PUBLIC WORKS AND

GOVERNMENT SERVICES CANADA

CHILLER

MAINTENANCE SERVICE CONTRACT

Contract Title: **Maintenance and Servicing of Chillers**

Building Name: **Joseph A. Ghiz Building**

Location: **275 Pope Road**
Summerside , Prince Edward Island

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1. Scope of Work

The Contractor shall furnish all necessary labour, material, tools and equipment to carry out full maintenance service on two (2) McQuay 400 Ton Centrifugal Chillers, one (1) McQuay 45 Ton Reciprocating Chiller, one(1) Smardt 60 ton Tubo-core chiller, two(2) 15 ton Carrier DX A/C units and two(2) Liebert XDP chilled water systems in accordance with Appendix ' A ' Work Schedule.

2. Examination of Premises

.1 All parties tendering may examine the site of the proposed work prior to submitting their tenders and become thoroughly acquainted with same and obtain any and all information that may be necessary to properly execute contract.

.2 Make site arrangements with the departmental representative.

3. Work Included

.1 Planned inspections in accordance with Appendix ' A '

.2 Replacing or changing parts, controls, filters, lubricants, refrigerants, burnt-out motors, etc.

.3 Emergency service and service calls.

4. Work Not Included

.1 Manufacturer's recommended periodic overhaul and stripped-down inspection is not included in this Contract.

5. Equipment

.1 Maintain the following equipment operating at a high degree of efficiency.

Make: see 1. above
Model:
Serial #:

.2 Chiller units which include but are not limited to:

.1 Condensers/Evaporators
.2 Refrigerant Circuit
.3 Controls
.4 Heaters
.5 Chilled Water System
.6. Motors
.7 Compressors

6. Emergency and Service Calls

.1 The following Work Priorities and Response Times shall apply:

.1 **Emergency**
A priority of "Emergency" is defined as a deficiency or breakdown that requires immediate attention to reduce the potential for danger to occupants, the general public, the environment, or the facility. Maintenance identified with this priority must be responded to immediately and must be reported without delay to designated manager.
Standard Response Times -
Urban **3 Hrs.**

.2 **Urgent**
A priority of "Urgent" is defined as a deficiency or breakdown that requires same day attention to reduce the potential for danger to occupants, the general public, the environment or the facility.
Standard Response Times -
Urban **3 Hrs.**

.3 **Routine**
A priority of "Routine" is defined as essential maintenance requirements which should be rectified at the earliest possible opportunity. It is considered as deficiencies or breakdowns that do not impair current operations or pose any danger to the occupants, the general public, the environment or the facility.
Standard Response Times -
Urban **24 Hrs.**

.4 **Low Priority**
Low Priority work includes deficiencies that are similar to those considered as Routine, but are of a less important nature. They are deficiencies which do not pose any immediate risk to the facility, its systems, its equipment or its occupants.
Standard Response Times -
Urban **48 Hrs.**

.2 Restore system to working condition as quickly as possible.

.3 Prevent recurrence of failure and damage to building, other equipment or system.

7. Replacement

.1 The Contractor is required to repair or replace worn or defective

Parts

parts or complete components of the system(s) using only genuine manufacturer's replacement parts.

.2 Replacement parts by another manufacturer may be used with the written permission of the Departmental Representative.

.3 Request direction from Departmental Representative prior to replacing any component.

.4 Defective parts shall be replaced (ASAP) within twenty-four (24) hours.

.5 Where an equipment inventory numbering system exists, identify on the log sheet the number of the equipment where the replacement part was used.

8. Service Definitions

.1 Provide the following maintenance services:

Add - Make an addition to.

Adjust - Bring components to a more effective relative position.

Assemble - To take apart and put together again.

Clean - Scrape, brush, flush and vacuum as required to remove dust, dirt and foreign matter.

Inspect - View closely for dirt, foreign substance, lack of lubricant, wear, damage, tightness, tension, alignment, leaks, cracks, spalling, deformation, overloading and settings. Make a critical appraisal of equipment, component and parts' ability to fulfil their function to a high degree of efficiency until next maintenance service date. Include inspection of items listed under work not included.

Instruct - Inform PWGSC's Representative on-site of any new operating procedures. Demonstrate and explain purpose, benefit and method of implementing new procedures.

