



**Public Works Government Services Canada- Bid
Receiving / Réception des soumissions
189 Prince William Street
Room 405
Saint John
New Brunswick
E2L 2B9**

**REQUEST FOR STANDING OFFER (RFSO)
MOULD REMEDIATION
VARIOUS BUILDINGS
CFB GAGETOWN AND TRAINING AREA, NEW BRUNSWICK
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PART 1 - GENERAL INFORMATION

1. Introduction

The Request for Standing Offers (RFSO) is divided into seven parts plus attachments and annexes, as follows:

Part 1 General Information: provides a general description of the requirement;

Part 2 Offeror Instructions: provides the instructions applicable to the clauses and conditions of the RFSO;

Part 3 Offer Preparation Instructions: provides offerors with instructions on how to prepare their offer to address the evaluation criteria specified;

Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria which must be addressed in the offer and the basis of selection;

Part 5 Certifications: includes the certifications to be provided;

Part 6 Security, Financial and Insurance Requirements: includes specific requirements that must be addressed by offerors; and

Part 7 7A, Standing Offer, and 7B, Resulting Contract Clauses:

7A, includes the Standing Offer containing the offer from the Offeror and the applicable clauses and conditions;

7B, includes the clauses and conditions which will apply to any contract resulting from a call-up made pursuant to the Standing Offer.

The Annexes include the Basis of Payment, Certifications, Complete list of each individual who is currently on the Bidder's Board of Directors, Voluntary Certification to Support the Use of Apprentices and Specification.

2. Summary

The Department of National Defence (DND), CFB Gagetown, Oromocto, New Brunswick has a requirement for the establishment of a Regional Individual Standing Offer (RISO). This Standing Offer is for the furnishing of all labour, material and equipment required for mould remediation for Level 1 to 3 Precaution Remediations located within CFB Gagetown & Training Area, New Brunswick. Work will be performed as and when requested, from April 1, 2016 to March 31, 2018, in accordance with the Specification attached Annex "D".

This agreement is subject to the provisions of the Agreement on Internal Trade, the World Trade Organizations Agreement on Government Procurement, the North American Free Trade Agreement and the Canada-Peru, Canada-Colombia and Canada-Panama Free Trade Agreement.

3. Debriefings

After issuance of a standing offer, offerors may request a debriefing on the results of the request for standing offers. Offerors should make the request to the Standing Offer Authority within 15 working days of receipt of notification that their offer was unsuccessful. The debriefing may be provided in writing, by telephone or in person.

PART 2 - OFFEROR INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the Request for Standing Offers (RFSO) by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Offerors who submit an offer agree to be bound by the instructions, clauses and conditions of the RFSO and accept the clauses and conditions of the Standing Offer and resulting contract(s).

The 2006 (2014-09-25) Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the RFSO.

1.1 SACC Manual clauses

SACC Manual clause M0019T (2007-05-25) Firm Prices and/or Rates

2. Submission of Offers

Offers must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the Request for Standing Offers.

Offers by facsimile will be accepted. Facsimile Number is (506) 636-4376.

3. Enquiries - Request for Standing Offers

All enquiries must be submitted in writing to the Standing Offer Authority no later than five (5) calendar days before the Request for Standing Offers (RFSO) closing date. Enquiries received after that time may not be answered.

Offerors should reference as accurately as possible the numbered item of the RFSO to which the enquiry relates. Care should be taken by offerors to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that offerors do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all offerors. Enquiries not submitted in a form that can be distributed to all offerors may not be answered by Canada.

4. Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in **New Brunswick**.

Offerors may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their offer, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the offerors.

PART 3 - OFFER PREPARATION INSTRUCTIONS

1. Offer Preparation Instructions

Section I: Financial Offer

Offerors must submit their financial offer in accordance with “Annex "A", Basis of Payment”.

The total amount of Goods and Services Tax or Harmonized Sales Tax must be shown separately, if applicable.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

Offers will be assessed in accordance with the entire requirement of the Request for Standing Offers, including the financial evaluation criteria.

1.1 Financial Evaluation

1.1.1 Offerors will be evaluated on the basis of the lowest overall Total Estimated Amount in Canadian dollars, the Harmonized Sales Tax (HST) excluded. The Total Evaluated Price will be calculated using the estimated usage figures on the Pricing Schedule (See Annex "A"). Offerors are required to bid on all line items in the Pricing Schedule or their offer may be considered non-responsive.

2. Basis of Selection

2.1 An offer must comply with the requirements of the Request for Standing Offers to be declared responsive. The responsive offer with the lowest evaluated price will be recommended for issuance of a standing offer.

PART 5 - CERTIFICATIONS

Offerors must provide the required certifications to be issued a standing offer. Canada will declare an offer non-responsive if the required certifications are not completed and submitted as requested.

Compliance with the certifications offerors provide to Canada is subject to verification by Canada during the offer evaluation period (before issuance of a standing offer) and after issuance of a standing offer. The Standing Offer Authority will have the right to ask for additional information to verify the Offerors' compliance with the certifications before issuance of a standing offer. The offer will be declared non-responsive if any certification made by the Offeror is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications or to comply with the request of the Standing Offer Authority for additional information will also render the offer non-responsive.

1. Mandatory Certifications Required Precedent to Issuance of a Standing Offer

1.1 Code of Conduct and Certifications - Related documentation

1.1.1 By submitting an offer, the Offeror certifies, for himself and his affiliates, to be in compliance with the Code of Conduct and Certifications clause of the Standard instructions. The related documentation hereinafter mentioned will help Canada in confirming that the certifications are true. By submitting an offer, the Offeror certifies that it is aware, and that its affiliates are aware, that Canada may request additional information, certifications, consent forms and other evidentiary elements proving identity or eligibility. Canada may also verify the information provided by the Offeror, including the information relating to the acts or convictions specified herein, through independent research, use of any government resources or by contacting third parties. Canada will declare non-responsive any offer in respect of which the information requested is missing or inaccurate, or in respect of which the information contained in the certifications is found to be untrue, in any respect, by Canada. The Offeror and any of the Offerors affiliates, will also be required to remain free and clear of any acts or convictions specified herein during the entire period of the Standing Offer and any call-ups made against the Standing Offer.

Offerors who are incorporated, including those submitting offers as a joint venture, must provide with their offer or promptly thereafter a complete list of names of all individuals who are currently directors of the Offeror. Offerors submitting offers as sole proprietorship, including those submitting offers as a joint venture, must provide the name of the owner with their offer or promptly thereafter. Offerors submitting offers as societies, firms, partnerships or associations of persons do not need to provide lists of

names. If the required names have not been received by the time the evaluation of offers is completed, Canada will inform the Offeror of a time frame within which to provide the information. Failure to comply will render the offer non-responsive. Providing the required names is a mandatory requirement for issuance of a standing offer and award of a contract.

Canada may, at any time, request that an Offeror provide properly completed and Signed Consent Forms (Consent to a Criminal Record Verification form- PWGSC-TPSGC 229) (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>) for any or all individuals aforementioned within the time specified. Failure to provide such Consent Forms within the time period provided will result in the offer being declared non-responsive.

2. Additional Certifications Precedent to Issuance of Standing Offer

The certifications listed below and the certifications in **Annex “B” Certifications** should be completed and submitted with the offer, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Standing Offer Authority will so inform the Offeror and provide the Offeror with a time frame within which to meet the requirement. Failure to comply with the request of the Standing Offer Authority and meet the requirements within that time period will render the offer non-responsive.

2.1 Former Public Servants - Competitive Requirements M3025T (2013-11-06)

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPS, offerors must provide the information required below before the issuance of a standing offer. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of offers is completed, Canada will inform the Offeror of a time frame within which to provide the information. Failure to comply with Canada’s request and meet the requirement within the prescribed time frame will render the offer non-responsive.

Definitions

For the purposes of this clause,

"former public servant" is any former member of a department as defined in the *Financial Administration Act* R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;

- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the Public Service Superannuation Act (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the Supplementary Retirement Benefits Act, R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the Canadian Forces Superannuation Act, R.S., 1985, c. C-17, the Defence Services Pension Continuation Act, 1970, c. D-3, the Royal Canadian Mounted Police Pension Continuation Act, 1970, c. R-10, and the Royal Canadian Mounted Police Superannuation Act, R.S., 1985, c. R-11, the Members of Parliament Retiring Allowances Act, R.S. 1985, c. M-5, and that portion of pension payable to the Canada Pension Plan Act, R.S., 1985, c. C-8.

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Offeror a FPS in receipt of a pension? YES () NO ()

If so, the Offeror must provide the following information, for all FPS in receipt of a pension, as applicable:

name of former public servant;

date of termination of employment or retirement from the Public Service.

By providing this information, Offerors agree that the successful Offeror's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

Work Force Adjustment Directive

Is the Offeror a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? YES () NO ()

If so, the Offeror must provide the following information:

- a. name of former public servant;

- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

2.2 All individuals who perform work under this agreement must have certified WHMIS and Confined Spaces training. Proof of such must be provided within seven (7) days of request from Standing Offer Authority and prior to award of Standing Offer Agreement.

PART 6 - INSURANCE REQUIREMENTS

1. Insurance Requirements

The Offeror must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Offeror, if issued a standing offer as a result of the request for standing offer, can be insured in accordance with the Insurance Requirements specified in **Annex B**.

If the information is not provided in the offer, the Standing Offer Authority will so inform the Offeror and provide the Offeror with a time frame within which to meet the requirement. Failure to comply with the request of the Standing Offer Authority and meet the requirement within that time period will render the offer non-responsive

PART 7 - STANDING OFFER AND RESULTING CONTRACT CLAUSES

A. STANDING OFFER

1. Offer

- 1.1 The Offeror offers to fulfill the requirement in accordance with the Specification in Annex "E".

