ST. LOUIS PUBLIC LIBRARY

ST. LOUIS' ORIGINAL SEARCH ENGINE®

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| TO: | All Proposers |
| FROM: | Rita Kirkland |
| DATE: | August 3, 2021 |
| SUBJECT: | Proposal Addendum No. 1 |
| RFB NUMBER: | 21-002446 |
| DATE ISSUED: | August 2, 2021 |
| PROJECT: | CHILLER MAINTENANCE - ADMINISTRATIVE OFFICE |

1. INTENT

This addendum is issued to provide an addition / modification in proposal plans and / or specifications.

2. MODIFICATIONS/ADDITIONS – Insertion of SCOPE OF WORK, Pages 14 thru 20 (Schedules A, B, C, D and E)

I have read and understand the preceding addendum and said changes are reflected in the Request for Proposal. The Proposer signed addendum should be included with the response packet.

COMPANY _____

PROPOSER'S SIGNATURE _____

TITLE _____

DATE _____

**Mission Statement**
The St. Louis Public Library will provide learning resources and information services that support and improve individual, family, and community life.

# High Pressure Chiller (York YK)

**Operational**

- ✓ Check with appropriate customer representative for operational deficiencies.
- ✓ Review control panel for proper operation and recorded fault histories (where applicable)
- ✓ Check for proper condenser and chilled water flow
- ✓ Check system pressures and temperatures.
- ✓ Check refrigerant levels
- ✓ Check compressor oil level(s).
- ✓ Check capacity control.
- ✓ Check for proper oil temperature and pressure
- ✓ Lubricate motor bearings (per manufacturer's recommendations).
- ✓ Visually inspect for refrigerant and oil leaks.
- ✓ Check for unusual noise and vibration.
- ✓ Check overall condition of unit.
- ✓ Record oil level in seal oil bottle
- ✓ Check for proper operation of oil return system
- ✓ Record and log all operating parameters
- ✓ Document tasks performed during visit and report any observations to the customer

**Comprehensive**

- ✓ Check with appropriate customer representative for operational deficiencies.
- ✓ Review control panel for proper operation and recorded fault histories
- ✓ Conduct refrigerant leak check.
- ✓ Check compressor oil level(s).
- ✓ Change oil filters (isolation valves must be present and functional)
- ✓ Change oil eductor filter dryer (isolation valves must be present and functional)
- ✓ Lubricate and check capacity control and linkage.
- ✓ Verify oil heater operation.
- ✓ Check and tighten electrical connections.
- ✓ Perform preventative procedures to flow proving devices
- ✓ Check for unusual noise and vibration.
- ✓ Check overall condition of unit.
- ✓ Remove and dispose any debris from any maintenance activity
- ✓ Complete any required maintenance checklists, report observations to appropriate customer represe

Tube Brushing

- ✓ Isolate tubes.
- ✓ Drain water from tubes.
- ✓ Remove head.
- ✓ Mechanically brush tubes.
- ✓ Replace gasket.
- ✓ Replace head.
- ✓ Clean area around equipment.

Oil Samples

- ✓ Take compressor oil and filter samples

Hazmat

- ✓ Contractor must dispose of refrigerant removed from machine.
- ✓ Contractor must dispose of oil and oil filters removed from machine.

# Low Pressure Chiller (York YT)

*Operational*

- ✓ Check with appropriate customer representative for operational deficiencies.
- ✓ Review control panel for proper operation and recorded fault histories
- ✓ Check for proper condenser and chilled water flow
- ✓ Check system pressures and temperatures.
- ✓ Check refrigerant levels
- ✓ Check compressor oil level(s).
- ✓ Check capacity control.
- ✓ Check for proper oil temperature and pressure
- ✓ Check for proper purge operation
- ✓ Visually inspect for refrigerant and oil leaks.
- ✓ Check for unusual noise and vibration.
- ✓ Check overall condition of unit.
- ✓ Record oil level in seal oil bottle
- ✓ Check for proper operation of oil return system
- ✓ Record and log all operating parameters
- ✓ Document tasks performed during visit and report any observations to the customer

Inspect and report condition of motor coupling for wear and oil leaks (OT and YT only)

Check starter cabinet for signs of overheating, arcing, burns, etc. and clean ventilation ports

*Comprehensive*

- ✓ Check with appropriate customer representative for operational deficiencies.
- ✓ Review control panel for proper operation and recorded fault histories
- ✓ Check compressor oil level(s).
- ✓ Change oil filters (isolation valves must be present and functional)
- ✓ Change oil eductor filter dryer (isolation valves must be present and functional)
- ✓ Check for proper purge operation
- ✓ Change purge filter dryers/strainers
- ✓ Lubricate and check capacity control and linkage.
- ✓ Verify oil heater operation.
  Megger oil pump motor and record readings

Clean dirt leg for oil return system
Check and tighten electrical connections.

