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ACAN nº : 9F023-20230064

ACAN - 9F023-20230064
CHILLER PLANT COMPREHENSIVE MAINTENANCE AT THE DAVID FLORIDA LABORATORY (DFL), OTTAWA

July 11, 2023

1. Advance Contract Award Notice (ACAN)

An ACAN is a public notice indicating to the supplier community that a department or agency intends to award a contract for goods, services or construction to a pre-identified supplier, thereby allowing other suppliers to signal their interest in bidding, by submitting a statement of capabilities. If no supplier submits a statement of capabilities that meets the requirements set out in the ACAN, on or before the closing date stated in the ACAN, the contracting officer may then proceed with the award to the pre-identified supplier.

2. Background

There are three chillers serving the building:

1. A Carrier 300-Ton centrifugal chiller model 02XR-276BGS65 is located in mechanical room M1 and serves AHU's and lab equipment. It is connected to the outdoor cooling tower located by the lobby and also to a remote basin tank located within the mechanical room. It was installed in 2003.

2. A Trane 500-Ton centrifugal chiller model CVHE500 is located in mechanical room M4-A and serves AHU's and lab equipment. It is connected to the outdoor cooling tower located by the generator building. It runs in parallel with a plate and frame heat exchanger for water-side free cooling. It was installed in 1996.

3. A Trane 200-Ton air-cooled chiller model RTAA is located outside of the building near the generator building and serves AHU's and lab equipment. It was installed in 1995.

There are two cooling towers serving the two centrifugal chillers:

1. A Marley 284-Ton induced draft cross-flow cooling tower is located outside the main entrance and serves the Carrier centrifugal chiller. It is also connected to a remote sump tank located in basement mechanical room M1. It was installed in 2003.

2. A Marley 377-Ton induced draft cross-flow cooling tower is located outside the generator building and serves the Trane centrifugal chiller. It was installed in 1996.

Qty	Equipment	Model/Serial Number	Schedules (See Annex "A")
1	300 Ton Carrier Centrifugal Chiller	Mod.#19XR212276BG565 Ser.#2405Q71535	CTV-330, CTV-312, ANL-110, ANL-120 ANL-150, CDS-210 FIG. 1
1	Marley Induced Draft Cooling Tower	Mod.# NC8300 Ser.# NC8303G1GM	CLT-110, CLT-130, FIG.1
1	500 Ton Trane Centrifugal Chiller	Mod.# CVHE Ser.# L96M08868	CTV-210, CTV-230 ANL-110, ANL-120 ANL-150, CDS-210, MSC-330, FIG. 1
1	Marley Induced Draft Cooling Tower	Mod.# NC8400 Ser.# 1003150-A1	CLT-110, CLT-130, FIG. 1
1	200 Ton RTAA Chiller	Mod.# RTAA2005YK Ser.# U95M31076	ROT-310, ROT-330, CDS-240, FIG. 1
3	Armstrong Dual Pumps	Mod.# Various Ser.# Various	PMP-110, FIG. 1
4	Strainers	Mod.# Various Ser.# Various	STR-110, FIG. 1

3. Definition of the requirement

The Canadian Space Agency (CSA) has a requirement for inspection, maintenance and repair services at the David Florida Laboratory (DFL) 3701 Carling Avenue, CP11490, Succ. H, Ottawa, Ontario, K2H 8S2. This coverage includes twelve (12) scheduled inspections each year, one (1) annual and eleven (11) monthly inspections, and emergency services, parts and repairs on a 24-hour per day basis. Emergency calls must be responded to within 2 hours. In attending to an after-hours call, the Trane technician will attempt to bring the unit back within safe parameters for operation, or if necessary, shut the unit down. The technician will then return during regular business hours to initiate repairs.

COMPREHENSIVE ANNUAL INSPECTION
CTV-312
Rev: 03/2006

1. Report in with the Customer Representative.
2. Record and report abnormal conditions, measurements taken, etc.
3. Review customer logs with the customer for operational problems and trends.

1. General Assembly

a. Inspect for leaks and report results.
b. Repair minor leaks as required (e.g, valve packing, flare nuts).
c. Transfer the refrigerant to the utility vessel.
d. Check front and rear oil seals.
e. Change the compressor motor refrigerant cooling filter.
f. Inspect internal piping, internal wiring, motor bearings, transmission gears and nut.

