APPENDIX C

JACQUES WHITFORD REPORT

AGRICULTURE AND AGRI-FOOD CANADA

FREDERICTON POTATO RESEARCH CENTRE

ASBESTOS MANAGEMENT PLAN

Building #6

Agriculture and Agri-food Canada | Agriculture et Agroalimentaire Canada

Agriculture & Agri-Food Canada
Fredericton Potato Research Centre



ASBESTOS MANAGEMENT PLAN

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1.0 INTRODUCTION

Jacques Whitford was commissioned by Ms. Heather McCleave of Public Works and Government Services Canada (PWGSC) on behalf of Agriculture and Agri-Food Canada to provide an Asbestos Management Plan (AMP) for the Potato Research Centre located at 850 Lincoln Road in Fredericton, New Brunswick.

The AMP for this property was developed based on the most stringent requirements of the following documents:

- *A Code of Practise for Working with Materials Containing Asbestos in New Brunswick* referenced in New Brunswick Regulation 92-106 made under the Occupational Health and Safety Act, N.B.;
- Treasury Board of Canada Secretariat Hazardous Substances Directive – II, Section 2.9 as it relates to asbestos management; and
- Public Works and Government Services Canada (PWGSC) Departmental Policy (DP:057) – *Asbestos Management*, dated March 12, 1997.

The requirements of the AMP are as follows:

- Minimize any future asbestos fibre release by controlling access to asbestos containing materials (ACMs) and prevent uncontrolled disturbance of ACMs by establishing safe work procedures for activities that may disturb ACMs in the buildings;
- Monitor the condition of ACMs. Given the changing nature of the building's environment, the condition of ACMs may change. By monitoring the condition of the material, AMP-trained facility staff can ensure that ACMs are well maintained;
- Respond quickly and effectively to changes in the condition of the ACMs and properly repair and contain any damaged ACMs that may be encountered in the future;
- Workers must be able to recognise an asbestos emergency and respond accordingly; and
- Applicable regulations must be followed until all ACMs are removed from the building.

This AMP has been developed to assist facility staff to safely perform their job function when working near ACMs. All facility staff, at a minimum, must read this AMP and be familiar with the following basic elements:

- Asbestos Containing Materials (ACM) Survey;
- Background Information on Asbestos;
- Types of Asbestos Operations;
- Roles and Responsibilities;
- Work Procedures/Worker Protection;

- Periodic Surveillance;
- Labelling;
- Training;
- Notification of cleaning staff and outside contractors who may perform work at the facility; and
- Record Keeping.

The scope of work performed by Jacques Whitford included the following:

- Visual Field Survey;
- Limited Confirmatory Field Sampling;
- Laboratory Analysis;
- Data Interpretation; and
- Preparation of the Asbestos Management Plan provided herein.

The first four tasks above were carried out by Jacques Whitford during an Asbestos-Containing Materials Survey that was completed at the facility in October 2006 for PWGSC on behalf of Agriculture and Agri-Food Canada. The asbestos survey consisted of a visual investigation and gathering of suspect ACMs, classification of the suspect ACMs, and laboratory analysis of suspect ACMs. A copy of the Asbestos Survey is provided in **Appendix 1** as well as an Asbestos Sampling letter report on the sampling of selected lab equipment present in the Research Laboratory (Building #1).

All buildings located at the Lincoln Road Potato Research Centre were considered for the Asbestos-Containing Materials Survey, however, some buildings were not assessed based on their age (new) or construction style (i.e. constructed with steel and wood only). The following buildings were included in the Survey:

- Building #2 - Entomology;
- Building #6 - Old School;
- Building #8 - Potato Breeding;
- Building #9 - Crop Dryer & Storage;
- Building #11 - Farm Services;
- Building #14 (Small Pole Barn);
- Building #15 (Large Pole Barn);
- Building # 17 - Dairy Barn;
- Building #19 - Lawn Equipment Storage;
- Building #23 - Hilton House;
- Building #44 - Insectary;
- Building #52 - Lower Farm Storage Barn; and
- Building #68 (Chemical Storage).

