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PART 1 GENERAL

1.1 Definitions

1.1.1 Actions

- 1.1.1.1 Checking/check: visual observation to ensure the device or system is in place and is not obviously damaged or obstructed.
- 1.1.1.2 Inspect/inspection: physical examination to determine that the device or system will perform in accordance with its intended function.
- 1.1.1.3 Testing/test: full operation of a device or system to ensure that it will perform in accordance with its intended operation or function.
- 1.1.1.4 Maintenance/Maintaining: routine recurring work; checking, inspecting, testing & service required to keep the components, sub-systems, system and integrated systems as identified in Part 3 – Equipment Inventory, in such condition that they may be continuously utilized, at their original or designed capacity and efficiency for their intended purpose.
- 1.1.1.5 Service: to make fit for use, adjust, repair, or maintain in order to keep the equipment identified in Part 3 – Equipment Inventory, in an operational condition as per their original design intent.
- 1.1.1.6 Emergency call: onsite diagnosis and correction made by a qualified person(s) as outlined in 1.4.3 – Emergency Call.

1.1.2 Individuals

1.1.2.1 Qualified Person

- 1) Someone who is in possession of a valid and recognized Canadian university or college degree, certificate, license, manufacturer-specific training/certification or professional standing. The university or college must have a provincial or territorial degree-granting status.
- 2) Someone having the appropriate minimum of five years of experience in the related field.

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- 1.1.2.2 Qualified Electrician: someone who is in possession of a valid Certificate of Qualification for a Qualified Electrical Worker in accordance with the Government of Nunavut - Safety Services. Qualified Electrical Workers shall be registered with the Government of Nunavut - Safety Services before doing any work under this contract.
- 1.1.2.3 Sprinkler and fire protection installer: someone who is certified in the trade regulated by the Trades Qualification and Apprenticeship Act. Persons undertaking the work of the sprinkler and fire protection installer have successfully completed the apprenticeship program and are in possession of a valid Certificate of Qualification in accordance with the provincial or territorial law in which the work is to be performed.
- 1.1.2.4 Fire Alarm Technician: someone who is in possession of a valid Canadian Fire Alarm Association (CFAA) certificate.
- 1.1.2.5 Extinguisher Technician: someone who is in possession of a valid training certificate in portable extinguishers that meets NFPA 10.

1.2 Codes, Standards, Regulations and Requirements

1.2.1 General

- 1.2.1.1 The Contractor must comply with all Codes, Standards, Regulations and Requirements listed in this section.
- 1.2.1.2 The Contractor must keep within his possession a copy of the most current edition of the applicable Codes, Standards, Regulations and Requirements in force at the time of entering into the Statement of Work for the duration of the Contract.
- 1.2.1.3 In the event that concurrent documents exist, the most stringent set of Codes, Standards, Regulations and Requirements must apply.

1.2.2 National and/or Territorial Codes

- 1.2.2.1 National and Territorial Building Codes - As they pertain to the installation, verification and maintenance of Fire Alarm and Fire Protection Systems.
- 1.2.2.2 National and Territorial Fire Codes - As they pertain to the installation, verification and maintenance of Fire Alarm and Fire Protection Systems.

1.2.2.3 National and Territorial Electrical Safety Codes - As they pertain to the installation, verification and maintenance of Fire Alarm and Fire Protection Systems.

1.2.2.4 National and Territorial Health & Safety Codes - As they pertain to the works undertaken on site.

1.2.3 Standards

1.2.3.1 Canadian Underwriters Laboratories of Canada (CAN/ULC) Standards

- 1) CAN/ULC - S508 - Standard for the Rating and Fire Testing of Fire Extinguishers
- 2) CAN/ULC - S524 - Standard for the Installation of Fire Alarm Systems
- 3) CAN/ULC - S536 - Inspection and Testing of Fire Alarm Systems
- 4) CAN/ULC - S537 - Verification of Fire Alarm Systems

1.2.3.2 Canadian Standards Association (CSA) Standards

- 1) CSA Z460 - Control of hazardous energy - Lockout and other methods
- 2) CSA Z462 - Workplace Electrical Safety (Arch Flash Protection)

1.2.3.3 National Fire Protection Association (NFPA) Standard

- 1) NFPA 10 – Standard for Portable Fire Extinguishers
- 2) NFPA 13 – Standard for the Installation of Sprinkler Systems
- 3) NFPA 14 – Standard for the Installation of Standpipes and Hose Systems
- 4) NFPA 20 – Standard for the Installation of Stationary Pumps for Fire Protection
- 5) NFPA 25 – Standard for the Inspection, Testing, and Maintenance of Water -Based Fire Protection Systems

- 6) NFPA 1962 – Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose

1.2.4 Health and Safety

- 1.2.4.1 *Canada Labour Code Part II*, Canada Occupational Safety and Health Regulations
- 1.2.4.2 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
- 1.2.4.3 Material Safety Data Sheets (MSDS)
- 1.2.4.4 Safety Act, Revised Statutes of the Northwest Territories (RSNWT) 1988, c S-1.

