                .066 In/Sec          .564 G-s
        PIA                .070 In/Sec          .339 G-s


MON38B      - LBS Reflux Pmp N               (19-Aug-21)
                      OVERALL LEVEL      1K-20kHz
        MOH                .139 In/Sec          .526 G-s          3575.0 RPM
        MOP                .127 G-s
        MOV                .102 In/Sec          .148 G-s
        MOA                .119 In/Sec          .167 G-s
        MIH                .098 In/Sec          .493 G-s
        MIP                .084 G-s
        MIV                .192 In/Sec          .065 G-s
        MIA                .104 In/Sec          .059 G-s
                      OVERALL LEVEL      1K-20KHz
        PIH                .126 In/Sec          .821 G-s
        PIP                .095 G-s
        PIV                .138 In/Sec          .465 G-s
        PIA                .112 In/Sec          .347 G-s


MON38CNM    - LBS Tails Pump N               (20-Aug-21)
                      OVERALL LEVEL      1K-20kHz
        MOH                .109 In/Sec          .297 G-s          3575.0 RPM
        MOP                .024 G-s
        MOV                .131 In/Sec          .136 G-s
        MOA                .114 In/Sec          .086 G-s
        MIH                .107 In/Sec          .398 G-s
        MIP                .072 G-s
        MIV                .124 In/Sec          .185 G-s
        MIA                .104 In/Sec          .118 G-s
                      OVERALL LEVEL      1K-20KHz
        PIH                .186 In/Sec         1.218 G-s
        PIP                .066 G-s
        PIV                .104 In/Sec          .930 G-s
        PIA                .116 In/Sec          .512 G-s


MON38CSM    - LBS Tails Pump S               (20-Aug-21)
                      OVERALL LEVEL      1K-20kHz
        MOH                .037 In/Sec          .292 G-s          3575.0 RPM
        MOP                .034 G-s
        MOV                .044 In/Sec          .079 G-s
        MOA                .052 In/Sec          .064 G-s
        MIH                .046 In/Sec          .523 G-s
        MIP                .066 G-s
        MIV                .053 In/Sec          .174 G-s
        MIA                .054 In/Sec          .096 G-s
                      OVERALL LEVEL      1K-20KHz
        PIH                .101 In/Sec          .429 G-s
        PIP                .069 G-s
        PIV                .087 In/Sec          .373 G-s
        PIA                .063 In/Sec          .219 G-s


MON40       - Acetone Pump                   (20-Aug-21)
                      OVERALL LEVEL      1K-20kHz
        MOH                .028 In/Sec          .748 G-s          3575.0 RPM
        MOP                .068 G-s
        MOV                .039 In/Sec          .287 G-s
        MOA                .031 In/Sec          .142 G-s
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        MIH           .034 In/Sec      1.930 G-s
        MIP           .175 G-s
        MIV           .038 In/Sec       .131 G-s
        MIA           .027 In/Sec       .127 G-s
                      OVERALL LEVEL    1K-20KHz
        PIH           .118 In/Sec       .755 G-s
        PIP           .123 G-s
        PIV           .110 In/Sec       .611 G-s
        PIA           .074 In/Sec       .384 G-s


MON43A      - Amide Reactor Circ Pmp #1N   (19-Aug-21)
                      OVERALL LEVEL    1K-20kHz
        MOH           .075 In/Sec       .224 G-s        1785.0 RPM
        MOP           .022 G-s
        MOV           .065 In/Sec       .129 G-s
        MOA           .121 In/Sec       .114 G-s
        MIH           .076 In/Sec       .329 G-s
        MIP           .131 G-s
        MIV           .085 In/Sec       .294 G-s
        MIA           .108 In/Sec       .406 G-s
                      OVERALL LEVEL    1K-20KHz
        PIH           .210 In/Sec       .433 G-s
        PIP           .189 G-s
        PIV           .162 In/Sec       .164 G-s
        PIA           .175 In/Sec       .131 G-s


MON43B      - Amide Reactor Circ Pmp #2S   (19-Aug-21)
                      OVERALL LEVEL    1K-20kHz
        MOH           .176 In/Sec       .123 G-s        1785.0 RPM
        MOP           .014 G-s
        MOV           .143 In/Sec       .114 G-s
        MOA           .126 In/Sec       .080 G-s
        MIH           .110 In/Sec       .038 G-s
        MIP          .0052 G-s
        MIV           .213 In/Sec       .010 G-s
        MIA           .089 In/Sec      .0076 G-s
                      OVERALL LEVEL    1K-20KHz
        PIH           .354 In/Sec       .267 G-s
        PIP           .144 G-s
        PIV           .202 In/Sec       .404 G-s
        PIA           .239 In/Sec       .093 G-s


MON45EM     - ACH Ref Brine Pump E         (20-Aug-21)
                      OVERALL LEVEL    1K-20kHz
        MOH           .059 In/Sec       .922 G-s        1750.0 RPM
        MOP           .472 G-s
        MOV           .110 In/Sec      1.394 G-s
        MOA           .076 In/Sec       .511 G-s
        MIH           .054 In/Sec      1.256 G-s
        MIP           .684 G-s
        MIV           .084 In/Sec       .996 G-s
        MIA           .081 In/Sec       .537 G-s
                      OVERALL LEVEL    1K-20KHz
        PIH           .067 In/Sec       .818 G-s
        PIP           .591 G-s
        PIV           .103 In/Sec       .802 G-s
        PIA           .067 In/Sec       .687 G-s
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        POH              .056 In/Sec      1.044 G-s
        POP              .564 G-s
        POV              .075 In/Sec       .551 G-s
        POA              .049 In/Sec       .224 G-s


MON45WM      - ACH Ref Brine Pump W        (22-Jul-21)
                         OVERALL LEVEL    1K-20kHz
        MOH              .057 In/Sec      1.826 G-s         1750.0 RPM
        MOP              .616 G-s
        MOV              .138 In/Sec       .723 G-s
        MOA              .119 In/Sec       .262 G-s
        MIH              .055 In/Sec      1.091 G-s
        MIP              .635 G-s
        MIV              .101 In/Sec       .605 G-s
        MIA              .131 In/Sec       .326 G-s
                         OVERALL LEVEL    1K-20KHz
        PIH              .277 In/Sec       .748 G-s
        PIP              .446 G-s
        PIV              .130 In/Sec       .439 G-s
        PIA              .141 In/Sec       .360 G-s
        POH              .141 In/Sec      1.302 G-s
        POP              .736 G-s
        POV              .118 In/Sec       .570 G-s
        POA              .079 In/Sec       .324 G-s


MON50        - Decanter Feed Pump         (19-Aug-21)
                         OVERALL LEVEL    1K-20kHz
        MOH              .049 In/Sec       .430 G-s         3575.0 RPM
        MOP              .103 G-s
        MOV              .121 In/Sec       .337 G-s
        MOA              .135 In/Sec       .114 G-s
        MIH              .044 In/Sec       .562 G-s
        MIP              .144 G-s
        MIV              .071 In/Sec       .282 G-s
        MIA              .127 In/Sec       .116 G-s
                         OVERALL LEVEL    1K-20KHz
        PIH              .274 In/Sec       .588 G-s
        PIP              .085 G-s
        PIV              .225 In/Sec       .320 G-s
        PIA              .191 In/Sec       .620 G-s