Building #1 (Research Laboratory) was not part of the survey due to the reported extent of recent renovations in this building. However, asbestos was identified in selected lab equipment currently present in the building. Furthermore, based on the age of the building, friable asbestos-containing mechanical insulation (or other ACMs) may be present within enclosed solid ceiling and wall systems, pipe chases or other inaccessible areas in the building. In addition, the portion of Building #1 occupied by the Province of New Brunswick was not considered as part of the survey work.

A site plan (Figure 1) of the facility showing the buildings surveyed and which ones were found to contain asbestos has been included in **Appendix 1**.

2.0 SUMMARY OF ASBESTOS CONTAINING MATERIALS SURVEY

The Potato Research Centre located on the Lincoln Road in Fredericton, New Brunswick. Buildings were first constructed on the site in the mid-1920's. An asbestos containing materials (ACMs) survey conducted at the facility in October 2006 identified the ACMs summarized in Table 1.

A total of thirty seven (37) bulk samples of suspect ACMs were sampled and submitted to LEX Scientific Inc. of Guelph, Ontario, for analysis using a combination of dispersion staining and Polarized Light Microscopy (PLM). LEX Scientific Inc. is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples. Transmission Electron Microscopy (TEM) analysis was carried out to verify the absence and / or presence of asbestos in three samples of vinyl floor tiles (9" x 9").

For detailed building plans of the facility showing the location of the identified ACMs summarized below, please refer to the building plans provided in the Asbestos Survey Report in **Appendix 1**. Photographs of selected identified ACMs have been provided in **Appendix 5**.

Table 1 - Summary of Asbestos Containing Materials
ACM Descriptions and Locations
Building #1 (Research Laboratory)
Lab Equipment - Non-friable asbestos containing oven pad. The oven pad is off-white in colour and is used to place and store hot lab beakers used in Lab Room #132. The oven pad contains 50% Chrysotile asbestos. Note: Although this building has been extensively renovated, based on the age of the building friable asbestos-containing mechanical insulation may be present within enclosed solid ceiling and wall systems, pipe chases or other inaccessible areas in the building.

Table 1 - Summary of Asbestos Containing Materials
ACM Descriptions and Locations
Building #2 (Entomology)
Pipe Insulation - Friable asbestos containing corrugated paper-like straight pipe insulation ("Air cell"). If viewable, the ends of the straight runs of "Air cell" are off-white in colour and have a layered corrugated paper appearance. The "Air cell" pipe insulation contains 70% Chrysotile asbestos and extends from the Lunchroom through to the Storage Room and also into the Washroom. Refer to Photo 1 in **Appendix 5**. Note: Friable asbestos-containing mechanical insulation may also be present within enclosed solid ceiling and wall systems, pipe chases or other inaccessible areas in the building. **Ceilings** - Non-friable asbestos-containing "Transite" ceiling panel boards. The "Transite" ceiling panel boards have a grey, fibrous, cementitious appearance and have been painted various colours. The "Transite" panels contain 20 % Chrysotile asbestos and are fastened to the ceilings throughout the majority of the building. Refer to Photo 2 in **Appendix 5**. **Flooring** - Non-friable asbestos containing vinyl floor tiles. There are two colours of 9" x 9" square vinyl floor tiles (green and reddish brown) were present in a small area adjacent to the door side walls in Growth Rooms 2 and 3. The vinyl floor tiles contain 23 % Chrysotile asbestos. Refer to Photo 3 in **Appendix 5**.
Building #6 (Old School)
Mechanical - Friable asbestos-containing corrugated paper-like straight pipe insulation ("Air cell"). If viewable, the ends of the straight runs of "Air cell" are off-white in colour and have a layered corrugated paper appearance. The "Air cell" pipe insulation contains 70% Chrysotile asbestos and is located in the Boiler Room in the basement. Refer to Photo 4 in **Appendix 5**. - Friable asbestos–containing insulating cement. The insulating cement is beige to off-white in colour and contains 10% Chrysotile and 20% Amosite asbestos. This insulating material is present on the boiler and associated mechanical equipment within the Boiler Room located in the basement. Refer to Photo 5 in **Appendix 5**. - Non-friable asbestos-containing cement piping "Transite". The "Transite" pipe is stored in Room 103 and contains 8% Chrysotile and 1% Amosite asbestos. Refer to Photo 4 in **Appendix 5**. Note: Friable asbestos-containing mechanical insulation may also be present within enclosed solid ceiling and wall systems, pipe chases or other inaccessible areas in the building.

