

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
Réception des soumissions - TPSGC / Bid Receiving  
- PWGSC  
1550, Avenue d'Estimauville  
1550, D'Estimauville Avenue  
Québec  
Québec  
G1J 0C7

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address**  
Raison sociale et adresse du  
fournisseur/de l'entrepreneur

**Issuing Office - Bureau de distribution**  
TPSGC/PWGSC  
601-1550, Avenue d'Estimauville  
Québec  
Québec  
G1J 0C7

Title - Sujet DFO-SMITH		
Solicitation No. - N° de l'invitation F3006-14N642/A		Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client F3006-14N642		Date 2014-12-10
GETS Reference No. - N° de référence de SEAG PW-\$QCL-036-16205		
File No. - N° de dossier QCL-4-37212 (036)	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-12-16		Time Zone Fuseau horaire Heure Normale du l'Est HNE
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>		
Address Enquiries to: - Adresser toutes questions à: Gagnon, Mathieu		Buyer Id - Id de l'acheteur qcl036
Telephone No. - N° de téléphone (418) 649-2883 ( )		FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:		

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Solicitation No. - N° de l'invitation

F3006-14N642/A

Client Ref. No. - N° de réf. du client

F3006-14N642

Amd. No. - N° de la modif.

002

File No. - N° du dossier

QCL-4-37212

Buyer ID - Id de l'acheteur

qc1036

CCC No./N° CCC - FMS No/ N° VME

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**See next page.**

**Please amend the above mentioned bidding solicitation with the changes here below in relation to questions and comments in suspend dated December 9<sup>th</sup> 2014 and related to the Bidder's Conference held on December 3<sup>rd</sup> 2014.**

### **Item No.1**

Please apply the following change to Invitation to Tender:

Item 1.2.1 Reference Table – Applicable regulation and documentation of the Repair Specification **must be replaced** with the following table:

1.2.1 Applicable regulations and documentation:

<b>FSSM Procedures</b>	<b>Title</b>	<b>Included Yes/No</b>
7.B.2.	Fall Protection	yes
7.B.3	Hazard Prevention Program	
7.D.9	Entry Into Confined Spaces	yes
7.D.11	Hotwork	yes
7.D.19	Lockout and Tagout	yes
7.F.6	Handling, Storage & Disposal of Hazardous Material	yes
7.F.9	Paint and Other Coatings	yes
7.F.10	Controlling Halocarbon Use Aboard Ships	yes
7.F.12	Potable Water Quality	
10.A.2	Contractor Liability	yes
Ship Specific	Vessel Specific - Asbestos Management Plan	
<b>Publications</b>		
TP3177E	Standard for the Control of Gas Hazards in Vessels to be Repaired or Altered	yes
T127E	Transport Canada Marine Safety Electrical Standard	yes
IEEE 45	Recommended Practice for Electrical Installation on Ships	yes
70-000-000-EU-JA-001	Specification for the Installation of Shipboard Electronic Equipment	Available from: CCG/ITS
CSA W47.1	Certification of Companies for Fusion Welding of Steel Structures Division 2 Certification	yes
CSA W47.2	Certification of Companies for Fusion Welding of Aluminum	
CSA W59	Welded Steel Construction – Metal Arc Welding	yes
CSA W59.2	Welded Aluminum Construction	
<b>Acts</b>		
CSA	Canada Shipping Act	yes
CLC	Canada Labour Code	yes
<b>Regulations</b>		
MOHS	Maritime Occupational Health and Safety	yes

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**Item No.2**

Please apply the following change to Invitation to Tender:

**ITEM 11.1 BULWARK PLATING AND ADJACENT STRUCTURAL MEMBERS**

The scope of must be done between March 2 and April 5, 2015.

**Scope of work – Add**

1. On the new weld do non destructive test for inspection
2. Change the stiffener that situed under desk plating as show in the following picture:

**Item No.3**

Please apply the following change to Invitation to Tender:

**ITEM 11.3 MAIN DECK HATCHES REPAIR****Scope of work – Add**

1. Supply matériel and labour to change all Deck hatches gaskets.
2. During the hatch removal, install insulated cover over the compartment entrance to avoid cold air penetration.

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## **Item No.4**

In Item 12.1 – Maintenance of two (2) Baudouin motors, **cancel paragraph 12.2 and replace with :**

### **12.1 Maintenance of two Baudouin engines**

#### **a. Objective**

Perform regulatory maintenance on two Baudouin propulsion engines according to the manufacturer's recommendations.

Baudouin engine serial nos.:

Starboard: 970730

Port: 970729

#### **b. Applicable technical documentation**

- Baudouin engine maintenance manual
- Parts book
- List of parts supplied by the CCG
- Baudouin maintenance document

#### **c. Scope of work**

- i. Overhaul the two (2) Baudouin engines 6P15.2SR with turbocharger according to the manufacturer's instructions in maintenance book no. 15 18 928 OM, sections R1, R2,R3 and R4 appended.
- ii. Perform the R1, R2 and R3 engine overhauls according to the manufacturer's recommendations as per the attached document, and perform the following:
  - Clean the oil coolers and perform a hydrostatic test at 1.5 times the operating pressure.
  - Completely overhaul the cylinder heads (disassemble all parts, take measurements and refurbish).
  - Completely overhaul the freshwater, transmission and cooling pumps.
  - Completely overhaul both sea water pumps.
  - Refurbish and calibrate the fuel pumps, and submit a performance report.
  - Refurbish the turbocharger.
  - Test the injectors.
  - Check and refurbish the injectors, and submit a performance report.
  - Clean the sea water cooler and perform a hydrostatic test.
  - Disassemble, clean and inspect the electric starter.
  - Replace:
    - the oil (supplied by vessel)
    - the antifreeze
  - The list of parts supplied by the CCG is appended. Extra parts will be additional to the contract.
  - Remove all piston and change ring and bottom end bearing
  - Homed the cylinder
- iii. Perform a four-hour test in the presence of the Chief Engineer and the technician who worked on the engines.

Submit a report on all the measurements taken and all the parts replaced.

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### **Item No.5**

Please apply the following change to Invitation to Tender:

In item 14.1 – *Trouble shooting and repair of ground fault* of the repair specification, the following requirement **must be added**:

- To provide a certificate of compliance at the end of the work.

### **Item No.6**

Please apply the following change to Invitation to Tender:

In item 14.2 – *Fuel Tank (2) Calibration* of the repair specification, the following requirements **must be added**:

- Do two(2) extra calibration on fuel tank.
- The calibration must be done on three level of the tank.
- For bid purpose supply a qualified labor to calibrated the fuel tank on the simplicity software , you must consider 20 hours of labour.
- The chief engineer must be in support to do all fuel transfer operation.

### **Item No.7**

Please apply the following change to Invitation to Tender:

Item 14.3 – *Ship's phase sharing* of the specification **must be included as follow**:

#### **Item 14.3 – Ship's phase sharing**

Supply specialized labour in electricity between to share the three phases equally. To execute de job you must modify the supply to heating power 230volt /1 phase on the corresponding panel. For bid purpose Bidders shall consider 20 hours of work.

### **Item No.8**

Bidder's question :

- 1- In the 'Operation Guide' to perform R2 item: what does the cleaning of silencer stage implied ?
- 2- In the 'operation Guide' to perform R" item: replacing hoses and clamps, is it only those that will be disassembled during the operations or they must all be replaced?
- 3- In the 'operation Guide' to perform R1 item: to verify engine coupling, does only one set will be disconnected or does the other must also be verified?
- 4- Regarding the accessibility hours from 07:00 am to 05:00 pm, Is it possible to get an extension for 12 hours per day or more?

**Réponse no.8 :**

- 1- Cancel this stage.
- 2- All hoses and clamps.
- 3- Only one coupling should be dismantled on the port side.
- 4- For now the hours of work must remain from 07:00 am to 05:00 pm.

**Item No.9**

Please apply the following change to Invitation to Tender:

**PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

Eliminate the table in section 4.1.5 – Deliverables after Contract award and replace with the following table:

Item	Description	Must be provided after Contract award within
1	Work Schedule and Reports as per article 7.16, Part 7	5 calendar days
2	Insurance Requirements as per article 7.11, Part 7	3 calendar days
3	Submit a detailed report of work and tests performed on document 5.0 Resultats.doc	End of contract
4	Inspection and Test Plan	3 calendar days

**Item No.10**

Please apply the following change to Invitation to Tender:

**PART 6 - Security, Financial and other Requirements, Item 6.7 – Welding Certification, must be modified as follow:**

**Eliminate** the following aluminium welding certification requirement:

- b) CSA W47.2, Certification of companies for fusion welding of aluminum;
- d) CSA W59.2, Welded aluminum construction.

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## **Item No.11**

Please apply the following change to Invitation to Tender:

**PART 7 – Resulting Contract Clauses, Item 6 – Payment, must be replaced with the following:**

### **6 Payment**

#### **6.1 Basis of Payment - Firm Price**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the firm price indicated in Annex B. Goods and Services Tax or Harmonized Sales Tax is extra, if applicable. Payment for unscheduled work will be done in accordance with Basis of Payment outlined at Annex B.

#### **6.2 Payment Terms - Progress Payments**

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work, up to 90 percent of the amount claimed and approved by Canada if:
  - (a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
  - (b) the amount claimed is in accordance with the basis of payment;
  - (c) the total amount for all progress payments paid by Canada does not exceed 90 percent of the total amount to be paid under the Contract;
  - (d) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.
2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted.
3. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

#### **6.3 SACC Manual Clauses**

SACC Manual Clause C6000C (2011-05-16)  
SACC Manual Clause H4500C (2010-01-11)

Limitation of Price  
Lien - Section 427 of the Bank Act

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## **Item No.12**

**PART 7 – Resulting Contract Clauses, Item 22 – Quality Control Plan, must be included as follow:**

### **22 Quality Control Plan**

The Contractor must implement and follow the Quality Control Plan (QCP) prepared according to the latest issue (at contract date) of ISO 10005 Quality management - Guidelines for quality plans, approved by the Inspection and Technical Authorities. The QCP shall describe how the Contractor will conform to the specified quality requirements of the Contract and specify how the required quality activities are to be carried out, including quality assurance of subcontractors. The Contractor must include a traceability matrix from the elements of the specified quality requirements to the corresponding paragraphs in the QCP.

The documents referenced in the QCP shall be made available when requested by the Inspection Authority.

The Contractor must make appropriate amendments to the QCP throughout the term of the contract to reflect current and planned quality activities. Amendments to the QCP must be acceptable to the Inspection and Technical Authorities.

**Refer to Annex “D” for further details on the Quality Control Plan requirements.**

## **Item No.13**

**PART 7 – Resulting Contract Clauses, Item 23 – Welding Certification, must be modified as follow:**

**Eliminate** the following aluminium welding certification requirements:

- b) CSA W47.2, Certification of companies for fusion welding of aluminum;
- d) CSA W59.2, Welded aluminum construction.

## **Item No.14**

**PART 7 – Resulting Contract Clauses, Item 28 – Inspection and Test Plan, must be included as follow:**

### **28 Inspection and Test Plan**

The Contractor shall, in support of their QCP, implement an approved Inspection & Test Plan (ITP).

The Contractor shall provide at no additional cost to the Crown, all applicable test data, all Contractor technical data, test pieces and samples as may reasonably be required by the Inspection Authority to verify conformance to contract requirements. The Contractor shall forward at his expense such technical data, test data, test pieces and samples to such location as the Inspector may direct.

**Refer to Annex “D” for details on Inspection and Test Plan Requirements.**

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### **Item No.15**

Please apply the following change to Invitation to Tender:

The following Annex D – Inspection / Quality Assurance / Quality Control, must be **included as follow**:

## **ANNEX D**

### **INSPECTION/QUALITY ASSURANCE/QUALITY CONTROL**

#### **D.1 Inspection and Test Plan (ITP):**

1. The Contractor must prepare an Inspection and Test Plan (ITP) comprising individual inspection and test plans for each specification item of this project, in accordance with the Quality Standard and its Quality Control Plan. The ITP must be submitted to the Inspection Authority for review and amended by the Contractor to the satisfaction of the Inspection Authority.
  - (a) Each ITP must contain all inspection points identified in the Technical Specification highlighting any mandatory points that must be witnessed by the Inspection Authority and other "hold" points imposed by the Contractor to ensure the quality of the work.
  - (b) Milestone delivery date for the ITP is given in the Contract, however individual ITPs should be forwarded for review as developed.
2. Coding:
  - (a) Each Inspection and Test Plan (ITP) is to be coded for identification clearly demonstrating a systematic approach similar to the following (Contractor's system should be defined in its Quality Control Plan):
    - (i) Prefixes for Inspections, Test and Trials:  
  
Prefix "1" is a Contractor inspection, i.e. 1H-10-01, 1H-10-02;  
  
prefix "2" is a Contractor post repair test, i.e. 2H-10-01; and  
  
prefix "3" is a Contractor post repair trial, i.e. 3H-10-01.
    - (b) Specification items followed by assigned sequence numbers for inspection processes within each Specification Item; and
    - (c) Cross reference to a verification document number
3. Inspection and Test Plan Criteria:  
Inspection criteria, procedures and requirements are stated in the specifications, drawings, technical orders and reference standards invoked by the Specifications. Test and trial documentation may also be included or referenced in the Specifications. An individual Inspection and Test Plan (ITP) is required for each Specification item.