MON 51       - WCM Tails Swing/Spare Pmp   (19-Aug-21)
                         OVERALL LEVEL    1K-20kHz
        M1H              .078 In/Sec       .811 G-s         3530.0 RPM
        M1P              .412 G-s
        M1V              .090 In/Sec       .205 G-s
        M1A              .066 In/Sec       .074 G-s
        M2H              .072 In/Sec       .700 G-s
        M2P              .307 G-s
        M2V              .098 In/Sec       .128 G-s
        M2A              .081 In/Sec       .076 G-s
                         OVERALL LEVEL    1K-20KHz
        P1H              .056 In/Sec       .179 G-s
        P1P              .016 G-s
        P1V              .124 In/Sec       .151 G-s
        P1A              .159 In/Sec       .124 G-s
        P2H              .069 In/Sec       .153 G-s
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        P2P                  .018 G-s
        P2V                  .085 In/Sec         .228 G-s
        P2A                  .156 In/Sec         .088 G-s


MON55NM    - HUT Pump N                          (19-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH                  .033 In/Sec         .362 G-s         1775.0 RPM
        MOP                  .169 G-s
        MOV                  .043 In/Sec         .283 G-s
        MOA                  .048 In/Sec         .185 G-s
        MIH                  .044 In/Sec         .505 G-s
        MIP                  .337 G-s
        MIV                  .069 In/Sec         .290 G-s
        MIA                  .037 In/Sec         .310 G-s
                        OVERALL LEVEL    1K-20KHz
        PIH                  .150 In/Sec         .435 G-s
        PIP                  .274 G-s
        PIV                  .175 In/Sec         .304 G-s
        PIA                  .085 In/Sec         .159 G-s
        POH                  .106 In/Sec         .956 G-s
        POP                  .569 G-s
        POV                  .097 In/Sec         .344 G-s
        POA                  .109 In/Sec         .195 G-s


MON55MM    - HUT Pump Mid                        (19-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH                  .053 In/Sec         .655 G-s         1775.0 RPM
        MOP                  .420 G-s
        MOV                  .065 In/Sec         .213 G-s
        MOA                  .055 In/Sec         .228 G-s
        MIH                  .062 In/Sec         .982 G-s
        MIP                  .609 G-s
        MIV                  .100 In/Sec         .460 G-s
        MIA                  .050 In/Sec         .575 G-s
                        OVERALL LEVEL    1K-20KHz
        PIH                  .213 In/Sec        1.029 G-s
        PIP                  .644 G-s
        PIV                  .145 In/Sec         .664 G-s
        PIA                  .169 In/Sec         .483 G-s
        POH                  .120 In/Sec        2.366 G-s
        POP                 1.298 G-s
        POV                  .136 In/Sec         .868 G-s
        POA                  .185 In/Sec         .553 G-s


MON56      - Inhibited Mon Xfer Pump E     (20-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH                  .057 In/Sec         .408 G-s         3575.0 RPM
        MOP                  .038 G-s
        MOV                  .040 In/Sec         .077 G-s
        MOA                  .041 In/Sec         .091 G-s
        MIH                  .073 In/Sec         .745 G-s
        MIP                  .076 G-s
        MIV                  .038 In/Sec         .192 G-s
        MIA                  .044 In/Sec         .118 G-s
                        OVERALL LEVEL    1K-20KHz
        PIH                  .140 In/Sec         .787 G-s
        PIP                  .091 G-s
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        PIV                 .078 In/Sec          .259 G-s
        PIA                 .066 In/Sec          .406 G-s


MON 63E     - LBS Side Stream Pump E        (19-Aug-21)
                        OVERALL LEVEL      1K-20kHz
        M1H                 .059 In/Sec          .577 G-s            3515.0 RPM
        M1P                 .029 G-s
        M1V                 .087 In/Sec          .202 G-s
        M1A                 .088 In/Sec          .117 G-s
        M2H                 .069 In/Sec          .850 G-s
        M2P                 .045 G-s
        M2V                 .083 In/Sec          .305 G-s
        M2A                 .066 In/Sec          .209 G-s
                        OVERALL LEVEL      1K-20KHz
        P1H                 .227 In/Sec          .773 G-s
        P1P                 .168 G-s
        P1V                 .137 In/Sec          .537 G-s
        P1A                 .156 In/Sec          .451 G-s
        P2H                 .153 In/Sec          .543 G-s
        P2P                 .035 G-s
        P2V                 .117 In/Sec          .281 G-s
        P2A                 .168 In/Sec          .228 G-s


MON 63W     - LBS Side Stream Pump W        (19-Aug-21)
                        OVERALL LEVEL      1K-20kHz
        M1H                 .076 In/Sec         1.250 G-s            3515.0 RPM
        M1P                 .031 G-s
        M1V                 .108 In/Sec         1.212 G-s
        M1A                 .086 In/Sec          .607 G-s
        M2H                 .092 In/Sec         2.276 G-s
        M2P                 .093 G-s
        M2V                 .124 In/Sec          .609 G-s
        M2A                 .075 In/Sec          .356 G-s
                        OVERALL LEVEL      1K-20KHz
        P1H                 .211 In/Sec          .503 G-s
        P1P                 .147 G-s
        P1V                 .159 In/Sec          .855 G-s
        P1A                 .153 In/Sec          .812 G-s
        P2H                 .220 In/Sec          .521 G-s
        P2P                 .156 G-s
        P2V                 .165 In/Sec          .926 G-s
        P2A                 .157 In/Sec          .899 G-s


MON65       - Amide Reactor Circ Primary    (19-Aug-21)
                        OVERALL LEVEL      1K-20kHz
        MOH                 .217 In/Sec          .416 G-s            1180.0 RPM
        MOP                 .236 G-s
        MOV                 .351 In/Sec          .146 G-s
        MOA                 .105 In/Sec          .084 G-s
        MIH                 .167 In/Sec          .612 G-s
        MIP                 .332 G-s
        MIV                 .282 In/Sec          .126 G-s
        MIA                 .097 In/Sec          .124 G-s
                        OVERALL LEVEL      1K-20KHz
        PIH                 .132 In/Sec          .163 G-s
        PIP                 .115 G-s
        PIV                 .137 In/Sec          .080 G-s
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        PIA               .079 In/Sec        .068 G-s


MON67SM     - PTZ Xfer Pump S              (02-Aug-21)
                          OVERALL LEVEL     1K-20kHz
        MOH               .145 In/Sec        .677 G-s          3575.0 RPM
        MOP               .0043 G-s
        MOV               .153 In/Sec        .162 G-s
        MOA               .139 In/Sec        .084 G-s
        MIH               .155 In/Sec        .394 G-s
        MIP               .065 G-s
        MIV               .153 In/Sec        .055 G-s
        MIA               .153 In/Sec        .037 G-s
                          OVERALL LEVEL     1K-20KHz
        PIH               .056 In/Sec        .497 G-s
        PIP               .044 G-s
        PIV               .044 In/Sec        .336 G-s
        PIA               .042 In/Sec        .263 G-s