Table 1 - Summary of Asbestos Containing Materials
ACM Descriptions and Locations
Building #8 (Potato Breeding Greenhouse)
Walls - Non-friable asbestos containing "Transite" panels. The "Transite" wall panel boards have a grey, fibrous, cementitious appearance. The "Transite" panels are fastened on to the lower portions of the walls in Greenhouse 8-1 and contain Chrysotile asbestos. Refer to Photo 7 in **Appendix 5**.
Building #9 (Crop Dryer and Storage)
Walls, Doors and Ceilings - Non-friable asbestos-containing "Transite" wall, door, and possibly ceiling panel boards. The "Transite" panel boards have a grey, fibrous, cementitious appearance and have been painted beige to off-white in some areas. The "Transite" panels contain 15 % Chrysotile asbestos and are fastened to the inside side of the doors and underneath the metal coverings on the walls, and possibly underneath the metal coverings on the ceilings inside the Crop Dryer Rooms (Dryer Rooms 1 and 2). Refer to Photo 8 in **Appendix 5**.
Building #11 (Farm Services)
Mechanical - Friable asbestos-containing "Mag block" straight pipe insulation. If viewable, the ends of the straight runs of "Mag block" are white in colour and have a pre-formed block appearance. The "Mag block" pipe insulation contains 10% Chrysotile and 10-15% Amosite asbestos and is located on the first floor in the Boiler Room and on the second floor in the Carpenter's Workshop, the Mechanic's Workshop, the Machine Shop, the Gator Storage Room, the Chemical Storage Room, and the Garden Storage Area. As well, stray remnants of this type of insulation were observed on struts below the ceiling in the Tractor Storage Area adjacent to the Garden Storage Area. Refer to Photo 9 in **Appendix 5**. - Friable asbestos-containing corrugated paper-like straight pipe insulation ("Air cell"). If viewable, the ends of the straight runs of "Air cell" are off-white in colour and have a layered corrugated paper appearance. The "Air cell" pipe insulation contains 70% Chrysotile asbestos and is located in the Gator Storage Room on the second floor and in the Janitor's Room on the first floor. Refer to Photo 10 in **Appendix 5**. Note: Friable asbestos-containing mechanical insulation may also be present within enclosed solid ceiling and wall systems, pipe chases or other inaccessible areas in the building. **Ceilings** - Non-friable asbestos-containing cementitious ceiling insulating material. The cementitious ceiling insulating material has a hard cement-like granular texture. The cementitious ceiling insulating material contains 3% Actinolite and Tremolite asbestos and is present on the ceilings in the Chemical Storage Area, the Office across from the Chemical Storage Area, the Garden Storage Area, the Lunchroom (above the drop ceiling), the Tractor Storage Area adjacent to the Lunchroom, and the hallway, all located on the second floor of the building. Refer to Photo 11 in **Appendix 5**.