Lubricate - Apply oil or grease to joints between moving parts and joints between fixed and moving parts.

Measure - Determine capacity or amount in standard units using an appropriate instrument. Measure condenser and evaporator pressure drop with differential pressure meter or "U" tube manometer. Measure motor overload with instrument approved by overload manufacturer.

Paint - Clean, prepare and paint surfaces to paint manufacturer's recommendations with paint and primer recommended by paint manufacturer for applicable surface and use.

Prove - Operate and determine if operation produces intended response.

Remove - Take off or away from.

Repack - Fill with packing again.

Repair - Restore to a sound state.

Replace - Restore by removing old components and replacing with new components.

Report - To PWGSC's Representative on-site and include in work report, results of inspection and proving, note problems encountered, services required, services performed and readings taken.

Shut Down - Take out of service.

Start Up - Return to service.

Tighten - Securely fix in place.

Treat - Act upon with agent.

9. Frequency

.1 The first maintenance inspection shall be completed within 15 days of commencement of the term of the Contract. Subsequent inspections shall be completed as per Appendix "A" - Work Schedule Centrifugal Water Chillers.

.2 To equipment manufacturer's maintenance manuals.

.3 **Final inspection**:
Sixty (60) days prior to Contract expiry date, arrange inspection with Property Manager or his representative. Correct deficiencies found during inspection.

10. Work Schedule

.1 Maintenance and servicing to include services indicated in the

Work Schedule.

.2 Check off work completed on Schedule Tables.

.3 Leave one (1) copy of Schedule Table on-site and submit one (1) copy to: PWGSC Representative

1. Codes and Legislative Requirements

.1 Execute the work to meet or exceed the requirements of the specifications and:

.1 National Building Code of Canada, 1995.

.2 Part II of the Canada Labour Code 1998.

.3 Canada Occupational Safety and Health Section of Part II of the Canada Labour Code 1998.

.4 Equipment or system manufacturer's recommendations, instruction manuals and/or leaflets.

.5 CAN/ULC-S536-M96 Standard for the Testing, Inspection and Maintenance of Existing Fire Alarm System(s).

.6 National Fire Code, 1995.

.7 Fire Commission of Canada #301 Standard for Building Construction Operations, 1982.

.8 Canadian Construction and Canada Labour Safety Codes; Provincial Government, Workers' Compensation Board; and Municipal Statutes and Authorities.

.9 Canadian Electrical Code, Part I, CSA C22.1-1998.

.10 Public Works and Government Services Canada "Electrical Safety Requirements" document dated June, 1995. (Includes Lockout Procedures). *

* Please Note: The Electrical Safety Requirements (the Procedures) are only a tool which the Contractor may use to assist him or her in interpreting the Codes and Standards set out in the Maintenance Services Standing Offer-Electrical, General Requirements, Codes and Legislative Requirements, Items 1.1.1, 1.1.2, 1.1.3, 1.1.4 and 1.1.5 (the cited Codes and Standards). Public Works and Government Services Canada does not warrant the adequacy of these Procedures and advise that the Procedures do not replace the cited Codes and Standards.

The Contractor is responsible to be familiar with the cited Codes and Standards and to ensure that all work undertaken on behalf of Public Works and Government Services Canada is completed in a safe manner and, at a minimum, in compliance with the cited Codes and Standards. In the event there is a conflict between these Procedures and the cited Codes and Standards, the cited Codes and Standards are to prevail.

.11 Part 7 of the National Building Code, Canadian Plumbing Code 1995.

.12 Materials and workmanship must conform to or exceed applicable standards of Canadian Government Specifications Board (CGSB), Canadian Standards Association (CSA), American Society for Testing Materials (ASTM) and referenced organizations.

.13 The Contractor can obtain addresses for codes and standards from Departmental Representative upon request.

.14 In the event of a conflict between any of the above codes or standards the most stringent shall apply.

.15 All of the above codes and standards in effect at the time of award are subject to change/revision. The latest editions of each shall be enforced during the term of the contract.

.16 These standards shall be considered an integral part of the specifications and shall be read in conjunction with the drawings and specifications. The Contractor shall be fully familiar with their contents and requirements as related to the work and materials specified.