MON68A      - #1 Reactor H2O Circ Pump     (19-Aug-21)
                          OVERALL LEVEL     1K-20kHz
        MOH               .053 In/Sec        .332 G-s          1180.0 RPM
        MOP               .087 G-s
        MOV               .038 In/Sec        .108 G-s
        MOA               .054 In/Sec        .063 G-s
        MIH               .049 In/Sec        .151 G-s
        MIP               .080 G-s
        MIV               .049 In/Sec        .047 G-s
        MIA               .049 In/Sec        .023 G-s
                          OVERALL LEVEL     1K-20KHz
        PIH               .034 In/Sec        .186 G-s
        PIP               .109 G-s
        PIV               .038 In/Sec        .288 G-s
        PIA               .040 In/Sec        .192 G-s


MON73W      - Skim Tub Xfer Pmp W          (20-Aug-21)
                          OVERALL LEVEL     1K-20kHz
        MOH               .036 In/Sec        .349 G-s          1010.0 RPM
        MOP               .120 G-s
        MOV               .335 In/Sec        .577 G-s
        MOA               .052 In/Sec        .202 G-s
        MIH               .047 In/Sec        .448 G-s
        MIP               .213 G-s
        MIV              3.026 In/Sec        .175 G-s
        MIA               .077 In/Sec        .418 G-s
                          OVERALL LEVEL     1K-20KHz
        PIH               .054 In/Sec        .101 G-s
        PIP               .092 G-s
        PIV               .037 In/Sec        .064 G-s
        PIA               .036 In/Sec        .042 G-s


MON81       - Uninhibited Mon Tank Pump S  (20-Aug-21)
                          OVERALL LEVEL     1K-20kHz
        MOH               .038 In/Sec        .181 G-s          3575.0 RPM
        MOP               .013 G-s
        MOV               .025 In/Sec        .081 G-s
        MOA               .026 In/Sec        .037 G-s
        MIH               .044 In/Sec        .197 G-s
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MIP                  .030 G-s
MIV                  .029 In/Sec        .045 G-s
MIA                  .022 In/Sec        .056 G-s
                     OVERALL LEVEL      1K-20KHz
PIH                  .106 In/Sec        .574 G-s
PIP                  .041 G-s
PIV                  .074 In/Sec        .404 G-s
PIA                  .076 In/Sec        .294 G-s
POH                  .101 In/Sec        .590 G-s
POP                  .062 G-s
POV                  .073 In/Sec        .514 G-s
POA                  .079 In/Sec        .250 G-s


MON80      - Uninhibited Mon Tank Pump N   (20-Aug-21)
                     OVERALL LEVEL      1K-20kHz
MOH                  .107 In/Sec        .230 G-s         3575.0 RPM
MOP                  .013 G-s
MOV                  .076 In/Sec        .529 G-s
MOA                  .201 In/Sec        .151 G-s
MIH                  .183 In/Sec        .282 G-s
MIP                  .016 G-s
MIV                  .181 In/Sec        .169 G-s
MIA                  .222 In/Sec        .027 G-s
                     OVERALL LEVEL      1K-20KHz
PIH                  .217 In/Sec        .104 G-s
PIP                  .0074 G-s
PIV                  .041 In/Sec        .182 G-s
PIA                  .066 In/Sec        .051 G-s
POH                  .164 In/Sec        .075 G-s
POP                  .0043 G-s
POV                  .050 In/Sec        .156 G-s
POA                  .066 In/Sec        .094 G-s


MON85E     - Water Treatment Pmp E        (20-Aug-21)
                     OVERALL LEVEL      1K-20kHz
MOH                  .127 In/Sec        .225 G-s         1775.0 RPM
MOP                  .096 G-s
MOV                  .080 In/Sec        .104 G-s
MOA                  .110 In/Sec        .039 G-s
MIH                  .095 In/Sec        .484 G-s
MIP                  .267 G-s
MIV                  .132 In/Sec        .361 G-s
MIA                  .046 In/Sec        .200 G-s
                     OVERALL LEVEL      1K-20KHz
PIH                  .174 In/Sec        .405 G-s
PIP                  .283 G-s
PIV                  .080 In/Sec        .341 G-s
PIA                  .098 In/Sec        .237 G-s
POH                  .126 In/Sec        .342 G-s
POP                  .203 G-s
POV                  .111 In/Sec        .369 G-s
POA                  .105 In/Sec        .172 G-s


MON85W     - Water Treatment Pmp W        (20-Aug-21)
                     OVERALL LEVEL      1K-20kHz
MOH                  .071 In/Sec        .540 G-s         1775.0 RPM
MOP                  .283 G-s
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        MOV              .106 In/Sec          .157 G-s
        MOA              .095 In/Sec          .120 G-s
        MIH              .055 In/Sec          .662 G-s
        MIP              .394 G-s
        MIV              .083 In/Sec          .430 G-s
        MIA              .074 In/Sec          .335 G-s
                         OVERALL LEVEL        1K-20KHz
        PIH              .101 In/Sec          .654 G-s
        PIP              .573 G-s
        PIV              .128 In/Sec          .468 G-s
        PIA              .096 In/Sec          .253 G-s
        POH              .063 In/Sec          .693 G-s
        POP              .487 G-s
        POV              .103 In/Sec          .334 G-s
        POA              .125 In/Sec          .100 G-s


MON118       - Tempered H20 Pmp                (19-Aug-21)
                         OVERALL LEVEL        1K-20kHz
        MOH              .046 In/Sec          .212 G-s           865.0 RPM
        MOP              .142 G-s
        MOV              .043 In/Sec          .043 G-s
        MOA              .041 In/Sec          .029 G-s
        MIH              .050 In/Sec          .164 G-s
        MIP              .090 G-s
        MIV              .031 In/Sec          .206 G-s
        MIA              .037 In/Sec          .063 G-s
                         OVERALL LEVEL        1K-20KHz
        PIH              .047 In/Sec          .054 G-s
        PIP              .035 G-s
        PIV              .029 In/Sec          .032 G-s
        PIA              .030 In/Sec          .081 G-s
        POH              .037 In/Sec          .064 G-s
        POP              .032 G-s
        POV              .023 In/Sec          .086 G-s
        POA              .030 In/Sec          .048 G-s


MON168       - A/B Booster Pump E              (22-Jul-21)
                         OVERALL LEVEL        1K-20kHz
        MOH              .076 In/Sec          .374 G-s          1020.0 RPM
        MOP              .159 G-s
        MOV              .028 In/Sec          .103 G-s
        MOA              .043 In/Sec          .083 G-s
        MIH              .060 In/Sec          .174 G-s
        MIP              .077 G-s
        MIV              .036 In/Sec          .091 G-s
        MIA              .047 In/Sec          .034 G-s
                         OVERALL LEVEL        1K-20KHz
        PIH              .063 In/Sec          .173 G-s
        PIP              .077 G-s
        PIV              .035 In/Sec          .099 G-s
        PIA              .046 In/Sec          .042 G-s