Table 1 - Summary of Asbestos Containing Materials
ACM Descriptions and Locations
Building #23 (Hilton House)
Ceilings - Friable asbestos-containing texture coatings. The texture coatings are a white troweled-on decorative material (i.e., stucco). The texture coatings contain 2% Chrysotile asbestos and were observed on the ceilings in the Meeting Room and in the office adjacent to the kitchen, both located on the ground floor. Refer to Photo 12 in **Appendix 5**. **Flooring** - Non-friable asbestos containing vinyl floor tiles. The 9" x 9" square vinyl floor tiles are greyish brown with white, black and red streaking and are located in the side entrance foyer on the ground floor. The vinyl floor tiles contain 59% Chrysotile asbestos. Refer to Photo 13 in **Appendix 5**. Note: Although all accessible asbestos-containing mechanical insulation was removed from this building in the spring of 2006, based on its age, friable asbestos-containing mechanical insulation may be present within enclosed solid ceiling and wall systems, pipe chases or other inaccessible areas in the building.
Exterior Concerns
Exterior - Non-friable asbestos-containing cement piping "Transite". Approximately fifteen sections of cement ("Transite") pipe are stored on the eastern side of Building #70 (Lumber Storage Building). The "Transite" pipes are 15 cm to 20 cm in diameter and approximately 3 m in length. The "Transite" pipes contain 8% Chrysotile and 1% Amosite asbestos. Refer to Photo 14 in **Appendix 5**.

3.0 BACKGROUND INFORMATION ON ASBESTOS

A discussion on asbestos, the development of regulations, and the need for an AMP is provided in the following sections. This discussion is warranted in order to provide an understanding of what asbestos is, what the concerns over asbestos in the work place are, and why an AMP is required.

3.1 Asbestos Characteristics

Asbestos is a family of naturally occurring fibrous silicates from two mineralogical groups:

- Serpentines, which include chrysotile (white asbestos). These spiral fibres are pliable, curly and made up of tiny individual fibrils; and

- Amphiboles, which include amosite (brown asbestos), crocidolite (blue asbestos), and tremolite. Amosite and crocidolite fibres are straight and needle like, whereas tremolite fibres are short and stubby.

The qualities of asbestos that promoted its use in construction are as follows:

- Fire resistance;
- Tensile strength;
- Durability;
- Flexibility; and
- Resistance to heat, wear, corrosion.

Asbestos has many building applications that include:

- Effective insulator against heat, cold, electricity and noise;
- Used as sprayed insulation and fireproofing materials in the period following the Second World War until about 1973;
- Used as a thermal insulator in pipes, boilers and incandescent light reflectors;
- Structural steelwork fireproofing of high-rise buildings;
- Acoustical and decorative purposes in ceiling tiles and building walls; and
- Durability in floor tiles, wall board, roof shingles and felts, gaskets, caulking, wall and ceiling plasters.

3.2 Potential Health Hazards

Asbestos is a health-hazard only if it can enter into the body through:

- Inhalation;
- Ingestion; or
- Absorption.

The primary health-related concern of the above list is asbestos inhalation. Respiratory diseases such as asbestosis (lung scarring) and cancers have been clinically linked to prolonged and heavy occupational exposure to airborne asbestos.

Health-related concerns prompted the Ontario Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario (1981) to study and report on the health effects of asbestos in buildings in the early 1980's. The following is the conclusion of the Royal Commission report (Chapter 9) with bolding added to emphasize critical points:

> "The exposure of building occupants to asbestos fibres during normal building use is insignificant, whether as compared to the exposure of insulation workers in the past or as compared to the much lower exposures permitted by the Ontario workplace control limits. Studies of asbestos concentrations in building air have shown that many buildings containing asbestos insulation do not exhibit fibre levels exceeding those in the outdoor air or in buildings not insulated with asbestos. Even when a building exhibits elevated asbestos fibre levels, these are still very low compared to current workplace control limits and are orders of magnitude below the levels to which workers were exposed in the past."
>
> "We will conclude that it is rarely necessary to take corrective action in buildings containing asbestos insulation in order to protect the general occupants of the buildings. **On the other hand, construction, demolition, renovation, maintenance and custodial workers in asbestos-containing buildings may be exposed to significant asbestos fibre levels and may, during their work, cause elevated fibre levels for nearby occupants. THE PROBLEM OF PROTECTING THESE WORKERS, AND OF PROTECTING OCCUPANTS FROM POSSIBLE FIBRE RELEASE AS A RESULT OF BUILDING WORK, IS THE REAL CHALLENGE THAT ASBESTOS INSULATION IN BUILDINGS PRESENTS."**