.17 All work is to be performed in accordance with the Federal Halocarbon Regulations.

2. Taxes

.1 Pay applicable Federal, Provincial and Municipal taxes.

3. Licences, Permits and Fees

.1 Provide the authorities having jurisdiction with all information requested.

.2 Pay all fees and obtain certificates and permits required.

.3 Furnish these certificates and permits when requested.

4. Environmental

.1 All work is to be performed in accordance with the Federal Environment Protection Act and the Provincial Environment Acts and Regulations.

5. Cleaning

.1 Maintain work area free of accumulated waste and rubbish.

.2 Remove and dispose of debris, used and obsolete material on a daily basis.

6. Product Approvals

.1 The Contractor shall ensure that all controlled products used in the performance of the work are classified and labelled

according to the Workplace Hazardous Materials Information System (WHMIS).

.2 The Contractor shall submit for approval the Material Safety Data Sheets (MSDS) for all controlled products that will be used in the performance of this work.

.3 No controlled products are to be brought on-site without prior approved Material Safety Data Sheets (MSDS).

.4 Material Safety Data Sheets (MSDS) to remain on-site at all times.

7. Personnel

.1 The Contractor will provide the Departmental Representative with a list of all people working on PWGSC premises, complete with a copy of their licences, where applicable, and will update the list immediately when personnel changes.

.2 The Contractor and his/her personnel must adhere to the Federal Government "NO SMOKING" policy while in Federal facilities.

8. Security Clearance

.1 The Contractor shall submit his/her name and the names of all employees, including new employees engaged during the Contract who will be working under this Contract to the Departmental Representative immediately following notification of Contract award.

.2 The Contractor and his/her employees will be required to provide personal information, such as address and date of birth; and complete Government forms in order to receive the required clearance level.

.3 Only those employees who receive the required clearance level will be allowed on-site.

.4 Clearance level required is reliable.

9. Co-ordination and Protection

.1 Perform work with minimum disturbance to occupants, public, and normal use of premises.

.2 Protect existing work from damage.

.3 Move furniture and fittings required for access to work and replace following completion of work.

.4 Where necessary, cover all furniture and fittings in work areas prior to commencing work; remove covers on completion of work.

.5 Any work that may disrupt the operations of the occupying clients shall be carried out after normal working hours (0800 - 1700 Monday to Friday).

10. Work Report

.1 Following completion of work at each visit to the site, make a written report of the work performed and readings taken, in accordance with Appendix "B". Leave one copy on site and submit one (1) copy to PWGSC's Representative.

.2 Record work performed for each service and emergency call in the Maintenance Log Book. The log must be kept in the building, available for review by PWGSC'S Representative at anytime.

11. Meetings

.1 Attend meetings at site when notified by Public Works and Government Services Canada.

12. Contractor's Tools and Equipment

.1 Safe, suitable for purpose intended and in good condition.

.2 Unless authorized o not store equipment on-site.

13. Property Management

.1 The Public Works and Government Services Canada Representative shall:

.1 Request Technician for service and emergency calls when needed.

.2 Verify Technician's reports and log sheets.

14. Technician

.1 The Technician shall:

.1 Be licensed in the Province of **Prince Edward Island** and qualified in the work demanded in the Contract.

.2 Notify the PWGSC's Representative on-site ten (10) working days in advance of scheduled maintenance date.

.3 Register with the PWGSC's Representative on-site and the Security Officer on entering and leaving the premises.