MON169       - A/B Booster Pump W              (20-Aug-21)
                         OVERALL LEVEL        1K-20kHz
        MOH              .038 In/Sec          .346 G-s          1200.0 RPM
        MOP              .131 G-s
        MOV              .028 In/Sec          .138 G-s
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        MOA              .032 In/Sec        .119 G-s
        MIH              .032 In/Sec        .308 G-s
        MIP              .228 G-s
        MIV              .052 In/Sec        .149 G-s
        MIA              .047 In/Sec        .073 G-s
                         OVERALL LEVEL      1K-20KHz
        PIH              .036 In/Sec        .070 G-s
        PIP              .047 G-s
        PIV              .034 In/Sec        .068 G-s
        PIA              .038 In/Sec        .067 G-s

SAR03        - Turb Comp Main Blower        (19-Aug-21)
                         OVERALL LEVEL
        5                .224 Mils                          4836.0 RPM
        6                .218 Mils
        7                .236 Mils
        8                .302 Mils
        9                .560 Mils
        10               .524 Mils
        11               .522 Mils
        12               .566 Mils
        15               .020 Mils
        16               .025 Mils

SAR10        - Process Air Fan E            (19-Aug-21)
                         OVERALL LEVEL      1K-20kHz
        MOH              .312 In/Sec        .303 G-s       1775.0 RPM
        MOP              .164 G-s
        MOV              .065 In/Sec        .316 G-s
        MOA              .160 In/Sec        .149 G-s
        MIH              .205 In/Sec        .986 G-s
        MIP              .590 G-s
        MIV              .144 In/Sec        .233 G-s
        MIA              .141 In/Sec        .237 G-s
                         OVERALL LEVEL      1K-20KHz
        FIH              .373 In/Sec        3.697 G-s
        FIP              2.016 G-s
        FIV              .209 In/Sec        2.131 G-s
        FIA              .234 In/Sec        1.020 G-s
        FOH              .335 In/Sec        2.279 G-s
        FOP              1.223 G-s
        FOV              .184 In/Sec        1.467 G-s
        FOA              .251 In/Sec        .810 G-s

SAR11        - Recycle Fan W                (19-Aug-21)
                         OVERALL LEVEL      1K-20kHz
        MOH              .039 In/Sec        .244 G-s       1775.0 RPM
        MOP              .103 G-s
        MOV              .043 In/Sec        .167 G-s
        MOA              .047 In/Sec        .116 G-s
        MIH              .023 In/Sec        .742 G-s
        MIP              .437 G-s
        MIV              .044 In/Sec        .288 G-s
        MIA              .045 In/Sec        .160 G-s
                         OVERALL LEVEL      1K-20KHz
        FIH              .014 In/Sec        .130 G-s
        FIP              .082 G-s
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        FIV              .016 In/Sec          .015 G-s
        FIA              .018 In/Sec          .015 G-s
        FOH              .386 In/Sec          .066 G-s
        FOP              .038 G-s
        FOV              .061 In/Sec          .018 G-s
        FOA              .438 In/Sec          .010 G-s

SAR12       - Recycle Fan E                  (19-Aug-21)
                         OVERALL LEVEL    1K-20kHz
        MOH              .032 In/Sec          .117 G-s          1775.0 RPM
        MOP              .029 G-s
        MOV              .048 In/Sec          .153 G-s
        MOA              .034 In/Sec          .063 G-s
        MIH              .032 In/Sec          .810 G-s
        MIP              .460 G-s
        MIV              .041 In/Sec          .510 G-s
        MIA              .042 In/Sec          .214 G-s
                         OVERALL LEVEL    1K-20KHz
        FIH              .022 In/Sec          .074 G-s
        FIP              .032 G-s
        FIV              .015 In/Sec          .069 G-s
        FIA              .022 In/Sec          .055 G-s
        FOH              .026 In/Sec          .152 G-s
        FOP              .045 G-s
        FOV              .018 In/Sec          .115 G-s
        FOA              .029 In/Sec          .121 G-s

SAR13       - Combustion Air Fan E           (19-Aug-21)
                         OVERALL LEVEL    1K-20kHz
        MOH              .071 In/Sec          .612 G-s          1020.0 RPM
        MOP              .408 G-s
        MOV              .040 In/Sec          .761 G-s
        MOA              .043 In/Sec          .173 G-s
        MIH              .070 In/Sec          .706 G-s
        MIP              .392 G-s
        MIV              .058 In/Sec          .509 G-s
        MIA              .049 In/Sec          .288 G-s
                         OVERALL LEVEL    1K-20KHz
        FIH              .083 In/Sec          .562 G-s
        FIP              .297 G-s
        FIV              .097 In/Sec          .351 G-s
        FIA              .067 In/Sec          .284 G-s
        FOH              .093 In/Sec          .567 G-s
        FOP              .315 G-s
        FOV              .098 In/Sec          .349 G-s
        FOA              .074 In/Sec          .369 G-s

SAR14       - Combustion Air Fan W           (19-Aug-21)
                         OVERALL LEVEL    1K-20kHz
        MOH              .113 In/Sec          .813 G-s          1020.0 RPM
        MOP              .278 G-s
        MOV              .070 In/Sec          .452 G-s
        MOA              .054 In/Sec          .230 G-s
        MIH              .108 In/Sec         1.688 G-s
        MIP              .895 G-s
        MIV              .065 In/Sec          .963 G-s
        MIA              .052 In/Sec          .741 G-s
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                    OVERALL LEVEL      1K-20KHz
      FIH           .113 In/Sec        .842 G-s
      FIP           .484 G-s
      FIV           .041 In/Sec        .891 G-s
      FIA           .071 In/Sec        .345 G-s
      FOH           .126 In/Sec        .766 G-s
      FOP           .552 G-s
      FOV           .059 In/Sec        .516 G-s
      FOA           .055 In/Sec        .320 G-s


SAR15      - Process Air Fan W            (19-Aug-21)
                    OVERALL LEVEL      1K-20kHz
      MOH           .066 In/Sec        .392 G-s          1180.0 RPM
      MOP           .139 G-s
      MOV           .051 In/Sec        .453 G-s
      MOA           .047 In/Sec        .241 G-s
      MIH           .055 In/Sec       1.258 G-s
      MIP           .409 G-s
      MIV           .051 In/Sec        .454 G-s
      MIA           .045 In/Sec        .287 G-s
                    OVERALL LEVEL      1K-20KHz
      FIH           .060 In/Sec        .354 G-s
      FIP           .209 G-s
      FIV           .033 In/Sec        .505 G-s
      FIA           .061 In/Sec        .737 G-s
      FOH           .065 In/Sec       1.094 G-s
      FOP           .634 G-s
      FOV           .057 In/Sec        .696 G-s
      FOA           .030 In/Sec        .240 G-s


SAR37B     - Interpass Twr Circ Pump S   (20-Aug-21)
                    OVERALL LEVEL      1K-20kHz
      MOH           .072 In/Sec       1.635 G-s          1775.0 RPM
      MOP           .738 G-s
      MOV           .112 In/Sec        .362 G-s
      MOA           .085 In/Sec        .445 G-s
    * MIH           .078 In/Sec       1.823 G-s
    * MIP           .832 G-s
    * MIV           .078 In/Sec        .733 G-s
    * MIA           .069 In/Sec        .242 G-s