1.2.5 Environmental Codes, Standards, Regulations and Requirements

- 1.2.5.1 Canadian Environmental Protection Act (CEPA) 1999 – Hazardous Waste Regulation
- 1.2.5.2 Fisheries Act (R.S.C., 1985, c. F-14)
- 1.2.5.3 Transportation of Dangerous Goods Regulations (TDGR)
- 1.2.5.4 Waste Management
 - 1) Territorial requirements on Waste Management
 - 2) Municipal By-Law on the Disposal of Fire Protection Water, as per Subsection 1.6.4 - Disposal of Waste
 - 3) City of Iqaluit requirements on Waste Management
- 1.2.5.5 Guidelines related to the Discharge of Fire Protection Water
 - 1) Canadian Council of Ministers of the Environment. (1999) Canadian Water Quality Guidelines for the Protection of Aquatic Life, Reactive Chlorine Species.

1.2.6 Authority Having Jurisdiction (AHJ)

- 1.2.6.1 The Labour Program, Human Resources and Skills Development Canada (HRSDC), is responsible for the provision of fire-protection services. HRSDC is

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also responsible for the administration and enforcement of Treasury Board policy, standards, codes and regulations that cover fire protection under the Canada Labour Code.

1.2.6.2 The Departmental Fire Protection Coordinator, which is a senior official designated by the Deputy Head for the purpose of overseeing the implementation of the Fire Protection Standard.

1.2.6.3 At the invitation of the Crown, recommendations may be accepted by the Government of Nunavut (GN) Office of the Fire Marshall. The GN Office of the Fire Marshall is a Division of the GN Department of Community and Government Services and is located in Iqaluit, Nunavut.

1.2.6.4 Nunavut Good Building Practices

- 1) Refer to these documents for best practices:
<http://cgs.gov.nu.ca/en/capital-planning>
<http://cgs.gov.nu.ca/en/files/Good%20Building%20Practices%20Guide%20line.pdf>

1.2.6.5 Territorial and Consolidations Acts

- 1) Environmental Rights Act
- 2) Environmental Protection Act
- 3) Workers' Compensation Act
- 4) Fire Prevention Act
- 5) Labour Standards Act
- 6) Technical Standards and Safety Act
- 7) Safety Act

1.3 Submittals

1.3.1 Required Permits

1.3.1.1 Electrical Inspection Permits

- 1) The Contractor is responsible to provide electrical inspection permits for all electrical work prior to electrical work taking place. Refer to the National, Provincial or Territorial electrical codes as mentioned in Section 1.2 – Codes, Standards, Regulations and Requirements.

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- 2) If an electrical inspection permit is not required, it is the Contractor's responsibility to provide a letter from the Electrical Safety Authority (ESA) confirming that the contractor is not required to provide electrical inspection permits for that specific work.

1.3.1.2 Fire Protection Water Discharge Permit

- 1) The Contractor must provide a Municipal Permit, approval letter, or acknowledgement to proceed prior to discharging Fire Protection Water to a municipal non-sanitary sewer as per Article 1.6.4. – Disposal of Waste.

1.3.2 Site/Work Specific Implementation Plan

1.3.2.1 The Contractor must submit a detailed, site/work specific, implementation plan to the Technical Authority twenty working days prior to the commencement of work as identified in the Contract.

- 1) The site/work specific, implementation plan must include:
 - a) A detailed site specific, inspection schedule.
 - b) A detailed work plan and sequence of operation for the annual inspection.
 - c) The site-Specific Health and Safety Plan.
 - d) Hazardous Waste Management Plan
 - e) Samples of relevant inspection checklists.
- 2) As part of the site/work specific, implementation plan the Contractor must perform:
 - a) A site-specific safety hazard assessment;
 - b) A health and safety risk/hazard analysis for site tasks and operations found within the implementation plan.
 - c) A Hazardous Waste Audit

1.3.2.2 The Technical Authority will review the Contractor's site/work specific implementation plan and provide comments to the Contractor within ten working days after the receipt of plan.

- 1.3.2.3 The Contractor must revise the site/work specific implementation plan as appropriate and resubmit the plan to the Technical Authority within ten working days after receipt of comments.
- 1.3.2.4 The Technical Authority's review of the Contractor's detailed site/work specific implementation plan should not be construed as final and does not reduce the Contractor' overall responsibility for providing the personnel required in the implementation plan.
- 1.3.2.5 The Technical Authority reserves the right to amend the site/work specific implementation plan at any time due to operational requirements and must sign off on all amendments to the plan, in consultation with the Contractor.

1.3.3 Site-Specific Inspection schedule

- 1.3.3.1 As part of the site/work specific, implementation plan, and every subsequent year after, the Contractor must submit to the Technical Authority a detailed site specific, inspection schedule.
- 1) The schedule must include the additional monthly, semi-annual and annual requirements as defined in Part 2 – Additional Requirements.
- 1.3.3.2 The Technical Authority's review of Contractor's annual detailed inspections schedule should not be construed as final and does not reduce the Contractors' overall responsibility for providing the required personnel on the scheduled inspection dates.
- 1.3.3.3 The Technical Authority reserves the right to amend the inspection schedule at any time due to operational requirements and must sign off on all amendments to the plan, in consultation with the Contractor.