Check for signs of moisture.

g. Record bearing clearances.
h. Check dehydrator sump and float operation.
i. Check the vane linkages for wear and for free and smooth operation.
j. Visually inspect the condenser tubes for cleanliness.

2. **Controls and Safeties**
   a. Inspect the control panel for cleanliness.
   b. Inspect the wiring and connections for tightness signs of overheating and discoloration.
   c. Verify the working condition of all indicator/alarm lights and LED/LCD displays.
   d. Test the high condenser pressure safety device. Calibrate and record setting.
   e. Test the low evaporator pressure safety device (19EA & 19EB). Calibrate and record setting.
   f. Test the low evaporator temperature safety device (17FA & 19FA). Calibrate and record setting.
   g. Test the oil pressure safety device. Calibrate and record setting.
   h. Test the operation of the load recycle temperature control device. Calibrate and record setting.
   i. Verify the operation of the oil temperature control. Calibrate and record setting.
   j. Test the operation of the chilled water pump and condenser water pump starter auxiliary contacts.
   k. Verify the operation of all timing devices.

3. **Lubrication System**
   a. Pull oil sample for spectroscopic analysis.
   b. Change the oil and filter as recommended by Carrier. Chillers using R-134a refrigerant should change only the oil filter.
   c. Flush the water side of the oil cooler to remove sludge.
   d. Verify the operation of the oil heater, (Measure the amps and compare the reading with the watt rating of the heater.)
   e. Measure and record the oil pump voltage and amperage.

4. **Motor and Starter**
   a. Clean the starter and cabinet.
   b. Inspect the wiring and connections for tightness and signs of overheating and discoloration.
   c. Check contactors for free and smooth operation.
   d. Check condition of the contacts for wear and pitting.
   e. Check the mechanical linkages for wear, security and clearances.
   f. Meg the motor and record reading.
   g. Verify the operation of the electrical interlocks.
   h. Measure voltage and record. Voltage should be nominal voltage ± 10%.

1. Check the general operation of the unit.
2. Log the operating temperatures, pressures, voltages, and amperages.
3. Check the operation of the purge unit, if applicable.
4. Check the operation of the control circuit.
5. Check the operation of the lubrication system.
6. Check the operation of the motor and starter.
7. Analyze the recorded data. Compare the data to the original design conditions.
8. Review the operating procedures with operating personnel.
9. Provide a written report of completed work, operating log, and indicate any uncorrected deficiencies detected.

COMPREHENSIVE ANNUAL INSPECTION SERVICE ELECTRONIC
CTV-210
Rev:03/2006

1. Report in with the Customer Representative.
2. Record and report abnormal conditions, measurements taken, etc.
3. Review customer logs with the customer for operational problems and trends.

1. **General Assembly**
   a. Inspect for leaks and report leak results.
      1. The refrigerant should be correct before starting the leak check. To prevent unnecessary venting of refrigerant, EPA-recommended methods (e.g. hot water and/or electric blankets) must be used to pressurize the vessels.
      2. In order to use EPA-recommended methods, certain conditions must be met:

         a. The isolation valves on the chilled water and condenser water lines must shut off the circulation completely.
         b. The temperature of the equipment room should be 70°F or higher.
         c. Access connections to the condenser water and chilled water circuits must be provided (customer's responsibility).

If these conditions cannot be met, the refrigerant must be removed and the vessel pressurized, using dry nitrogen and a trace gas. This additional procedure is outside the scope of this agreement.

a. Repair minor leaks as required (e.g., valve packing. flare nuts)
b. Visually inspect condenser tubes for cleanliness.
c. Check vanes for free and smooth operation.
d. Check mechanical linkages for wear.

2. **High Efficiency Purge Unit**
   a. Run unit in manual mode.
   b. Check and clean air cooled condenser.
   c. Verify purge compressor operation.
   d. Change purge drier core/filter if purge time warrants.