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(a) All ITPs must be prepared by the Contractor in accordance with the above criteria, its Quality Plan, and must provide the following reference information:

- (i) the ship's name;
- (ii) the Specification item number;
- (iii) equipment/system description and a statement defining the parameter which is being inspected;
- (iv) a list of applicable documents referenced or specified in the inspection procedure;
- (v) the inspection, test or trial requirements specified in the Technical Specification;
- (vi) the tools and equipment required to accomplish the inspection;
- (vii) the environmental conditions under which the inspections are to be conducted and the tolerances on the inspection conditions;
- (viii) a detailed step-by step procedure of how each inspection is to be performed, conformance parameters, accept/reject criteria and recording of results, deficiencies found and description of corrective action(s) required;
- (ix) name and signature of the person who prepared the plan, date prepared and amendment level; and,
- (x) names and signatures of the persons conducting and witnessing the inspection, test or trial.

4. Contractor Imposed Testing:

Tests and trials in addition to those given in the Technical Specification must be approved by the Inspection Authority.

- (a) Amendments: Amendment action for the Inspection and Test Plans must be ongoing throughout the refit and reflect the inspection requirements for unscheduled work. Amendments must be submitted as developed, but not less frequently than once every second week.

## D.2 Conduct of Inspection

1. Inspections must be conducted in accordance with the ITP.
2. The Contractor must provide its own staff or subcontracted staff to conduct inspections, tests and trials; excepting that Technical Authority or Inspection Authority personnel may be designated in the specifications, in which case the Contractor must ensure that its own staff are provided in support of such inspection/test/trial.
3. The Contractor must ensure that the required conditions stated in the ITP prevail at the commencement of, and for the duration of, each inspection/test/trial.

4. The Contractor must ensure that personnel required for equipment operation and records taking during the inspection/test/trial are briefed and available at the start and throughout the duration of the inspection/test/trial. Tradesmen or FSRs who may be required to effect minor changes or adjustments in the installation must be available at short notice.
5. The Contractor is to coordinate the activities of all personnel taking part in each inspection/test/trial and ensure that safe conditions prevail throughout the inspection/test/trial.

### **D.3 Inspection Records and Reports**

1. The Contractor on the inspection record, test or trials sheets as applicable must record the results of each inspection. The Contractor must maintain files of completed inspection records consistent with the Quality Standard and its Quality Plan for this project.
2. The Contractor's QC representative (and the FSR when required) must sign as having witnessed the inspection, test or trial on the inspection record. The Contractor must forward originals of completed inspection records, together with completed test(s) and/or trials sheets to the Inspection Authority as they are completed.
3. Unsatisfactory inspection/test/trial results, for which corrective action cannot be completed during the normal course of the inspection/test/trial, will require the Contractor to establish and record the cause of the unsatisfactory condition to the satisfaction of the Inspection Authority. Canada representatives may assist in identification where appropriate.
4. Corrective action to remove cause of unsatisfactory inspections must be submitted to the Inspection Authority in writing by the Contractor, for approval before affecting such repairs and rescheduling of the unsatisfactory inspection/test/trial. Such notices must be included in the final records passed to the Inspection Authority.
5. The Contractor must undertake rectification of defects and deficiencies in the Contractor's installation or repair as soon as practicable. The Contractor is responsible to schedule such repairs at its own risk.
6. The Contractor must reschedule unsatisfactory inspections after any required repairs have been completed.
7. Quality Control, Inspection and Test records that substantiate conformance to the specified requirements, including records of corrective actions, must be retained by the Contractor for three (3) years from the date of completion or termination of the Contract and must be made available to the Inspection Authority upon request.

### **D.4 Inspection and Trials Process**

1. Drawings and Purchase Orders
  - (a) Upon receipt of two (2) copies of each drawing or purchase order, the designated Inspection Authority will review its content against the provisions of the Specifications. Where discrepancies are noted, the Inspection Authority will formally advise all concerned, in writing using a Discrepancy Notice. The resolution of any such discrepancy is a matter for consultation between the Contractor and other Crown Authorities.

**The Inspection Authority is NOT responsible for the resolution of discrepancies.**

## 2. Inspection

- (a) Upon receipt and acceptance of the Contractor's ITP, inspection will consist of a number of Inspection Points supplemented by such other inspections, tests, demonstrations and trials as may be deemed necessary by the Inspection Authority to permit him to certify that the work has been performed in compliance with the provisions of the Specifications. The Contractor must be responsible for notifying the designated Inspection Authority of when the work will be available for inspection, sufficiently in advance to permit the designated Inspection Authority to arrange for the appropriate inspection.
- (b) The Inspection Authority will inspect the materials, equipment and work throughout the project against the provisions of the Technical Specification and, where non-conformances are noted, will issue appropriate **INSPECTION NON-CONFORMANCE REPORTS**.
- (c) The Contract requires the implementation of a Quality Assurance/Quality Control system, so the Inspection authority must require that the Contractor provide a copy of its internal inspection report pertaining to a work item before conducting the requested inspection. If third party inspections are required by the Contract (e.g. inspections by a certified CWB 178.2 welding inspector), the reports of these inspections must be required before the Work is inspected by the Inspection Authority.
- (d) The QA/QC system is a requirement, so if the documentation is presented to the Inspection Authority before an inspection stating that the Work is satisfactory but the Inspection Authority finds that the Work has not been satisfactorily inspected, the Inspection Authority must issue an Inspection Non-conformance Report against the Work and another against the failure of the Contractor's QA/QC system.
- (e) Before carrying out any inspection, the Inspection Authority must review the requirements for the Work and the acceptance and/or rejection standards to be applied. Where more than one standard or requirement is called up and they are potentially conflicting, the Inspection Authority must refer to the order of precedence in the Contract to determine the standard or requirement to be applied.

## 3. Inspection Non-conformance report

- (a) An Inspection Non-conformance report will be issued for each non-conformance noted by the Inspection Authority. Each report will be uniquely numbered for reference purposes, will be signed and dated by the Inspection Authority, and will describe the non-conformance.
- (b) When the non-conformance has been corrected by the Contractor and has been re-inspected and accepted by the Inspection Authority, the Inspection Authority will complete the Report by adding an applicable signed and dated notation.
- (c) At the end of the project, the content of all Inspection Non-conformance Reports which have not been signed-off by the Inspection Authority will be transferred to the Acceptance Documents before the Inspection Authority's certification of such documents.

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#### 4. Tests, Trials, and Demonstrations

- (a) To enable the Inspection Authority to certify that the Work has been performed satisfactorily, in accordance with the Contract and Specifications, the Contractor must schedule, co-ordinate, perform, and record all specified Tests, Trials and Demonstrations required by the Inspection Authority.
- (b) Where the Specifications contain a specific performance requirement for any component, equipment, sub-system or system, the Contractor must test such component, equipment, sub-system or system to the satisfaction of the Inspection Authority, to prove that the specified performance has been achieved and that the component, equipment, sub-system or system performs as required by the specifications.
- (c) Tests, trials and demonstrations must be conducted in accordance with a logical, systematic schedule which must ensure that all associated components and equipment are proven before sub-systems demonstration or testing, and that sub-systems are proven before system demonstration or testing.
- (d) Where the Specifications do not contain specific performance requirements for any component, equipment, sub-system or system, the Contractor must demonstrate such component, equipment, sub-system or system to the satisfaction of the Inspection Authority.
- (e) The contractor must submit its Test and Inspection Plan as indicated in section D.1 above.
- (f) The Contractor must co-ordinate each test, trial and demonstration with all interested parties, including the Inspection Authority; Contracting and Technical Authorities; regulatory authorities; Classification Society; Sub-contractors; etc. The Contractor must provide the Inspection Authority and other Crown Authorities with a minimum of five working days notice of each scheduled test, trial, or demonstration.
- (g) The Contractor must keep written records of all tests, trials, and demonstrations conducted.
- (h) The Contractor must in all respects be responsible for the conduct of all tests and trials in accordance with the requirements of the Contract.
- (i) The Inspection Authority and the Technical Authority reserve the right to defer starting or continuing with any sea trials for any reasonable cause including but not limited to adverse weather, visibility, equipment failure or degradation, lack of qualified personnel and inadequate compliance with safety standards.

#### **Item No.16**

Please apply the following change to Invitation to Tender:

Appendix 1 of Annex I – *Pricing Date Sheet*, must be **replaced with the following (see next pages)**:

## APPENDIX 1 OF ANNEX I

PRICING DATA SHEETS			
Item	Description		Fixed Price
11.1	Bulwark plating and adjacent structural members. Except for items 11.1,c. iv & vii here below)	\$ _____	
	11.1, c. iv – Replacement of roller fairlead section	\$ _____	
	11.1, c. vii – Painting of the repair area affected by the work.	\$ _____	
	<b>Total for 11.1 :</b>	<b>\$ _____</b>	
11.2	Installation ventilation appareil à gouverner.		\$ _____
11.3	Main deck hatches repair (8) (Final amount prorated) Price : \$ _____ / hatch x 8 hatches =		\$ _____
12.1	Maintenance of two (2) Beaudoin motors (Final amounts prorated)		
	Maintenance of motors. Price : \$ _____ / motor x 2 motors =	\$ _____	
	Cleaning of oil coolers (2) Price : \$ _____ / cooler x 2 coolers =	\$ _____	
	Hydrostatic Tests (2) (1.5 times the operating pressure) Price : \$ _____ / test x 2 tests =	\$ _____	
	Complete revision of fresh water pump (2) Price : \$ _____ / pump x 2 pumps =	\$ _____	
	Complete revision of transmission pumps (2) Price : \$ _____ / pump x 2 pumps =	\$ _____	
	Complete revision of cooling pumps (2) Price : \$ _____ / pump x 2 pumps =	\$ _____	
	Complete revision of sea water pumps (2) Price : \$ _____ / pump x 2 pumps =	\$ _____	
	Refurbishment of fuel pumps (2) including calibration and performance report. Price : \$ _____ / pump x 2 pumps =	\$ _____	
	Refurbishment of turbos compressors (2) Price : \$ _____ / turbo comp. x 2 turbo comp. =	\$ _____	
	Verification and refurbishment of injectors (12) including performance report. Price : \$ _____ / injector x 12 injectors =	\$ _____	
	Cleaning of sea water coolers (2) including hydrostatic tests. Price : \$ _____ / pump x 2 pumps =	\$ _____	
	Electric Starters (2) including, disassembly, cleaning, inspection and replacement. Price : \$ _____ / starter x 2 starters =	\$ _____	
	Oil change (Oil supply by CCG)	\$ _____	
	Replacement of antifreeze	\$ _____	
	Installation, removal and measurement of two (2) pistons (including TCMS inspection). Price : \$ _____ \$ / piston x 2 pistons =	\$ _____	
	Installation, removal and measurement of the two (2) crank shaft main bearings (including TCMS inspection). Price : \$ _____ / bearing x 2 bearings =	\$ _____	
	Four (4) hours trials	\$ _____	
	<b>Total for 12.1 :</b>	<b>\$ _____</b>	

Solicitation No. - N° de l'invitation  
F3006-14N642/A  
Client Ref. No. - N° de réf. du client  
F3006-14N642

Amd. No. - N° de la modif.  
002  
File No. - N° du dossier  
QCL-4-37212

Buyer ID - Id de l'acheteur  
qcl036  
CCC No./N° CCC - FMS No/ N° VME

## PRICING DATA SHEETS

<b>12.2</b>	Revision of the Port Transmission		
	12.2, c.xi Renewal of "Chockfast" supports	\$	
	12.2, c.xii Roundtrip transportation, subcontracting (test and report) of the hydraulic pump.	\$	
	12.2, c.xiv Two (2) hours trials	\$	
	<b>Total for 12.2 :</b>		
<b>14.1</b>	Trouble shooting and repair of ground problem (100 hours) (Final amount prorated) Price : \$ / hour x 100 hours =		\$
<b>14.2</b>	Fuel tanks (4) calibration (Final amount prorated) Price : \$ / tank x 4 tanks =		\$
<b>14.3</b>	Ship's phase sharing (Final amount prorated) Price : \$ / hour x 20 hours =		\$
<b>16.3</b>	Removal of freezer		
	16.3, b. i – Removal and disposal of refrigeration gas	\$	
	16.3, b. ii – Dismantling, disposal and cleaning of the refrigerator compartment.	\$	
	16.3, b. iii – Vent installation	\$	
	<b>Total for 16.3 :</b>		
<b>A) SCHEDULED WORK - TOTAL FIRM PRICING</b>			\$

**RADOUB D'HIVER NGCC FCG SMITH**  
**CCGS FCG SMITH WINTER WORK**

**F3006-14N642/A**

**CONFÉRENCE DE SOUMISSIONNAIRES / BIDDERS' CONFERENCE**

**PROCÈS VERBAL / MINUTES OF MEETING**

La conférence de soumissionnaires au sera tenue à bord du navire NGCC FCG Smith à 10h00, le 3 décembre 2014. Le navire sera amarré au Quai de Pêche et Océans Canada – Garde côtière, au 15, rue du Prince, Sorel-Tracy (QC) J3P 4J4.