1.3.4 Work Plan and Sequence of Operation for the Annual inspection

- 1.3.4.1 As part of the site/work specific, implementation plan the Contractor must submit to the Technical Authority, a detailed work plan including a sequence of operation for all of the events covered under the annual inspection. This work plan must include but is not limited to;
- a) Lockout-Tag out procedures
 - b) Site-Specific Electrical Inspection Procedures
 - c) Spill Containment Procedures

- d) Dechlorination of Fire Protection Water Procedures
- e) Quantities of Hazardous Waste Products to be produced during the annual inspection.

1.3.4.2 The Technical Authority reserves the right to amend the Work Plan at any time due to operational requirements and must sign off on all amendments to the plan, in consultation with the Contractor.

1.3.5 Health and Safety

1.3.5.1 Site-Specific Health and Safety Plan

- 1) As part of the site/work specific implementation plan, the Contractor must submit to the Technical Authority their site-specific Health and Safety Plan.
- 2) The Health and Safety Plan must include:
 - a) Results of site-specific safety hazard assessment;
 - b) Results of health and safety risk or hazard analysis for site tasks and operations found in work plan.
- 3) The Technical Authority's review of Contractor's final Health and Safety plan should not be construed as approved and does not reduce the Contractor's overall responsibility for Health and Safety.

1.3.5.2 Accident Report

- 1) The Contractor must submit to the Technical Authority within twenty-four hours of incident and/or accident reports of incidents and/or accidents that occur during the term of the Contract.

1.3.5.3 Correction – Health and Safety Issues

- 1) The Contractor must provide the Technical Authority within two working days with written report of action taken to correct non-compliance of Health and Safety issues.

1.3.5.4 Hazardous Material (WHMIS-MSDS)

- 1) The Contractor must submit any and all Workplace Hazardous Materials System (WHMIS) Material Safety Data Sheets (MSDS) for Hazardous Materials used on site to the Technical Authority five working days before such materials are brought to site.

1.3.6 Inspection Checklists

- 1.3.6.1 Sample inspection checklists are available from the Technical Authority upon request.
- 1.3.6.2 The Contractor is responsible for providing and completing the inspection checklists required by this Contract. These inspection checklists must be in conformance with the minimum requirements defined by the applicable Codes, Standards, Regulations and Requirements as per section 1.2.
- 1.3.6.3 Additional inspections, checks and tests, as identified in Part 2 – Execution, must also be recorded on the Contractor’s checklists.
- 1.3.6.4 The inspection checklists must be submitted to and approved by the Technical Authority as part of the site/work specific, implementation plan.
- 1.3.6.5 The inspection checklists must be used to record the work performed at each inspection and must identify the specific tasks undertaken.
- 1.3.6.6 The completed original inspection checklists must be submitted to the Technical Authority and become the property of Canada.

1.3.7 Building Life Safety Compliance Testing Manual

- 1.3.7.1 Signature of personnel performing any of the identified checks, inspections or tests as outlined in this Statement of Work must be entered into the Building Life Safety Compliance Testing Manual.

1.3.8 Material Removal Records

- 1.3.8.1 The Contractor must submit to the Technical Authority within five working days records for all removals from site, for both materials designated for alternative disposal and general waste as defined by the Canadian Environmental Protection Act (CEPA) 1999, Hazardous Waste Regulation and other applicable provincial, municipal or territorial legislation.

1.3.9 Reports for Tests, Checks, Maintenance and Service

1.3.9.1 Monthly and Semi-Annual Reports

- 1) A detailed and comprehensive signed inspection report must be submitted to the Technical Authority five working days following the completion of the monthly and semi-annual tests, checks, maintenance and service defined within this Statement of Work.
- 2) A detailed and comprehensive signed computerized or hard copy report of the monthly and semi-annual test procedures carried out must be submitted to the Technical Authority within ten working days following the completion of the inspections, tests, checks, maintenance and service defined within this Statement of Work.
- 3) The report must include the major and minor deficiencies noted during the inspections, tests, checks, maintenance and service defined within this Statement of Work.

1.3.9.2 Annual Report

- 1) A detailed and comprehensive signed computerized or hard copy of the annual inspection report must be submitted to the Technical Authority no later than fifteen working days following the completion of the annual inspection, tests, checks, maintenance and service.
- 2) The Annual Report must also include major and minor deficiencies noted during the inspections, tests, checks, maintenance and service.

1.4 General Requirements

1.4.1 Purpose

- 1.4.1.1 The maintenance and service of building components, sub-systems, systems and integrated systems is of utmost importance to ensure the successful operation of the installed services and utilities.
- 1.4.1.2 The maintenance shall not be considered completed until it can be demonstrated to the Technical Authority that the work defined within this Statement of Work has been satisfactorily performed by the Contractor.

1.4.2 Objective

1.4.2.1 The objective of this Statement of Work is to engage a Contractor to provide maintenance services on the Fire Alarm/Fire Protection/Life Safety Systems, to ensure the integrity and uninterrupted performance of the systems as indicated in Part 3 – Equipment Inventory.

1.4.3 Emergency Calls

1.4.3.1 Request for service shall only be accepted from the National Service Call Centre, local PWGSC representative in Iqaluit, Nunavut or Technical Authority in Iqaluit, Nunavut.