3. **Controls and Safeties**
   a. Verify all settings in the electronic control panel.
   b. Inspect the control panel for cleanliness.
   c. Inspect wiring and connections for tightness and signs for overheating and discoloration.
   d. Verify the operation of the vane control system:
   e. Verify the working condition of all indicator/alarm lights and LED/LCD displays.
   f. Verify the operation of the oil sump temperature control device.
   g. Test high condenser pressure safety device. Calibrate and record setting.
   h. Test low evaporator temperature safety device. Calibrate and record setting.
   i. Test low oil pressure safety device. Calibrate and record setting.
   j. Test high motor temperature safety device. Calibrate and record.
   k. Test operation of chilled water pump and condenser water pump starter auxiliary contacts.

4. **Lubrication System**
   a. Pull oil sample from spectroscopic analysis.
   b. Check oil for acid content and discoloration. Make recommendations to the customer based on the results of the test.
   c. Measure and record the oil pump voltage and amperage.
   d. Verify the operation of the oil heater. Measure amps and compare readings with rating of the heater.
   e. Change the oil filter.
   f. Verify the oil level.

5. **Motor and Starter**
   a. Clean the starter and cabinet.
   b. Inspect wiring and connections for tightness and signs of overheating and discoloration.
   c. Check condition of the contracts for wear and itting.
   d. Check contactors for free and smooth operation.
   e. Check the mechanical linkages for wear, security and clearances.
   f. Check tightness of the motor terminal connections.
   g. Meg the motor and record reading
   h. Verify the operation of the electrical interlocks.

MID-SEASON RUNNING INSPECTION
CTV-230
Rev: 03/2006

1. Check the general operation of the unit.
2. Log the operating temperatures, pressures, voltages, and amperages.
3. Log the operation of the purge unit.
4. Check the operation of the control circuit.
5. Check the operation of the lubrication system.
6. Check the operation of the motor and starter.
7. Analyze the recorded data. Compare the data to the original design conditions.
8. Review operating procedures with operating personnel.

9. Provide a written report of completed work, operation log and indicate any uncorrected deficiencies detected.

COMPREHENSIVE ANNUAL INSPECTION SERVICE
ROT-310
Rev: 03/2006

1. Report in with the Customer Representative.
2. Record and report abnormal conditions, measurements taken, etc.
3. Review customer logs with the customer for operational problems and trends.

1. **General Assembly**
   a. Inspect for leaks and report leak check result.
   b. Repair minor leaks as required (e.g. valve packing, flare nuts).
   c. Check the condenser fans for clearances and free operation.
   d. Check tightness of condenser fan motor mounting brackets.
   e. Check the set screws on the fan shafts.
   f. Visually inspect the condenser coil for cleanliness.
   g. Verify the performance of the fan control inverter VFD, if applicable.
   h. Grease bearings as required.

2. **Controls and Safeties**
   a. Inspect the control panel for cleanliness.
   b. Inspect wiring and connections for tightness and signs of overheating and discoloration.
   c. Verify the working condition of all indicator/alarm lights and LED/LCD displays.
   d. Test oil pressure safety device (as required). Calibrate and record setting.
   e. Test the operation of the chilled water pump starter auxiliary contacts.

3. **Lubrication System**
   a. Pull oil sample from spectroscopic analysis.
   b. Check oil for acid content and discoloration. Make recommendations to the customer based on the results of the test.
   c. Measure and record voltages and amperages.
   d. Verify the operation of the compressors. Measure amps and compare readings with rating of the compressors.
   e. Change the filter.

4. **Motor and Starter**
   a. Clean the starter cabinet and starter components.
   b. Inspect wiring and connections for tightness and signs of overheating and discoloration.
   c. Check the condition of the contacts for wear and pitting.
   d. Check contactors for free and smooth operation.
   e. Check all mechanical linkages for wear, security and clearances.
   f. Verify tightness of the motor terminal connections.
   g. Meg the motor and record readings.

h. Verify the operation of the electrical interlocks.
i. Measure voltage and record. Voltage should be nominal voltage ±10%.

MID-SEASON RUNNING INSPECTION
ROT-330
Rev: 03/2006

1. Check the general operation of the unit.
2. Log the operating temperatures, pressures, voltages, and amperages.
3. Check the operation of the control circuit.
4. Check the operation of the lubrication system.
5. Check the operation of the motor and starter.
6. Analyze the recorded data. Compare the data to the original design conditions.
7. Review operating procedures with operating personnel.
8. Provide a written report of completed work, operation log and indicate any uncorrected deficiencies detected.