15.	**Charge Adjustment (See Appendix "D")**	.1	Where a charge advisory tag is provided, it shall be completed and mailed when any refrigerant or oil is removed or added to an appliance.
		.2	No refrigerant is to be discharged to atmosphere, used to flush or purge systems, used as a cleanser or used for leak detection.
		.3	The Contractor must have or have access to refrigerant reclamation unit and be trained in its use and operation.
		.4	No appliance is to be discarded while containing refrigerant or oil. The disposal application form must be received and a disposal permit attached to the appliance before being disposed of.
		.5	When the charge is removed for repair purposes the designate is to be advised of the cost of installing isolation valves to prevent the necessity of further removals.
		.6	All accidental discharges are to be reported to the designate.
		.7	All work is to be performed in accordance with the Federal Environment Protection Act, Provincial Environment Acts and Regulations and the Refrigeration Service Engineers Society Code of Practice.
16.	**Maintenance Manuals**	.1	Obtain maintenance manuals from manufacturers of systems and equipment to receive maintenance service.
		.2	Have maintenance manuals on-site and available for viewing.
17.	**Final Inspection**	.1	Sixty (60) days prior to Contract expiry date, arrange site inspection.
		.2	Correct deficiencies discovered during inspection.
		.3	Final payment will be issued following deficiency correction.
I8.	**Energy Conservation**	.1	Conserve energy and non-renewable natural resources with due regard for property protection, safety of workers and employees, and overriding by-laws and regulations.
19.	**Confined Spaces**	.1	All work in confined spaces will be carried out in compliance with the Canada Labour Code, Part II, Section 11.

.2 The Contractor to provide and maintain all equipment as required by any person to enter and/or perform work in a safe manner, in compliance with the Canada Occupational, Safety and Health Regulations, Part XI.

.1 At the Departmental Representative's request, the Contractor agrees to provide to PWGSC employees or its consultants, all necessary equipment as defined under Item 19.2 to enter the confined space, and the Contractor acknowledges that he/she is responsible for the safety and efficacy of this equipment.

.3 The Contractor to provide and maintain training, as required by the Canada Labour Code, Part II, Section 11.

.1 The Contractor and/or his employees shall provide proof of training and qualifications when requested by the Departmental Representative.

.4 The Contractor to provide the Departmental Representative with a copy of an "Entry Permit" for each and every entry into the confined space to ensure compliance with the Canada Labour Code, Part II, Section 11.

.5 The Contractor to have a hazard assessment of the confined space performed.

.1 The Contractor to provide the Departmental Representative with a copy of the hazard assessment.

20. Disciplinary Procedures for Safety Violations

.1 Contractors shall have their own written disciplinary procedures for violation or non-compliance of work site safety rules and regulations.

.2 **First Violation**: Verbal warning issued to the Contractor for the first violation of a safety regulation, rules, policy and procedures. (Violation will be documented on contract file, copy to Contractor and PWGSC).

.3 **Second Violation**: Written warning to Contractor for second violation of a safety regulation, rules, policy and procedures. (Violation will be documented on contract file, copy to Contractor and PWGSC).

.4 **Third Violation**: A third violation of a safety regulation, rules, policy and procedures may result in the termination of the contract with a recommendation to the Contracting Authority that the

Contractor be denied access to future SOA/SC(s). (Documented to contract file, copies to Contractor and PWGSC).

.5 **Serious Violation**: For a serious violation of a safety regulation, rules, policy and procedures as deemed by a Regulator, Project Manager or Safety Officer a recommendation will be made to the Contracting Authority to immediately terminate the SOA/SC(s). (Violation documented on contract file, copies to Contractor and PWGSC).

.6 **Charges Laid or Guilty Determination by Courts**: Infractions of safety regulations, rules, policy and procedures that result in charges being laid by a Regulator against the Contractor or the Contractor being found guilty by the courts may result in that Contractor being denied access to future contracts.

21. Asbestos

.1 Within the confines of the site, the provision of products containing fibrous asbestos materials is prohibited.

.2 Demolition or disturbance of spray or trowel-applied asbestos can be hazardous to health. Should material resembling spray or trowel-applied asbestos be encountered in course of work, stop work and notify Departmental Representative immediately. Do not proceed until written instructions have been received from Departmental Representative.

22. Fastening Devices Explosive Actuated

. 1 Explosive actuated devices shall not be used, until approved by Departmental Representative.

23. Hot Work

.1 All hot work activity, as defined in "Service Definitions" of this specification, is to take place with written permission from the Departmental Representative (Hot Work Permit).

.2 The ventilation system in the area of any Hot Work activity is to be isolated to prevent migration of fumes/smoke and to reduce any possible spread of fire to other areas of the facility.

.3 Contractor is to employ an employee trained in the use of fire extinguishers as fire watch during any Hot Work for a minimum of 60 minutes after activity has ceased.