1.4.3.2 The Contractor must provide a qualified person(s) as defined by Section 1.1 - Definitions, to respond, on site, on a twenty-four hour, seven day a week basis at no extra cost to Canada for up to 20 incidents during the period of this contract including extensions if qualified person(s) are located or en route to Iqaluit, Nunavut. Once the qualified person(s) determine the problem, labour and material expenses to make the systems 100% operational will be paid for by Canada once approved by the Technical Authority. In the event that a qualified person(s) is not located or en route to Iqaluit, Nunavut the following will apply:

- 1) When at the time of an Emergency Call request and as a result a flight from outside Iqaluit, Nunavut is required, when approved by the Technical Authority, Canada will pay for a commercial airline return ticket in economy class, meals, labour during travel period, accommodations and cargo shipment (where applicable). Once contractor employee(s) arrives in Iqaluit, Nunavut, 1.4.3.2 will apply.
- 2) If contractor employee(s) is required to modify an existing flight, when approved by the Technical Authority, Canada will pay for the difference in transportation charges, accommodation charges and meals. Once contractor employee(s) arrives in Iqaluit, Nunavut, 1.4.3.2 will apply.

1.4.4 Problem escalation

1.4.4.1 If within the first four hours of working on the equipment, the Contractor's service technician has not been able to make significant progress of repairing the equipment, they shall then contact their technical support manager, service manager or engineering manager for advice on a further course of action.

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1.4.4.2 If the problem is not corrected within a total of eight hours, the service technician shall contact their technical support manager, service manager or engineering manager, who shall arrange to have the manufacturer engineer provide technical support onsite which at that point 1.4.3.2(1) will apply.

1.4.4.3 The Contractor shall provide clear and concise rationale of the events leading up to the failure of any component, sub-system, system or integrated system.

1.4.5 Notification

1.4.5.1 An annually approved schedule is required before the start of the first test and every subsequent year thereafter.

1.4.5.2 The Technical Authority must be notified a minimum of fifteen working days prior to tentative tests to allow time to make necessary arrangements.

1.4.5.3 The Contractor must ensure that proper notification procedures are in place to avoid false alarms during service, repairs and testing of the equipment identified in Part 3 – Equipment Inventory.

1.4.5.4 The Contractor must ensure that proper notification procedures are in place to avoid any miscommunication. The list of minimum contacts includes but is not limited to: the Technical Authority, the monitoring service, the fire department and the site security.

1.4.5.5 When service or repairs are required, the Technical Authority must be notified and the Fire Alarm/Fire Protection/Life Safety Systems must be temporarily bypassed to prevent possible false alarms.

1.4.5.6 The Technical Authority and the local Fire Department must be notified, in writing, of any actions taken to disable the Fire Alarm/Fire Protection/Life Safety Systems.

1.4.6 Operational Requirements

1.4.6.1 The Contractor must provide required maintenance as per Contractual requirements and at the indicated frequency, inclusive of the manufacturer's recommendations to maintain the equipment at its original performance level to provide trouble-free operations.

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1.4.7 Extra Work

- 1.4.7.1 The Equipment Inventory identified in Part 3 – Equipment Inventory must be inspected and maintained as described herein. All additional parts and labour required to effect repairs to this equipment will be at extra cost to Canada.
- 1.4.7.2 For any repairs associated with the Equipment Inventory, the Contractor must submit to the Technical Authority for review, within twenty-four hours, a comprehensive part & labour cost summary and the reason for repair(s). If the request is deemed fair and reasonable by the Technical Authority, compensation will be provided to the Contractor as per the As and When Requested Work Pricing Schedule 2 in the Contract. The proposed repairs must not proceed without prior consent in writing from the Technical Authority.
- 1.4.7.3 While the Contractor is on site, deficiencies discovered that can be repaired with available material from the Contractor's stock must be billed as per the As and When Requested Work Pricing Schedule 2 in the Contract. The approval to proceed with this corrective work can only be authorized by the Technical Authority.
- 1.4.7.4 Components used to repair or replace existing system components must be new, compatible with the existing inventory, Canadian Underwriters Laboratories of Canada (ULC) and/or Canadian Standards Association (CSA) listed and must comply with the applicable provisions of the codes, standards, regulations and requirements identified in Section 1.2 – Required Codes, Standards, Regulations and Requirements.
- 1.4.7.5 The Contractor is to identify modifications or improvements to the equipment or system(s) that will enhance equipment serviceability, life expectancy and/or efficiency. The Contractor must submit an estimated cost of the repairs based on the 'As and When Requested Work' Pricing Schedule 2 in the Contract.

1.4.8 Building Access Hours

1.4.8.1 Regular, Silent and Weekend Building Working Hours

- 1) Regular working building hours are from 06:00 AM until 06:00 PM, Monday to Friday.
- 2) Silent building hours are from 06:00 PM until 06:00 AM, Monday to Friday.
- 3) Weekend building working hours are from 06:00 PM, Friday to 06:00 AM, Monday.