2. Standard Clauses and Conditions

All clauses and conditions identified in the Standing Offer and resulting contract(s) by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

2.1 General Conditions

2005 (2014-09-25) General Conditions - Standing Offers - Goods or Services, apply to and form part of the Standing Offer.

3. Term of Standing Offer

3.1 Period of the Standing Offer

The period for making call-ups against the Standing Offer is from Date of Award to March 31, 2018.

4. Authorities

4.1 Standing Offer Authority

The Standing Offer Authority is:

Name: Anne MacDonald
Title: Supply Officer
Organization: Public Works and Government Services Canada
Acquisitions Branch
Directorate: Real Property Contracting
Address: 3 Queen Street
Charlottetown, PEI
C1A 4A2
Telephone: (902) 626-4949
Facsimile: (506) 636-4376
E-mail address: anne.macdonald@pwgsc.gc.ca

The Standing Offer Authority is responsible for the establishment of the Standing Offer, its administration and its revision, if applicable. Upon the making of a call-up, as Contracting Authority, he is responsible for any contractual issues relating to individual call-ups made against the Standing Offer by any Identified User.

4.2 Project Authority

The Project Authority for the Standing Offer is identified in the call-up against the Standing Offer.

The Project Authority is the representative of the department or agency for whom the Work will be carried out pursuant to a call-up against the Standing Offer and is responsible for all the technical content of the Work under the resulting Contract.

4.3 Offeror's Representative

Name: _____
Telephone: () _____
Fax: () _____
E-mail: _____

5. Identified Users

The Identified User authorized to make call-ups against the Standing Offer is: Department of National Defence.

6. Call-up Instrument

The Work will be authorized or confirmed by the Identified User(s) using form CF942.

7. Limitation of Call-ups

Individual call-ups against the Standing Offer must not exceed \$60,000.00Harmonized Sales Tax Included).

8. Financial Limitation

The total cost to Canada resulting from call-ups against the Standing Offer must not exceed the sum of \$300,000.00(Harmonized Sales Tax extra) unless otherwise authorized in writing by the Standing Offer Authority. The Offeror must not perform any work or services or supply any articles in response to call-ups which would cause the total cost to Canada to exceed the said sum, unless an increase is so authorized.

The Offeror must notify the Standing Offer Authority as to the adequacy of this sum when 75 percent of this amount has been committed, or 4 months before the expiry date of the Standing Offer, whichever comes first. However, if at any time, the Offeror considers that the said sum may be exceeded, the Offeror must promptly notify the Standing Offer Authority.

9. Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- a) the call up against the Standing Offer, including any annexes;
- b) the articles of the Standing Offer;
- c) the general conditions 2005 (2014-09-25), General Conditions - Standing Offers - Goods or Services
- d) Supplemental General Conditions 2010C (2014-09-25), General Conditions - Services (Medium Complexity);
- e) Specifications and drawings;
- f) Annex "A", Basis of Payment;
- g) Any amendment issued or any allowable offer revision received before the date and time set for solicitation closing
- h) the Offeror's offer

10. Certifications

10.1. Compliance

Compliance with the Certifications provided by the Offeror is a condition of authorization of the Standing Offer and subject to verification by Canada during the term of the Standing Offer and of any resulting contract that would continue beyond the period of the Standing Offer. In the event that the Offeror does not comply with any certification or it is determined that any certification made by the Offeror in its offer is untrue, whether made knowingly or unknowingly, Canada has the right to terminate any resulting contract for default and set aside the Standing Offer.

11. Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in New Brunswick.

12. Estimates

SACC Manual clause M3800C (2006-08-15) Estimates

13. Insurance Requirements

The Contractor must comply with the insurance requirements specified in Annex B . The Contractor must maintain the required insurance coverage for the duration of the Standing Offer. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Standing Offer.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Standing Offer and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Standing Offer Authority within seven (7) days after request from the Standing Offer Authority and prior to award of the Standing Offer, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an Insurer licensed to carry out business in Canada. The Contractor must, if requested by the Standing Offer Authority, forward to Canada a certified true copy of all applicable insurance policies.

B. RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from a call-up against the Standing Offer.

1. Statement of Work

The Contractor must perform the Work described in the call-up against the Standing Offer.

2. Standard Clauses and Conditions

2.1 General Conditions

Supplemental General Conditions 2010C (2014-09-25), General Conditions - Services (Medium Complexity); apply to and form part of the Contract.

3. Term of Contract

3.1 Period of the Contract

The Work must be completed in accordance with the call-up against the Standing Offer.

4. Payment

4.1 Basis of Payment

Refer to "Annex "A", Basis of Payment"

4.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

4.3 Single Payment

SACC Manual clause H1000C (2008-05-12) Single Payment

5. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

2. Invoices must be distributed as follows:

(a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

ANNEX "A"
BASIS OF PAYMENT
PRICING SCHEDULE
April 1, 2014 to March 31, 2016

Item	Description, Class of Labour, Material or Plant	Unit of Measure	Estimated Hrs / Qty	Unit Price \$ ¢	Estimated Total Price \$ ¢
1	Technicians rate per hour for service on site during normal working hours, 0730 hours to 1600 hours Monday to Friday	Hour	1,000	\$ _____	\$ _____
2	Supervisors rate per hour for service on site during normal working hours, 0730 hours to 1600 hours Monday to Friday	Hour	1,000	\$ _____	\$ _____
3	Technicians rate per hour for service on site for calls after normal working hours and holidays	Hour	300	\$ _____	\$ _____
4	Supervisors rate per hour for service on site for calls after normal working hours and holidays	Hour	300	\$ _____	\$ _____
5	Air monitoring	Test	80	\$ _____	\$ _____
6	Disposal and transportation of contaminated waste at approved site. For tendering purposes, the Offeror will submit their percent of mark-up on disposal fee: _____% Allowance+Mark-Up=Total	Allowance	\$10,000	Mark-up in \$	
7	All products and materials will be invoiced at the Contractor's wholesale cost plus a percentage for mark-up, estimated at \$50,000. The Contractor is to submit a percent of mark-up for tendering purposes.	Allowance	\$50,000	Mark-up _____% = \$	Allowance + Mark up = \$
<u>Total Estimated Amount used for Evaluation</u>					\$ _____

Note: The estimated quantity entered in column four for each item is an estimate only for services as and when requested and does not infer that all the quantities for that item will be utilized or that the quantities may not be exceeded.

ANNEX “B”

Certifications Precedent to Standing Offer Award

1. Workers’ Compensation Certification - Letter of Good Standing

Within seven (7) days and prior to award, provide proof that the Offeror has an account in good standing with the applicable provincial or territorial Workers’ Compensation Board.

2. Equipment List

Within seven (7) days and prior to award, the Offeror will be required to provide an equipment list which will include year, make and model. This equipment is subject to inspection by the Department of National Defence (DND).

3. All individuals who perform work under this agreement must have certified WHMIS and Confined Spaces training. Proof of such must be provided within seven (7) days of request from Standing Offer Authority and prior to award of Standing Offer Agreement.
4. Proof of liability insurance for a minimum amount of two million (\$2,000,000) as specified below.

INSURANCE REQUIREMENTS

Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, **but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.**
2. The Commercial General Liability policy must include the following:
 - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by the Department of National Defence.
 - (b) Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
 - (c) Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.

- (d) Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
- (e) Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
- (f) Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
- (g) Employees and, if applicable, Volunteers must be included as Additional Insured.
- (h) Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
- (i) Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
- (j) Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.
- (k) If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.

ANNEX C

**COMPLETE LIST OF EACH INDIVIDUAL WHO IS CURRENTLY ON THE BIDDER'S BOARD OF
DIRECTORS**

NOTE TO OFFERORS

WRITE DIRECTOR'S SURNAMES AND GIVEN NAMES IN BLOCK LETTERS

ANNEX “D”

Voluntary Certification to Support the Use of Apprentices

1. To encourage employers to participate in apprenticeship training, Contractors bidding on construction and maintenance contracts by Public Works and Government Services Canada (PWGSC) are being asked to sign a voluntary certification, signaling their commitment to hire and train apprentices.
2. Canada is facing skills shortages across various sectors and regions, especially in the skilled trades. Equipping Canadians with skills and training is a shared responsibility. In Economic Action Plan (EAP) 2013, the Government of Canada made a commitment to support the use of apprentices in federal construction and maintenance contracts. Contractors have an important role in supporting apprentices through hiring and training and are encouraged to certify that they are providing opportunities to apprentices as part of doing business with the Government of Canada.
3. Through the Economic Action Plan 2013 and support for training programs, the Government of Canada is encouraging apprenticeships and careers in the skilled trades. In addition, the government offers a tax credit to employers to encourage them to hire apprentices. Information on this tax measure administered by the Canada Revenue Agency can be found at: www.cra-arc.gc.ca. Employers are also encouraged to find out what additional information and supports are available from their respective provincial or territorial jurisdiction.
4. Signed certifications will be used to better understand contractor use of apprentices on Government of Canada maintenance and construction contracts and may inform future policy and program development.
5. The Contractor hereby certifies the following:

In order to help meet demand for skilled tradespeople, the Contractor agrees to use, and require its subcontractors to use, reasonable commercial efforts to hire and train registered apprentices, to strive to fully utilize allowable apprenticeship ratios¹ and to respect any hiring requirements prescribed by provincial or territorial statutes.

The Contractor hereby consents to this information being collected and held by PWGSC, and Employment and Social Development Canada to support work to gather data on the hiring and training of apprentices in federal construction and maintenance contracts.