24. Contractor's Responsibility

.1 The Contractor shall maintain and provide PWGSC with Current phone, fax and pager numbers to be able to provide response to requests for service from the local Departmental Representative and/or the National Service Call Centre (NSCC) 1-800-463-1850 on a twenty-four (24) hour, seven (7) day per week basis. This involves ensuring that cellular phones and pagers are of a type that can be contacted from the National Service Call Centre in Toronto. If the request for service is from the NSCC, the Contractor shall, immediately upon completion of the service, report back to the NSCC describing the action taken to correct the problem.

.2 The Contractor shall provide service during regular working hours, silent hours, weekends and holidays.

.3 The Contractor will advise the Departmental Representative of the telephone number at which he/she or his/her representative may be contacted at any time.

.4 The Contractor shall not refuse any call for service requested by a Departmental Representative.

.5 Contractor, prior to commencement of work, shall report to the Commissionaire's desk to log in.

.6 On award of contract, the Contractor must provide names of personnel performing work on this contract complete with proof of their qualifications which must include training on centrifugal and turbo-core chillers.

.7 The Contractor must report to the site with a service vehicle which is reasonably well stocked with replacement parts to carry out repairs on the systems in use in these facilities.

25. Submittals

.1 Certification letter of good standing from Worker's Compensation Board.

.2 Signed statement by Owner of company that the company will maintain Worker's Compensation Board coverage for the life of the Standing Offer Agreement (SOA) / Service Contract (SC), including sub-contractor.

.3 Before Work Begins Contractors are to provide documentation:
- .1 A copy of the company's site-safety plan.
- .2 A copy of the company's safety manual.
- .3 The Contractor and his/her personnel must adhere to the Federal Government 'NO SMOKING' Policy while in Federal facilities and/or Scent Free Policy if applicable.
- .4 All sub-contractors shall adhere to the above qualifications.

26. Training

.1 Before Work Begins Contractors are to provide documentation:
- .1 Certification of training for safety for all personnel that will be involved with the Standing Offer Agreement/Service Contract. Updated list complete with licenses shall be kept on site including personnel changes.
- .2 Training for workers shall include (but not limited to)
  - .1 Safe operation of tools and equipment.
  - .2 Proper wearing and use of personal protective equipment (PPE).
  - .3 Safe work practices and procedures of their given work tasks or function.
  - .4 Site conditions and minimum site safety rules.

27. Departmental Rep

.1 The Contractor will be notified of, on award of the contract, the name and phone number of the Departmental Representative.

1. Application for Payment

.1 Upon expiration of a payment period, submit to the Property Manager three (3) copies of the invoice for the portion of services completed in respect of which the application for payment is made, countersigned by the Departmental Representative, accompanied by a Work Certificate (Appendix "C"), completed and signed by the Contractor and the Departmental Representative; and completed Log Sheets.

2. Payment Conditions

.1 Payments will be made on satisfactory completion of the work covered by the payment period and subject to the other conditions of payments stated in the Contract.

.2 The Contractor must submit a completed "Request For Isolation" form, when applicable, before any invoice can be processed. See Index.

.3 All invoices for the fiscal year must be submitted for payment before 31 March of each year.

Work Schedule
Legend : X = Maintenence Service Required

Service Item or Component	Frequency												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	COMPLETED
Inspect													
" O " Ring Leakage			X				X			X			
Purge Solenoid Leakage			X				X			X			
Oil Level			X				X			X			
Refrigerant Level			X				X			X			
Oil Level in Vane Shaft			X				X			X			
Seal Cup			X				X			X			
Unusual Noise			X				X			X			
Unusual Vibration			X				X			X			
Add-As Required													
Oil Charge			X				X			X			
Refrigerant			X				X			X			
Oil to Vane Shaft Seal			X				X			X			
Oil Cup			X				X			X			
Prove													
Purge Unit			X				X			X			
Starter			X				X			X			
Indicating Lamps			X				X			X			
Load Limit Relay			X				X			X			
Low Chilled Water Cut Out			X				X			X			
Low Refrigerant Control			X				X			X			
High Condensor Control			X				X			X			
Low Oil Failure Control			X				X			X			
Motor Overload Signal			X				X			X			
Motor Amperage Settings			X				X			X			
Chiller Water Module Setting			X				X			X			
Chiller Water Flow Switch			X				X			X			
Chiller Water Pump Assembly			X				X			X			
Oil Pump			X				X			X			
Purge Safety & Operations Switch			X				X			X			