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1.4.8.2 Inspections, Maintenance, Testing and Service

- 1) The maintenance as defined by this Statement of Work must be carried out at such a time as to not inadvertently interfere with the operation of any equipment within the building (e.g. cause the shut-down of the computers or any other integrated building systems).
- 2) The inspections, maintenance, testing and service to the Fire Alarm/Fire Protection/Life Safety Systems which may cause disruption to the building occupants and/or systems and may interfere with the operation of any equipment within the building cannot be carried out during regular working hours as defined in article 1.4.8.1- Regular, Silent and Weekend Working Hours.
- 3) Disruptive tasks include audible signals, testing of ancillary functions, or other tests and services identified by the Technical Authority.

1.4.8.3 Testing

- 1) Testing required by this Contract must only take place on silent or weekend working hours at an approved time by the Technical Authority.

1.4.8.4 Service

- 1) Service required by this contract must take place on silent or weekend working hours at an approved time by the Technical Authority.

1.5 Responsibilities

1.5.1 Completion of the Statement of Work

- 1.5.1.1 The Contractor must have the complete operational and adjustment procedures of the manufacturer for the equipment concerned, including direct access to the manufacturer's technical support services and service bulletins.

1.5.2 Negligence on the Part of Canada and Other Parties

- 1.5.2.1 The Contractor is not required, as part of his Statement of work, to make renewals or repairs necessitated by reason of the negligent operation or misuse of the

equipment by Canada or other parties or by reason of any other cause beyond the Contractor's control.

1.5.2.2 The Contractor must notify the Technical Authority by phone within an hour and subsequently to follow up with a written report by fax or e-mail within twenty-four hours of any negligent operation or misuse of the equipment by Canada and other parties. The Contractor may be required to make repair or replace components necessitated by such occurrence at extra cost.

1.5.3 Documentation

1.5.3.1 It is the responsibility of the Contractor to document the tasks and activities associated with maintenance, service and repairs as identified within this Statement of Work.

1.5.3.2 The documentation as a result of the above is to be provided to the Technical Authority in accordance to the procedures identified within Section 1.3 – Submittals.

1.5.3.3 Checks, tests, maintenance and service must be documented as identified within this Statement of Work and must be demonstrated as being correct and complete to the satisfaction of the Technical Authority.

1.5.4 Health and Safety

1.5.4.1 Site Specific Health and Safety Plan: See Section 1.3 – Submittals.

1.5.4.2 It is the responsibility of the Contractor to ensure the health and safety of persons on site, safety of property on site and protection of persons adjacent to site and environment to the extent that they may be affected by conduct of work.

1.5.4.3 It is the responsibility of the Contractor to comply with and enforce compliance by employees with safety requirements of the Statement of Work documents, applicable Federal, Provincial, Territorial and local statutes, regulations, ordinances, and with site-specific Health and Safety Plan.

1.5.4.4 It is the responsibility of the Contractor to comply with the *Canada Labour Code Part II*, and the associated Canada Occupational Health and Safety Regulations.

1.5.4.5 It is the responsibility of the Contractor to comply with the Nunavut Territorial and Consolidations Acts (Safety).

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1.5.4.6 It is the responsibility of the Contractor to remove from the site any person employed on the site by the Contractor that, in the opinion of the Technical Authority, is a security risk, has been conducting himself improperly or has violated the requirements of the site specific Health and Safety Plan. The Contractor must replace the removed individual with another individual with the same mandatory qualifications within twenty-four hours.

1.5.5 Work Alone Policy

1.5.5.1 It is the responsibility of the contractor to ensure that an escort is to be provided by Canada during any job function. The contractor must coordinate with the Technical Authority for arrangements of an escort for each visit. If no escort is available, work must not proceed.

1.6 Summary of Work

1.6.1 Inclusions of the Statement of Work

1.6.1.1 Labour

- 1) The labour for all inspections, testing, cleaning, maintenance, service, and contract administration expenses must be provided by the Contractor at no extra cost to Canada.
- 2) The labour for emergency calls must be provided by the Contractor as per Sub-Section 1.4.3 – Emergency Calls on a 7 days a week / 24 hours a day basis.

1.6.1.2 Tools, equipment and services

- 1) The Contractor must furnish all necessary Personal Protective Equipment (PPE), tools, equipment, and services necessary to execute the tasks and activities required for the maintenance, service and repair of the equipment identified in Part 3 – Equipment Inventory.

1.6.1.3 Consumable Materials

- 1) The Contractor must provide all necessary consumable materials required for the maintenance and service of the equipment as identified

in Part 2 - Execution. This includes but is not limited to: distilled water, pilot lights, fuses, cleaning materials and light bulbs.

1.6.2 Schedule

1.6.2.1 The first inspection and test must be carried out fifteen working days following the work start date as identified in this Statement of Work, with each successive test following at:

- a) Monthly;
- b) Quarterly;
- c) Semi-Annually; and
- d) Annually, as applicable, to be first quarterly.