The journeyperson-apprentice ratio is defined as the number of qualified/certified journeypersons that an employer must employ in a designated trade or occupation in order to be eligible to register an apprentice as determined by provincial/territorial (P/T) legislation, regulation, policy directive or by law issued by the responsible authority or agency.

Name:

Signature:

Company Name:

Company Legal Name:

Solicitation Number:

Optional information to provide:

Number of apprentices planned to be working on this contract:

Trades of those apprentices:

ANNEX E
SPECIFICATION



**DEPARTMENT OF NATIONAL DEFENCE
5 ENGINEER SERVICES SQUADRON
5 ENGINEER SERVICES UNIT
5 CDSB GAGETOWN**

SPECIFICATION

STANDING OFFER AGREEMENT

MOULD REMEDIATION

**VARIOUS BUILDINGS
5 CDSB GAGETOWN AND TRAINING AREA
01 APRIL 2016 TO 31 MARCH 2018**


Designed by


Fire Inspector


Project O


Engineering O

PF No:
Job No: L-G2-9900/1712

Date: 2015-09-04

NATIONAL DEFENCE
JOB NO.L-G2-9900/1712
5 CDSB GAGETOWN, N.B.

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END OF SECTION

1.01 DESCRIPTION OF WORK

- .1 Work under this agreement covers the supply of all labour, material and equipment required for mold remediation for Level 1 to 3 Precaution Remediations located within 5 CDSB Gagetown and the Training Area as directed by the Engineer.

1.02 DURATION OF CONTRACT

- .1 This Standing Offer Agreement will extend from 01 April 2016 to 31 March 2018.

1.03 QUALIFICATIONS

- .1 All Contractor employees must have certified WHMIS and Confined Spaces training. Certificates will be submitted to the Engineer prior to award of this Standing Offer.

1.04 ENGINEER

- .1 The Engineer, as defined and stated in this specification will be the Commanding Officer of 5 Engineer Services Unit or a designated representative. The address of the Engineer is:
 - Contracts Office
 - 5 Engineer Services Unit
 - Building B18
 - 5 CDSB Gagetown
 - PO Box 17000 Station Forces
 - Oromocto, NB E2V 4J5
 - Tel: (506) 422-2002 Ext 2677
 - Fax: (502) 4222-1248

1.05 CODES AND STANDARDS

- .1 Perform work and enforce all regulations in accordance with the following Codes and Standards:
 - .1 National Building Code of Canada;
 - .2 Canada Labour Code Part 2;
 - .3 Canada Occupational Health and Safety Regulations SOR/86-304, Division III HVAC Systems;
 - .4 New Brunswick Occupational Health and Safety Act;
 - .5 Guidelines on Assessment and Remediation of Fungi in Indoor Environments by the New York City Department of Health Bureau of Environmental & Occupational Disease Epidemiology;
 - .6 N.B. Reg 91-191, Part III Air Quality;
 - .7 New Brunswick Occupational Safety and Health Regulation Part XVII for Confined Spaces and any other applicable code or regulation; and
 - .8 Canadian Guideline for Managing Indoor Air Quality in Office Buildings CAN/CSA Z204 (R1999), Guideline on Office Ergonomics CAN/CSA Z412-00 (R2005).
 - .9 In any case of a discrepancy, the more stringent requirements shall apply.
- .2 Meet or exceed requirements of contract documents, specified standards,

codes and referenced documents.

- .3 If work is to be carried out in a confined space a copy of the pertinent SOP will be attached to the CF 942, Call-Up Against a Standing Offer.
- .4 Contractor be registered with WorkSafeNB and provide proof of such to PWGSC prior to award of this Standing Offer Agreement.

1.06 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each of following:
 - .1 Drawings issued for work;
 - .2 Specifications;
 - .3 Addenda;
 - .4 Other modifications to project;
 - .5 Field test reports;
 - .6 Material Safety Data Sheet for chemicals on site; used
 - .7 Copy of approved work schedule; and
 - .8 Manufacturer's application instructions.

1.07 WORK SCHEDULE

- .1 Provide prior to commencing work, schedule showing anticipated progress stages and final completion of work.
- .2 Interim reviews of work progress based on work schedule will be conducted as required by the Engineer. Any schedule changes required must be approved by the Engineer.

1.08 CONTRACTOR'S USE OF SITE

- .1 Use of site is limited to affected areas for work and storage as requested by the Engineer.
- .2 Do not unreasonably encumber site with materials and equipment.
- .3 Move stored products or equipment which may interfere with operations of building occupants.
- .4 Any additional areas required for storage other than those provided by DND will be at the Contractors expense.
- .5 Provide a list of all employees and suppliers, when requested, by the Engineer.

1.09 POWER AND WATER SUPPLY

- .1 DND can provide, free of charge, temporary electric power and water for the purpose of this agreement.
- .2 Engineer will determine delivery points and quantitative limits. Engineer's written permission is required before any connection is made. Connect to existing power supply in accordance with Canadian Electrical Code.
- .3 Contractor to provide at no cost to DND, all equipment and temporary lines

to bring these services to the work site.

- .4 Supply of temporary services by DND is subject to DND requirements and may be discontinued by the Engineer at any time without notice. The Engineer will not accept any liability for damage or delay caused by such withdrawal of temporary services.

1.10 ACCEPTABILITY OF MATERIALS

- .1 Material and parts used will be those specified by the manufacturer of the equipment and any other material will require the approval of the Engineer.
- .2 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.
- .3 The Contractor will not make any change in the design and installation of equipment and materials without prior written approval of the Engineer.
- .4 If, in an emergency, the Contractor installs parts other than those specified, they will be replaced with specified parts before claiming payment, but no claim for other than specified parts will be made.
- .5 All replaced parts and materials not under warranty, whether serviceable or unserviceable will be left on site for inspection on completion of the work.
- .6 All manufactured articles, materials, and equipment will be applied, installed, connected and used as specified by the manufacturer.

1.11 OVERLOADING

- .1 Ensure no part of work is subjected to a load which will endanger its safety to others or will cause permanent deformation.

1.12 TEMPORARY STRUCTURES

- .1 The Contractor will furnish and maintain all equipment such as temporary stairs, ramps, ladders, scaffolds, hoists, chutes, enclosures, etc, as may be required for the proper execution of the work.
- .2 Temporary structures erected by the Contractor will remain their property and will be removed by them from the site on completion of the work.

1.13 CLEAN UP

- .1 On completion of all work, remove all surplus materials, plant, tools, equipment, and debris, and leave the work site in a clean and tidy condition to the complete satisfaction of the Engineer. The Contractor will not remove any salvageable material or equipment from the job site without permission from the Engineer.

1.14 CUTTING FITTING AND PATCHING

- .1 Execute cutting, fitting and patching required to make work fit properly together.

- .2 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.

1.15 EXISTING SERVICE

- .1 Submit schedule and obtain approval from Engineer for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
- .1 Where unknown services are encountered, immediately advise Engineer and confirm findings in writing.

1.16 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

- .1 Execute work with least possible interference or disturbance to occupants, public and normal use of premises. Arrange with Engineer to facilitate execution of work.
- .2 Where security has been reduced by work of Contract, provide temporary means to maintain security.
- .3 Provide temporary dust screens, barriers, warning signs in locations where renovation and alteration work is adjacent to areas used by public or government staff.

1.17 ADDITIONAL DRAWINGS

- .1 Engineer may furnish additional drawings to assist proper execution of work. These drawings will be issued for clarification only. Such drawings shall have same meaning and intent as if they were included with plans referred to in Contract documents.

1.18 LEVEL 1 TO LEVEL 3 PRECAUTION OF REMEDIATION

- .1 Level 1 or Minimum Precaution Remediation of an area of less than 3 square meters contaminated surfaces and up to 1 square meter of contaminated surface in an HVAC system. As per section 13287.
- .2 Level 2 or Intermediate Precaution Remediations are defined as; Isolated areas of between 3 - 10 square meters of contaminated surfaces. As per section 13288.
- .3 Level 3 or Maximum Precaution Remediations are defined as ; Greater than 10 continuous square meters of contaminated surfaces in an area, and greater than 1 square meter of contaminated surface in an HVAC system. As per section 13289.

1.19 WORK REQUISITION

- .1 The Contractor will provide service during regular working hours on an 8 hour per day, 5 days per week basis, 0730 to 1600 hrs, Monday to Friday inclusive and service after normal working hours.
- .2 The Contractor will advise the Engineer of the telephone number or location at which they or their representative may be contacted at all times.

- .3 The Contractor, on receipt of an acceptance of tender will be advised by the Engineer in writing, the names of persons authorized to request service. Work undertaken at the request of others will be entirely at the Contractor's risk with regard to payment.
- .4 The Contractor will not refuse any call for service requested by the Engineer and will carry out the service as requested in a timely fashion.
- .5 When service is requested, the Engineer will notify the Contractor and detail the job to be performed. The contractor will provide a written estimate indicating labour and material costs in accordance with the Standing Offer Agreement, prior to a Requisition being provided for the work. The CF 942 will detail the work to be done and will be signed by the Engineer and faxed to the Contractor.
- .6 The Contractor will report to the Engineer prior to starting work and upon completion of work on a daily basis.
- .7 After reporting, the Contractor will proceed to the job, carry out the work, then have the Engineer or authorized person sign both copies of their service report on completion. The date, hours worked and material used on each job will be shown on the Company Service Report.
- .8 The Contractor will return a copy of the signed Requisition with their invoice on completion of the work to include labour sheets and invoices for material provided to the Engineer.