Legend : X = Maintenence Service Required

Service Item or Component	Frequency												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	COMPLETED
Prove (con't)													
Anti-recycle Timer			X			X				X			
Oil Pump Auxiliary Contacts			X			X				X			
Oil Prelibe Timer , Before Starting Compressor			X			X				X			
Condersor Flow Switch			X			X				X			
Adjust As Required													
Low Chilled Water Cutout			X			X				X			
Low Refrigerant Control			X			X				X			
High Condenser Control			X			X				X			
Low Oil Failure Control			X			X				X			
Motor Overload Signal			X			X				X			
Motor Amperage Setting			X			X				X			
Chilled Water Module Setting			X			X				X			
Chilled Water Flow Switch			X			X				X			
Chilled Water Pump Auxiliary Contacts			X			X				X			
Condenser Water Pump Auxiliary Contacts			X			X				X			
Oil Pump Time Delay Relay			X			X				X			
Purge Safety andOperationalSwitch			X			X				X			
Load Limit Relay			X			X				X			
Starter Anti-Recycle Timer			X			X				X			
Oil Pump Auxiliary Contacts			X			X				X			
Oil Prelube Timer, before starting Compressor			X			X				X			

Legend : X = Maintenence Service Required

Service Item or Component	Frequency												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	COMPLETED
REPAIR OR REPLACE													
All Defective Components			X				X			X			
Repair All Leaks			X				X			X			
MEASURE													
Oil System Pressure			X				X			X			
Oil System Temperature			X				X			X			
Cooling System Pressure			X				X			X			
Cooling System Temperature			X				X			X			
Condenser System Pressure			X				X			X			
Condenser System Temperature			X				X			X			
INSTRUCT													
Operational Changes (if any)			X				X			X			
REPORT													
Oil Level			X				X			X			
Refrigerant Level/Adjustments			X				X			X			
Oil System Pressure			X				X			X			
Oil System Temperature			X				X			X			
Leakage			X				X			X			
INSPECT													
Oil Heater for Continuity			X				X			X			
Controls			X				X			X			
Oil Demister			X				X			X			
Dash Pot Oil			X				X			X			
Contacts			X				X			X			
Motor Ground			X				X			X			
Overload Heater			X				X			X			
Running Road Amps			X				X			X			

Legend : X = Maintenence Service Required

Service Item or Component	Frequency												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	COMPLETED
CLEAN													
Contacts			X				X			X			
Refrigerant Filter			X				X			X			
Purge Sight Glass			X				X			X			
Purge Float Chamber			X				X			X			
Magnetic Plug			X				X			X			
Controls			X				X			X			
Oil Demister			X				X			X			
REPLACE													
Oil Pump Reservoir Oil			X				X			X			
Filter Cooling Section Oil			X				X			X			
Oil Filters			X				X			X			
Volute Filter			X				X			X			
MEASURE													
Motor Continuity			X				X			X			
Motor Ground			X				X			X			
Megger each Phase of Chiller			X				X			X			
Megger each Phase of Oil Pump Motor			X				X			X			
REPORT													
Continuity of Motor			X				X			X			
Grounding of Motor			X				X			X			
Megger at Oil Pump Motor Phases			X				X			X			
Oil System Pressure			X				X			X			
Oil System Temperature			X				X			X			
Oil Heater Continuity			X				X			X			
STARTUP													
Chiller & Auxiliaries			X				X			X			
TIGHTEN													
Gaskets on Purge Solenoid			X				X			X			

Service Item or Component	Frequency												
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	COMPLETED
ANNUAL - Water Side													
Open up Condenser and Evaporators, Clean and Examine Tubes, Check for Corrosion, Pitting, Erosion and other Defects Considered Unreliable.			X										
ANNUAL													
Perform Oil Analysis			X										
Refrigerant Leak Test				X						X			
EVERY FIVE YEARS													
Perform Eddy Current Test			X										