The bidders' conference will be held onboard the vessel CCGS FCG Smith at 10:00 am, on December 3<sup>rd</sup> 2014. Ship will be moored Oceans and Fisheries Canada – Coast guard at 15 rue du Prince, Sorel-Tracy (QC) J3P 4J4.

**A) MOT DE BIENVENUE / WELCOMING MESSAGE:**

Le président s'est présenté et a souhaité la bienvenue à tous les participants et remercier les soumissionnaires présents pour leur intérêt pour le présent projet. /

The Chairperson introduced himself and welcomed all attendees and thanked the bidders in attendance for their interest in this project.

**B) INTRODUCTION:**

Le président a expliqué que le but de la présente réunion était de passer en revue le document d'Appel d'offres portant le numéro F3006-14N642/A et le devis technique afin d'éclaircir tout point qui pourrait être obscur pour les soumissionnaires présents. /

The Chairperson explained that this meeting was aimed at reviewing the Invitation to Tender document bearing serial number F3006-14N642/A in order to clarify any points brought up by any participant.

**C) PRÉSENCES / PERSONS IN ATTENDANCE**

Le président a indiqué qu'il agirait à titre d'autorité contractuelle pour le projet. Il a demandé aux participants de se présenter à tour de rôle. /

The Chairperson stated that he will be acting as the Contracting Authority during the project. He asked the attendees to introduce themselves.

Participants:

Attendees:

<b><u>Nom/Name</u></b>	<b><u>Occupation/Rank</u></b>	<b><u>Cie.ou min./Co. or Dept</u></b>
Mathieu Gagnon (Par conference téléphonique)	Chef aux approvisionnements (marine) / Supply Chief (marine)	TPSGC / PWGSC
Gaël Therrien	Gestionnaire principal de l'entretien des Navires / Senior vessel maintenance manager	MPO-GCC / CCG-MFO
David Falardeau	Directeur / Director	UPC Diesel / Wajax
Tsoufik Djouamaa	Directeur bureau Sorel-Tracy / Sorel-Tracy office Director	Fjordtech
Daniel Claveau	Représentant aux ventes / Sales Representative	Navamar
Alain Morissette	Commandant NGCC Smith / Captain CCGS Smith	MPO-GCC / CCG-MFO
Patrice Boudreau	Chef mécanicien NGCC Smith / Chief Engineer CCGS Smith	MPO-GCC / CCG-MFO

## **D) RÉVISION DES DOCUMENTS DE SOUMISSION / BID PACKAGE REVIEW**

### **1) DOCUMENT D'APPEL D'OFFRES / INVITATION FOR TENDER**

- PARTIE 1      RENSEIGNEMENTS GÉNÉRAUX  
PART 1      GENERAL INFORMATION
- Il est mentionné que certains travaux ont des dates spécifiques. /  
It was noted that some work has specific dates.
- Le navire sera disponible pour les travaux sont prévus du 7 janvier au 5 avril 2015. /  
The vessel will be available for performing of work from January 7<sup>th</sup> to April 5<sup>th</sup>, 2015.
- La date de clôture des soumissions du 8 décembre 2014 sera reportée au 15 ou au 16 décembre dans la première modification de l'appel d'offre. /  
The bid closing date of December 8<sup>th</sup>, 2014 will be extend to December 15<sup>th</sup> or December 16<sup>th</sup> 2014 in the first Invitation to Tender Amendment.
  
- PARTIE 2      INSTRUCTIONS À L'INTENTION DES SOUMISSIONNAIRES  
PART 2      BIDDER INSTRUCTIONS
- Sans commentaire. /  
No comment.
  
- PARTIE 3      INSTRUCTION POUR LA PRÉPARATION DES SOUMISSIONS  
PART 3      BID PREPARATION INSTRUCTIONS
- Il est mentionné aux soumissionnaires de porter une attention spéciale à fournir tout les documents requis à l'appel d'offre. /  
It is mentioned bidders to pay special attention to provide all the required documents to the tender.
  
- PARTIE 4      PROCÉDURES D'ÉVALUATION ET MÉTHODE DE SÉLECTION  
PART 4      EVALUATION PROCEDURES AND BASIS OF SELECTION
- L'élément no.3 du tableau de l'article 4.1.3 est une lettre ou une preuve que le fournisseur est en mesure de rencontrer les exigences en matière d'assurance suite à l'octroi du Contrat. /  
The Item no.3 listed in the table of Section 4.1.3 is a letter or proof that the Supplier is able to meet the insurance requirements following the award of the Contract.
- L'élément no.4 du tableau de l'article 4.1.5 sera supprimé dans une modification à venir de l'appel d'offre. /  
The Item no.4 listed in Section 4.1.5 will be removed in an upcoming Invitation to Tender Amendment.
  
- PARTIE 5      ATTESTATIONS  
PART 5      CERTIFICATIONS
- Sans commentaire. /  
No comment.
  
- PARTIE 6      EXIGENCES RELATIVES À LA SÉCURITÉ, EXIGENCES FINANCIÈRES ET AUTRES EXIGENCES  
PART 6      SECURITY, FINANCIAL AND OTHER REQUIREMENTS
- À l'article 6.7, les requis de certification de soudage d'aluminium seront éliminés dans une modification à venir de l'appel d'offres. /  
In Section 6.7, aluminium welding certification requirements will be eliminated in an upcoming Invitation to Tender Amendment.

- PARTIE 7      CLAUSES DU CONTRAT SUBSÉQUENT  
PART 7      RESULTING CONTRACT CLAUSES
- À l'article 5.1, de la version française, le nom de l'Autorité contractante sera remplacé dans une modification à venir de l'appel d'offre. /  
In Section 5.1 of the French version, the name of the Contracting Authority will be replaced in an upcoming Invitation to Tender Amendment.
- Les soumissionnaires demandent la possibilité d'avoir des paiements progressifs (article 6.1). Cette question sera traitée au besoin, dans une modification à venir de l'appel d'offres. /  
Bidders require the possibility of using progress payments (Section 6.1). This will be addressed as needed, in an upcoming Invitation to Tender Amendment.
- Les requis de fournir un plan de contrôle de la qualité sera ajouter dans une modification à venir de l'appel d'offres (article 22). /  
Requirement to provide a quality control plan will be added in an upcoming Invitation to Tender Amendment (Section 22).
- À l'article 23, les requis de certification de soudage d'aluminium seront éliminés dans une modification à venir de l'appel d'offres. /  
Section 23, aluminium welding certification requirement will be eliminated in an upcoming Invitation to Tender Amendment.
- Le navire demeurera sous la garde de la GCC mais l'équipage ne sera pas constamment à bord lors de la période des travaux. Ceci ne soulage pas le fournisseur de sa responsabilité de s'assurer que les travaux qu'il effectue se font dans le respect des règles de sécurité qui s'imposent et telles que requises aux devis. /  
The ship will remain in the custody of the CCG but the crew will not be constantly onboard during the repair period. This does not relieve the supplier of his responsibility to ensure that the work is carried out are in compliance with the applicable safety rules and as required in the specification.
- Les heures d'accessibilité (ouverture de la guérite) sont présentement de 7h00 à 17h00. Les soumissionnaires aimeraient avoir accès de 7h00 à 19h00. Ceci sera traité au besoin dans une modification à venir de l'appel d'offre. /  
The hours of accessibility (opening of the gate) are currently from 7:00 am to 5:00 pm. Bidders would like to have access from 7:00 am to 7:00 pm. This will be addressed if needed in an upcoming Invitation to Tender Amendment.
- ANNEXE A      DEVIS TECHNIQUE  
ANNEX A      TECHNICAL SPECIFICATION

**ITEM 11.1   RÉPARATION DE PLAQUES DE PAVOIS ET D'ÉLÉMENTS STRUCTURAUX ADJACENT /  
BULWARK PLATING AND ADJACENT STRUCTURAL MEMBERS**

- L'ensemble des travaux de soudure (travail à chaud) doivent être réalisés entre le 2 mars et le 5 avril 2015. /  
All welding (hot work) must be carried out between March 2<sup>nd</sup> and April 5<sup>th</sup> 2015.
- Des aciers de grade "A" sont requis. /  
Grade 'A' steel are required.
- La peinture devra être incluse à la soumission. /  
Painting must be included in the Bid.
- Les informations concernant les épaisseurs de la plaque de pavois seront fournies au besoin (déjà inclus dans les dessins). /  
Information on the thickness of the bulwark plate will be provided if needed (already provided on the drawings).
- Il n'y a pas de plan disponible pour le chaumard déformé. Se fier sur le chaumard bâbord. /
- There is no plan available for the damaged fairlead. To rely on the Port fairlead.

**ITEM 11.2   INSTALLATION VENTILATION APPAREIL À GOUVERNER /  
VENTILATION INSTALLATION STEERING GEAR COMPARTMENT**

- Cet élément est un item "clé en main" et comprend donc le filage et autres travaux connexes. /  
This item is a "turnkey" item and therefore comprises wiring and other related work.
- Le bouton d'arrêt en est un de type "Arrêt d'urgence" et doit aussi servir pour la mise en marche. /  
The stop button is a "Emergency Stop" type and should also be use as a start button.

**ITEM 11.3 RÉPARATION DES ÉCOUTILLES DU PONT /  
MAIN DECK HATCHES REPAIR**

- Rappel sur la clause qui concerne les retouches de peinture. /  
Reminder of the clause concerning the paintwork.
- Tous les joints doivent être remplacés. Matériel et main d'œuvre à la charge du Fournisseur. /  
All seals must be replaced. Equipment and labor are supplied by the Bidder.
- Des fermetures temporaires isolées devront être prévues (par le fournisseur) durant les travaux afin de conserver la température des espaces visés. Le bois peut être utilisé avec un isolant adéquat. /  
Insulated temporary enclosure shall be provided (by the supplier) during the repair to keep the temperature of the areas concerned. Wood can be used with suitable insulating material.

**ITEM 12.1 ENTRETIEN DES DEUX (2) MOTEURS BEAUDOIN /  
MAINTENANCE OF TWO (2) BEAUDOIN MOTORS**

- Impossibilité de vérification des taux de compression à valider dans une modification à venir de l'appel d'offre. /  
Feasability to perform compression ratio measurement will be addressed in an upcoming Invitation to Tender Amendment.
- Antigel (remplacement) à valider. Quantité requise de 52 litres par moteur. Un antigel reconnu pour le climat du Québec et de grade commercial est accepté. /Saisissez du texte, l'adresse d'un site Web ou importez un document à traduire. /  
Antifreeze (replacement) to confirm. Required quantity of 52 liters per engine. Commercial grade anti-freeze recognized for the Quebec climate is accepted.
- Les essais en mer devront être effectués entre le 30 mars et le 5 avril ou en fonction des glaces. /  
Sea trials will be carried out between March 30th and April 5th 2015 or based on ice conditions.

**ITEM 12.2 RÉVISION DE LA TRANSMISSION BÂBORD /  
REVISION OF THE PORT TRANSMISSION**

- L'arbre à pignon sera disponible au début durant les deux premières semaines de mars 2015. Les autres travaux peuvent (et devraient) débuter plus tôt. /  
The pinion shaft will be available early in the first two weeks of March 2015. Other work can (and should) begin earlier.
- La liste de l'item ix de la portée des travaux semble incomplète. Au besoin, une liste mise à jour sera fournie dans une modification à venir de l'appel d'offre. /  
The item's list ix scope of work seems incomplete. If required, an updated list will be provided in an upcoming Invitation to Tender Amendment.

**ITEM 14.1 RÉPARATION DU PROBLÈME DE MISE À LA TERRE /  
TROUBLE SHOOTING AND REPAIR OF GROUND PROBLEM**

- Faire un suivi des heures et découvertes ainsi que des travaux supplémentaires requis. /  
To track hours and discoveries as well as additional work required.
- Fournir un certificat de conformité à la fin des travaux. /  
Provide a certificate of conformity to completion.

**ITEM 14.2 CALIBRATION DES RÉSERVOIRS (2) DE CARBURANT /  
FUEL TANKS (2) CALIBRATION**

- Sans commentaire. /  
No comment.

**ITEM 16.3 RETRAIT DU CONGÉLATEUR /  
REMOVAL OF FREEZER**

- Le vieux congélateur doit être jeté par le fournisseur. /  
The old freezer must be disposed by the Supplier.

**E) VISITE DU NAVIRE / VESSEL'S VIEWING**

- La visite du navire a eu lieu suite à la conférence des soumissionnaires. /  
The vessel's viewing was held after the Bidder's Conference.

**F) AUTRES / OTHERS**

- Ajout de l'item 14.3 – Équilibrage des phases du navire.

*" Fournir la main d'œuvre en électricité afin de balancer les charges électrique également entre les phases en déplaçant l'alimentation du chauffage de 230volt/1 phase dans les panneaux respectifs. Pour fin de soumission considérer 20 heures de travail." /*

- *Adding of Item 14.3 – Ship's phase sharing*

*" Supply specialized labour in electricity between to share the three phases equally. To execute de job you must modify the supply to heating power 230volt /1 phase on the corresponding panel. For bid purpose you consider 20 hours of work. "*

**G) AJOURNEMENT / ADJOURNMENT.**

- La conférence a pris fin à 12 :05 et a été suivie de la visite du navire. /  
The conference was adjourned at 12:05 pm and was follow by the vessel's viewing.