1.6.3 Hazardous Waste Management Plan

1.6.3.1 General

- 1) The Contractor must comply with the Canadian Environmental Protection Act and applicable Provincial and Territorial Codes, Standards and Requirements as per Section 1.2 - Required Codes, Standards, Regulations and Requirements, including local hazardous waste management programs.
- 2) The Contractor must conduct a hazardous waste audit to determine the hazardous waste generated during maintenance, service or repair activities over the duration of the Contract, and prepare a written hazardous waste management plan as part of the Site/Work Specific Implementation Plan under Section 1.3 - Submittals. The hazardous waste audit must include steps regarding the discharge of dechlorinated fire protection water as included in sub-sections 1.2.5 – Environmental Codes, Standards, Regulations and Requirements and 1.3.4 – Work plan and Sequence of Operations.
- 3) All maintenance personnel must be fully briefed on the hazardous waste management work plan and must be required to conform to it for all aspects of the work. The Contractor shall be responsible for the enforcement of this requirement. The Technical Authority reserves the right to require the dismissal from the site of personnel who fail to comply with the requirements of the hazardous waste management plan.

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1.6.3.2 Scheduling

- 1) The Contractor must coordinate the work involving hazardous waste with other activities at site to ensure timely and orderly progress of the work.

1.6.3.3 Execution of Work

- 1) Hazardous waste includes but is not limited to;
 - a) Batteries
 - b) Smoke detectors
- 2) Hazardous waste materials must be handled in accordance with the appropriate Codes, Standards, Regulations and Requirements as identified within section 1.2 – Codes, Standards, Regulations and Requirements.
- 3) The Contractor must clean up work area as work progresses.
- 4) The Contractor must remove tools on completion of work, and leave work areas in clean and orderly condition.
- 5) Mechanical and electrical equipment, sub-systems and systems must be protected from damage and blockage.

1.6.3.4 Health and Safety

- 1) Unforeseen Hazard
 - a) When an unforeseen safety-related factor, hazard, or condition occurs during performance of the work, the Contractor has the right to follow procedures in place for Employee's Right to Refuse Work, in accordance with Acts and regulations of the province having jurisdiction. The Contractor must immediately advise the Technical Authority verbally and in writing within twenty-four hours.
- 2) Correction of Non-Compliance by the Contractor

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- a) Immediately address Health and Safety non-compliance issues identified by authority having jurisdiction or by the Technical Authority.
 - b) Provide the Technical Authority with written report of action taken to correct non-compliance of Health and Safety issues as identified in Section 1.3 – Submittals.
 - c) The Technical Authority may stop work if non-compliance of Health and Safety regulations is not corrected.
- 3) On-site Contingency and Emergency response plan
- a) The Contractor must comply with the standing emergency plan for the site where the work is being performed.

1.6.4 Disposal of Waste

- 1.6.4.1 Burying of rubbish and waste materials by the Contractor is prohibited.
- 1.6.4.2 Disposal of waste, volatile materials, mineral spirits, paint thinners or petroleum products into waterways, storm or sanitary sewers is prohibited as outlined in 1.2.5 – Environmental Codes, Standards, Regulations and Requirements.
- 1.6.4.3 Water generated from the back flush of the sprinkler system must be disposed of in accordance with municipal, provincial and federal requirements, as per Sub-Sections 1.2.5. – Environmental Codes, Standards, Regulations and Requirements.
- 1.6.4.4 Disposal of the water generated from the back flush of the sprinkler system into waterways, storm or sanitary sewers is prohibited, unless specific approval to discharge into the sanitary sewer is provided by the municipality. Transportation of this liquid waste by a licensed hauler and disposal to an approved wastewater treatment facility may be required.
- 1.6.4.5 Fire Protection Water Dechlorination
- 1) Discharge of fire protection water, including potable water being utilized for fire pump testing, must be in accordance with the Territorial and Consolidations Acts.
 - 2) Quality Requirements

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- a) Analytical test results of a sample of the raw fire protection water from the building will be provided to the Contractor by Canada. If the results exceed **0.005 milligrams per litre (mg/L)** Reactive Chlorine Species (or Total Residual Chlorine), the Contractor must dechlorinate the fire protection water prior to discharging.
 - b) Fire protection water, including potable water being utilized for fire pump testing, must be dechlorinated via dechlorination equipment, such that water released to storm sewers or ground during the Annual tests does not exceed **0.005 milligrams per litre (mg/L)** Reactive Chlorine Species (or Total Residual Chlorine).
- 3) Measurement and Dechlorination Material
- a) Discharged fire protection water must be tested using a colorimetric kit or meter capable of measuring Total Residual Chlorine at concentrations of 0 to 3.0 mg/L as a minimum. An acceptable Total Residual Chlorine reading for the discharge would be less than 0.005 mg/L, or 0 mg/L (depending on instrument sensitivity).
 - b) The dechlorinating agents used to dechlorinate the fire protection water shall be free of any ingredients that are harmful or toxic to the aquatic environment.
- 4) Dechlorination Reports
- a) The dechlorination process must form part of the Contractor's Hazardous Waste Audit and must be included in the Site/Work Specific Implementation Plan as per Sub-Section 1.3.2. – Site Specific Implementation plan.
 - b) Annual discharged fire protection water test results must be incorporated into the Annual Report as per Article 1.3.9.2. – Annual Report.
- 1.6.4.6 Unless specified otherwise, materials for removal become the Contractor's property.

1.7 Work Restrictions

1.7.1 Use of site and facilities

1.7.1.1 Work must be done with the least possible interference or disturbance to normal use of premises. Arrangements with Technical Authority must be made to facilitate work.