AIR-COOLED CONDENSERS (110-200 Tons)
CDS-240
Rev: 03/2006

1. Clean air-cooled condenser, using pressurized water and biodegradable cleaner if required.

OIL SAMPLE/SPECTROGRAPHIC ANALYSIS
ANL-110
Rev: 03/2006

1. Pull oil sample for spectrographic analysis.

REFRIGERANT SAMPLE/ANALYSIS
ANL-120
Rev: 03/2006

1. Pull refrigerant sample for spectrographic analysis for moisture, using approved containers.

EDDY CURRENT TESTING
ANL-150
Rev: 03/2006

1. Perform eddy current test on the tubes to determine the condition of the tubes, and if corrective action is needed.

WATER-COOLED CONDENSERS BRUSH TUBES (600 Tubes/Day)
CDS-210
Rev: 03/2006

1. Pull easy end head.
2. Brush tubes as necessary.

NOTE: The term "easy end head" refers to the head which has no piping attached to it. In the case of 1-pass or 3-pass vessels, there will be no easy end head, and extra time must be allotted to the job for the removal of the piping. An exception to this would be the units having marine boxes.

COMPREHENSIVE ANNUAL INSPECTON
CLT-110
Rev: 03/2006

1. Report in with the Customer Representative.
2. Record and report abnormal conditions, measurements taken, etc.
3. Review customer logs with the customer for operational problems and trends.

1. **General Assembly**
   a. STRUCTURE
      1. Disassemble all screens and access panels for inspection.
      2. Inspect the condition of the slats, if applicable.
      3. Inspect the condition of the tower fill.
      4. Inspect the condition of the support structure.
      5. Inspect the condition of the basins (upper and lower) and/or spray nozzles.
      6. Verify cleanliness of basins and strainers.
      7. Verify the condition and operation of the basin fill valve system.

   b. MECHANICAL
      1. Inspect belts for wear, cracks, and glazing.
      2. Verify correct belt tension. Adjust the tension as necessary.
      3. Inspect sheaves and pulleys for wear, condition, and alignment.
      4. Inspect fan shaft and bearings for condition.
      5. Inspect fan assembly for condition, security, and clearances. (e.g. blade tip clearance.)

2. **Lubrication System**
   a. Lubricate motor bearings.
   b. Lubricate fan shaft bearings.

3. **Motor and Starter**
   a. Clean the starter and cabinet.
   b. Inspect wiring and connections for tightness and signs of overheating and discoloration.
   c. Check the condition of the contacts for wear and pitting.
   d. Check the contactor(s) for free and smooth operation.
   e. Meg the motor(s) and record readings.
   f. Check disconnect terminal block for wear, tightness and signs of overheating and discoloration.
   g. Check the condition and operation of the basin heater contactor(s).

MID-SEASON RUNNING INSPECTION

CLT-130
Rev: 03/2006

1. Check the general operation of the tower,
2. Verify clean basins and strainers.
3. Verify proper water level in the basin.
4. Verify proper operation of the water level control device.
5. Verify smooth operation of the fan(s).
6. Verify proper operation of the bypass valve(s), if applicable.
7. Review operating procedures with operating personnel.
8. Provide a written report of completed work, operating log, and indicate any uncorrected deficiencies detected.

SEMI-ANNUAL PUMP MAINTENANCE
PMP-110
Rev: 01/2011

1. Replace filters on all duel pumps systems twice er year, for a total of 12 filter replacements.

SEMI-ANNUAL STRAINER MAINTENANCE
STR-110
Rev: 01/2011

1. Clean out all strainers on cooling system piping twice per year for a total of 8 cleanings.

4. Criteria for assessment of the Statement of Capabilities (Minimum Essential Requirements)

Any interested supplier must demonstrate, by way of a statement of capabilities, that at least one technician meets the following requirements:

A. Experience

1. Demonstrated a minimum of five (5) years of experience in a variety of chiller and cooling tower maintenance, including air cooled systems and mechanically cooled systems.
2. Demonstrated a minimum of five (5) years of experience with commercial, industrial and government facilities with chilled water equipment and systems like those described in this document, within Ottawa's (or similar geographic location) unique environmental conditions.
3. Demonstrated a minimum of five (5) years of experience with the Trane Network Architecture and associated hardware.