1.20 QUANTITIES AND BASIS FOR PAYMENT

- .1 The work done under this standing offer will be paid for on a unit price basis. The Contractor will accept the payment as full consideration for everything furnished and done by them in respect of the work.
- .2 The Contractor will submit the prices in accordance with the specification. Such prices will include expenses, tools, all equipment required for mould remediation, transportation (travel time to and from the contractors base of operation will be included in the rates provided), overhead and profit.
 - .1 No separate charges for transportation which includes; travel to and from the Base and travel Portal to Portal are to be invoiced.
- .3 Provide unit prices for the following:
 - .1 Technicians rate per hour for service on site during normal working hours are 0730 to 1600 hrs. Monday to Friday; **Estimate 1000 hrs.**
 - .2 Supervisors rate per hour for service on site during normal working hours Monday to Friday; **Estimate 1000 hrs.**
 - .3 Technicians rate per hour for service on site for calls after normal working hours, and holidays; **Estimate 300 hrs.**
 - .4 Supervisors rate per hour for service on site for calls after normal working hours, and holidays. **Estimate 300 hrs.**
 - .5 Air Monitoring; **Estimate 80 tests.**
 - .6 Disposal and transportation of contaminated waste at approved dump site. For tendering purposes, the Contractor will submit their percent of mark-up on disposal fee. Copies of invoices for disposal used must accompany the invoice for the service call completed; **Estimate \$10,000.00.**
 - .7 All material will be invoiced at the Contractors wholesale cost, plus a percentage of mark-up. For tendering purposes, the Contractor will

submit their percent of mark-up on material. Copies of invoices for materials used must accompany the invoice for each call-up completed.
Estimate \$50,000.00.

- .4 Time charged and the contract price of materials may be verified by Government Audit before and after payment.
- .5 The above mentioned quantities may increase or decrease and are used as a guide only. The quantities are not guaranteed and the Contractor will have no claim for loss of anticipated profits as a result of these estimated quantities.

1.21 CONTRACTOR'S ACCESS TO SITE

- .1 Access directly to and from site subject to traffic and security regulations established by DND.

1.22 SECURITY CLEARANCE

- .1 The Contractor shall maintain an up-to-date roster of all employees involved in this contract including managers, supervisors, tradespersons, drivers and labourers. This roster must be made available to the Engineer upon request.
- .2 The Contractor shall provide proof of the information contained within the roster to the Engineer upon request. The Engineer reserves the right to have removed from the site those personnel who do not meet security requirements as laid down by the Military Police Section.
- .3 All employees will require a "Reliability" security clearance before commencement of any work at 5 CDSB Gagetown, at no extra cost to DND. A copy of each employee's Reliability Security Clearance must be provided before said employee starts work on DND property.

1.23 CONTRACTOR PASSES

- .1 All Contractor employees will carry an authorized Contractor Pass when employed on DND property. Such passes will be produced when requested by the Military Police, Commissionaires, Security Guards and persons in authority.
- .2 The Contractor will complete an application form for contractor passes for each individual. The Contractor will accompany the employee to the Military Police Identification Section for the issuance of pass.
- .3 A photocopy of passes is to be provided to the Engineer.
- .4 The Contractor will ensure Contractor passes are recovered from employees who cease to be employed on DND property. Such passes shall be returned to the Military Identification Section.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Province of New Brunswick Occupational Health and Safety Act, S.N.B. 1991.
- .3 National Building Code of Canada, 2010.

1.02 REGULATORY REQUIREMENTS

- .1 Do work in accordance with the safety measures of the National Building Code of Canada 2010, the Canada Labour Code Part 2, the New Brunswick Occupational Health and Safety Act and WorkSafeNB provided that in any case of conflict or discrepancy the more stringent requirements shall apply.

1.03 RESPONSIBILITY

- .1 Contractor is responsible for the health and safety of all persons on site. Contractor is also responsible for the protection of property, persons and the environment on or adjacent to the site in so far as the work may affect these.
- .2 Contractor and all contractor's employees are to comply with all safety requirements specified in the Contract Documents as well as all applicable federal, provincial and local statutes, regulations, ordinances and with Contractor's site-specific Health and Safety Plan.
- .3 As outlined in the Canada Labour Code Part 2, the Contractor is responsible to provide a site-specific Health and Safety Plan that includes a Confined Space Entry Procedure in the event that work is deemed by the Engineer to be in a confined space. Work is not to begin until this Health and Safety Plan is submitted and approved by the Engineer.
- .4 5 CDSB Gagetown 5 Engineer Services Unit employs a Lock Out/Tag Out program to prevent work related injuries due to electrical or mechanical systems being energized while personnel are working in or around these systems. The Contractor must respect these locks and tags when encountered. Do not forcibly remove these locks and/or tags at any time. If the Contractor requires that these be removed to perform work, a request is to be made to the Engineer for such removal.
- .5 As per the Canada Labour Code Part 2, it is the Contractor's responsibility to employ their own Lock Out/Tag Out program to ensure that equipment is not energized by other personnel while they are working in or around equipment.
- .6 It is the Contractor's responsibility to ensure that all their employees are provided all Personal Protective Equipment (PPE) necessary to perform all work. Hard hats and safety glasses are to worn at all times.

1.04 UNFORESEEN HAZARDS

- .1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of work, the Contractor must have procedures in place to facilitate the Employee's Right to Refuse Work in accordance with Acts and Regulations of New Brunswick. The Contractor is to advise the Engineer verbally and in writing of any employee who exercises this right.

1.05 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Engineer.
- .2 Provide Engineer with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Engineer may stop work if non-compliance of health and safety regulations is not corrected.

1.06 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for work.

END OF SECTION

1 GENERAL

1.01 REPORTING FIRES

- .1 Know location of nearest fire alarm box and telephone, including emergency phone number.
- .2 Report immediately all fire incidents to Fire Department as follows:
 - .1 telephone 911.
- .3 When reporting fire by telephone, give location of fire, name or number of building and be prepared to verify the location.

1.02 INTERIOR AND EXTERIOR FIRE PROTECTION AND ALARM SYSTEMS

- .1 Fire protection and alarm system will not be:
 - .1 obstructed;
 - .2 shut-off; and
 - .3 left inactive at end of working day or shift without authorization from Fire Chief.
- .2 Fire hydrants, standpipes and hose systems will not be used for other than fire-fighting purposes unless authorized by Fire Chief.

1.03 FIRE EXTINGUISHERS

- .1 Supply fire extinguishers, as scaled by Fire Chief, necessary to protect work in progress and contractor's physical plant on site.

1.04 BLOCKAGE OF ROADWAYS

- .1 Advise Fire Chief of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by Fire Chief, erecting of barricades and digging of trenches.

1.05 SMOKING PRECAUTIONS

- .1 Observe smoking regulations at all times.

1.06 RUBBISH AND WASTE MATERIALS

- .1 Rubbish and waste materials are to be kept to minimum.
- .2 Burning of rubbish is prohibited.
- .3 Removal:
 - .1 Remove all rubbish from work site at end of work day or shift or as directed.
- .4 Storage:
 - .1 Store oily waste in approved receptacles to ensure maximum cleanliness and safety.
 - .2 Deposit greasy or oily rags and materials subject to spontaneous combustion in approved receptacles and remove.

1.07 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- .1 Handling, storage and use of flammable and combustible liquids are to be governed by the current National Fire Code of Canada.
- .2 Flammable and combustible liquids such as gasoline, kerosene and naphtha will be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing Underwriters' Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes requires permission of Fire Chief.
- .3 Transfer of flammable and combustible liquids is prohibited within buildings or jetties.
- .4 Transfer of flammable and combustible liquids will not be carried out in vicinity of open flames or any type of heat-producing devices.
- .5 Flammable liquids having a flash point below 38° C such as naphtha or gasoline will not be used as solvents or cleaning agents.
- .6 Flammable and combustible waste liquids, for disposal, will be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and Fire Department is to be notified when disposal is required.

1.08 HAZARDOUS SUBSTANCES

- .1 Work entailing use of toxic or hazardous materials, chemicals and/or explosives, or otherwise creating hazard to life, safety or health, will be in accordance with National Fire Code of Canada.
- .2 Obtain from Fire Chief a "Hot Work" permit for work involving welding, burning or use of blow torches and salamanders, in buildings or facilities.
- .3 When Work is carried out in dangerous or hazardous areas involving use of heat, provide fire watchers equipped with sufficient fire extinguishers. Determination of dangerous or hazardous areas along with level of protection necessary for Fire Watch is at discretion of the Fire Chief. Contractors are responsible for providing fire watch service for work on a scale established and in conjunction with Fire Chief at pre-work conference.
- .4 Where flammable liquids, such as lacquers or urethanes are to be used, proper ventilation will be assured and all sources of ignition are to be eliminated. Fire Chief is to be informed prior to and at cessation of such work.

1.09 QUESTIONS AND/OR CLARIFICATION

- .1 Direct any questions or clarification on Fire Safety in addition to above requirements to Fire Chief through the Engineer.

1.10 FIRE INSPECTION

- .1 Site inspections by Fire Chief will be coordinated through Engineer.
- .2 Allow Fire Chief unrestricted access to work site.

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FIRE SAFETY REQUIREMENTS

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- .3 Co-operate with Fire Chief during routine fire safety inspection of work site.
- .4 Immediately remedy all unsafe fire situations observed by Fire Chief.

END OF SECTION

1 GENERAL

1.01 GENERAL

- .1 Contractor will take all reasonable steps to ensure that they and their employees have complied with all pertinent legislation and have protected the environment.

1.02 FIRES

- .1 Fires and burning of rubbish on site not permitted.

1.03 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site unless approved by Engineer.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

1.04 SPILL PROTECTION

- .1 The Contractor must have adequate clean up materials for any potential hazardous materials used in the completion of the work (ie. Foams, fuels, oils, lubricants, etc).