MAINTENANCE SERVICE REPORT CHILLERS

Project Title: Maintenance and Servicing of Chillers

Project No: _____ **Project Date**: _____

Chiller Model: _____ **Serial No.**: _____

Condenser Design Capacity: _____ (g/m (L/s) _____ ° (F) (C) to _____ ° (F) (C) at _____ (Pw) (kPa)

Evaporator Design Capacity: _____ (g/m) (L/s) _____ ° (F) (C) to _____ ° (F) (C) at _____ (Pw) (kPa)

OBTAIN	SOURCE	READING
.1 Oil Pressure	Gauge	_____ (psig) (kPa)
.2 Purge Pressure	Gauge	_____ (psig) (kPa)
.3 Oil sump temperature	Thermometer	_____ ° (F) (C)
.4 Bearing oil	Thermometer	_____ ° (F) (C)
.5 Sump oil level	Sight Glass	_____
.6 Condenser pressure	Gauge	_____ (psig) (kPa)
.7 Equivalent condenser temp.	Chart	_____ ° (F) (C)
.8 Condenser drop leg temp.	Thermometer	_____ ° (F) (C)
.9 Equivalent non-condensable temp.	Thermometer	_____ ° (F) (C)
.10 Condenser water temp. leaving	Thermometer	_____ ° (F) (C)
.11 Condenser water temp. entering	Thermometer	_____ ° (F) (C)
.12 Condenser water pressure drop	Meter	_____ ° (F) (C)
.13 Condenser water equivalent flow	Chart	_____ (g/m) (L/s)
.14 Evaporator water temp. leaving	Thermometer	_____ ° (F) (C)
.15 Evaporator water temp. entering	Thermometer	_____ ° (F) (C)
.16 Refrigerant temp.	Thermometer	_____ ° (F) (C)
.17 Evaporator water pressure drop	Meter	_____ (psig) (kPa)
.18 Evaporator water equivalent flow	Chart	_____ (g/m) (L/s)

.19 Starter amperage	Phase 1	Ammeter	_____A
	Phase 3	Ammeter	_____A
.20 Starter voltage	Phase 1	Voltmeter	_____V
	Phase 2	Voltmeter	_____V
	Phase 3	Voltmeter	_____V
.21 Purge operation frequency	Operator		_____times/d

REPORT

WORK CERTIFICATE
CHILLERS

BUILDING NAME: _____

ADDRESS: _____

_____

_____

_____

PROJECT NUMBER: _____

CONTRACT DATE: _____

I/We hereby certify that all of the work for the month of ( ) has been completed in accordance with the Contract.

Mechanic: _____

Provincial License #: _____

Contractor's Supervisor: _____

Date: _____

This certificate has been signed by the Service Mechanic in my presence. The signature of the Departmental Representative does not constitute acceptance of the work.

_____ _____

Departmental Representative **Date**

Specimen of Ozone Depleting Substance Control Card
See General Requirements Page 5, Items 15.1 to 15.7

ACC/CC # ***520120-001***
I certify that the charge of ***6*** lbs., ***3*** oz of R ***22*** has been
(✓) Remove for:
( ) Reuse
( ) Recycling
(✓) Reclaimation
( ) Lost due to equipment failure and apply for permission to dispose of this equipment in permission accordance with applicable Federal/Provincial statues.

Keep Cool	***John Smith***	***426-3381***	***NS-18***	***99/01/20***
Company	Signature	Phone/Fax	Lic. No.	Date

CHARGE ADVISAL

ACC/CC # ***520021-002***
The Manufacturers recommended Charge of ***8*** lbs, ***2*** oz of R Charge of ***8*** lbs, ***2*** oz of R 22 has been supplemented with addition of ***2*** lbs, ***3*** oz of to meet required pressures

Loss of Charge was due to:
Leak at flare nut of TX valve tightened and leak tested.

Four Season	***Bob White***	***496-5387***	***NS-21***	***99/01/20***
Company	Signature	Phone/Fax	Lic. No.	Date

Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

REQUEST FOR ELECTRICAL ISOLATION AND RE-ENERGIZATION
DEMANDE DE COUPURE À LA SOURCE ET RÉ-ALIMENTATION

A. Building Name and Address - Nom et adresse de l'immeuble

Specific Location of Installation or Equipment to be Isolated/Re-Energization (indicate floor, wing, room no., cabinet no., etc.)
Endroit précis de l'installation ou de l'appareillage devant être coupé à la source et ré-alimenté. (indiquer l'étage, l'aile, le n° de la pièce, le n° du panneau, etc.)