B. License

1. The proposed technician must be licensed in the refrigeration/air conditioning

trade and gas fitter 1 trade for a minimum of five (5) years. Refrigeration/air conditioning license and gas fitter 1 license number must be provided.

The supplier must provide, at a minimum, three (3) references that demonstrate its ability within the last five (5) years, to perform work of a similar scale and scope as outlined in Section 2 - Definition of the requirement**.** The CSA reserves the right to contact the references for verification.

References to include the following:

1. Brief description of each project (year, description of equipment maintained, scope, size)
2. Brief description of the type of controls on each project (year, list manufacturer, the contractor involvement in the controls, programming and setup)
3. The client for whom the work was performed
4. Reference name, title, email and telephone number
5. Year in which the work was performed (Indicate if the contract is completed or ongoing)

5. Applicability of the trade agreement to the procurement

This procurement is subject to the following trade agreement:

- Canadian Free Trade Agreement (CFTA)

6. Set-aside under the Procurement Strategy for Indigenous Business

Not applicable

7. Comprehensive Land Claims Agreement(s)

Not applicable

8. Security

A. The Contractor must, at all times during the performance of the Contract, hold a valid Designated Organization Screening (DOS), issued by the Contract Security Program (CSP), Public Works and Government Services Canada (PWGSC).

B. The Contractor personnel requiring access to sensitive site(s) must EACH hold a valid **RELIABILITY** STATUS, granted or approved by the CSP, PWGSC. Until the security screening of the Contractor personnel required by this Contract has been completed satisfactorily by the CSP, PWGSC, the Contractor personnel **MAY NOT ENTER** sites without an escort.

C. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of the CSP, PWGSC.

D. The Contractor must comply with the provisions of the:

1. Security Requirements Check List and security guide (if applicable).
2. Contract Security Manual (Latest Edition).

9. Justification for the Pre-Identified Supplier

The pre-identified supplier is the only capable supplier able to provide the specific services required at the DFL. The supplier has ownership of the internal software tools and direct access to the manufacture's designers and engineers which are only available to Trane factory trained technicians, required to service the equipment. The supplier has been servicing the equipment and the specific chiller models at DFL interface with the Trane software.

10. Government Contracts Regulations Exception(s)

The following exception to the *Government Contracts Regulations* is invoked for this procurement under subsection 6(d) – only one person is capable of performing the work.

11. Exclusions and/or Limited Tendering Reasons

Not applicable

12. Ownership of Intellectual Property

Not applicable

13. Period of the proposed contract or delivery date

The proposed contract is for a period of two (2) years, from August 1st, 2023 to July 31th, 2025.

14. Option to extend the contract period

The Contractor grants to government of Canada the irrevocable option to extend the term of this contract by five (5) years under the same terms and conditions. Government of Canada may exercise any or all option periods at any time by sending a notice to the Contractor at least 30 calendar days prior to the contract expiry date.

15. Cost estimate of the proposed contract

The estimated value of the contract, including options, is *$297,640.00 before tax.*

Initial Contract Period: $85,040.00 before tax (August 1st, 2023 to July 31th, 2025)
Option 1: $42,520.00 before tax (August 1st, 2025 to July 31th, 2026)
Option 2: $42,520.00 before tax (August 1st, 2026 to July 31th, 2027)
Option 3: $42,520.00 before tax (August 1st, 2027 to July 31th, 2028)

Option 4: $42,520.00 before tax (August 1st, 2028 to July 31th, 2029)
Option 5: $42,520.00 before tax (August 1st, 2029 to July 31th, 2030)

16. Name and address of the pre-identified supplier

TRANE
1024 Morrison Drive
Ottawa, Ontario
K2H 8K7

17. Suppliers' right to submit a statement of capabilities

Suppliers who consider themselves fully qualified and available to provide the services described in the ACAN may submit a statement of capabilities in writing to the contact person identified in this notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

18. Closing date for a submission of a statement of capabilities

The closing date and time for accepting statements of capabilities is July 26th, 2023 at 2:00pm EDT.

19. Inquiries and submission of statements of capabilities

Inquiries and statements of capabilities are to be directed to:

Mélanie Séguin, Procurement Specialist
Canadian Space Agency
6767 route de l'Aéroport
Saint-Hubert, QC
Canada J3Y 8Y9

Telephone: 438 364-1399
E-mail: melanie.seguin@asc-csa.gc.ca