3.3 Regulatory Requirements

The above conclusions resulted in the development of Occupational Health and Safety Regulations and guidelines in all Canadian provinces and territories for asbestos work. In New Brunswick, asbestos is regulated under New Brunswick Regulation 92-106, *A Code of Practice for Working with Materials Containing Asbestos in New Brunswick.* In addition to the provincial requirements, a number of federal departmental policies and guidelines have been adopted for the protection of occupants from asbestos exposure. One of these documents is the Treasury Board of Canada Secretariat Hazardous Substances Directive - II, Section 2.9, as it relates to asbestos management. Another such policy is the Public Works and Government Services Canada Departmental Policy (DP:057) - Asbestos Management - *respecting asbestos management in federally owned or leased buildings or facilities containing asbestos*, March 12, 1997.

An Asbestos Management Plan is a regulatory requirement in New Brunswick, under New Brunswick Regulation 92-106, Section 4. An active AMP is an excellent means to ensure that all of the requirements of the New Brunswick Regulation and Treasury Board of Canada Circular TB 774012 are met, and to prevent exposure of building occupants to asbestos fibres. For an Asbestos Management Plan to be effective, it is necessary that a quantitative asbestos survey be conducted, and that a process be in place to implement the Plan.

4.0 CLASSIFICATION OF ASBESTOS RELATED WORK

As the risk of exposure to asbestos fibres increases, more stringent work procedures are required for the remediation of the ACMs. Low-risk (Type I), moderate-risk (Type II) and high-risk (Type III) asbestos related work are governed by separate work procedures. Sections 4.1 to 4.3 define the types of asbestos related work as outlined in the PWGSC Departmental Policy (DP:057) and are included to provide an overview of each type of work. Section 4.4 defines a commonly used work procedure (Glove Bag) for Type II asbestos related work.

4.1 Type I or Low-Risk Asbestos Related Work

Asbestos related work classified as Type I or low-risk has minimal risk of releasing asbestos fibres. However, regulations require that precautions be adequate to protect workers from the release of asbestos fibres. Low-risk work procedures cover almost all the asbestos related work involving non-friable ACMs and some very limited activities associated with small quantities of friable ACMs including:

- Installation or removal of a non-friable ACM with a hand tool;
- Disturbance of a non-friable ACM with a power tool equipped with a HEPA dust collector;
- Removal of adhesive patches or dry wall materials where joint filling materials contain asbestos;
- Removal of square vinyl floor tiles;
- Removal or replacement of ten or less asbestos-containing compressed mineral fibre type ceiling tiles;
- Collecting samples of suspect friable ACMs; and
- Working close to friable sprayed asbestos, where the material may be affected by the work activities.

4.2 Type II or Moderate-Risk Asbestos Related Work

Type II or moderate-risk asbestos related work is described as any minor activity that may disturb or involve direct contact with small quantities of friable ACMs that may result in significant potential exposure to airborne asbestos fibres with some health risk. This asbestos related work might include:

- Removal or replacement of more than ten asbestos-containing compressed mineral fibre type ceiling tiles;
- Entry into ceiling spaces, crawl spaces, pipe tunnels, etc. where friable asbestos debris is present;
- The removal of a false ceiling with the likelihood of a significant quantity of friable ACMs on its surface;

- Minor removal of friable ACMs (removal of not more than 1 m^2 of surface area per work period);
- Minor disturbance of friable ACMs (i.e. to repair valves on piping, install hangers, fastening to a sprayed surface);
- Repair of asbestos mechanical insulation (no limit is imposed as to the amount of repair permitted under Type II conditions); and
- Application of tape, sealant or other covering to pipe or boiler insulation containing asbestos.