1.7.1.2 The Contractor must maintain security measures established by the existing facility and as approved by the Technical Authority.

1.7.2 Maintenance of existing services

1.7.2.1 The Contractor must provide the following in order to maintain existing building services:

- 1) Safety barricades, signage and all precautionary measures required to assure the continued use to building access and services.
- 2) Where building security is reduced by the work, temporary means of maintaining security must be provided i.e. posting a person or persons to monitor entry to the building.

1.7.3 Interruption of Building Services

1.7.3.1 The Contractor must notify the Technical Authority fifteen working days prior to intended interruptions of services and obtain written permission before beginning the work.

PART 2 EXECUTION

2.1 General

2.1.1 Performance

- 2.1.1.1 All work must be performed in accordance with the applicable Federal, Provincial or Territorial building, fire and electrical codes as identified in Section 1.2 – Codes, Standards, Regulations and Requirements.
- 2.1.1.2 The Contractor must execute such work in a careful and workmanlike manner.
- 2.1.1.3 Each component, sub-system, system and integrated system associated with the Emergency Electrical Power Supply Systems as identified within Part 3 – Equipment Inventory, must be checked, inspected and tested as per the Section 1.2 applicable Codes, Standards, Regulations and Requirements.

2.1.2 Scheduling and Planning

2.1.2.1 Maintenance Implementation Strategy

- 1) The Contractor must review the maintenance implementation strategy and planning carefully with the Technical Authority. The Contractor must provide the Technical Authority with a detailed maintenance implementation strategy schedule as per Section 1.3 - Submittals.

2.1.2.2 Inspections, checks and tests

- 1) Daily and weekly inspections, checks and tests to be performed by others, unless they coincide with a scheduled monthly, quarterly, semi-annual or annual inspection, check or test.
- 2) The monthly inspections, checks and tests shall include the daily and weekly inspection, check or test.
- 3) The quarterly inspections, checks and tests shall include the daily, weekly and monthly inspection, check or test.
- 4) The semi-annual inspections, checks and tests shall include the daily, weekly, monthly and quarterly inspection, check or test.

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- 5) The annual inspections, checks and tests shall include the daily, weekly, monthly, quarterly and semi-annual inspection, check or test.
- 6) The two year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 7) The three year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 8) The five year inspection, test and maintenance shall be performed in conjunction with the yearly test.

2.1.3 Inspection Closeout Tasks

2.1.3.1 The Contractor must restore the systems as identified in Part 3 – Equipment Inventory to the operational state as recorded prior to the commencement of the scheduled checks, inspections and tests included in this Statement of Work.

2.1.3.2 Normal situations

- 1) At the conclusion of a test, the following shall be ensured:
 - a) Primary power indication lamp is on;
 - b) System trouble signal and indicator is off;
 - c) Control panel is locked;

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- d) AC power switch enclosure (where applicable) is locked;
- e) All components of the system, including ancillary and auxiliary devices, are reset or returned to the normal standby mode;
- f) The appropriate Fire Department and remote monitoring station are notified that the work undertaken as part of this Contract is completed.

2.1.3.3 Abnormal situations

- 1) The Contractor shall restore the systems as identified in Part 3 – Equipment Inventory to the operational state as recorded prior to the commencement of the scheduled checks, inspections and tests included in this Contract.

2.1.4 Personnel on site

2.1.4.1 Electrical Work

- 1) Electrical work must be performed by qualified electrician(s), as per Section 1.1 – Definitions.

2.1.4.2 Monthly, Bi-monthly, Quarterly and Semi-Annual required personnel

- 1) The following is the minimum number of qualified personnel as identified in Section 1.1 - Definitions, required on site during inspections, checks, and testing:
 - a) One Canadian Fire Alarm Association (CFAA) certified fire alarm technician must be present for fire alarm related work.
 - b) Sprinkler and fire protection installer must be present for sprinklers and standpipe related work **when required by the various codes and standards.**
 - c) One fire extinguisher technician for portable extinguishers.
 - d) If the contractor has employees who are trained on more than one system, the contractor can reduce the number of employees required to attend each monthly up to a minimum of one employee.

2.1.4.3 Annual inspection required personnel

- 1) Personnel required for the annual, five, ten, twelve, fifteen and twenty year:
 - a) One qualified person must have a valid CFAA certificate.
 - b) One qualified person must have a valid Sprinkler and fire protection installer certificate.
 - c) One fire extinguisher technician for portable extinguishers.
 - d) Provide any other additional qualified persons to complete the work required.
 - e) If the contractor has employees who are trained on more than one system, the contractor can reduce the number of employees required to attend the annual up to a minimum of one employee.

2.1.4.4 Additional requirements

- 1) The checks, inspections, tests, maintenance and service must include but must not be limited to the additional requirements listed in the sections following and must involve all of the verification and test procedures recommended by the Manufacturer.

2.2 Fire Alarm Systems – with or without Emergency Voice Communication Capabilities

2.2.1 Performance

- 2.2.1.1 Each component, sub-system, system and integrated system associated with the Fire Alarm, Fire Protection and Life Safety Systems as identified within Part 2 – Execution, must be checked, inspected and tested as per the applicable Codes, Standards, Regulations and Requirements in Section 1.2.