Mathieu Gagnon  
Autorité contractante / Contracting Authority  
Travaux publics et services gouvernementaux Canada  
Public Works and Government Services Canada.

**ASBESTOS MATERIALS SURVEY  
FOR  
CANADIAN COAST GUARD SERVICES**

**VESSEL NAME: CCGS F.C.G. SMITH**

**VESSEL NO.: 806310**



Prepared for:

Department of Fisheries and Oceans  
Integrated Technical Support  
200 Kent Street, Station 6E215  
Ottawa, Ontario  
K1A 0E6

Gesfor Project No. MA10246-PLE  
Pinchin LeBlanc Environmental Ltd Project No. 01-6116

March 31<sup>st</sup>, 2006

## ***EXECUTIVE SUMMARY***

Pinchin LeBlanc Environmental Ltd. (PLEL) was retained by the Department of Fisheries and Oceans (DFO) to perform asbestos surveys for asbestos-containing materials within selected Canadian Coast Guard Services (CCGS) vessels throughout Canada. To accomplish the task of surveying vessels on a national scale, PLEL utilized the Pinchin Group of companies. A total of thirty (30) selected vessels were included within the survey program. This report will provide the findings for the following vessel;

**VESSEL NAME:** CCGS F.C.G. Smith

**VESSEL NO.:** 806310

**VESSEL DESC.:** Multi Hulled Survey & Sounding

No friable or non-friable asbestos-containing materials were identified within the vessel during the survey.

## TABLE OF CONTENTS

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<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2.0</b>	<b>SURVEY AND ASSESSMENT CRITERIA .....</b>	<b>2</b>
2.1	SURVEY INFORMATION.....	2
2.2	SURVEY METHODOLOGY .....	2
2.3	SURVEY SCOPE.....	2
2.3.1	<i>Friable Materials</i> .....	2
2.3.2	<i>Non-Friable Materials</i> .....	3
2.3.3	<i>Sampling Strategy</i> .....	4
2.3.4	<i>Analytical Methods</i> .....	4
2.3.5	<i>Field Data Collection</i> .....	4
2.3.6	<i>Limitations of Survey</i> .....	5
<b>3.0</b>	<b>DISCUSSION OF ASBESTOS-CONTAINING MATERIALS.....</b>	<b>6</b>
3.1	SPRAYED OR TROWELLED FIREPROOFING OR THERMAL INSULATION .....	6
3.2	TEXTURE FINISHES .....	6
3.3	PIPING INSULATION.....	7
3.4	VENTILATION TRUNKING INSULATION .....	7
3.5	HIGH TEMPERATURE MACHINERY INSULATION.....	7
3.5.1	<i>Main Propulsion and generators</i> .....	7
3.6	BULKHEADS AND DECKHEADS .....	7
3.7	DECK COVERING MATERIALS .....	7
3.7.1	<i>Vinyl Sheet Flooring</i> .....	7
3.7.2	<i>Vinyl Floor Tiles</i> .....	7
3.8	DOOR, HATCH, SCUTTLE INSULATION AND PACKINGS .....	8
3.9	OTHER ASBESTOS-CONTAINING MATERIALS.....	8
3.10	SUSPECT ASBESTOS-CONTAINING MATERIALS .....	8
<b>4.0</b>	<b>CONCLUSIONS.....</b>	<b>9</b>

## **APPENDICES**

<b>APPENDIX I</b>	<b>RESULTS OF BULK SAMPLE ANALYSIS FOR ASBESTOS</b>
<b>APPENDIX II</b>	<b>SURVEY DATA</b>
APPENDIX II-A	GUIDE TO SURVEY SHEETS
APPENDIX II-B	LOCATION AND SAMPLE TABLE
APPENDIX II-C	ASBESTOS DATA REPORT
APPENDIX II-D	ALL DATA REPORT
<b>APPENDIX III</b>	<b>ASBESTOS ASSESSMENT MATRIX</b>

## **1.0 INTRODUCTION**

Pinchin LeBlanc Environmental Ltd. (PLEL) was retained by the Department of Fisheries and Oceans (DFO) to perform asbestos surveys for asbestos-containing materials (ACM) within selected Canadian Coast Guard Services (CCGS) vessels throughout Canada. To accomplish the task of surveying vessels on a national scale, PLEL utilized the Pinchin Group of companies. A total of thirty (30) vessels were included within the survey program. The surveys have been conducted to address inaccurate or unavailable information regarding the presence of asbestos of CCGS vessels. This report will provide the findings for the following vessel;

**VESSEL NAME:** CCGS F.C.G. Smith

**VESSEL NO.:** 806310

**VESSEL DESC.:** Multi Hulled Survey & Sounding

The survey included both friable<sup>1</sup> and non-friable<sup>2</sup> ACM as well as suspect ACM. Both Federal and Provincial regulations and guidelines distinguish between friable and non-friable materials. All provincial regulations regarding asbestos materials distinguish between friable and non-friable materials when assigning appropriate work practices.

The most common friable ACM used in the past are surfacing materials (usually sprayed fireproofing, texture, decorative or acoustic plaster) and thermal insulations. Friable ACM has a much greater potential to release airborne asbestos fibres when disturbed.

Asbestos-containing manufactured materials include deck covering materials, deckhead and bulkhead panels, gasket materials, asbestos cement pipe or board, drywall joining compounds and asbestos textiles. Usually these products are considered to be non-friable but depending on their formulation and condition these may be in fact considered friable. Note that though a product may be considered non-friable when new, if the product releases fine dust due to deterioration or during removal, the free dust is considered friable. For example, lay-in acoustic ceiling tiles may release significant dust at the time of major removal.

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<sup>1</sup> The term friable is applied to a material that can be readily crumbled or reduced to dust or powder by hand pressure. . The most common friable ACM used in the past are sprayed or trowelled materials (for fireproofing or thermal insulation), texture plaster (decorative or acoustic), and mechanical insulations.

<sup>2</sup> Common non-friable ACM include vinyl floor tiles, ceiling tiles, gasket materials, asbestos cement pipe or board (under the trade name "Transite"), drywall joining compounds and asbestos textiles.

## **2.0 SURVEY AND ASSESSMENT CRITERIA**

### **2.1 Survey Information**

The vessel was located in Sorel-Tracy, Quebec and therefore the regional Pinchin Group office conducting the fieldwork was Le Groupe Gesfor Poirier Pinchin inc. (Gesfor). The fieldwork was performed by Marie-France Boivin of Gesfor on March 2<sup>nd</sup>, 2006.

### **2.2 Survey Methodology**

The collection of information was on a room-by-room basis and the approximate quantities of the ACM were noted where appropriate. In order to determine the location of the ACM and develop recommendations of the work required, the surveyor entered each room, cabin, or space where practical. Representative views were made above accessible suspended ceiling systems. Access above and within solid bulkheads and deckheads was made through existing hatches or panels. Where required, intrusive inspections were made within cavities particularly in areas where mechanical equipment was suspected to be present. The intrusive investigations involved the removal of existing bulkhead panels or deckhead panels to assess the conditions within. The survey did not include demolition of floors, ceilings or walls or other demolition to check on conditions behind.

The surveyor assigned a unique location number to each area or individual room surveyed. Where a room name was available, it was recorded along with the assigned location number (Location XX). The information from the field data collection sheets, was entered into the Pinchin Group's *Hazardous Materials Inventory System* (HMIS) computer database. The computer generated print-outs are included as Appendix II of this report.

### **2.3 Survey Scope**

#### **2.3.1 Friable Materials**

The survey included the following asbestos and non-asbestos materials:

- ◆ Sprayed Materials including:
  - fireproofing
  - thermal insulation (not including mechanical)
  - texture finishes (for acoustic or decorative purposes)

(NOTE: Although usually installed by spray application the materials above may also have been installed by roller or trowel).

- ◆ Mechanical Insulation on:
  - boiler and breeching,
  - generators and exhausts,
  - ventilation trunking and ductwork,
  - piping,
  - tanks and equipment
- ◆ Deckhead Tiles (suspended ceiling tiles)
  - Suspended ceiling tiles are included, as they may become friable on handling.

### **2.3.2 Non-Friable Materials**

The survey also included the identification for the following non-friable materials:

- ◆ Deckhead and bulkhead panels
- ◆ Textiles
- ◆ Asbestos cement boards
- ◆ Firestop material
- ◆ Vinyl floor tiles and vinyl sheet flooring
- ◆ Drywall joint compound
- ◆ Plaster (walls and ceilings)
- ◆ Other (gaskets and door packings)

Some of these products (i.e. – asbestos cement boards) were visually identified as asbestos containing. For the remaining materials, due to the inconsistent use of asbestos, any materials which were not sampled or visually confirmed as non-asbestos are identified in this report as suspect material (SM) or susceptible to contain asbestos.

No identification was made of asbestos products used in the vessel operations (i.e. – kitchens or manufacturing operations), or curricula (i.e. laboratories or trade shops). No testing of dust within supply or return air ducts was performed.

#### **2.3.3 Sampling Strategy**

Asbestos samples were collected in accordance with the National Institute for Occupational Safety and Health (NIOSH) method 9002. The collection of samples was performed in sufficient frequency to obtain a general pattern of asbestos use within the vessel. It is known that inconsistencies within construction or later repair or refit may result in deviation from the general pattern however without sampling of every wall, foot of pipe, pipe fitting, HVAC unit, ductwork, ceiling tile etc., it is not possible to individually characterize every asbestos material present. Therefore the surveyor relies on visual identification of similar materials with asbestos content based on representative bulk samples. While our experience is that this methodology is reliable and practical, it should be noted that the possibility remains that visually similar materials may have different asbestos content.

#### **2.3.4 Analytical Methods**

During the survey, materials suspected of containing asbestos were identified visually, based on the surveyor's knowledge of the historic use of asbestos-containing products. Where these materials had not been previously sampled, visual identifications were supported by collection and analysis of a limited number of bulk samples. For this confirmation a total of four (4) samples were collected and analyzed at the International Asbestos Testing Laboratories (IATL).

The bulk samples are analyzed using a combination of dispersion staining and polarized light microscopy. The analytical method follows the U.S. EPA Method 600/R-93/116 dated July 1993. IATL is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples (Laboratory Number 1165). The analytical certificates are presented in Appendix I.

Materials which when analysed are reported as containing less than 0.1% of asbestos are considered to be non-asbestos under Provincial Regulations.

#### **2.3.5 Field Data Collection**

In each of the inspection locations the surveyor completed a field data collection sheet. On the field data sheet, the absence or presence of asbestos-containing materials was recorded in the following components.

- Floor (decks)
- Ceiling (deckheads)
- Wall (bulkheads)
- Piping
- Structure
- Duct
- Mechanical Equipment
- Other

The computer generated field data sheets found in Appendix II provide an easy reference for maintenance workers in the event of work in a particular room or area. The information, as presented on these sheets, lists all materials present as either asbestos-containing or not. The sheets list both the "condition" and "accessibility" of the asbestos material. These terms are defined in Appendix III.

The quantities shown are approximations, based on visual examination as per our contract. Quantities were not provided on a consistent or reliable basis. For the quantities shown no measured take-off was performed and these quantities should not be utilized for cost estimating or budgeting purposes. Furthermore, particularly for pipe insulation, it must also be realized that without removing all deckhead panels, bulkhead panels, etc. that not all asbestos materials present on the vessel were visually inspected or noted.

Appendix II also provides the "Guide to Survey Sheets" along with summaries of the numerical or alphabetical codes used.

### **2.3.6 Limitations of Survey**

A number of limitations are described throughout this report. The intent of the limitations is to clearly identify to the user of this report that some limitations exist as to the possible thoroughness of a survey. Some of these limitations have been specifically identified above.

As per industry standards the field observations, measurements, and analysis are considered sufficient in detail and scope to form a reasonable basis for an asbestos hazard assessment of this property. Gesfor warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted asbestos inventory methods, for the Site referenced in this report.

These evaluation methods have been developed to provide the Client with information regarding apparent indications of existing or potentially hazardous conditions relating to the property and are necessarily limited to the conditions observed and information available at the time of the Site visit and research. There is a distinct possibility that conditions may exist which could not be reasonably identified within the scope of the assessment or which were not apparent during the Site visit. Gesfor believes that the information collected during the survey period concerning the property is reliable.

However, Gesfor cannot warrant or guarantee that the information provided is absolutely complete or accurate beyond the current asbestos consulting industry standards. No other warranties are implied or expressed.