4.3 Type III or High-Risk Asbestos Related Work

Type III or high-risk asbestos related work is described, as any activity for which there is a potential for high exposure to airborne asbestos fibres with high health risk. This asbestos related work may include:

- The removal or disturbance of friable ACMs, other than low or moderate risk asbestos related work;
- The spray application of an encapsulant or sealant to friable ACMs (i.e. encapsulating sprayed fireproofing);
- The use of power tools not equipped with HEPA filtered dust collection device on non-friable ACM;
- Disturbance of the ductwork or air handling equipment serving or passing through areas of buildings with sprayed asbestos-containing fireproofing or insulation; and
- Repair, alteration or demolition of a boiler, furnace, kiln, or similar equipment with asbestos-containing refractory.

4.4 Glovebag Work Procedure

The removal or repair of asbestos-containing pipe insulation may be conducted using Type II (moderate-risk) procedures. Another option for the removal of asbestos-containing pipe insulation is the glove bag procedure, which is a polyethylene containment bag which fastens around the pipe insulation to be removed and is sealed onto the pipe system. The glovebags are equipped with sealed armholes and a pouch for tools inside the glovebag that allows removal of the insulation inside the glovebag. Once the asbestos-containing pipe insulation has been removed from the pipe and placed in the lower chamber of the glovebag, a small port is used to wet the inside of the glovebag and wash down the exposed pipe. The lower chamber is then re-sealed prior to removal of the glovebag.

5.0 ROLES & RESPONSIBILITIES

This section outlines the responsibilities of both the key personnel identified in the AMP and other building occupants. A Facility Asbestos Coordinator (FAC) should be established for the facility. The FAC should be someone in a senior position who is knowledgeable of the facility and on-site operations and activities, and should be one site on a full time basis (i.e. property manager or maintenance supervisor). The FAC should receive at a minimum, appropriate training in the area of asbestos management, including classification and identification of asbestos related work, from a qualified trainer.

Table 2 presents the key personnel identified in the AMP.

Table 2 - Key Personnel Identified in the Asbestos Management Plan

Title	Name, address phone numbers and email addresses
Facility Asbestos Coordinator	Name: Sean Brown Agriculture and Agri-Food Canada Address: Potato Research Station 850 Lincoln Road, Fredericton, New Brunswick Telephone: (506) 452 4839 Fax: (506) 452 3316 Email: browns@agr.gc.ca
Property Manager	Name: Jeanne Caissie Agriculture and Agri-Food Canada Address: Potato Research Station 850 Lincoln Road, Fredericton, New Brunswick Telephone: (506) 452 4951 Fax: (506) 452 3316 Email: Caissiej@agr.gc.ca
Facility Manager / Project Manager	Name: Sean Brown Agriculture and Agri-Food Canada Address: Potato Research Station 850 Lincoln Road, Fredericton, New Brunswick Telephone: (506) 452 4839 Fax: (506) 452 3316 Email: browns@agr.gc.ca

The responsibilities of the **Facility Asbestos Coordinator** for the facility include:

1. Coordinate the asbestos training program with the Property Manager for all personnel involved with the management and maintenance of the facility;

2. Maintain worker asbestos training records;

3. Ensure that relevant tasks and responsibilities of individuals identified in this AMP are being carried out and all documents and records are complete and maintained;

4. Coordinate with the Property Manager to engage a consultant to conduct ACM inspections every year;

5. Receive and retain copies of Contractor Notification and Acknowledgement (CNA) forms and Asbestos Related Work Records (ARWRs) from Contractors and/or Consultants, after the completion of an asbestos related project;

6. Maintain and update the AMP as needed and maintain the binder at a secure location in the facility that is accessible to all staff and outside contractors;

7. Inform the appropriate personnel and contractors (if applicable) regarding planned repair, renovation and maintenance or installation work involving ACMs to be performed in their occupied areas in writing and in advance of work to be performed;

8. Identify planned maintenance activity (Section 6.1.1) by facility staff and determine whether the planned maintenance work will disturb ACMs;

9. Ensure that recommended procedures and safety precautions provided in worker training courses and outlined in this AMP will be followed for planned maintenance work or emergencies involving ACMs;