END OF SECTION

1 GENERAL

1.01 SECTION INCLUDES

- .1 This Section has been designed to provide general practices and procedures for Level 1 or Minimum Precaution Remediation of an area of less than 3 square meters contaminated surfaces and up to 1 square meter of contaminated surface in an HVAC system. For further information see Section 13289 para 1.

1.02 REFERENCES

- .1 See Section 13289 Para 1.2 References.

1.03 DEFINITIONS

- .1 See Section 13289 Para 1.3 Definitions.

1.04 REGULATORY REQUIREMENTS

- .1 See Section 13289 Para 1.4 Regulatory Requirements.

1.05 SUBMITTALS

- .1 See Section 13289 Para 1.5.6, Proof of Contractors Microbial Liability Insurance.
- .2 See Section 13289 Para 1.6.1, Closeout Submittals.

1.06 INSTRUCTION AND TRAINING

- .1 Before commencing work, provide to Engineer satisfactory proof that every worker has had training and qualifications as per Section 13289 Para 1.5.1 to 1.5.3. This training can perform as part of a program to comply with the requirements of OSHA Hazard Communication Standard 29 CFR 1910.1200 or equivalent.

1.07 WORKER PROTECTION

- .1 Non-powered disposable filter-type respirator of type N95 OSHA 29 CFR 1910.134 or equivalent, suitable for protection against mould and acceptable to Provincial Authority having jurisdiction.
- .2 See Section 13288 Para 1.8.2 to 1.8.7 Worker protection.

1.08 HOURS OF WORK

- .1 Typical work schedule - Work shall be performed as per Section 01005, para 17.1.

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2 PRODUCTS

2.01 MATERIALS

- .1 See Section 13289, Para 2.1, Materials.

2.02 TOOLS AND EQUIPMENT

- .1 See Section 13289, Para's 2.2.1; suitable equipment, 2.2.2, PPE; 2.2.5, vacuum cleaners and 2.2.6, ladders and scaffolds.

3 EXECUTION

3.01 PREPARATION OF MOULD WORK AREA (< 3 SQUARE METRES)

- .1 Mould Contaminated Work Area see Section 13289, para 3.1.1.
- .2 Clean movable objects see Section 13289 Para 3.1.5.
- .3 Remove visible dust see Section 13289 Para 3.1.7.
- .4 Use of compressed air see Section 13289 Para 3.1.8.
- .5 Return air grills see Section 13289 Para 3.1.9.
- .6 Flooring in Mould Contaminated work area see Section 13288, Para 3.1.1.

3.02 PREPARATION OF MOULD WORK AREA (<1 SQUARE METRE IN HVAC SYSTEMS)

- .1 HVAC systems of concern shall be shut down prior to remedial activities.
- .2 Take necessary precautions to ensure that components of HVAC systems are not contaminated during remediation. Remove and bag filters.
- .3 Barriers shall be erected around Mold Contaminated Work Area before remediation using a single layer of 0.15 mm fibre reinforced polyethylene sheeting affixed to floor and ceiling with fibre reinforced adhesive tape, with a slit entry and a covering flap, to contain dust and debris.
- .4 Use 0.15 mm fibre reinforced polyethylene drop sheets tightly sealed to floor with fibre reinforced adhesive tape to minimize dust and contamination.

3.03 MICROBIAL REMEDIATION MOULD WORK AREA (<1 TO 3 SQUARE METERS)

- .1 Use a sprayer (low velocity, fine-mist) to mist (not wet) materials containing mould to be cut or scraped. Perform work in a manner to reduce dust creation to lowest levels practicable.
- .2 Non-porous materials (e.g. metals, glass and hard plastics) and semi-porous materials (e.g. wood studs, and some furniture) can be cleaned using the detergent solution and reused depending on the depth to which microbial growth has penetrated the substrate. Wood to be discarded if fungal growth has affected its soundness.

- .3 Porous materials, ceiling tiles, insulation and wallboards with more than a small area of mould contaminated and/or dampness to be removed and discarded.
- .4 Porous materials identified as lightly contaminated that can be cleaned by HEPA vacuuming washing or damp wiped can be reused, but to be discarded or replaced if possible.
- .5 Contaminated building materials shall be disposed as outlined in paragraph 3.6.
- .6 If at any time during remediation, should Engineer or Contractor suspect contamination of areas outside Mould Contaminated Work Area, the Contractor shall stop remediation work and immediately decontaminate these affected areas on direction of the Engineer. Eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until a visual inspection determines areas are free from contamination.
- .7 Notify Engineer of mould contaminated material discovered during work and not apparent from drawings, call up or report pertaining to work. Do not disturb such material pending instructions from the Engineer.

3.04 MICROBIAL REMEDIATION MOULD WORK AREA (< 1 SQUARE METRE IN HVAC SYSTEM)

- .1 Use a sprayer (low-velocity, fine-mist) to mist (not wet) materials containing mould to be cut scraped. Perform work in a manner to reduce dust creation to lowest levels practicable.
- .2 Porous materials in HVAC systems such as the insulation of the interior lined ducts and filters must be removed to bare (underlying) metal and the materials properly discarded.
- .3 Contaminated building materials shall be disposed as outlined in paragraph 3.6.
- .4 If at any time during the remediation, should the Engineer or Contractor suspect contamination of areas outside Mould Work Area, contractor shall stop remediation work and immediately decontaminate these affected areas on the direction of the Engineer. Eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until a visual inspection determines the areas are free from contamination.
- .5 Notify Engineer of mould contaminated material discovered during work and not apparent from drawings, call up, or report pertaining to work. Do not disturb such material pending instructions from the Engineer.

3.05 REPAIR AND CLEAN-UP

- .1 Frequently during work and immediately after completion of work, Mould Contaminated Work Area shall be cleaned using a HEPA vacuum and/or by damp mopping with a cleaning solution.
- .2 Restoration of designated Mould Contaminated Work Area shall be performed

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as contract specifies.

- .3 Areas shall be left dry and visibly free from contamination, debris and dust.
- .4 Perform final thorough clean-up of work areas and adjacent areas affected by work using HEPA vacuum and/or damp mopping with detergent solution.

3.06 WASTE DISPOSAL

- .1 Place dust and mould-containing waste in doubled-bagged dust-tight 0.15 mm clear polyethylene waste bags. Treat drop sheets and disposable protective clothing as waste; fold these items to contain dust, and place in plastic bags. Securely seal bags.
- .2 Clean the exterior of each waste-filled bag using damp cloths and a cleaning solution or a HEPA vacuum prior to removal from Mould Contaminated Work Area.
- .3 Remove waste bags from site and dispose. There is no special requirements for disposal of mouldy materials, as such they can be disposed of in a landfill.

3.07 RE-ESTABLISHMENT OF OBJECTS AND SYSTEMS

- .1 Contractor shall relocate objects moved to temporary locations to their proper positions. Ensure objects are cleaned before been moved into cleaned areas.
- .2 Re-mount objects removed to former positions.
- .3 Reinstall new filters if required in HVAC systems.
- .4 Re-establish mechanical and electrical systems (if necessary) to proper working order.

3.08 FINAL CLEARANCE

- .1 The Engineer shall conduct a thorough visual inspection to detect visible accumulations of dust or bulk materials remaining in work area. Should dust, debris, microbial contamination, or residue be detected the contractor shall repeat cleaning at contractors expense until area meets approval.

END OF SECTION

1 GENERAL

1.01 SECTION INCLUDES

- .1 This Section has been designed to provide general practices and procedures for Level 2 or Intermediate Precaution Remediations are defined as; Isolated areas of between 3 - 10 square meters of contaminated surfaces.

1.02 REFERENCES

- .1 See Section 13289, Para 1.2, References.

1.03 DEFINITIONS

- .1 See Section 13289, Para 1.3, Definitions.

1.04 REGULATORY REQUIREMENTS

- .1 See Section 13289, Para 1.4, Regulatory Requirements.

1.05 SUBMITTALS

- .1 See Section 13289, Para 1.5, Submittals.

1.06 CLOSEOUT SUBMITTALS

- .1 See Section 13289, Para 1.6.1 and 1.6.2, General Log and Daily Log.

1.07 INSTRUCTION AND TRAINING

- .1 See Section 13289, Para 1.7, Instruction and Training.

1.08 WORKER PROTECTION

- .1 Respirators suitable for protection against mould and acceptable to Provincial Authority having jurisdiction Non-powered disposable filter-type respirator of type N95 OSHA 29 CFR 1910.134 half-face equipped with replaceable HEPA filter cartridges or full-face air purifying respirators (APR) equipped with replaceable HEPA filter cartridges, personally issued to the work and marked as to efficiency and purpose.
- .2 Gloves and eye protection.
- .3 Disposable paper coveralls including head covering.
- .4 See Section 13289, Para 1.8.4.2, Facial Hair.
- .5 See Section 13289, Para 1.8.4.3, Eating and Drinking.
- .6 Before leaving the Mould Contaminated Work Area, dispose of protective clothing as specified in Section 13289, Para 3.8, Waste Disposal.
- .7 Ensure workers wash hands and face after leaving Mould Contaminated Work

Area. Facilities for washing are located as indicated on drawings.

1.09 VISITOR PROTECTION

- .1 Protective clothing and approved respirators as per para 1.8.1, Respirators shall be worn by Authorized Visitors to Mould Contaminated Work Area.
- .2 Instruct Authorized Visitors in use of protective clothing, respirators, and procedures.
- .3 Instruct Authorized Visitors in proper procedures to be followed in entering into and exiting from Mould contaminated work area.

1.10 HOURS OF WORK

- .1 Typical work schedule - Work shall be performed as per Section 01005, para 17.1.