SAR38      - Drying Tower Pumpout         (30-Aug-21)
                    OVERALL LEVEL      1K-20kHz
      MOH           .072 In/Sec        .214 G-s          3575.0 RPM
      MOP           .063 G-s
      MOV           .177 In/Sec        .085 G-s
      MOA           .155 In/Sec        .086 G-s
      MIH           .084 In/Sec        .257 G-s
      MIP           .059 G-s
      MIV           .171 In/Sec        .035 G-s
      MIA           .150 In/Sec        .043 G-s
                    OVERALL LEVEL      1K-20KHz
      PIH           .351 In/Sec        .201 G-s
      PIP           .059 G-s
      PIV           .125 In/Sec        .181 G-s
      PIA           .239 In/Sec        .064 G-s
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SAR39A      - Boiler Feed H2O Pmp NW         (19-Aug-21)
                    OVERALL LEVEL      1K-20kHz
      MOH           .029 In/Sec        .567 G-s          3575.0 RPM
      MOP           .015 G-s
      MOV           .054 In/Sec        .174 G-s
      MOA           .079 In/Sec        .086 G-s
      MIH           .070 In/Sec        .360 G-s
      MIP           .059 G-s
      MIV           .055 In/Sec        .229 G-s
      MIA           .076 In/Sec        .177 G-s
                    OVERALL LEVEL      1K-20KHz
      PIH           .136 In/Sec        .665 G-s
      PIP           .174 G-s
      PIV           .102 In/Sec        .468 G-s
      PIA           .083 In/Sec        .277 G-s
      POH           .144 In/Sec        .829 G-s
      POP           .152 G-s
      POV           .167 In/Sec        .347 G-s
      POA           .133 In/Sec        .338 G-s


SAR39B      - Boiler Feed H2O Pmp SW         (20-Jul-21)
                    OVERALL LEVEL      1K-20kHz
      MOH           .046 In/Sec        .704 G-s          3575.0 RPM
      MOP           .112 G-s
      MOV           .057 In/Sec        .543 G-s
      MOA           .038 In/Sec        .358 G-s
      MIH           .053 In/Sec       1.491 G-s
      MIP           .135 G-s
      MIV           .031 In/Sec        .413 G-s
      MIA           .041 In/Sec       1.174 G-s
                    OVERALL LEVEL      1K-20KHz
      PIH           .057 In/Sec        .350 G-s
      PIP           .055 G-s
      PIV           .086 In/Sec        .389 G-s
      PIA           .064 In/Sec        .200 G-s
      POH           .033 In/Sec        .347 G-s
      POP           .108 G-s
      POV           .058 In/Sec        .356 G-s
      POA           .068 In/Sec        .121 G-s


SAR39C      - Boiler Feed H2O Pmp NE         (03-Aug-21)
                    OVERALL LEVEL      1K-20kHz
      MOH           .246 In/Sec        .693 G-s          3575.0 RPM
      MOP           .018 G-s
      MOV           .071 In/Sec        .298 G-s
      MOA           .054 In/Sec        .787 G-s
      MIH           .182 In/Sec        .560 G-s
      MIP           .021 G-s
      MIV           .095 In/Sec        .366 G-s
      MIA           .056 In/Sec        .077 G-s
                    OVERALL LEVEL      1K-20KHz
      PIH           .125 In/Sec        .372 G-s
      PIP           .025 G-s
      PIV           .112 In/Sec        .166 G-s
      PIA           .115 In/Sec        .176 G-s
      POH           .221 In/Sec        .992 G-s
      POP           .133 G-s
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        POV                 .103 In/Sec        .342 G-s
        POA                 .069 In/Sec        .154 G-s


SAR39D      - Boiler Feed H2O Pmp SE        (19-Aug-21)
                    OVERALL LEVEL       1K-20kHz
        MOH                 .080 In/Sec       1.954 G-s          3575.0 RPM
        MOP                 .074 G-s
        MOV                 .061 In/Sec        .984 G-s
        MOA                 .034 In/Sec        .649 G-s
        MIH                 .045 In/Sec       1.082 G-s
        MIP                 .071 G-s
        MIV                 .040 In/Sec        .437 G-s
        MIA                 .052 In/Sec        .975 G-s
                    OVERALL LEVEL       1K-20KHz
        PIH                 .024 In/Sec        .309 G-s
        PIP                 .080 G-s
        PIV                 .033 In/Sec        .293 G-s
        PIA                 .024 In/Sec        .278 G-s
        POH                 .026 In/Sec        .331 G-s
        POP                 .107 G-s
        POV                 .030 In/Sec        .283 G-s
        POA                 .025 In/Sec        .153 G-s


SAR50A      - Drying Tower Circ Pump W        (03-Aug-21)
                    OVERALL LEVEL       1K-20kHz
        MOH                 .205 In/Sec        .762 G-s          1775.0 RPM
        MOP                 .072 G-s
        MOV                 .295 In/Sec        .114 G-s
        MOA                 .099 In/Sec        .067 G-s
        MIH                 .116 In/Sec        .994 G-s
        MIP                 .151 G-s
        MIV                 .158 In/Sec        .379 G-s
        MIA                 .107 In/Sec        .238 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        (20-Jul-21)
                    OVERALL LEVEL       1K-20kHz
        MOH                 .058 In/Sec       1.016 G-s          1775.0 RPM
        MOP                 .539 G-s
        MOV                 .107 In/Sec        .398 G-s
        MOA                 .061 In/Sec        .170 G-s
        MIH                 .038 In/Sec        .607 G-s
        MIP                 .310 G-s
        MIV                 .083 In/Sec        .135 G-s
        MIA                 .069 In/Sec        .123 G-s
                    OVERALL LEVEL       1K-20KHz
    *   POV                 .108 In/Sec        .283 G-s
    *   POA                 .192 In/Sec        .208 G-s


SAR55A      - Neutralization Pump N        (19-Aug-21)
                    OVERALL LEVEL       1K-20kHz
        MOH                 .050 In/Sec        .770 G-s          3575.0 RPM
        MOP                 .354 G-s
        MOV                 .187 In/Sec        .137 G-s
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MOA              .117 In/Sec        .261 G-s
MIH              .121 In/Sec       3.834 G-s
MIP             2.761 G-s
MIV              .118 In/Sec        .812 G-s
MIA              .115 In/Sec        .648 G-s
                OVERALL LEVEL      1K-20KHz
PIH              .111 In/Sec        .272 G-s
PIP              .031 G-s
PIV              .067 In/Sec        .118 G-s
PIA              .055 In/Sec        .101 G-s