10. Identify, report and document work related ACM emergencies to the Property Manager and Health Canada;

11. Maintain copies of Asbestos Related Work Records (ARWR) and Contractor Notification and Acknowledgement (CNA) forms;

12. Handle asbestos emergencies as outlined in Section 6.3;

13. Assist the asbestos consultant during inspections;

14. Coordinate the labelling of ACMs identified in Section 8.0;

15. Handle questions or requests from facility staff for information regarding asbestos;

16. Prepare and distribute standard notification letters for cleaning contractors; and

17. Ensure all contractors performing work under their control have completed CNA.

The responsibilities of the **Property Manager** for the facility include:

1. Ensure facility staff receive the appropriate asbestos training and maintain training records;

2. Approve and initiate an asbestos related project; and

3. Coordinate with FAC to engage a consultant to conduct routine ACM inspections.

The responsibilities of the **Facility Manager and/or Project Manager** for the facility include:

1. Request information regarding the possible presence of asbestos in the areas of planned projects from the FAC;

2. Notify the FAC of all planned removals / repairs involving ACMs;

3. Ensure that the FAC has notified facility staff and cleaning contractors (if necessary) regarding planned Asbestos Related Work;

4. Ensure asbestos related work is overseen and conducted by qualified personnel;

5. Ensure that all contractors performing work under their control have completed a CNA form (**Appendix 2**); and

6. Submit copies of CNAs, ARWRs and asbestos consultant reports (if applicable) to the FAC upon completion of work.

Certain types of work will require the use of outside contractors and consultants and are best handled by outside contractors and / or consultants. Therefore, in these circumstances the contractor and consultant should be responsible for the following:

Asbestos Consultant:

1. Update the locations and approximate quantity of ACMs on building plans and forward the updated asbestos plans to the FAC. Updates will be completed after routine inspections (every year) or an abatement project;

2. Classify asbestos removal or repair work, prepare scope of work or tender documents, hire asbestos contractors and coordinate asbestos related work with the Facility Manager / Project Manager or Property Manager;

3. Fill out the Asbestos Related Work Record (**Appendix 2**) upon completion of asbestos related work and submit it, along with Contractor Notification and Acknowledgement (CNA) form (**Appendix 2**), to the Facility Manager / Project Manager;

4. Provide inspection and air monitoring during asbestos abatement projects. This includes ensuring proper asbestos removal/repair work and safety procedures are followed (Type I, II, etc.) and the specified work outlined in the contract, scope of work or tender is completed; and

5. Provide a written report to the Facility Manager / Project Manager summarizing the asbestos-related work that has been completed during the abatement project and the results of air monitoring tests. The report is to include a copy of the waste manifest.

Asbestos Contractor:

1. Complete and submit to the Facility Manager / Project Manager or the Asbestos Consultant a Contractor Notification and Acknowledgement (CNA) form (**Appendix 2**) prior to commencing any work;

2. Arrange the proper storage, transportation and disposal of any asbestos waste generated during asbestos related work activities;

3. Supply waste manifests upon disposal to the Asbestos Consultant; and

4. Conduct all asbestos abatement project work in accordance with applicable Federal and Provincial Regulations.

Non-Asbestos Contractor:

1. Complete and submit a Contractor Notification and Acknowledgement (CNA) form to the Facility Manager / Project Manager or FAC prior to conducting any work in areas where asbestos-containing materials have been identified; and

2. Stop or do not commence work and contact the FAC if materials are encountered or identified in the work areas that are suspected to contain asbestos.

Facility personnel including cleaning contractors:

1. Contact the FAC prior to conducting any maintenance work or attaching or removing anything from interior walls/ceilings or other surfaces; and

2. Report any damage to walls or other building components to the FAC.

6.0 ASBESTOS RELATED WORK PROCEDURES

Procedures for conducting asbestos related work activities have not been included in this AMP, since Agricultural and Agri-Food Canada employees at the facility do not conduct any asbestos related work. Only Asbestos Emergency Response procedures as described below in Section 6.3 are applicable at this facility. Should the situation change regarding asbestos related work, the AMP would require updating to include the applicable AMP work practices, additional training requirements for employees, as well as respiratory, medical, and general health and safety requirements.