2 PRODUCTS

2.01 MATERIALS

- .1 See Section 13289, Para 2.1, Materials.

2.02 TOOLS AND EQUIPMENT

- .1 See Section 13289, Para's 2.2.1, suitable equipment; 2.2.2, PPE; 2.2.3, exhaust air fans; 2.2.5, vacuum cleaners; 2.2.6, ladders and scaffolds and 2.2.7, other materials.

3 EXECUTION

3.01 PREPARATION OF MOULD CONTAMINATED WORK AREA (3-10 m²)

- .1 Use 0.15 mm fibre reinforced drop sheets tightly sealed with fibre reinforced adhesive tape over flooring in work areas.
- .2 Do not begin remediation work until barriers are inspected and authorization is given by Engineer.
- .3 See Section 13289, Para's 3.1.1 to 3.1.10 and 3.1.15

3.02 MICROBIAL REMEDIATION

- .1 If remediation procedures are expected to generate a lot of dust or the visible concentration of fungi is heavy (blanket as opposed to patchy coverage), then it is recommended that Maximum Precautions Section 13289 for Mould Remediation be followed using full containment.
- .2 Use sprayer (low-velocity, fine-mist) to mist (not wet) materials containing mould to be cut or scraped. Perform work in a manner to reduce dust creation to lowest levels practicable.

- .3 Non-porous (e.g. metals, glass and hard plastics) and semi-porous (e.g. wood studs) materials can be cleaned using the cleaning solution and reused depending on the depth to which microbial growth has penetrated the substrate. Wood to be discarded if fungal growth has affected its soundness.
- .4 Porous materials ceiling tiles insulation wallboards with more than 1 square metre of mould contamination and/or dampness to be removed and discarded.
- .5 Porous materials identified as lightly contaminated that can be cleaned by HEPA vacuuming washing damp wiping can be reused, but to be discarded and replaced if possible.
- .6 Contaminated building materials shall be disposed as outlined in paragraph 3.4.
- .7 During mould remediation, should the Engineer or Contractor suspect contamination of areas outside the enclosed Mould Contaminated Work Area, contractor shall stop remediation work and immediately decontaminate affected areas on direction of the Engineer. Eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering these contaminated areas until air and swab sampling and a visual inspection determines the areas are free from contamination.
- .8 Notify the Engineer of mould contaminated material discovered during work and not apparent from drawings, specifications or report pertaining to work. Do not disturb such material pending instructions from the Engineer.

3.03 REPAIR AND CLEAN-UP

- .1 During Mould Remediation and immediately after completion of mould remediation, the enclosure shall be cleaned starting within the top of enclosure and working down to floor. Areas shall be cleaned using a HEPA vacuum and/or by damp mopping with the cleaning solution.
- .2 Restoration of the designated Mould Contaminated Work Area shall be performed as the Engineer specifies.
- .3 Areas shall be left dry and visibly free from contamination, debris and dust.
- .4 After clean-up within barrier, barrier shall be dismantled when ordered by the Engineer and disposed of as outlined in paragraph 3.4.
- .5 Perform final thorough clean-up of work areas and adjacent areas affected by work using HEPA vacuum and/or damp mopping with cleaning solution.

3.04 WASTE DISPOSAL

- .1 Place debris and mold-containing waste in doubled-bagged dust-tight 0.15 mm fibre reinforced clear polyethylene waste bags. Treat drop sheets and disposable protective clothing as waste; fold these items to contain dust, and place in plastic bags. Securely seal bags.
- .2 Large items that have heavy mould growth shall be covered with fibre reinforced polyethylene sheeting and sealed with fibre reinforced adhesive tape before they are removed from the enclosure.

- .3 Clean exterior of each waste-filled bag using damp cloths or a HEPA vacuum prior to removal from Mould Contaminated Work Area.
- .4 Remove waste bags from site and dispose. There is no special requirements for the disposal of mouldy materials, as such they can be disposed of in a landfill.

3.05 RE-ESTABLISHMENT OF OBJECTS AND SYSTEMS

- .1 Contractor shall return objects moved to temporary locations to their location. Ensure objects are cleaned before being moved into cleaned areas.
- .2 Re-mount objects removed to former positions.
- .3 Re-establish mechanical and electrical systems (if necessary) to proper working order. Install new filters into HVAC systems serving the affected area as part of remediation.

3.06 FINAL CLEARANCE

- .1 The Engineer shall conduct a thorough visual inspection to detect visible accumulations of dust or bulk materials remaining in the work area. Should dust, debris, microbial contamination or residue be detected the contractor shall repeat cleaning at contractors expense, until area meets approval.
- .2 Before and after the work, air samples shall be taken inside of Mould Contaminated Work Area enclosures in accordance with recommended guidelines.
- .3 Final air monitoring of Mould Contaminated Work Area shall be performed provided the area has passed a visual inspection and an appropriate settling period of a minimum of 12 hours has passed. If air monitoring results are deemed unacceptable by the Engineer areas shall be re-cleaned with a HEPA vacuum and damp wiped until levels are found to be acceptable by the Engineer.

END OF SECTION

1 GENERAL

1.01 SUMMARY

- .1 This Section has been designed to provide general practices and procedures for; Maximum Precaution Remediations are defined as ; Greater than 10 contiguous square meters of contaminated surfaces in an area, and greater than 1 square meter of contaminated surface in an HVAC system.

1.02 REFERENCES

- .1 Occupational Safety and Health Administration U.S. Department of Public Safety:
 - .1 29 CFR 1910.134 - Respiratory Protection; and
 - .2 29 CFR 1910.1200 - Hazard Communication Strategy.
- .2 United States Environmental Protection Agency (EPA), Mould Remediation in Schools and Commercial Buildings 2001.
- .3 New York City Department of Health - Bureau of Environmental and Occupational Disease Epidemiology's Guidelines on the Assessment and Remediation of Fungi in Indoor Environment 2000.
- .4 Indoor Air Quality in Office Buildings: A Technical Guide 93-EHD-166.

1.03 DEFINITIONS

- .1 Authorized Visitors: Engineers, Consultants or designated representatives, and representatives of regulatory agencies.
- .2 Cleaning solution: Detergent solution of 5% bleach to water.
- .3 Competent person: An individual Engineer or Consultant who can demonstrate that mould remediation training has been obtained, is capable of identifying existing microbial hazards in the work place and selecting the appropriate control strategy for microbial exposure.
- .4 Contractor: Remediation contractor providing demolition and removal services as defined in the specification.
- .5 Critical barrier or enclosure: A minimum of two separate layers of 0.15 mm fibre reinforced polyethylene sheeting (FRPS) tarp taped securely and separately over windows, doorways, diffusers, grilles and any other openings between the work area and uncontaminated areas outside of the work area including the outside of the building.
- .6 Curtained doorway: An arrangement of closures to allow ingress and egress from one room to another. Typically constructed as follows: Place two overlapping sheets (minimum overlap of 1 metre or width of doorway) of FRPS tarp over an existing or temporarily framed doorway, securing each along the top of doorway, securing the vertical edge of one sheet along one vertical side of doorway and securing the vertical edge of other sheet along the opposite vertical side of the doorway. Reinforce free edges of FRPS, tarp with fibre reinforced adhesive tape and weight the bottom edge to ensure

proper closing. Curtained doorways shall be spaced at a minimum of 2 metres apart.

- .7 Decontamination Room: An enclosure located between Mould Contaminated Work Area and uncontaminated area for decontamination of equipment and workers, typically consisting of two curtained doorways at least 2 metres apart.
- .8 Fibre Reinforced Polyethylene Sheet (FRPS): rip-proof polyethylene sheeting with fibre reinforced adhesive tape added along edges.
- .9 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with filter system capable of collecting and retaining particles greater than 0.3 microns in any direction at 99.97% efficiency.
- .10 HVAC: Heating ventilating and air-conditioning systems which serve occupied areas. Includes but is not limited to air handling units, duct work, terminal boxes and grills.
- .11 Mould Contaminated Work Area (MCWA): Specific area or location where actual work is being performed or such other area of a facility which it has been determined may be hazardous to public health as a result of the mould remediation.
- .12 Negative pressure: Mould Contaminated Work Area shall be maintained at a negative pressure relative to surrounding space to prevent contaminants from leaving the contaminated area. An exhaust fan with a HEPA filter shall be used to maintain Mould Contaminated Work Area at a lower pressure than surrounding areas. A pressure differential of 5 to 7 Pa shall be maintained at all times. Air flow movement can be verified with smoke pencil.
- .13 Occupied Area: Areas of building or work site that is outside Mould Contaminated Work Area.
- .14 PPE: Personnel Protection Equipment.
- .15 Sprayer: Garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Must have a minimum of six litres capacity for work.

1.04 REGULATORY REQUIREMENTS

- .1 Comply with regulations in effect at time work is performed. In case of conflict among these requirements or with these specifications the more stringent requirement applies. If no regulations exist, follow guidelines most widely accepted by recognized professional organizations such as occupational hygienists, health professionals or environmental engineers as listed in paragraph 1.2 References.

1.05 SUBMITTALS

- .1 Submit proof satisfactory to Engineer that employees have had instruction on potential hazards of mould exposure, use of personal respirator and protective clothing, entry and exit from work areas and aspects of work procedures and protective measures.
- .2 Submit proof of attendance in form of certificate that supervisory personnel and Technicians have been trained in asbestos mould remediation course,

- approved by Engineer. Minimum of one supervisor for every ten trained workers.
- .3 Submit proof of qualifications of both remediation supervisor and subcontractors.
 - .4 Submit layout of proposed enclosures and decontamination facilities to Engineer for review.
 - .5 Submit Provincial and/or local requirements for Notice of Project Form.
 - .6 Submit proof of Two million dollars (\$2,000,000.00) Contractors Liability Insurance to PWGSC prior to award of this contract.
 - .7 Submit fitting record by construction safety advisor to the Engineer that all employees have prior respirator fitting and testing. Workers must be fit tested (irritant smoke test) with the respirator that is personally issued.
 - .8 Submit Workplace Health Safety and Compensation Commission of NB status and transcription of insurance.