SAR59A      - Scrub Twr Circ Pmp W          (19-Aug-21)
                OVERALL LEVEL      1K-20kHz
MOH              .033 In/Sec        .337 G-s          1775.0 RPM
MOP              .175 G-s
MOV              .045 In/Sec        .126 G-s
MOA              .030 In/Sec        .246 G-s
MIH              .029 In/Sec        .392 G-s
MIP              .276 G-s
MIV              .032 In/Sec        .146 G-s
MIA              .027 In/Sec        .175 G-s
                OVERALL LEVEL      1K-20KHz
PIH              .101 In/Sec        .491 G-s
PIP              .287 G-s
PIV              .073 In/Sec        .361 G-s
PIA              .092 In/Sec        .233 G-s
POH              .077 In/Sec        .385 G-s
POP              .203 G-s
POV              .103 In/Sec        .152 G-s
POA              .114 In/Sec        .112 G-s


SAR59B      - Scrub Twr Circ Pmp M          (19-Aug-21)
                OVERALL LEVEL      1K-20kHz
MOH              .047 In/Sec        .541 G-s          1775.0 RPM
MOP              .179 G-s
MOV              .060 In/Sec        .261 G-s
MOA              .067 In/Sec        .101 G-s
MIH              .055 In/Sec       1.117 G-s
MIP              .946 G-s
MIV              .068 In/Sec        .677 G-s
MIA              .047 In/Sec        .505 G-s
                OVERALL LEVEL      1K-20KHz
PIH              .230 In/Sec        .653 G-s
PIP              .388 G-s
PIV              .075 In/Sec        .359 G-s
PIA              .095 In/Sec        .220 G-s
POH              .171 In/Sec        .451 G-s
POP              .272 G-s
POV              .101 In/Sec        .241 G-s
POA              .109 In/Sec        .216 G-s


SAR59C      - Scrub Twr Circ Pmp E          (19-Aug-21)
                OVERALL LEVEL      1K-20kHz
MOH              .021 In/Sec        .197 G-s          1775.0 RPM
MOP              .054 G-s
MOV              .034 In/Sec        .043 G-s
MOA              .034 In/Sec        .034 G-s
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          MIH              .026 In/Sec        .816 G-s
          MIP              .305 G-s
          MIV              .027 In/Sec        .231 G-s
          MIA              .021 In/Sec        .088 G-s
                           OVERALL LEVEL      1K-20KHz
          PIH              .087 In/Sec        .512 G-s
          PIP              .290 G-s
          PIV              .054 In/Sec        .300 G-s
          PIA              .054 In/Sec        .178 G-s
          POH              .082 In/Sec        .448 G-s
          POP              .288 G-s
          POV              .063 In/Sec        .226 G-s
          POA              .053 In/Sec        .125 G-s


SAR54C        - Weak Acid Xfer Pump S        (19-Aug-21)
                           OVERALL LEVEL      1K-20kHz
          MOH              .060 In/Sec        .143 G-s         3575.0 RPM
          MOP              .025 G-s
          MOV              .045 In/Sec        .124 G-s
          MOA              .083 In/Sec        .066 G-s
          MIH              .081 In/Sec        .157 G-s
          MIP              .035 G-s
          MIV              .061 In/Sec        .088 G-s
          MIA              .088 In/Sec        .064 G-s
                           OVERALL LEVEL      1K-20KHz
          PIH              .149 In/Sec        .809 G-s
          PIP              .027 G-s
          PIV              .109 In/Sec        .295 G-s
          PIA              .113 In/Sec        .208 G-s


SAR54B        - Weak Acid Xfer Pump N        (19-Aug-21)
                           OVERALL LEVEL      1K-20kHz
          MOH              .390 In/Sec        .311 G-s         3575.0 RPM
          MOP              .052 G-s
          MOV              .357 In/Sec        .262 G-s
          MOA              .161 In/Sec        .101 G-s
          MIH              .202 In/Sec        .414 G-s
          MIP              .069 G-s
          MIV              .141 In/Sec        .298 G-s
          MIA              .165 In/Sec        .063 G-s
                           OVERALL LEVEL      1K-20KHz
          PIH              .186 In/Sec        .963 G-s
          PIP              .219 G-s
          PIV              .127 In/Sec       1.404 G-s
          PIA              .132 In/Sec        .699 G-s


SAR 56A       - N Oleum Storage Tank Feed    (20-Aug-21)
                           OVERALL LEVEL      1K-20kHz
          M1H              .056 In/Sec        .088 G-s         1775.0 RPM
          M1P              .016 G-s
          M1V              .055 In/Sec        .035 G-s
          M1A              .055 In/Sec        .028 G-s
          M2H              .065 In/Sec        .298 G-s
          M2P              .151 G-s
          M2V              .036 In/Sec        .070 G-s
          M2A              .052 In/Sec        .046 G-s
                           OVERALL LEVEL      1K-20KHz
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        P1H                   .070 In/Sec           .105 G-s
        P1P                   .064 G-s
        P1V                   .043 In/Sec           .058 G-s
        P1A                   .050 In/Sec           .041 G-s
        P2H                   .056 In/Sec           .067 G-s
        P2P                   .032 G-s
        P2V                   .048 In/Sec           .059 G-s
        P2A                   .054 In/Sec           .040 G-s


SAR 56B    - M Oleum Storage Tank Feed      (20-Aug-21)
                    OVERALL LEVEL       1K-20kHz
        M1H                   .115 In/Sec           .383 G-s          1775.0 RPM
        M1P                   .072 G-s
        M1V                   .156 In/Sec           .054 G-s
        M1A                   .101 In/Sec           .077 G-s
        M2H                   .092 In/Sec           .275 G-s
        M2P                   .133 G-s
        M2V                   .100 In/Sec           .101 G-s
        M2A                   .080 In/Sec           .064 G-s
                    OVERALL LEVEL       1K-20KHz
        P1H                   .119 In/Sec           .218 G-s
        P1P                   .178 G-s
        P1V                   .046 In/Sec           .136 G-s
        P1A                   .083 In/Sec           .067 G-s
        P2H                   .051 In/Sec           .121 G-s
        P2P                   .050 G-s
        P2V                   .055 In/Sec           .077 G-s
        P2A                   .049 In/Sec           .026 G-s


SAR 56C    - S Oleum Storage Tank Feed      (20-Aug-21)
                    OVERALL LEVEL       1K-20kHz
        M1H                   .034 In/Sec           .192 G-s          1775.0 RPM
        M1P                   .082 G-s
        M1V                   .043 In/Sec           .467 G-s
        M1A                   .022 In/Sec           .066 G-s
        M2H                   .126 In/Sec           .224 G-s
        M2P                   .179 G-s
        M2V                   .056 In/Sec           .234 G-s
        M2A                   .085 In/Sec           .104 G-s
                    OVERALL LEVEL       1K-20KHz
        P1H                   .108 In/Sec           .118 G-s
        P1P                   .057 G-s
        P1V                   .041 In/Sec           .072 G-s
        P1A                   .027 In/Sec           .066 G-s
        P2H                   .059 In/Sec           .218 G-s
        P2P                   .173 G-s
        P2V                   .028 In/Sec           .189 G-s
        P2A                   .026 In/Sec           .042 G-s