- ✓ Perform preventative procedures to flow proving devices
- ✓ Lubricate motor bearings (per manufacturer's recommendations).
- ✓ Verify cut-out on high condenser pressure, cooler low pressure, oil pressure, oil temperature, compressor high discharge temperature, low water temperature leaving cooler, all pump auxiliary contacts (chw, cw, oil, etc.)
- ✓ Check overall condition of unit.
- ✓ Remove and dispose any debris from any maintenance activity
- ✓ Complete any required maintenance checklists, report observations to appropriate customer representat

- ✓ Clean starter cabinet, inspect all components for burns, arcing, etc.
- ✓ Test motor current and terminal connections
- ✓ Megger motor at starter terminals and record readings

*Tube Brushing*

- ✓ Isolate tubes.
- ✓ Drain water from tubes.
- ✓ Remove head.
- ✓ Mechanically brush tubes.
- ✓ Replace gasket.
- ✓ Replace head.
- ✓ Clean area around equipment.

*Oil Samples*

- ✓ Take compressor oil samples

**Hazmat:**
Oil removed from equipment to be disposed of by contractor
Oil filters removed from equipment to be disposed of by contractor
Refrigerant removed from equipment to be disposed of by contractor

SCHEDULE C



## VIBRATION ANALYSIS

Provide all equipment necessary to the analysis.

Indicated instrumentation used and limits of the analysis, if any.

Provide an experienced operator.

Provide a graphic vibration signature taken in the horizontal, vertical and axial directions.

Indicate at what locations signatures were obtained.

Report the amplitude of vibration by velocity (inches/second) and frequency (cycles/minute).

Indicate areas which exceed acceptable levels (10 inches/second) of vibration amplitude, at discrete frequency.

Provide recommended corrective action as required.

Indicate re-analysis frequency based on results.

## SPECTROCHEMICAL OIL ANALYSIS

**Sampling Procedure**

- Run machine to circulate oil in sump.
- Oil should be warm, not hot, from operation so as to obtain a representative sample.
- Sample will be taken at a petcock installed on the oil line before the filter.
- Provide an appropriate and clean container for the sample.
- Provide a label indicating: machine manufacturer, model, oil type, run hours, and time elapsed since last sampling.

**Analysis and Report**

- Provide laboratory analysis to identify twenty metallic elements which are measured by a direct reading spectrometer.

- Identify water content which will be reported in PPM, detectable to less than 1 PPM.
- Measure the viscosity of the sample at 40°C and report in centistokes.
- Measure total acid number and report.
- Provide a written report of all conditions and contents, to include:

  Unit/oil condition (normal, abnormal, critical).
  Suitability of oil for continued use.
  Recommendations for corrective action (if required).
  Answers to specific questions submitted with the sample.

# Solid State Starters with coolant

**Operational Inspection**

Check with appropriate customer representative for operational deficiencies.
Review control panel for proper VSD operation and recorded fault histories
Visually inspect coolant circuit for leaks
Check for proper coolant level
Check condition of coolant hoses
Complete any required maintenance checklists, report observations to appropriate customer representative.

**Comprehensive Inspection**

Check with appropriate customer representative for operational deficiencies.
Review control panel for proper VSD operation and recorded fault histories
Visually inspect coolant circuit for leaks
Check condition of coolant hoses
Meg compressor motor
Check electrical connections for proper tightness.
Inspect fuses for continuity
Check for heat damage.
Replace coolant and ensure proper level.
Clean inside the VSD cabinet
Clean and/or backflush heat exchanger and strainer
Remove and dispose any debris from any maintenance activity
Complete any required maintenance checklists, report observations to appropriate customer representative.
Disposal of removed coolant to be disposed of by contractor