1.06 CLOSEOUT SUBMITTALS

- .1 The general log provides a permanent record of the project. The contractor is responsible for maintaining logs, including negative pressure records and other required documentation as part of the permanent project file.
- .2 Daily log must be available for inspection upon request by Engineer.
- .3 Visitor log must be available for inspection upon request by Engineer.

1.07 INSTRUCTION AND TRAINING

- .1 Before commencing work, provide to Engineer proof that workers have had instruction and training in potential health hazards of mould exposure, handling of hazardous materials, in personal hygiene including protective clothing, entry and exit from Mould Contaminated Work Area, use of disposal procedures including building materials, respirators, protective clothing and Workplace Hazardous Material Information System WHMIS. This training can be performed as part of a program to comply with the requirements of the OHSa Hazard Communication Standard (29 CFR 1910.1200) or equivalent.
- .2 Instruction and training related to the use of personal respirators:
 - .1 Fitting of equipment;
 - .2 Inspection and maintenance of equipment;
 - .3 Disinfecting of equipment; and
 - .4 Limitations of equipment.
- .3 Instruction and training must be provided by the designated construction safety advisor.
- .4 Supervisory personnel to complete required training in mould remediation as specified in paragraph 1.6.2.

1.08 WORKER PROTECTION

- .1 As a minimum, a full-face dual cartridge negative air purifying respirator equipped with HEPA filter cartridges shall be worn. Disposable respirators shall not be allowed.
- .2 Gloves that extend to middle of forearm.
- .3 Mould-impervious polyethylene coated disposable head and foot coverings, and a body suit made of a breathable material shall be used. Gaps, such as those around ankles and wrists, shall be sealed with fibre reinforced adhesive tape.
- .4 Procedures for entering Mould Contaminated Work Area. Each worker shall:
 - .1 Remove street clothes in the Decontamination Room and put on respirator with new filters or reusable filters, clean disposable protective clothing and head covers before entering Mould Contaminated Work Area. Street clothes, uncontaminated footwear and towels shall be stored in Decontamination Room;
 - .2 Ensure that no person required to enter Mould Contaminated Work Area has facial hair that affects the seal between respirator and face; and
 - .3 Eating and drinking are not permitted in Mould Contaminated Work Area. Drinking is permitted in the Decontamination Area.
- .5 Procedures for exiting Mould Contaminated Work Area. Workers shall:
 - .1 Remove gross contamination from clothing before leaving work area then proceed to the Decontamination Room and remove disposable protective clothing except respirators. Place contaminated worksuits in closed containers for disposal with mould contaminated materials;
 - .2 Clean outside of respirator with cleaning solution. Remove respirator, remove and dispose of filters in the container provided for the purpose. Wash and rinse the inside of respirator;
 - .3 When not in use in the work area, store reusable work footwear in Decontamination Room. Upon completion of mould remediation, clean footwear thoroughly inside and out using cleaning solution before removing from Mould Contaminated Work Area or from Decontamination Room;
 - .4 Proceed to decontamination room and change into street clothes at the end of each day's work; and
 - .5 If re-entering work area, follow entering and exiting procedures outlined in paragraphs above.
- .6 Workers shall be fully protected with respirators and protective equipment clothing during preparation of erecting enclosure prior to commencing actual mould remediation.
- .7 Post in the Decontamination room the procedures described in paragraph 1.8.5 of this section, in both official languages.

1.09 VISITOR PROTECTION

- .1 Protective clothing and approved respirators (see para 1.8.1) shall be worn by Authorized Visitors to Mould Contaminated Work Area.
- .2 Instruct Authorized Visitors in proper use of protective clothing, respirators, and procedures.

- .3 Instruct Authorized Visitors proper procedures to be followed in entering into and exiting from Mould Contaminated Work Area.

1.10 SITE CONDITIONS

- .1 Inform sub-trades of presence of mold-contaminated materials and potential health hazards of mould exposure.
- .2 Submit to Engineer a copy of notifications prior to the start of work.

1.11 HOURS OF WORK

- .1 Typical work schedule - Work shall be performed as per Section 00 21 13, para 20.1.

2 PRODUCTS

2.01 MATERIALS

- .1 Drop Sheets: Fibre reinforced polyethylene 0.15 mm thick woven fibre reinforced fabric bonded both sides with polyethylene.
- .2 Disposal bags: dust-tight 0.15 mm clear polyethylene waste bags.
- .3 Wetting Agent: water to mist the mould-containing material.
- .4 Cleaning solution: environmentally friendly detergent solution for damp wipe and/or mop as per 1.3.1. Material Safety Data Sheet shall be submitted for biocides to be used as recommended by manufacturer of material to be cleaned.
- .5 Fibre reinforced adhesive tape shall be used in sealing joints of fibre reinforced polyethylene sheets and for attachment of fibre reinforced polyethylene sheet to finished and unfinished surfaces. Fibre reinforced adhesive tape must be capable of adhering under both dry and wet conditions.

2.02 TOOLS AND EQUIPMENT

- .1 Tools and equipment shall be suitable for use with microbial contamination and must be able to withstand de-contamination.
- .2 Personnel protective equipment (protective clothing, personal respiratory filter cartridges, HEPA air filters, etc.) shall be provided in sufficient quantities for duration of project.
- .3 Exhaust air fan systems shall be equipped with HEPA filters and be capable of providing sufficient exhaust air to create a minimum pressure differential of 5 to 7 Pa and to allow a sufficient flow of air through area.
- .4 Pressure differential automatic recording instrument shall be provided to ensure exhaust air devices provide the minimum pressure differential required between Mould Contaminated Work Area and uncontaminated areas. Equipment shall be installed in the critical barrier between Mould Contaminated Work Area and uncontaminated areas and gap shall be sealed

with fibre reinforced adhesive tape.

- .5 Vacuum cleaners shall have HEPA filters.
- .6 Ladders and/or scaffolds shall be of adequate length, strength and sufficient quantity to support work schedule.
- .7 Materials such as polyethylene sheeting, lumber, nails and other hardware necessary to construct and dismantle decontamination enclosures and barriers that isolate Mould Work Area shall be provided as appropriate for the work.

3 EXECUTION

3.01 PREPARATION OF MOULD CONTAMINATED WORK AREAS (GREATER THAN 10 SQUARE METRES CONTAMINATED IN AN AREA)

- .1 Mould Contaminated Work Area and areas adjacent and around shall be unoccupied. Vacating is required for infants (less than 12 months old), elderly people, persons having undergone recent surgery, immune suppressed people or people with chronic inflammatory lung diseases (e.g. asthma, hypersensitivity pneumonitis and severe allergies).
- .2 One supervisor for every ten trained mould remediation workers is required.
- .3 Approved supervisor must remain within Mould Contaminated Work Area at all times during disturbance, removal, or other handling of mold-contaminated materials.
- .4 HVAC systems serving Mould Contaminated Work Areas shall be turned off prior to starting remediation work to prevent contamination and dust dispersal to other areas of the building.
- .5 Clean movable objects within proposed Mould Contaminated Work Area using HEPA filtered vacuum, damp wipe surfaces and remove such objects from Mould Contaminated Work Area to a secure and clean area.
- .6 Clean fixed objects within proposed work area using HEPA filtered vacuum, damp wipe surfaces and enclose with 2 separate layers of 0.15 mm fibre reinforced polyethylene sheeting securely sealed with fibre reinforced adhesive tape.
- .7 Remove visible dust from surfaces in work area where dust is likely to be disturbed during the course of mould remediation work. Use HEPA vacuum and damp wipe the area.
- .8 Do not use compressed air to clean up or remove dust from surfaces.
- .9 Seal off windows, doorways, skylights, ducts, grilles, diffusers, ceiling plenums, electrical outlets and any openings between the work area and uncontaminated areas to prevent spread of dirt and spores with 2 separate layers of 0.15 mm fibre reinforced polyethylene sheeting securely held in place by fibre reinforced adhesive tape. Doorways and corridors which will not be used for passage during work must be sealed with fixed critical barriers.

- .10 Critical barriers shall be erected around perimeter of Mould Contaminated Work Area before remediation using two separate layers of 0.15 mm fibre reinforced polyethylene sheeting extending from floor slab to as close as possible to underside of ceiling slab. Gaps due to ductwork, piping conduits shall be sealed with 2 separate layers of 0.15 mm fibre reinforced polyethylene sheeting. For larger areas, a steel or wooden stud frame can be erected and fibre reinforced polyethylene sheeting attached to it. In general, openings greater than 3 square metres shall be framed with 38 x 89 mm studs spaced 400 mm on center. Barriers must be constructed without disturbing contaminated materials.
- .11 Floor and wall surfaces within enclosure which are not to be removed as microbial waste shall be sealed with a minimum of 2 separate layers of 0.15 mm polyethylene sheeting. Cover floors first so that fibre reinforced polyethylene extends at least 300 mm and fold up against the enclosure wall, vertical fibre reinforced polyethylene sheet shall overlap the floor fold up.
- .12 Build worker Decontamination Room at exits from work areas.
- .13 Put negative pressure system in operation and operate continuously from the time the first fibre reinforced polyethylene is installed to seal openings until final completion of work including final clean-up. Provide continuous monitoring of pressure differential using an automatic recording instrument.
- .14 After Mould Contaminated Work Area enclosure is completed, remove HVAC filters, pack in sealed plastic bags 0.15 mm minimum thickness and treat as contaminated waste. Remove objects that might interfere with mould removal, as directed by the Engineer. Use HEPA vacuum during fixture removal to reduce dust dispersal.
- .15 Before beginning mould remediation work, at each access to Mould Contaminated Work Area, install warning signs in both official languages in upper case 'Helvetica Medium' letters reading as follows, where the number in parentheses indicates the font size to be used: 'CAUTION MOULD HAZARD AREA (25 mm) / NO UNAUTHORIZED ENTRY (19 mm) / WEAR ASSIGNED PROTECTIVE EQUIPMENT (19 mm) / BREATHING MOULD DUST MAY CAUSE SERIOUS BODILY HARM (7 mm)'.