SAR57A     - Oleum Twr Circ Pump W          (30-Aug-21)
                    OVERALL LEVEL       1K-20kHz
        MOH                   .102 In/Sec           .817 G-s          1775.0 RPM
        MOP                   .247 G-s
        MOV                   .072 In/Sec           .216 G-s
        MOA                   .111 In/Sec           .264 G-s
        MIH                   .081 In/Sec          1.304 G-s
        MIP                   .338 G-s
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        MIV                  .140 In/Sec       2.133 G-s
        MIA                  .100 In/Sec       1.025 G-s


SAR57B      - Oleum Twr Circ Pump E        (20-Aug-21)
                        OVERALL LEVEL      1K-20kHz
        MOH                  .208 In/Sec       .286 G-s           1775.0 RPM
        MOP                  .125 G-s
        MOV                  .059 In/Sec       .107 G-s
        MOA                  .226 In/Sec       .087 G-s
        MIH                  .054 In/Sec       .397 G-s
        MIP                  .223 G-s
        MIV                  .058 In/Sec       .095 G-s
        MIA                  .069 In/Sec       .160 G-s


SAR61NM     - Spent Acid Circ Pmp N        (21-Jul-21)
                        OVERALL LEVEL      1K-20kHz
        MIH                  .013 In/Sec       .545 G-s           1775.0 RPM
        MIP                  .261 G-s
        MIV                  .022 In/Sec       .205 G-s
        MIA                  .036 In/Sec       .116 G-s
                        OVERALL LEVEL      1K-20KHz
        PIH                  .018 In/Sec       .128 G-s
        PIP                  .027 G-s
        PIV                  .032 In/Sec       .087 G-s
        PIA                  .086 In/Sec       .127 G-s


SAR63EM     - Spent Acid Feed Pmp E        (20-Aug-21)
                        OVERALL LEVEL      1K-20kHz
        MOH                  .041 In/Sec       .258 G-s           3575.0 RPM
        MOP                  .087 G-s
        MOV                  .040 In/Sec       .148 G-s
        MOA                  .109 In/Sec       .075 G-s
        MIH                  .046 In/Sec       .360 G-s
        MIP                  .103 G-s
        MIV                  .053 In/Sec       .110 G-s
        MIA                  .104 In/Sec       .060 G-s
                        OVERALL LEVEL      1K-20KHz
        PIH                  .087 In/Sec      1.181 G-s
        PIP                  .032 G-s
        PIV                  .109 In/Sec       .593 G-s
        PIA                  .089 In/Sec       .676 G-s
        POH                  .079 In/Sec       .944 G-s
        POP                  .054 G-s
        POV                  .088 In/Sec       .712 G-s
        POA                  .080 In/Sec       .384 G-s


SAR63WM     - Spent Acid Feed Pmp W        (20-Aug-21)
                        OVERALL LEVEL      1K-20kHz
        MOH                  .053 In/Sec       .210 G-s           3575.0 RPM
        MOP                  .0049 G-s
        MOV                  .039 In/Sec       .043 G-s
        MOA                  .033 In/Sec       .109 G-s
        MIH                  .068 In/Sec       .909 G-s
        MIP                  .015 G-s
        MIV                  .032 In/Sec       .107 G-s
        MIA                  .026 In/Sec       .174 G-s
                        OVERALL LEVEL      1K-20KHz
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        PIH                    .054 In/Sec          .289 G-s
        PIP                    .039 G-s
        PIV                    .055 In/Sec          .287 G-s
        PIA                    .043 In/Sec          .107 G-s


SAR66A      - Vertical Cool Twr Pump #1      (02-Aug-21)
                       OVERALL LEVEL      1K-20kHz
        MOH                    .042 In/Sec          .171 G-s          1195.0 RPM
        MOP                    .076 G-s
        MOV                    .135 In/Sec          .212 G-s
        MOA                    .183 In/Sec          .207 G-s
        MIH                    .055 In/Sec          .719 G-s
        MIP                    .395 G-s
        MIV                    .425 In/Sec          .371 G-s
        MIA                    .052 In/Sec          .303 G-s


SAR66B      - Vertical Cool Twr Pump #2      (02-Aug-21)
                       OVERALL LEVEL      1K-20kHz
        MOH                    .315 In/Sec          .155 G-s          1195.0 RPM
        MOP                    .067 G-s
        MOV                    .457 In/Sec          .137 G-s
        MOA                    .227 In/Sec          .076 G-s
        MIH                    .181 In/Sec          .092 G-s
        MIP                    .049 G-s
        MIV                    .211 In/Sec          .094 G-s
        MIA                    .195 In/Sec          .048 G-s


SAR66C      - Vertical Cool Twr Pump #3      (02-Aug-21)
                       OVERALL LEVEL      1K-20kHz
        MOH                    .421 In/Sec          .106 G-s          1195.0 RPM
        MOP                    .052 G-s
        MOV                    .262 In/Sec          .071 G-s
        MOA                    .178 In/Sec          .039 G-s
        MIH                    .183 In/Sec          .047 G-s
        MIP                    .028 G-s
        MIV                    .090 In/Sec          .053 G-s
        MIA                    .139 In/Sec          .026 G-s


SAR66D      - Vertical Cool Twr Pump #4      (02-Aug-21)
                       OVERALL LEVEL      1K-20kHz
        MOH                    .209 In/Sec          .109 G-s          1195.0 RPM
        MOP                    .056 G-s
        MOV                    .189 In/Sec          .153 G-s
        MOA                    .150 In/Sec          .044 G-s
        MIH                    .095 In/Sec          .065 G-s
        MIP                    .033 G-s
        MIV                    .078 In/Sec          .071 G-s
        MIA                    .111 In/Sec          .037 G-s


SAR66E      - Vertical Cool Twr Pump #5      (02-Aug-21)
                       OVERALL LEVEL      1K-20kHz
        MOH                    .103 In/Sec          .289 G-s          1195.0 RPM
        MOP                    .110 G-s
        MOV                    .246 In/Sec         1.393 G-s
        MOA                    .244 In/Sec          .419 G-s
        MIH                    .050 In/Sec          .671 G-s
        MIP                    .305 G-s
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        MIV                 .125 In/Sec          .255 G-s
        MIA                 .189 In/Sec          .253 G-s


SAR78A      - Cooling Tower Fan #1          (02-Aug-21)
                       OVERALL LEVEL     1K-20kHz
        MOH                 .196 In/Sec          .370 G-s          1775.0 RPM
        MOP                 .165 G-s
        MOV                 .367 In/Sec          .320 G-s
        MOA                 .386 In/Sec          .411 G-s
        MIH                 .097 In/Sec          .540 G-s
        MIP                 .364 G-s
        MIV                 .299 In/Sec          .247 G-s
        MIA                 .412 In/Sec          .346 G-s


SAR78B      - Cooling Tower Fan #2          (02-Aug-21)
                       OVERALL LEVEL     1K-20kHz
        MOH                 .076 In/Sec          .754 G-s          1775.0 RPM
        MOP                 .463 G-s
        MOV                 .061 In/Sec          .206 G-s
        MOA                 .177 In/Sec          .115 G-s
        MIH                 .093 In/Sec         1.335 G-s
        MIP                 .153 G-s
        MIV                 .107 In/Sec          .160 G-s
        MIA                 .165 In/Sec          .203 G-s