2.2.2 Additional requirements

2.2.2.1 Monthly requirements

- 1) Battery and battery charging system

- a) The operating parameters of the battery test of the system must include:
 - i) Rated voltage of battery must be measured before start of the test and also at the conclusion of the test. Indicated readings must indicate full nameplate voltage prior to the test, and the indicated voltage at conclusion of the test must not fall below 85% of rated battery voltage, record the results on the report;
 - ii) At no time during this test must the system be left unattended, if the system is not monitored.

2.2.2.2 Annual requirements

- 1) Control Unit or Transponder and Display and Control Center (DCC)
 - a) The Control Unit(s) or Transponder(s) and DCC(s) must be inspected, tested, and verified to ensure that all audio amplifiers and associated supervisory circuits have their output wattages measured and recorded to ensure they are operating within the manufacturer's specifications for that system.
- 2) Circuits Using Fire Alarm System Power
 - a) The tests must be conducted to determine that the field devices at the electrically furthest point from the power source in every circuit receives rated operating power as per rated electrical characteristics in accordance with the manufacturer's specification.

2.3 Water Base Fire Protection System

2.3.1 Performance

- 2.3.1.1 Each component, sub-system, system and integrated system associated with the Fire Alarm, Fire Protection and Life Safety Systems as identified within Part 2 – Execution, must be checked, inspected and tested as per the applicable Codes, Standards, Regulations and Requirements in Section 1.2.

2.3.2 Additional Annual requirements

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2.3.2.1 Dechlorination of Fire Protection Water

- 1) Potable water being utilized for fire pump testing must be discharged via dechlorination equipment prior to discharge to storm sewers, in accordance with Article 1.6.4.

2.4 Battery Powered Emergency Lighting

2.4.1 Performance

- 2.4.1.1 The components, sub-systems, systems and integrated systems that make up the Battery Powered Emergency Lighting identified within Part 2 – Execution must be checked, inspected and tested once during each Contract year.

2.4.2 Additional requirements

2.4.2.1 Annual requirement

- 1) Emergency lighting units and exit lights are to be disconnected from normal AC-power and tested for a period of time as defined in the relevant Codes, Standards, Regulations and Requirements identified in Section 1.2.
- 2) The Contractor must ensure the following:
 - a) Verify battery voltage prior to 120 volt AC disconnection.
 - b) Verify battery voltage when to 120 volt AC is disconnected, and ensure changeover to VDC (as applicable).
 - c) Verify proper changeover from normal to battery power and ensure that all heads are operating and aligned as to provide adequate light in intended area.
 - d) Verify battery terminal voltage at the end of the test, before restoring normal power. Record the results in the report.
 - e) Verify that voltage 120 volts AC is restored to unit and changeover to VDC has occurred.
 - f) If it is discovered that the battery voltage drops to below 85% of its rated capacity, the Contractor is to notify the Technical Authority immediately in writing.

2.5 Portable Fire Extinguishers

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2.5.1 Performance

2.5.1.1 The portable fire extinguishers are to be maintained as per NFPA 10.

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PART 3 EQUIPMENT INVENTORY

3.1 General

3.1.1 Inventory

3.1.1.1 The following is a list of the minimum number of components included in this Statement of Work. Please note inventory is deemed as accurate as possible.

3.2 Government of Canada Building

3.2.1 Building information

Building name	Government of Canada Building
Civic Address	969 Federal Road
City	Iqaluit, Nunavut

3.2.2 Main Fire Alarm System

3.2.2.1 Fire Alarm Panel

Manufacture	Edwards EST-2
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3.2.2.2 Annunciator

Location	Remote
Model No.	Edwards 2LSRA

3.2.2.3 Active, Supportive, Audible and Visual Field Devices

Manual Pull Stations	11 – Edwards SIGC270B
Smoke/Heat detectors (multisensor)	17 – Edwards SIGA
Auxiliary Relays	6 – Sigma - CR
Bells	25 – Edwards MB6-24
Visual Signal Appliance	One 757-5A-T

3.2.3 Water Base Fire Protection Systems

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3.2.3.1 Sprinklers

Glycol Systems	3
Sprinkler Flow Switches	4
Sprinkler Tamper Switches	5

3.2.4 Battery Powered Emergency Lights

Battery Powered Emergency Lights	25
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3.2.5 Portable Fire Extinguishers

Portable Fire Extinguishers	33
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3.3 Coast Guard Building

3.3.1 Building information

Building name	Coast Guard Building
Civic Address	1063 Niuraivik Lane
City	Iqaluit, Nunavut

3.3.2 Fire Alarm System

3.3.2.1 Fire Alarm Panel

Manufacture	Qs-4
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3.3.2.2 Active, Supportive and audible Field Devices

Pull Stations	4
Smoke detectors	2 – 6260
Duct Smoke detectors	10 – 6260
Auxiliary Relays	18 – Sigma-CR
Bells	7

3.3.3 Water Base Fire Protection Systems

3.3.3.1 Fire Pump

Fire Pump with Controller	1
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3.3.3.2 Sprinklers

Flow Switches	1
Tamper Switches	5

3.3.4 Portable Fire Extinguishers

Portable Fire Extinguishers	9
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