3.02 PREPARATION OF WORKER DECONTAMINATION ENCLOSURE SYSTEM

- .1 Establish a worker decontamination enclosure system between Mould Contaminated Work Area and uncontaminated area. Access to Mould Contaminated work area shall be through this enclosure.
- .2 Access to Decontamination Room shall be through double flap curtained openings.
- .3 Decontamination Room: Build Decontamination Room between Mould Contaminated Work Areas, with two curtained doorways, one to Mould Contaminated Work Area and one to uncontaminated areas. Install waste receptor and storage facilities for workers' shoes and any protective clothing to be re worn in Decontamination Room. Decontamination Room shall be large enough to accommodate specified facilities, other equipment needed, and at least one worker allowing sufficient space to change clothes comfortably. Provide storage for clean protective clothing and respiratory equipment. Install

a mirror to permit workers to fit respiratory equipment properly.

- .4 No personnel shall be permitted to leave the Decontamination Room unless first decontaminated by changing, wet cleaning or HEPA vacuuming to remove dust and mould spores. No contaminated materials or persons shall enter the uncontaminated area.

3.03 MAINTENANCE OF ENCLOSURES

- .1 Maintain enclosures in tidy condition.
- .2 Ensure that barriers and fibre reinforced polyethylene linings are effectively sealed with duct tape at the beginning of each working period. Repair damaged barriers and remedy defects immediately upon discovery.
- .3 Use smoke methods to test effectiveness of barriers when directed by the Engineer.

3.04 PREPARATION OF HVAC SYSTEM ENCLOSURES (> 1 SQUARE METRE CONTAMINATION)

- .1 Preparation of enclosures as outlined in paragraphs 3.1 and 3.2.1 to 3.2.4 can be applied to remediation of microbial growth on outside or inside surfaces of HVAC systems.
- .2 HVAC systems shall be shut down prior to mould remedial activities.
- .3 Take necessary precautions to ensure that components of HVAC systems are not contaminated during remediation, especially porous materials such as filters.
- .4 Decontamination rooms are required if contamination is greater than 1 square metres.

3.05 MICROBIAL REMEDIATION WORK AREAS

- .1 Mould remediation work shall not commence until:
 - .1 Mould Contaminated Work Areas and decontamination enclosures are effectively segregated from parts of the building required to remain in use. Enclosures are to be inspected by the Engineer;
 - .2 Tools, equipment and materials waste containers are on site;
 - .3 Building security has been set up;
 - .4 Warning signs as specified in paragraph 3.1.15 are displayed where access to contaminated areas is possible; and
 - .5 Notifications have been completed and preparatory steps have been taken.
- .2 Authorized supervisor employed by the contractor and qualified in microbial contamination remediation shall be on the job at all times to ensure establishment and maintenance of the negative pressure enclosure and proper work practices throughout the project.
- .3 Do not begin remediation work until authorized by the Engineer.
- .4 Use sprayer (low-velocity, fine mist) to mist (not wet) where materials containing mould to be cut or scraped. Perform work in a manner to reduce

dust creation to lowest levels practicable.

- .5 Remove microbial contaminated materials in designated locations as outlined in Call Up. Removal shall also include visibly contaminated material as determined by the Engineer.
- .6 Remove contaminated material in small sections within the enclosure. Pack material in sealable plastic bags 0.15 mm minimum thickness and place in containers for disposal.
- .7 Non-porous (e.g. metals, glass and hard plastics) and semi-porous (e.g. wood studs and some furniture) materials that are identified as contaminated can be cleaned using the detergent solution and reused depending on depth to which microbial growth has penetrated the substrate. Wood to be discarded if fungal growth has affected its soundness.
- .8 Where designated waste container is not used, remove sealed containers containing mould waste and dispose following procedures outlined in paragraph 3.8.
- .9 During mould remediation, should the Engineer or Contractor suspect contamination of areas outside the enclosed Mould Contaminated Work Area the contractor shall stop remediation work and immediately decontaminate these affected areas on direction of the Engineer. Eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering these contaminated areas until air and swab sampling and visual inspections determine areas are free of contamination.

3.06 MICROBIAL REMEDIATION HVAC WORK AREA

- .1 Porous materials in HVAC systems such as the insulation of the interior lined ducts, fibrous insulation and filters must be removed to the bare (underlying) metal and the materials properly discarded as outlined in paragraph 3.8.2.
- .2 Material Safety Data Sheet shall be submitted for biocides to be used as recommended by HVAC manufacturer with HVAC components (cooling coils and condensation pans).
- .3 Any time during the remediation, should the Engineer or Contractor suspect contamination of areas outside the work area the contractor shall stop remediation work and immediately decontaminate these affected areas on direction of the Engineer. Eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering these contaminated areas until air and surface sampling and visual inspections determine area(s) are free of contamination.

3.07 REPAIR AND CLEAN-UP

- .1 During mould remediation and immediately after completion of mould remediation, enclosure shall be cleaned starting within the top of enclosure and working down to floors. Both enclosed area and the Decontamination Room shall be cleaned using a HEPA vacuum and/or by damp mopping with the cleaning solution.
- .2 The inside layer of polyethylene sheeting within the work area shall be HEPA vacuumed and damp wiped prior to removal. Removal of this layer shall

occur after removal and decontamination activities are completed and work area inspected by Engineer.

- .3 Restoration of designated Mould Contaminated Work shall be performed as call up specifies.
- .4 Remove inside layer of fibre reinforced polyethylene sheeting by rolling it away from walls to centre of work area. Vacuum visible debris during cleanup, immediately, using a HEPA vacuum.
- .5 A minimum of twelve hours after the inside layer of fibre reinforced polyethylene sheeting has been removed, second layer of polyethylene sheeting shall be HEPA vacuumed and damp wiped.
- .6 Decontamination Room shall be included in a similar clean-up.
- .7 Non-essential fibre reinforced polyethylene sheeting and visible accumulations of material and debris shall be removed.
- .8 Dispose of used fibre reinforced polyethylene sheets, used fibre reinforced adhesive tape, cleaning material, clothing, and contaminated waste as described in paragraph 3.8.1 and 3.8.2.
- .9 Sealed waste containers and equipment used in Mould Contaminated Work Areas shall be included in cleanup and shall be removed from work areas, via the Decontamination Room.
- .10 A final visual inspection check shall be carried out to ensure that no dust or debris remains on surfaces as a result of dismantling operations. Final clearance air sampling shall be performed and deemed acceptable by the Engineer prior to re-occupancy. Repeat cleaning using HEPA vacuum equipment, or damp cleaning methods, in conjunction with sampling until levels meet this criteria.
- .11 Upon notification that final tests are acceptable all remaining critical barriers may be removed. Surfaces behind the containment barriers, including walls, floors, ceiling tiles, windows, doors and other surfaces shall be HEPA vacuumed. Adjacent interior spaces within 3 metres of former location of containment barriers shall also be HEPA vacuumed.

3.08 WASTE DISPOSAL

- .1 Place debris and mold-containing waste in doubled-bagged dust-tight 0.15 mm clear polyethylene waste bags. Treat drop sheets and disposable protective clothing as waste; fold these items to contain dust, and place in plastic bags. Securely seal bags and place in waste containers for transport.
- .2 Large items that have heavy mould growth shall be covered with two layers of polyethylene sheeting and sealed with fibre reinforced adhesive tape before they are removed from the cleaned work area.
- .3 Outside of bags and/or waste containers shall be cleaned with a damp cloth and a cleaning solution or HEPA vacuumed prior to their transport to uncontaminated areas of building.
- .4 Remove waste bags and/or containers from site and dispose. There is no

special requirement for the disposal of mouldy materials, as such they can be disposed of in a landfill.

3.09 RE-ESTABLISHMENT OF MOVABLE OBJECTS AND SYSTEMS

- .1 Contractor shall return objects moved to temporary locations to their original location. Ensure objects are cleaned before been moved into cleaned area.
- .2 Re-mount objects to former positions where possible.
- .3 Advise the Engineer to re-establish HVAC and electrical systems to proper working condition. Replace filters if required in HVAC system serving the affected areas.

3.10 AIR MONITORING AND FINAL CLEARANCE

- .1 Before and after the work, air samples shall be taken inside of Mould Contaminated Work Area enclosures in accordance with recommended guidelines.
- .2 The Engineer shall conduct a thorough visual inspection to detect visible accumulations of dust or bulk materials remaining in the work area. Should dust, debris, microbial contamination, or residue be detected the contractor shall repeat the cleaning at the contractor's expense, until the area meets approval.
- .3 Final air monitoring of the Mould Contaminated Work Area shall be performed provided the area has passed a visual inspection and an appropriate settling period of 12 hours has passed. If air monitoring results are deemed unacceptable by the Engineer the areas shall be re-cleaned with a HEPA vacuum and damp wiped until levels are found to be acceptable by the Engineer.

END OF SECTION