SAR78C      - Cooling Tower Fan #3          (02-Aug-21)
                       OVERALL LEVEL     1K-20kHz
        MOH                 .091 In/Sec          .627 G-s          1775.0 RPM
        MOP                 .387 G-s
        MOV                 .103 In/Sec          .416 G-s
        MOA                 .218 In/Sec          .196 G-s
        MIH                 .099 In/Sec         1.406 G-s
        MIP                 .264 G-s
        MIV                 .153 In/Sec          .598 G-s
        MIA                 .169 In/Sec          .260 G-s


SAR78D      - Cooling Tower Fan #4          (02-Aug-21)
                       OVERALL LEVEL     1K-20kHz
        MOH                 .110 In/Sec          .540 G-s          1775.0 RPM
        MOP                 .359 G-s
        MOV                 .151 In/Sec          .254 G-s
        MOA                 .289 In/Sec          .182 G-s
        MIH                 .093 In/Sec          .548 G-s
        MIP                 .381 G-s
        MIV                 .379 In/Sec          .309 G-s
        MIA                 .288 In/Sec          .220 G-s


SAR127      - Final Twr Pumpout Drain Pmp  (30-Aug-21)
                       OVERALL LEVEL     1K-20kHz
        MOH                 .127 In/Sec          .398 G-s          1775.0 RPM
        MOP                 .066 G-s
        MOV                 .019 In/Sec          .150 G-s
        MOA                 .129 In/Sec          .120 G-s
        MIH                 .018 In/Sec          .448 G-s
        MIP                 .148 G-s
        MIV                 .029 In/Sec          .114 G-s
        MIA                 .019 In/Sec          .175 G-s
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                         OVERALL LEVEL      1K-20KHz
        PIH              .054 In/Sec        .060 G-s
        PIP              .034 G-s
        PIV              .023 In/Sec        .123 G-s
        PIA              .032 In/Sec        .052 G-s


SAR128      - Oleum Fume Scrub Blwr         (20-Aug-21)
                         OVERALL LEVEL      1K-20kHz
        MIH              .045 In/Sec        .484 G-s          3575.0 RPM
        MIP              .053 G-s
        MIV              .048 In/Sec        .148 G-s
        MIA              .056 In/Sec        .045 G-s
                         OVERALL LEVEL      1K-20KHz
        FIH              .046 In/Sec        .318 G-s
        FIP              .022 G-s
        FIV              .037 In/Sec        .308 G-s
        FIA              .042 In/Sec        .127 G-s
        FOH              .074 In/Sec        .693 G-s
        FOP              .103 G-s
        FOV              .072 In/Sec        .386 G-s
        FOA              .104 In/Sec        .189 G-s


SAR135      - Spent Acid Circ Pmp E         (20-Aug-21)
                         OVERALL LEVEL      1K-20kHz
        MOH              .033 In/Sec        .158 G-s          1775.0 RPM
        MOP              .083 G-s
        MOV              .037 In/Sec        .142 G-s
        MOA              .069 In/Sec        .040 G-s
        MIH              .047 In/Sec        .205 G-s
        MIP              .109 G-s
        MIV              .054 In/Sec        .045 G-s
        MIA              .057 In/Sec        .043 G-s
                         OVERALL LEVEL      1K-20KHz
        PIH              .039 In/Sec        .176 G-s
        PIP              .126 G-s
        PIV              .030 In/Sec        .121 G-s
        PIA              .024 In/Sec        .079 G-s
        POH              .039 In/Sec        .203 G-s
        POP              .130 G-s
        POV              .030 In/Sec        .122 G-s
        POA              .024 In/Sec        .085 G-s


SAR137A     - Contain Pit Pump N            (20-Aug-21)
                         OVERALL LEVEL      1K-20kHz
        MOH              .080 In/Sec        .297 G-s          1775.0 RPM
        MOP              .078 G-s
        MOV              .259 In/Sec        .156 G-s
        MOA              .211 In/Sec        .114 G-s


SAR156      - Spent Acid Feed Booster N     (20-Aug-21)
                         OVERALL LEVEL      1K-20kHz
        MIH              .045 In/Sec        .248 G-s          1180.0 RPM
        MIP              .120 G-s
        MIV              .063 In/Sec        .086 G-s
        MIA              .044 In/Sec        .120 G-s
                         OVERALL LEVEL      1K-20KHz
        PIH              .228 In/Sec        .058 G-s
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        PIP              .028 G-s
        PIV              .036 In/Sec        .039 G-s
        PIA              .106 In/Sec        .069 G-s


SAR157     - Spent Acid Feed Booster S    (21-Jul-21)
                        OVERALL LEVEL    1K-20kHz
        MIH              .054 In/Sec        .194 G-s        1020.0 RPM
        MIP              .086 G-s
        MIV              .062 In/Sec        .102 G-s
        MIA              .075 In/Sec        .048 G-s
                        OVERALL LEVEL    1K-20KHz
        PIH              .073 In/Sec        .118 G-s
        PIP              .095 G-s
        PIV              .036 In/Sec        .078 G-s
        PIA              .062 In/Sec        .102 G-s


SAR161A    - N SAR Cool Twr Fan W         (03-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH              .096 In/Sec        .621 G-s        1775.0 RPM
        MOP              .196 G-s
        MOV              .264 In/Sec        .485 G-s
        MOA              .313 In/Sec        .139 G-s
        MIH              .157 In/Sec       1.174 G-s
        MIP              .380 G-s
        MIV              .185 In/Sec        .515 G-s
        MIA              .316 In/Sec        .259 G-s


SAR161B    - N SAR Cool Twr Fan Middle    (03-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH              .126 In/Sec       1.000 G-s        1775.0 RPM
        MOP              .297 G-s
        MOV              .160 In/Sec        .393 G-s
        MOA              .127 In/Sec        .171 G-s
        MIH              .130 In/Sec        .992 G-s
        MIP              .143 G-s
        MIV              .152 In/Sec        .332 G-s
        MIA              .156 In/Sec        .226 G-s


SAR161C    - N SAR Cool Twr Fan E         (03-Aug-21)
                        OVERALL LEVEL    1K-20kHz
        MOH              .099 In/Sec        .348 G-s        1775.0 RPM
        MOP              .117 G-s
        MOV              .130 In/Sec        .110 G-s
        MOA              .235 In/Sec        .061 G-s
        MIH              .223 In/Sec        .412 G-s
        MIP              .179 G-s
        MIV              .219 In/Sec        .155 G-s
        MIA              .246 In/Sec        .150 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
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        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          (20-Jul-21)
                             OVERALL LEVEL       1K-20kHz
        MOH                  .157 In/Sec          .820 G-s            1775.0 RPM
        MOP                  .366 G-s
        MOV                  .155 In/Sec          .105 G-s
        MOA                  .042 In/Sec          .271 G-s
        MIH                  .109 In/Sec          .442 G-s
        MIP                  .268 G-s
        MIV                  .106 In/Sec          .152 G-s
        MIA                  .040 In/Sec          .112 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


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   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
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