### **3.0 DISCUSSION OF ASBESTOS-CONTAINING MATERIALS**

A summary of the findings for the ACM survey are discussed below under the following headings:

- 3.1 Sprayed or Trowelled Fireproofing or Thermal Insulation
- 3.2 Texture Finishes (for acoustic or decorative purposes)
- 3.3 Piping Insulation
- 3.4 Ventilation Trunking Insulation
- 3.5 High Temperature Machinery Insulation
- 3.6 Bulkheads and Deckheads
- 3.7 Deck Covering Material (i.e. Flooring products)
- 3.8 Door, Hatch, Scuttle Insulation and Packings
- 3.9 Other Asbestos-Containing Materials
- 3.10 Suspect Asbestos Materials

The sample numbers (Sample A-XX) referenced below refers to the bulk analysis reports presented in Appendix I.

The location numbers (Location XX) are cross-referenced to the Location Table found in Appendix II-B and referred to on the Survey Data Sheets in Appendix II. The information below provides a summary of information contained in the Survey Data Sheets. Refer to Appendix II for detailed information on the observations made at each of the survey locations.

#### **3.1 Sprayed or Trowelled Fireproofing or Thermal Insulation**

No sprayed or trowelled fireproofing is present on the vessel.

#### **3.2 Texture Finishes**

No textured finish surfaces were observed on the vessel.

### **3.3 Piping Insulation**

Piping on the vessel was observed not to be insulated, except for fibreglass; a material known to be asbestos-free.

### **3.4 Ventilation Trunking Insulation**

Typical ducts present are not insulated.

### **3.5 High Temperature Machinery Insulation**

#### **3.5.1 Main Propulsion and generators**

The main propulsion and generators exhausts, located in the Engine Room (Locations 21 and 22), are insulated with white blocks called "Mag Block". Representative samples indicate the insulating material is non-asbestos (Sample A04). These exhausts are also present in the Tank Top Deck in the Storage and the Shop (Locations 25 and 26 respectively).

### **3.6 Bulkheads and Deckheads**

The insulation of bulkheads and deckheads is fibreglass; a material known to be asbestos-free.

No ceiling tiles are present on the vessel.

### **3.7 Deck Covering Materials**

#### **3.7.1 Vinyl Sheet Flooring**

One type of vinyl sheet flooring was observed to be present in a compartment in the Lower Deck (Location 25) and the analysis indicates no asbestos present (Sample A09).

#### **3.7.2 Vinyl Floor Tiles**

Various types of vinyl floor tiles materials were observed to be present on the vessel, none of which were found to contain asbestos. The following is summary of the vinyl floor tiles observed throughout the vessel:

- Vinyl floor tiles, FT-01, 12"x 12" in size and turquoise were sampled in the Bridge Deck in the Wheelhouse (Location 01) and do not contain asbestos (Sample A01).
- Vinyl floor tiles, FT-02, 12"x 12" in size and blue were sampled in the Main Deck in a cabin (Location 03) and do not contain asbestos (Sample A02).

- Vinyl floor tiles, FT-03, 12"x 12" in size and green were sampled in the Main Deck in the Laundry Room (Location 04) and do not contain asbestos (Sample A03).

### **3.8 Door, Hatch, Scuttle Insulation and Packings**

Fireproofing on the hatches is susceptible to contain asbestos; however the fireproofing seal around the hatches was not sampled in order not to jeopardize the seal and protection.

### **3.9 Other Asbestos-Containing Materials**

No other asbestos-containing materials were observed on the vessel.

### **3.10 Suspect Asbestos-Containing Materials**

In addition to the ACM described in the sections above, a number of other materials may be present on the vessel that can potentially contain asbestos. These materials are grouped under the heading of suspected to contain asbestos materials. The need for demolition/dismantling equipment and the lack of access limit our ability to determine the asbestos content.

Materials which are not accessible and/or can not be sampled without demolition, dismantling or causing irreparable damage include: components or wiring within motors, lights, high voltage wiring, mechanical packing and gaskets, and materials located inside electrical fixtures, light fixtures, switch gear or transformers.

#### 4.0 CONCLUSIONS

Asbestos-containing materials were not found to be present on the surveyed vessel.

Prepared by:

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Marie-France Boivin  
*Project Coordinator*  
Asbestos & Hazardous Materials  
**Le Groupe Gesfor Poirier Pinchin  
inc.**

Reviewed by:

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Eric Provencher, Eng.  
*Director*  
Asbestos & Hazardous Materials  
**Le Groupe Gesfor Poirier Pinchin  
inc.**

Reviewed by:



Trevor Houweling, P.Eng.  
*Project Manager*  
**Pinchin LeBlanc Environmental Ltd.**

## **APPENDIX I**

### **RESULTS OF BULK SAMPLE ANALYSIS FOR ASBESTOS**

**Client:** Canadian Coast Guard  
**Project:** 01-6116  
**Building Number(s):** 806310

## Bulk Sample Analysis

**Building #:** 806310 **Building Name:** CCGS F.C.G. Smith **Surveyor:** Survey Date:

Sample #	System	Material	Loc #	Asbestos	Result A	Type A	Result B	Type B	Result C	Type C	Result D	Type D	Result
0001	Floor	Vinyl tiles	1	<input type="checkbox"/>	N.D.								N.D.
Description: Floor Tile 12"x12" - Turquoise													
0002	Floor	Vinyl tiles	3	<input type="checkbox"/>	N.D.								N.D.
Description: Floor Tile 12"x12" - Blue													
0003	Floor	Vinyl tiles	4	<input type="checkbox"/>	N.D.								N.D.
Description: Floor Tile 12"x12" - Aqua green													
0004	Mechanical Equipment	Magnesia block	21	<input type="checkbox"/>	N.D.								N.D.
Description: Mag Block on Generator/Motor Exhaust													

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**APPENDIX II**  
**SURVEY DATA**

**APPENDIX II-A**  
**GUIDE TO SURVEY SHEETS**

## **GUIDE TO THE ASBESTOS SURVEY SHEETS ASBESTOS MATERIALS SURVEY**

The following Appendices contain printouts from Hazardous Materials Inventory System (HMIS) computer database. The appendices include information that the majority of our clients find useful.

Each Appendix is discussed below:

<b>Appendix II-B Locations Report</b>	The Locations Report provides a list of all functional areas (rooms) of the vessel where the surveyor recorded information. The information recorded includes the, unique Location Number, location by floor or room number, name of the areas (if available), whether the room was accessible, the square foot area of the room (optional), the date of the survey, surveyor's name and notes specific to the location
<b>Appendix II-B Asbestos Samples Report</b>	The Asbestos Samples Report provides information on the materials, where they were sampled, and the results of the samples collected and analyzed during the survey. If the sample contains two distinct layers the results are reported separately. The sample numbers are referenced on the Asbestos Only Report.
<b>Appendix II-C Asbestos Only Report</b>	The Asbestos Only Report, is one of a multitude of customized reports available via the HMIS database. The Asbestos Only Report provides information regarding materials that have been determined to contain asbestos, either through sample analysis or based on the observations and knowledge of the surveyor.
<b>Appendix II-D All Data Report</b>	The All Data Report, provides information regarding all materials that have been surveyed, either through sample analysis or based on the observations and knowledge of the surveyor. This report provides both asbestos-containing as well as non-asbestos materials.

**APPENDIX II-B**  
**LOCATION AND SAMPLE TABLE**

Client: Canadian Coast Guard  
Project: 01-6116

Building Name: CCGS F.C.G. Smith  
Building #: 806310

## Location List

Location Report	Warning Label	Loc #	Floor	Room Prefix	Room Number	Room Suffix	Room Name	No Access	Square Feet	Survey Date	Surveyor	Notes
Open	Open	1	Bridge				Wheelhouse		1216	2006-03-06	Gesfor	S01 to S03 1x1 turquois
Open	Open	2	Bridge				Sweep control room		360	2006-03-06	Gesfor	
Open	Open	3	Main				Cabin		100	2006-03-06	Gesfor	S04 to S06 1x1 blue
Open	Open	4	Main				Laundry		25	2006-03-06	Gesfor	
Open	Open	5	Main				Cabin		120	2006-03-06	Gesfor	
Open	Open	6	Main				Cabin		100	2006-03-06	Gesfor	
Open	Open	7	Main				Cabin		100	2006-03-06	Gesfor	
Open	Open	8	Main				Shower			2006-03-06	Gesfor	
Open	Open	9	Main				Corridor		240	2006-03-06	Gesfor	
Open	Open	10	Main				Cabin		70	2006-03-06	Gesfor	
Open	Open	11	Main				Cabin		70	2006-03-06	Gesfor	
Open	Open	12	Main				Mess		168	2006-03-06	Gesfor	

**Client:** Canadian Coast Guard  
**Project:** 01-6116

**Building Name:** CCGS F.C.G. Smith  
**Building #:** 806310

## Location List

Location Report	Warning Label	Loc #	Floor	Room Prefix	Room Number	Room Suffix	Room Name	No Access	Square Feet	Survey Date	Surveyor	Notes
Open	Open	13	Main				Galley		140	2006-03-06	Gesfor	
Open	Open	14	Main				Storage		16	2006-03-06	Gesfor	
Open	Open	15	Main				Control Room		100	2006-03-06	Gesfor	
Open	Open	16	Main				Room		100	2006-03-06	Gesfor	
Open	Open	17	Main				Washroom		56	2006-03-06	Gesfor	
Open	Open	18	Main				Room		78	2006-03-06	Gesfor	
Open	Open	19	Main				Washroom		48	2006-03-06	Gesfor	
Open	Open	20	Main				Storage		60	2006-03-06	Gesfor	
Open	Open	21	Tank Top				Engine Room		450	2006-03-06	Gesfor	s-10 on generator s-11 on motor
Open	Open	22	Tank Top				Engine Room		450	2006-03-06	Gesfor	s-12 on motor
Open	Open	23	Tank Top				Storage		264	2006-03-06	Gesfor	
Open	Open	24	Tank Top				Storage		264	2006-03-06	Gesfor	

**Client:** Canadian Coast Guard  
**Project:** 01-6116

**Building Name:** CCGS F.C.G. Smith  
**Building #:** 806310

## Location List

Location Report	Warning Label	Loc #	Floor	Room Prefix	Room Number	Room Suffix	Room Name	No Access	Square Feet	Survey Date	Surveyor	Notes
Open	Open	25	Tank Top				Storage		312	2006-03-06	Gesfor	
Open	Open	26	Tank Top				Shop		324	2006-03-06	Gesfor	
Open	Open	27	Tank Top				Steering Gear		144	2006-03-06	Gesfor	
Open	Open	28	Tank Top				Steering Gear		144	2006-03-06	Gesfor	

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**APPENDIX II-C**  
**ASBESTOS DATA REPORT**

## Confirmed Asbestos and Assumed Asbestos Report

### Legend:

Action	Access			Condition		Sample Number	
	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
No calculated action	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(3) ACM removal required	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(5) Proactive ACM removal	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(7) Management program and surveillance	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(9) Action not currently assigned	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							
Units							
SF - Square feet		LF - Linear feet		EA - Each		% - Percentage	

**APPENDIX II-D**  
**ALL DATA REPORT**



Building Number(s): 806310

Hazardous Material Inventory System

## All Data Report

<b>Building #: 806310</b>		<b>Building Name: CCGS F.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 1216</b>	
<b>Location #: 1</b>		<b>Location Name: Wheelhouse</b>		<b>Floor: Bridge</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units</b>	
<b>Observ. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Sample</b>	<b>Friability</b>
4080	Walls		Fibreglass								None
4059	Ceiling		Metal								None
4056	Floor	Floor Tile 1	Vinyl tiles	Surface	N/A	A	Y	1216		SF	S0001 None

Note: S01 to S03 1x1 turquois

<b>Building #: 806310</b>		<b>Building Name: CCGS F.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 360</b>	
<b>Location #: 2</b>		<b>Location Name: Sweep control room</b>		<b>Floor: Bridge</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units</b>	
<b>Observ. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Sample</b>	<b>Friability</b>
4063	Floor	Floor Tile 1	Vinyl tiles	Surface	N/A	A	Y	360		SF	V0001 None
4061	Ceiling		Metal								None
4062	Walls		Fibreglass								None

## Legend:

Action		Access		Condition		Sample Number	
	No calculated action	(1) Error	A All building occupants	Good	No visible damage or exposed material	S####	Sample collected
(1)	Immediate clean-up of debris or damaged ACM likely to be disturbed	(2) Type 2 precautions for entry into areas with ACM debris	B Maintenance and operations staff without a ladder	Fair	Repairable damage with minor amounts of exposed material	V####	Material is visually identified to be identical to S###
(3)	ACM removal required	(4) Type 2 precautions for entry into areas where ACM is present	C Maintenance and operations staff with a ladder	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5)	Proactive ACM removal	(6) ACM repair	D Not accessible	NOTE: Sprayed material are only rated as Good or Poor.		V9000	Material is visually identified to contain asbestos
(7)	Management program and surveillance	(8) Assumed Material				V9500	Material is assumed to contain asbestos
(9)	Action not currently assigned	(?) Unknown / Unable to Calculate					Note: Vinyl tiles, vinyl sheet flooring, drywall, plaster and textured finish (coat) are considered assumed materials if not sampled.
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							

NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.

## Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

# **Hazardous Material Inventory System All Data Report**

Building #: 806310 Location #: 3		Building Name: CCGS F.C.G. Smith Location Name: Cabin		Surveyor: Gesfor Floor: Main		Survey Date: Room #:			Square ft: 100			
Obsrv. #	System	Component	Material	Item	Covering	Access	Visible	Condition, Quantity & Action	Units	Sample	Hazard	Friability
4069	Piping		Not Insulated								None	
4066	Floor	Floor Tile 2	Vinyl tiles	Surface	N/A	A	Y	100	SF	S0002	None	
4064	Ceiling		Metal								None	
4065	Walls		Fibreglass								None	
Note: S04 to S06 1x1 blue												
Building #: 806310 Location #: 4		Building Name: CCGS F.C.G. Smith Location Name: Laundry		Surveyor: Gesfor Floor: Main		Survey Date: Room #:			Square ft: 25			
Obsrv. #	System	Component	Material	Item	Covering	Access	Visible	Condition, Quantity & Action	Units	Sample	Hazard	Friability
4072	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A	A	Y	25	SF	S0003	None	
4071	Walls		Fibreglass								None	
4070	Ceiling		Metal								None	

## **Legend:**

Action	Access			Condition		Sample Number	
	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
No calculated action	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(3) ACM removal required	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(5) Proactive ACM removal	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(7) Management program and surveillance	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(9) Action not currently assigned	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							
Sample collected Material is visually identified to be identical to S### Material is visually identified to contain no asbestos Material is visually identified to contain asbestos Material is assumed to contain asbestos Note: Vinyl tiles, vinyl sheet flooring, drywall, plaster and textured finish (coat) are considered assumed materials if not sampled.							

## **Units**

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

## All Data Report

<b>Building #: 806310</b>		<b>Building Name: CCGS F.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 120</b>	
<b>Location #: 5</b>		<b>Location Name: Cabin</b>		<b>Floor: Main</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units</b>	
<b>Obsrv. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Sample</b>	<b>Triability</b>
4074	Walls		Fibreglass								None
4073	Ceiling		Metal								None
4075	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A	A	Y	120		SF	V0003 None

<b>Building #: 806310</b>		<b>Building Name: CCGS F.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 100</b>	
<b>Location #: 6</b>		<b>Location Name: Cabin</b>		<b>Floor: Main</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units</b>	
<b>Obsrv. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Sample</b>	<b>Triability</b>
4077	Walls		Fibreglass								None
4076	Ceiling		Metal								None
4078	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A	A	Y	100		SF	V0003 None

### Legend:

Action	Access				Condition		Sample Number	
	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
No calculated action	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(3) ACM removal required	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(5) Proactive ACM removal	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(7) Management program and surveillance	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(9) Action not currently assigned	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.								

Units

SF - Square feet

LF - Linear feet

EA - Each

Percentage



Building Number(s): 806310

**Hazardous Material Inventory System**

# All Data Report

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 100	
Location #: 7		Location Name: Cabin		Floor: Main		Visible		Condition, Quantity & Action		Units Sample	
Obsrv. #	System	Component	Material	Item	Covering	Access	Good	Fair	Poor	Sample	Friability
4081	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A	A	Y	100		SF V0003	None
4080	Walls		Fibreglass								None
4079	Ceiling		Metal								None

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft:	
Location #: 8		Location Name: Shower		Floor: Main		Visible		Condition, Quantity & Action		Units Sample	
Obsrv. #	System	Component	Material	Item	Covering	Access	Good	Fair	Poor	Sample	Friability
4085	Piping		Not Insulated								None
4084	Floor		Ceramic Tiles								None
4083	Walls		Fibreglass								None
4082	Ceiling		Metal								None

## Legend:

Action		Access		Condition		Sample Number	
(1)	No calculated action	(1)	Error	Good	No visible damage or exposed material	S###	Sample collected
(2)	Immediate clean-up of debris or damaged ACM likely to be disturbed	(2)	Type 2 precautions for entry into areas with ACM debris	Fair	Repairable damage with minor amounts of exposed material	V###	Material is visually identified to be identical to S###
(3)	ACM removal required	(4)	Type 2 precautions for entry into areas where ACM is present	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5)	Proactive ACM removal	(6)	ACM repair	NOTE: Sprayed material are only rated as Good or Poor.		V9000	Material is visually identified to contain asbestos
(7)	Management program and surveillance	(8)	Assumed Material			V9500	Material is assumed to contain asbestos
(9)	Action not currently assigned	(?)	Unknown / Unable to Calculate				Note: Vinyl tiles, vinyl sheet flooring, dr-wall, plaster and textured finish (coat) are considered assumed materials if not sampled.

## Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

Hazardous Materials Inventory System

## All Data Report

<b>Building #: 806310</b>		<b>Building Name: CCGS F.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 240</b>	
<b>Location #: 9</b>		<b>Location Name: Corridor</b>		<b>Floor: Main</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units Sample</b>	
<b>Observ. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Hazard</b>	<b>Friability</b>
4087	Walls		Fibreglass							None	
4088	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A	A	Y	240		SF	V0003
4086	Ceiling		Metal							None	

<b>Building #: 806310</b>		<b>Building Name: CCGS F.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 70</b>	
<b>Location #: 10</b>		<b>Location Name: Cabin</b>		<b>Floor: Main</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units Sample</b>	
<b>Observ. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Hazard</b>	<b>Friability</b>
4090	Walls		Fibreglass							None	
4089	Ceiling		Metal							None	
4091	Floor		Vinyl tiles	Surface	N/A	A	Y	70		SF	V0003

## Legend:

Action	Access			Condition		Sample Number	
	(1)	Error	A	All building occupants	Good	S###	Sample collected
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(2)	Type 2 precautions for entry into areas with ACM debris	B	Maintenance and operations staff without a ladder	Fair	V###	Material is visually identified to be identical to S###
(3) ACM removal required	(4)	Type 2 precautions for entry into areas where ACM is present	C	Maintenance and operations staff with a ladder	Poor	V0000	Material is visually identified to contain no asbestos
(5) Proactive ACM removal	(6)	ACM repair	D	Not accessible	NOTE: Sprayed material are only rated as Good or Poor.	V9000	Material is visually identified to contain asbestos
(7) Management program and surveillance	(8)	Assumed Material				V9500	Material is assumed to contain asbestos
(9) Action not currently assigned	(?)	Unknown / Unable to Calculate					Note: Vinyl tiles, vinyl sheet flooring, drywall, plaster and textured finish (coat) are considered assumed materials if not sampled.

## Units

SF - Square feet

L.F - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

Hazardous Material Inventory System

## All Data Report

Building #: 806310		Building Name: CCGS F.C.G. Smith			Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 70	
Location #: 11		Location Name: Cabin			Floor: Main							
Obsv. #	System	Component	Material	Item	Covering	Access	Visible	Condition, Quantity & Action	Units	Sample	Hazard	Friability
4094	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A	A	Y	70	SF	V0003	None	
4093	Walls		Fibreglass								None	
4092	Ceiling		Metal								None	

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 168				
Location #: 12		Location Name: Mess		Floor: Main										
Obsrv. #	System	Component	Material	Item	Covering	Access	Visible	Condition, Quantity & Action			Units	Sample	Hazard	Friability
								Good	Fair	Poor				
4097	Floor	Floor Tile 1	Vinyl tiles	Surface	N/A	A	Y	168			SF	V0001	None	
4096	Walls		Fibreglass										None	
4095	Ceiling		Metal										None	

## Legend:

Action	Access				Condition		Sample Number	
	(1) No calculated action	(2) Error	(3) Type 2 precautions for entry into areas with ACM debris	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(2) Error	(1) No calculated action	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(3) ACM removal required	(1) No calculated action	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(4) Type 2 precautions for entry into areas where ACM is present	(1) No calculated action	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(5) Proactive ACM removal	(1) No calculated action	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(6) Management program and surveillance	(1) No calculated action	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(7) Action not currently assigned	(1) No calculated action	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.	(1) No calculated action	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.

## Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

Hazardous Material Inventory System

## All Data Report

<b>Building #: 806310</b>		<b>Building Name: CCGS E.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 140</b>	
<b>Location #: 13</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Visible</b>	<b>Condition, Quantity &amp; Action</b>		<b>Units</b>	<b>Sample</b>
								<b>Good</b>	<b>Fair</b>	<b>Poor</b>	
4099	Walls		Fibreglass								None
4098	Ceiling		Metal								None
4100	Floor	Floor Tile 1	Vinyl tiles	Surface	N/A	A	Y	140			SF V0001 None

<b>Building #: 806310</b>		<b>Building Name: CCGS E.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 16</b>	
<b>Location #: 14</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Visible</b>	<b>Condition, Quantity &amp; Action</b>		<b>Units</b>	<b>Sample</b>
								<b>Good</b>	<b>Fair</b>	<b>Poor</b>	
4103	Floor	Floor Tile 1	Vinyl tiles	Surface	N/A	A	Y	16			SF V0001 None
4102	Walls		Fibreglass								None
4101	Ceiling		Metal								None

## Legend:

Action	Access			Condition		Sample Number	
	(1)	Error	(2)	Good	No visible damage or exposed material	S###	Sample collected
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(2)	Type 2 precautions for entry into areas with ACM debris	(3)	Fair	Reparable damage with minor amounts of exposed material	V###	Material is visually identified to be identical to S###
(3) ACM removal required	(4)	Type 2 precautions for entry into areas where ACM is present	(5)	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5) Proactive ACM removal	(6)	ACM repair	(7)	NOTE: Sprayed material are only rated as Good or Poor.		V9000	Material is visually identified to contain asbestos
(7) Management program and surveillance	(8)	Assumed Material	(9)			V9500	Material is assumed to contain asbestos
(9) Action not currently assigned	(?)	Unknown / Unable to Calculate					Note: Vinyl tiles, vinyl sheet flooring, drywall, plaster and textured finish (coat) are considered assumed materials if not sampled.
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							

## Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

# **Hazardous Material Inventory System**

## **All Data Report**

<b>Building #: 806310</b>		<b>Building Name: CCGS E.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 100</b>	
<b>Location #: 15</b>		<b>Location Name: Control Room</b>		<b>Floor: Main</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units Sample</b>	
<b>Obsrv. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Hazard</b>	<b>Friability</b>
4106	Floor		Aluminum							None	
4105	Walls		Fibreglass							None	
4104	Ceiling		Metal							None	

<b>Building #: 806310</b>		<b>Building Name: CCGS E.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 100</b>	
<b>Location #: 16</b>		<b>Location Name: Room</b>		<b>Floor: Main</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units Sample</b>	
<b>Obsrv. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Hazard</b>	<b>Friability</b>
4109	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A	A	Y	100		SF	V0003 None
4108	Walls		Fibreglass							None	
4107	Ceiling		Metal							None	

### **Legend:**

Action	Access			Condition		Sample Number	
	(1) No calculated action	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned
(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) Unknown / Unable to Calculate	(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(3) ACM removal required	(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) Unknown / Unable to Calculate	(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.	
(4) Type 2 precautions for entry into areas where ACM is present	(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) Unknown / Unable to Calculate	(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.		
(5) Proactive ACM removal	(6) Management program and surveillance	(7) Action not currently assigned	(8) Unknown / Unable to Calculate	(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.			
(6) Management program and surveillance	(7) Action not currently assigned	(8) Unknown / Unable to Calculate	(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.				
(7) Action not currently assigned	(8) Unknown / Unable to Calculate	(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.					
(8) Unknown / Unable to Calculate	(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.						
(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							

### **Units**

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

Hazardous Materials Inventory System

## All Data Report

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 56	
Location #:	System	Component	Material	Item	Floor: Main	Covering	Access	Visible	Condition, Quantity & Action	Fair	Poor
4110	Ceiling		Metal						Good		
4112	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A		A	Y	56		
4111	Walls		Fibreglass							SF	V0003
											None

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 78	
Location #:	System	Component	Material	Item	Floor: Main	Covering	Access	Visible	Condition, Quantity & Action	Fair	Poor
4115	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A		A	Y	78		
4114	Walls		Fibreglass							SF	V0003
4113	Ceiling		Metal								None
											None

## Legend:

Action		Access		Condition		Sample Number	
(1)	No calculated action	(1)	Error	Good	No visible damage or exposed material	S###	Sample collected
(2)	Immediate clean-up of debris or damaged ACM likely to be disturbed	(2)	Type 2 precautions for entry into areas with ACM debris	Fair	Repairable damage with minor amounts of exposed material	V###	Material is visually identified to be identical to S###
(3)	ACM removal required	(4)	Type 2 precautions for entry into areas where ACM is present	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5)	Proactive ACM removal	(6)	ACM repair	NOTE: Sprayed material are only rated as Good or Poor		V9000	Material is visually identified to contain asbestos
(7)	Management program and surveillance	(8)	Assumed Material			V9500	Material is assumed to contain asbestos
(9)	Action not currently assigned	(?)	Unknown / Unable to Calculate				Note: Vinyl tiles, vinyl sheet flooring, drywall, plaster and textured finish (coat) are considered assumed materials if not sampled.

## Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

## All Data Report

<b>Building #: 806310</b>		<b>Building Name: CCGS F.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 48</b>	
<b>Location #: 19</b>		<b>Location Name: Washroom</b>		<b>Floor: Main</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units Sample</b>	
<b>Observ. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Hazard</b>	<b>Fraility</b>
4117	Walls		Fibreglass							None	
4116	Ceiling		Metal							None	
4118	Floor	Floor Tile 3	Vinyl tiles	Surface	N/A	A	Y	48		SF	V0003 None

<b>Building #: 806310</b>		<b>Building Name: CCGS F.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 60</b>	
<b>Location #: 20</b>		<b>Location Name: Storage</b>		<b>Floor: Main</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units Sample</b>	
<b>Observ. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Hazard</b>	<b>Fraility</b>
4121	Floor	Floor Tile 1	Vinyl tiles	Surface	N/A	A	Y	60		SF	V0001 None
4120	Walls		Fibreglass							None	
4119	Ceiling		Metal							None	

### Legend:

Action	Access			Condition		Sample Number	
	(1)	Error	(2)	Good	No visible damage or exposed material	S###	Sample collected
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(2)	Type 2 precautions for entry into areas with ACM debris	(3)	Fair	Repairable damage with minor amounts of exposed material	V####	Material is visually identified to be identical to S###
(3) ACM removal required	(4)	Type 2 precautions for entry into areas where ACM is present	(5)	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5) Proactive ACM removal	(6)	ACM repair	(7)	NOTE: Sprayed material are only rated as Good or Poor.		V9000	Material is visually identified to contain asbestos
(7) Management program and surveillance	(8)	Assumed Material	(9)			V9500	Material is assumed to contain asbestos
(9) Action not currently assigned	(?)	Unknown / Unable to Calculate					Note: Vinyl tiles, vinyl sheet flooring, drywall, plaster and textured finish (coat) are considered assumed materials if not sampled
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							

### Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage

All Data Report

Building #: 806310		Building Name: CCGS E.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 450	
Location #: 21		Location Name: Engine Room		Floor: Tank Top		Visible		Condition, Quantity & Action		Units	
Obsrv. #	System	Component	Material	Item	Covering	Access	Good	Fair	Poor	Sample	Fraility
4127	Mechanical Equipment	Exhaust	Magnesia block	Surface	Canvas	A	N	40		LF	50004 None
4126	Duct		Not Insulated								None
4125	Piping		Not Insulated								None
4123	Ceiling		Metal								None
4122	Floor		Steel								None
4124	Walls		Steel								None

Note: s-10 on generator s-11 on motor

Legend:

Action		Access		Condition		Sample Number	
(1)	No calculated action	(1)	Error	Good	No visible damage or exposed material	S####	Sample collected
(2)	Immediate clean-up of debris or damaged ACM likely to be disturbed	(2)	Type 2 precautions for entry into areas with ACM debris	Fair	Repairable damage with minor amounts of exposed material	V####	Material is visually identified to be identical to S###
(3)	ACM removal required	(4)	Type 2 precautions for entry into areas where ACM is present	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5)	Proactive ACM removal	(6)	ACM repair	NOTE: Sprayed material are only rated as Good or Poor.		V9000	Material is visually identified to contain asbestos
(7)	Management program and surveillance	(8)	Assumed Material			V9500	Material is assumed to contain asbestos
(9)	Action not currently assigned	(7)	Unknown / Unable to Calculate				Note: Vinyl tiles, vinyl sheet flooring, drywall, plaster and textured finish (coat) are considered assumed materials if not sampled.
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							

Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage

**All Data Report**

<b>Building #: 806310</b>		<b>Building Name: CCGS E.C.G. Smith</b>		<b>Surveyor: Gesfor</b>		<b>Survey Date:</b>		<b>Room #:</b>		<b>Square ft: 450</b>	
<b>Location #: 22</b>		<b>Location Name: Engine Room</b>		<b>Floor: Tank Top</b>		<b>Visible</b>		<b>Condition, Quantity &amp; Action</b>		<b>Units</b>	
<b>Obsrv. #</b>	<b>System</b>	<b>Component</b>	<b>Material</b>	<b>Item</b>	<b>Covering</b>	<b>Access</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>	<b>Sample</b>	<b>Friability</b>
4134	Mechanical Equipment	Exhaust	Magnesia block	Surface	Canvas	A	Y	40		LF V0004	None
4132	Piping		Not Insulated								None
4131	Floor		Steel								None
4129	Ceiling		Metal								None
4133	Walls		Steel								None
4130	Duct		Not Insulated								None

Note: s-12 on motor

**Legend:**

Action	Access				Condition		Sample Number	
	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
No calculated action	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(3) ACM removal required	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(5) Proactive ACM removal	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(7) Management program and surveillance	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
(9) Action not currently assigned	(1) Error	(2) Type 2 precautions for entry into areas with ACM debris	(3) Type 2 precautions for entry into areas where ACM is present	(4) ACM repair	(5) Assumed Material	(6) Unknown / Unable to Calculate	(7) Management program and surveillance	(8) Action not currently assigned
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.								

**Units**

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



Building Number(s): 806310

# Hazardous Material Inventory System All Data Report

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 264	
Location #: 23		Location Name: Storage		Floor: Tank Top		Item		Covering		Access	
Obsrv. #	System	Component	Material					Visible	Condition, Quantity & Action	Fair	Poor
4138	Piping		Fibreglass								VNO
4137	Structure		Steel								None
4136	Walls		Steel								None
4135	Floor		Steel								None

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 264	
Location #: 24		Location Name: Storage		Floor: Tank Top		Item		Covering		Access	
Obsrv. #	System	Component	Material					Visible	Condition, Quantity & Action	Fair	Poor
4139	Piping		Fibreglass								None
4142	Floor		Steel								None
4141	Walls		Steel								None
4140	Structure		Steel								None

## Legend:

Action		Access		Condition		Sample Number	
	No calculated action	(1) Error	A All building occupants	Good	No visible damage or exposed material	S###	Sample collected
(1)	Immediate clean-up of debris or damaged ACM likely to be disturbed	(2) Type 2 precautions for entry into areas with ACM debris	B Maintenance and operations staff without a ladder	Fair	Reparable damage with minor amounts of exposed material	V####	Material is visually identified to be identical to S###
(3)	ACM removal required	(4) Type 2 precautions for entry into areas where ACM is present	C Maintenance and operations staff with a ladder	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5)	Proactive ACM removal	(6) ACM repair	D Not accessible	NOTE: Sprayed material are only rated as Good or Poor.	V9000	V9000	Material is visually identified to contain asbestos
(7)	Management program and surveillance	(8) Assumed Material			V9500	V9500	Material is assumed to contain asbestos
(9)	Action not currently assigned	(?) Unknown / Unable to Calculate			Note: Vinyl tiles, vinyl sheet flooring, drywall, plaster and textured finish (coat) are considered assumed materials if not sampled.		
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							

Units

SF - Square feet

LF - Linear feet

EA - Each

%- Percentage



Building Number(s): 806310

## Hazardous Material Inventory System All Data Report

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #:		Square ft: 312	
Location #: 25		Location Name: Storage		Floor: Tank Top		Visible		Condition, Quantity & Action		Units	
Observ. #	System	Component	Material	Item	Covering	Access	Good	Fair	Poor	Sample	Fraility
4146	Mechanical Equipment	Exhaust	Magnesia block	Surface	Canvas	A	Y	20		LF	V0004 None
4144	Structure		Steel								None
4143	Floor		Steel								None
4148	Ceiling		Fibreglass							VNO	None
4147	Walls		Fibreglass							VNO	None
4145	Piping		Not Insulated								None

### Legend:

Action	Access			Condition		Sample Number	
	(1) No calculated action	(2) Error	(3) All building occupants	Good	No visible damage or exposed material	SH##	Sample collected
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed	(1) Type 2 precautions for entry into areas with ACM debris	(2) Type 2 precautions for entry into areas with ACM debris	(3) Maintenance and operations staff without a ladder	Fair	Repairable damage with minor amounts of exposed material	V####	Material is visually identified to be identical to S##
(3) ACM removal required	(4) Type 2 precautions for entry into areas where ACM is present	(4) Type 2 precautions for entry into areas where ACM is present	(3) Maintenance and operations staff with a ladder	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5) Proactive ACM removal	(6) ACM repair	(6) ACM repair	(4) Not accessible	NOTE: Sprayed material are only rated as Good or Poor.		V9000	Material is visually identified to contain asbestos
(7) Management program and surveillance	(8) Assumed Material	(8) Assumed Material				V9500	Material is assumed to contain asbestos
(9) Action not currently assigned	(7) Unknown / Unable to Calculate	(7) Unknown / Unable to Calculate					Note: Vinyl tiles, vinyl sheet flooring, dr-wall, plaster and textured finish (coat) are considered assumed materials if not sampled.

### Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage

## All Data Report

Building #: 806310		Building Name: CCGS F.C.G. Smith		Surveyor: Gesfor		Survey Date:		Room #: 324		Square ft: 324	
Location #: 26		Location Name: Shop		Floor: Tank Top		Visible		Condition, Quantity & Action		Units Sample	
Observ. #	System	Component	Material	Item	Covering	Access	Good	Fair	Poor	Hazard	Friability
4154	Piping		Not insulated							None	
4153	Mechanical Equipment	Exhaust	Magnesia block	Surface	Canvas	A	Y	16		LF V0004	None
4151	Ceiling		Fibreglass							None	
4150	Structure		Steel							None	
4149	Floor		Steel							None	
4152	Walls		Fibreglass							VNO	None

### Legend:

Action	Access				Condition		Sample Number	
	(1) No calculated action	(2) Error	(3) Type 2 precautions for entry into areas with ACM debris	(4) Type 2 precautions for entry into areas where ACM is present	(5) ACM repair	(6) Assumed Material	(7) Unknown / Unable to Calculate	(8) Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.
(1) Immediate clean-up of debris or damaged ACM likely to be disturbed								
(2) Type 2 precautions for entry into areas with ACM debris								
(3) ACM removal required								
(4) Type 2 precautions for entry into areas where ACM is present								
(5) Proactive ACM removal								
(6) ACM repair								
(7) Management program and surveillance								
(8) Action not currently assigned								
(9) NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.								

### Units

SF - Square feet

LF - Linear feet

EA - Each

% - Percentage



## **Hazardous Material Inventory System**

# All Data Report

**Building Number(s):** 806310

[illegible][illegible]

**Legend:**

Action		Access		Condition		Sample Number	
	No calculated action	(1) Error	A All building occupants	Good	No visible damage or exposed material	S###	Sample collected
(1)	Immediate clean-up of debris or damaged ACM likely to be disturbed	(2) Type 2 precautions for entry into areas with ACM debris	B Maintenance and operations staff without a ladder	Fair	Repairable damage with minor amounts of exposed material	V###	Material is visually identified to be identical to S##
(3)	ACM removal required	(4) Type 2 precautions for entry into areas where ACM is present	C Maintenance and operations staff with a ladder	Poor	Irreparable damage with exposed and missing material	V0000	Material is visually identified to contain no asbestos
(5)	Proactive ACM removal	(6) ACM repair	D Not accessible	NOTE: Sprayed material are only rated as Good or Poor.	Material is visually identified to contain asbestos	V9000	Material is visually identified to contain asbestos
(7)	Management program and surveillance	(8) Assumed Material				V9500	Material is assumed to contain asbestos
(9)	Action not currently assigned	(?) Unknown / Unable to Calculate					
NOTE: Actions in round brackets ( ) are auto-calculated. Actions in square brackets [ ] are manual overrides.							

Units

SF - Square feet

LF - Linear feet

FA - Each

Percentage

Page 16 of 16

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Date: 31/03/06 11:31:55

### **APPENDIX III**

### **ASBESTOS ASSESSMENT MATRIX**

## 1.0 EVALUATION CRITERIA AND BASIS OF RECOMMENDATIONS FOR ASBESTOS-CONTAINING MATERIALS

This reassessment provides accurate information regarding the location, condition and accessibility of the ACM used in the construction of the vessel. In order to make recommendations for compliance with current regulations, PLEL developed the following ACM evaluation criteria based on the conclusion of previous published studies, particularly the "Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario" and our experience with structures containing ACM. The same criterion that was initially employed has been utilized for the reassessment.

### 1.1 Evaluation of Condition

#### 1.1.1 Spray Applied Fireproofing, Insulation and Texture Finishes

To evaluate the condition of ACM spray applied as fireproofing, non-mechanical thermal insulation, or texture, decorative or acoustic finishes, the following criteria is applied:

**GOOD** Surface of material shows no significant signs of damage, deterioration or delamination. Up to 1 percent visible damage to surface is allowed within range of **GOOD**. Evaluation of sprayed fireproofing requires the surveyor to be familiar with the irregular surface texture typical of fireproofing as installed. **GOOD** condition includes unencapsulated or unpainted fireproofing or texture finishes, where no delamination or damage is observed, and encapsulated fireproofing or texture finishes where the encapsulation has been applied after the damage or fallout occurred.

**POOR** Sprayed materials show signs of damage, delamination or deterioration. More than 1 percent damage to surface of ACM spray.

In observation areas where damage exists, in isolated locations, both **GOOD** and **POOR** condition may be applicable. The extent or percentage of each condition will be recorded on the room-by-room survey form. **FAIR** condition is not utilized in the evaluation of the fireproofing, non-mechanical insulation, or texture coat finishes.