Description of Installation or Equipment to be Isolated/Re-Energization
Description de l'installation ou de l'appareillage devant être coupé à la source et ré-alimenté.

Isolation/Re-Energization Request No.
N° de la demande de coupure à la source et ré-alimentation

Date and Time of Request - Date et heure de la demande
Date (Y-A M D-J) | Hour / Heure (HH:MM)

Isolation to Start On
Coupure à la source devant débuter le
Date (Y-A M D-J) | Hour / Heure (HH:MM)

Isolation to End On
Coupure à la source se termine le
Date (Y-A M D-J) | Hour / Heure (HH:MM)

Procedures for Isolation/Re-Energization - Procédures de coupure à la source et de ré-alimentation
(NOTE: When procedures involve more than one operation a Procedures for Isolation and Re-Energizing form must be completed and attached.)
(NOTA : Lorsqu'un procédé comporte plus d'une opération, vous devez remplir les formulaires « Procédures de coupure à la source » (PWGSC-TPGSC 12) et « Procédures de ré-alimentation » (PWGSC-TPSGC 12-1) et les 'annexer au présent formulaire.)

Voltage / Tension ▶ ☐ When high voltage equipment is to be Isolated a Procedures for Isolation/Re-Energizing form must be completed and attached.
Pour la coupure à la source d'appareillages haute tension, les formulaires « Procédures de coupure à la source » (PWGSC-TPSGC 12) « et Procédures de ré-alimentation » (PWGSC-TPSGC 12-1) doivent être rempli et joint.

Update of Line Drawings Required Upon Completion
Nécessité de mettre à jour les schémas électriques une fois les travaux terminés ▶ ☐ Yes / Oui ☐ No / Non

Requested by - Demandé par Name of Person in Charge - Nom de la personne responsable	Signature	Date (Y-A M D-J)	Hour - Heure (HH:MM)
			:

B. Request Approved - Demande autorisée

Name of Guarantor - Nom du garant	Signature	Date (Y-A M D-J)	Hour - Heure (HH:MM)
			:

C. Isolation Confirmed - TO BE COMPLETED PRIOR TO COMMENCEMENT OF WORK
Coupure à la source confirmée - À REMPLIR AVANT DE COMMENCER LES TRAVAUX

Isolation has been tested for potential and its determined safe for workers to perform the work.
Le procédé de coupure à la source a été vérifié pour potentiel et les travaux peuvent être exécutés en sécurité.

Name of Person in Charge - Nom de la personne responsable	Signature	Date (Y-A M D-J)	Hour - Heure (HH:MM)
			:

D. Completion of Requested Isolation Time and Completion of Work Confirmed
Achèvement de la période demandée pour la coupure à la source et confirmation de l'exécution des travaux

Line Drawings Updated as Required
Les schémas électriques ont été mis à jour tel que demandé ▶ ☐ Yes / Oui ☐ No / Non

Name of Person in Charge - Nom de la personne responsable	Signature	Date (Y-A M D-J)	Hour - Heure (HH:MM)
			:

E. Approval of Completion of Work and Confirmation that Equipment or Installation has been Re-energized
Approbation d'achèvement des travaux et confirmation de la remise sous tension de l'appareil ou de l'installation

Name of Manager in Charge of Worksite or Supervisor Nom du gestionnaire responsable du lieu de travail ou du superviseur	Signature	Date (Y-A M D-J)	Hour - Heure (HH:MM)
			:

PWGSC-TPSGC 13 (03/2011)

THIS RECORD MUST BE KEPT FOR ONE YEAR FOLLOWING COMPLETION OF WORK
À CONSERVER PENDANT UN AN APRÈS LA FIN DES TRAVAUX

Copy 1 / Copie 1 ▶ **Manager in Charge of Worksite or Supervisor / Gestionnaire responsable du lieu de travail ou superviseur**

Copy 2 / Copie 2 ▶ **To be submitted to, and retained by the Guarantor (upon completion of the work) / À remettre au garant à la fin des travaux. Le garant doit garder cette copie.**