The evaluation of ACM spray applied as fireproofing, non-mechanical thermal insulation, or texture, decorative or acoustic finishes which are present above ceilings, may be limited by the number of observations made, and by building components such as ducts or full height bulkheads that obstruct the above ceiling observations. Persons entering the ceiling are advised to be watchful for ACM **DEBRIS** prior to accessing or working above ceilings in areas of buildings with ACM regardless of the reported condition.

### 1.1.2 Mechanical Insulation

The evaluation of the condition of mechanical insulation (on surface of boilers, breeching, exhausts, ductwork, piping, tanks, equipment etc.) utilizes the following criteria:

- |             |   |
|-------------|---|
| <b>GOOD</b> | Insulation is completely covered in jacketing and exhibits no evidence of damage or deterioration. No insulation is exposed. Includes conditions where the jacketing has minor damage (ie., scuffs or stains), but the jacketing is not penetrated.   |
| <b>FAIR</b> | Minor penetrating damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination) or undamaged insulation that had never been jacketed. Insulation is exposed but not showing surface disintegration. The extent of missing insulation ranges from minor to none. Damage can be repaired. |
| <b>POOR</b> | Original insulation jacket is missing, damaged, deteriorated or delaminated. Insulation is exposed and significant areas have been dislodged. Damage cannot be readily repaired.  |

The evaluation of mechanical insulation may be limited by the number of observations made and vessel components such as ducts or bulkheads that obstruct observations. It is not possible to observe each foot of mechanical insulation from all angles. Persons working in proximity to mechanical insulation or entering ceilings with mechanical insulation are advised to be watchful of ACM **DEBRIS** regardless of the reported condition.

### 1.1.3 Non-friable and Potentially Friable Materials

The condition of non-friable ACM, such as plaster finishes containing asbestos, and manufactured products such as acoustic ceiling tiles and asbestos cement products (transite), all of which have the potential to become friable when handled are evaluated as follows:

- |             |  |
|-------------|--|
| <b>GOOD</b> | No significant damage. Material may be cracked or broken but is stable and not likely to become friable upon casual contact.                                   |
| <b>POOR</b> | Material is severely damaged. Loose <b>DEBRIS</b> is present or binder has disintegrated to the point where contact will cause the material to become friable. |

The evaluation of the condition of non-friable and potentially friable materials does not utilize a **FAIR** condition rating.

If the ACM is damaged but stable, and there is no friable **DEBRIS** present, the condition is rated as **GOOD**.

## 1.2 **Evaluation of Accessibility**

The accessibility of materials known or suspected of being ACM is rated according to the following criteria:

<b>ACCESS (A)</b>	Areas of the vessel within reach (from deck level) of all general occupants. Includes areas such as storage areas where activities of the general occupants may result in disturbance of ACM not normally within reach from deck level.
<b>ACCESS (B)</b>	<p>Frequently entered maintenance and service areas of the vessel within reach of staff, without the need for a ladder (less frequently accessed than Access A areas). Includes:</p> <ul style="list-style-type: none"> <li>○ areas within reach from a fixed ladder or catwalk, ie. tops of equipment, mezzanines.</li> <li>○ frequently entered pipe chases, stack towers, tunnels and service areas.</li> </ul>
<b>ACCESS (C)</b>	<p>Areas of the vessel above 8'-0" where use of a ladder is required to reach the ACM (less frequently accessed than Access B areas).</p> <p>Refers to ACM materials that are exposed to view, from the floor or ladder, without the removal or opening of other vessel components such as deckheads/bulkheads, or service access doors or hatches. Does not include infrequently accessed service areas of the vessel.</p>
<b>ACCESS (D)</b>	Areas of the vessel behind inaccessible solid deckhead and/or bulkhead systems, or mechanical equipment etc. where demolition or removal of the deckhead/bulkhead or equipment etc. is required to reach the ACM. Evaluation of condition and extent of ACM is limited or impossible, depending on the surveyor's ability to visually examine materials in ACCESS D.

### 1.3 Evaluation of ACM DEBRIS

#### 1.3.1 DEBRIS From Friable ACM

The presence of fallen ACM is noted separately from the presumed friable ACM source (sprayed fireproofing, thermal insulation, texture, decorative or acoustic finishes or mechanical insulation) and is referred to as **DEBRIS**.

#### 1.3.2 DEBRIS From Damaged Non-Friable ACM

The presence of fallen ACM from damaged non-friable ACM is also reported separately from the non-friable ACM source. Only fallen non-friable ACM that has become friable is reported as **DEBRIS**.

The identification of the exact location or presence of **DEBRIS** on the top of deckhead panels is limited by the number of observations made and the presence of vessel components such as ducts or compartment bulkheads that obstruct observations. Workers are advised to be watchful for the presence of **DEBRIS** prior to accessing or working in proximity to mechanical insulation or above deckheads in areas of the vessel with ACM regardless of the reported presence or absence of **DEBRIS**.

## 1.4 Evaluation of SUSPECT MATERIALS

The evaluation of **SUSPECT MATERIALS** (SM), which are materials and products that may randomly contain asbestos but were not tested, is based on the assumption that these unsampled SUSPECT MATERIALS are asbestos-containing.

A number of potentially ACM's that are difficult to identify may be present in some areas. These materials are grouped under the heading of Suspect Asbestos-Containing Materials (the need for demolition/dismantling equipment and the lack of access limit our ability to determine the asbestos content).

Several areas of equipment base insulating materials are concealed with cladding, and every effort has been made to collect representative samples of base insulating materials. It is possible however that certain asbestos-containing base insulation is present behind solid cladding. A level of destructive testing prior to activities that may expose such materials is a standing recommendation.

## 1.5 Action Matrix and Definitions

PLEL's evaluation of viability of a specific asbestos control options is based on the consideration of the ACM's condition and accessibility. The logic used is that damaged ACM located in an area frequently accessed by all vessel occupants is of a higher priority than damaged ACM located in an infrequently accessed service area.

Under current regulations and guidelines, the owner is required to control all disturbance of ACM. A number of abatement options, such as repair, removal, enclosure, or encapsulation are available to comply with the regulatory requirements.

The following factors are also considered in making site-specific recommendations for compliance with the provincial regulations:

- i) ACM in **POOR** condition is not routinely repairable.
  - o If an abatement action is necessary, removal is the recommended action (enclosure is a viable option in unusual circumstances).
- ii) Mechanical insulation in **FAIR** condition can be repaired or removed based on the following general recommendations applied on a case by case basis (Note: Either repair or removal are legally acceptable options for the treatment of ACM found in **FAIR** condition):
  - o Repair ACM mechanical insulation found in **FAIR** condition in **ACCESS (B)** or **ACCESS (C)** areas.
  - o Remove ACM mechanical insulation found in **FAIR** condition in **ACCESS (B)** and **ACCESS (C)** areas, where future damage to the ACM is likely to occur.
  - o Remove ACM mechanical insulation found in **FAIR** condition with **ACCESS (A)** to eliminate the potential for re-damaging ACM by all vessel users.

- iii) ACM in **GOOD** condition present in **ACCESS (A)** at a minimum is subject to surveillance, as long as it is not disturbed by future renovation, maintenance or demolition. PLEL recommends pro-active removal of the ACM in **ACCESS (A)** where damage is possible by ongoing occupant activity (accidental or intentional). This recommendation exceeds current regulatory requirements.
- iv) Non-friable or manufactured products are considered in the action matrix as follows:
  - o Non-friable and manufactured products reported in **POOR** condition or friable **DEBRIS** resulting from the deterioration of non-friable ACM are treated as friable materials and the appropriate action, depending on accessibility, is determined from the Action Matrix for friable ACM.
  - o For non-friable or manufactured products reported in **GOOD** condition, Action 7 (surveillance) is recommended regardless of Accessibility.
  - o For non-friable or manufactured products **FAIR** condition is not utilized.
- v) Remove all ACM from a particular area where small quantities of asbestos are present and removal will negate the need for the use of the Asbestos Management Program in that area.

With these principles in mind, the following Action Matrix Tables establish the recommended asbestos control action. Note that factors not included in the above discussion, such as an owner's policy decision to remove material, knowledge of upcoming maintenance, etc., may result in a recommendation that differs from this table. The **ACTIONS** are defined in full following the tables.

## 1.6 Action Matrix Tables

### 1.6.1 FRIABLE ACM

ACCESS	CONDITION			DEBRIS	SUSPECT MATERIAL
	GOOD	FAIR	POOR		
(A)	ACTION 5/7 <sup>1</sup>	ACTION 5/6 <sup>2</sup>	ACTION 3	ACTION 1	ACTION 8
(B)	ACTION 7	ACTION 6/5 <sup>3</sup>	ACTION 3	ACTION 1	ACTION 8
(C) Exposed	ACTION 7	ACTION 6	ACTION 4	ACTION 2	ACTION 8
(C) Concealed	ACTION 7	ACTION 7	ACTION 4	ACTION 2	ACTION 8
(D)	ACTION 7	ACTION 7	ACTION 7	ACTION 7	ACTION 8

<sup>1</sup> If material in **ACCESS (A)/GOOD** condition is not removed **ACTION 7** is required.

<sup>2</sup> If material in **ACCESS(A)/FAIR** condition is not removed **ACTION 6** is required.

<sup>3</sup> Remove ACM in **ACCESS (B)/FAIR** condition if ACM is likely to be disturbed.

### 1.6.2 NON-FRIABLE AND POTENTIALLY FRIABLE ACM

ACCESS	CONDITION		DEBRIS	SUSPECT MATERIAL
	GOOD	POOR		
(A)	ACTION 7	ACTION 3 <sup>4</sup>	ACTION 1	ACTION 8
(B)	ACTION 7	ACTION 3 <sup>4</sup>	ACTION 1	ACTION 8
(C) Exposed	ACTION 7	ACTION 4 <sup>4</sup>	ACTION 2	ACTION 8
(C) Concealed	ACTION 7	ACTION 4 <sup>4</sup>	ACTION 2	ACTION 8
(D)	ACTION 7	ACTION 7 <sup>4</sup>	ACTION 7	ACTION 8
<sup>4</sup> Non-friable and potentially friable ACM found in <b>POOR</b> condition and friable <b>DEBRIS</b> (from a non-friable ACM source) shall be treated as friable ACM.				

### 1.7 Action Definitions

The following definitions relate to the Action Matrix Tables presented above, and as calculated by PLEL's Hazardous Materials Information System (HMIS). The corresponding Action is presented alongside the quantity in the Re-Assessment Survey Data sheets in Appendix I.

#### **ACTION 1 Immediate Clean-Up of DEBRIS that is Likely to Be Disturbed**

Restrict access that is likely to cause a disturbance of the ACM **DEBRIS** and clean up ACM **DEBRIS** immediately. Utilize correct asbestos procedures. This action is required for compliance with regulatory requirements. The surveyor will immediately notify the owner of this condition.

#### **ACTION 2 Type 2 Precautions for Entry into Areas with ACM DEBRIS**

At locations where ACM **DEBRIS** can be isolated in lieu of removal or cleaned up, use appropriate means to limit entry to the area. Restrict access to the area to persons utilizing Type 2 asbestos precautions. The precautions will be required until the ACM **DEBRIS** has been cleaned up, and the source of the **DEBRIS** has been stabilized or removed.

#### **ACTION 3 ACM Removal Required for Compliance**

Remove ACM for compliance with regulatory requirements. Utilize asbestos procedures appropriate to the scope of the removal work.

#### **ACTION 4 Type 2 Precautions for Access into Areas Where ACM is Present and Likely to be Disturbed by Access**

Use Type 2 asbestos precautions when entry or access into an area is likely to disturb the ACM. **ACTION 4** must be used until the ACM is removed (Use ACTION 1 or 2 if **DEBRIS** is present).

**ACTION 5      Proactive ACM Removal**

Remove ACM in lieu of repair, or at locations where the presence of asbestos in **GOOD** condition is not desirable.

**ACTION 6      ACM Repair**

Repair ACM found in **FAIR** condition, and not likely to be damaged again or disturbed by normal use of the area or room. Upon completion of the repair work treat ACM as material in **GOOD** condition and implement **ACTION 7**. If ACM is likely to be damaged or disturbed, during normal use of the area or room, implement **ACTION 5**.

**ACTION 7      Asbestos Management Program with Routine Surveillance**

Implement an Asbestos Management Program, including routine surveillance of ACM. Trained workers or contractors must use appropriate asbestos precautions (Type 1, Type 2 or Type 3) during disturbance of the remaining ACM.

**ACTION 8      Suspect Material**

Implement the Asbestos Management Program for materials that historically contained asbestos but cannot, or have not, been sufficiently tested for asbestos content. These materials are identified as **SUSPECT MATERIALS**. **SUSPECT MATERIALS** may include the following:

- All concealed equipment base insulating material(s)
- All inaccessible insulations on operating equipment

**SUSPECT MATERIALS** are to be treated as ACM and subject to the Action Matrix, until bulk sampling confirms the absence of asbestos. Bulk sampling, of **SUSPECT MATERIALS**, is recommended prior to the start of renovation, demolition, or maintenance work that will result in a significant disturbance of the **SUSPECT MATERIAL**.