In order to prevent or minimize the chances of asbestos fibre releases, facility staff will not conduct any renovations or disturbances that may damage building materials containing ACMs. Activities that may disturb asbestos containing building materials include:

- drilling, cutting, sanding, or removing cementitious material on ceilings in Building #11 (Farm Services) or texture coatings on ceilings in Building #23 (Hilton House);
- drilling, sanding or cutting into "Transite" panels fastened to walls, ceilings, and doors in some rooms of Building #2 (Entomology), Building #8 (Potato Breeding Greenhouse), and Building #9 (Crop Dryer and Storage);
- drilling, cutting or sanding lab oven pad present in lab Room 132 in Building #1 (Research Laboratory);
- drilling, sanding or cutting into "Transite" piping located in Room 103 of Building #6 (Old School) and stored near Building #70 (Lumber Storage Building);
- using high revolution floor polishers on ACM floor tiles (9" square ACM tiles) on some floors in Building #2 (Entomology) and Building #23 (Hilton House);
- removing or disturbing pipe or boiler insulation present in Building #2 (Entomology), Building #6 (Old School), and Building #11 (Farm Services).

6.1 Identification Of Work That May Involve Asbestos

The first step in any asbestos abatement work is to identify the potential for work to disturb ACM. The following are the three processes by which work is initiated at the building and asbestos concerns are identified.

6.1.1 Planned Maintenance

Planned maintenance involves any maintenance activity carried out on a routine basis by the building staff. The Facility Asbestos Coordinator will review all planned maintenance and determine if the planned maintenance activity will disturb any ACMs. If it is determined that ACM will be disturbed,

the Facility Asbestos Coordinator will contact the Property Manager, who can approve and initiate an Asbestos Related Work Project.

6.1.2 Minor Repair

Minor repairs generally refer to maintenance work that can be engaged by the facility staff without the assistance of a Facility Manager / Project Manager. Prior to the initiation of minor repairs or work by facility staff that will require a modification to the infrastructure of a building, the Facility Asbestos Coordinator will be contacted and determine whether the work will potentially disturb any identified ACM. If it is determined that ACM will be disturbed, the Facility Asbestos Coordinator contacts the Facility Manager / Project Manager, who can approve and initiate an Asbestos Related Work Project.

6.1.3 Project Work

Project work typically involves a substantial change to the infrastructure of the building. These projects are initiated and managed by the Facility Manager / Project Manager. The Facility Manager / Project Manager will identify the areas affected from a floor plan and submit them to the Facility Asbestos Coordinator. In reviewing the floor plan and the *Asbestos Survey Report* presented in **Appendix 1**, the Facility Asbestos Coordinator will determine if the project will disturb any identified ACM. If it is determined that ACM will be disturbed, the Property Manager can approve and initiate an Asbestos Related Work Project by the Facility Manager / Project Manager.

6.2 Asbestos Project

The initiation of an asbestos project involves the Property Manager ensuring that the Facility Manager / Project Manager under takes the work in accordance with Federal policies. The Facility Manager / Project Manager will then notify the Facility Asbestos Coordinator (FAC). The FAC is responsible for notifying the building staff and cleaning staff, when appropriate. The Facility Manager / Project Manager will then engage the asbestos consultant and contractor. The Project Manager will ensure that only qualified personnel will be engaged to conduct and monitor asbestos projects. The Facility Manager / Project Manager will ensure the Contractor Notification and Acknowledgement Form (CNA) is received and confirm that all building and cleaning staff have been notified (if appropriate) before initiating the abatement. The consultant will be responsible for monitoring the abatement as per the terms of their contract. The consultant will prepare and submit the Asbestos Related Work Record (ARWR) and an asbestos abatement report directly to the Facility Manager / Project Manager, who will forward a copy to the FAC. The FAC is responsible for ensuring a copy of this information is maintained in the facilities AMP records. The Consultant is also responsible for updating the ACM location plans presented in the ACM survey in **Appendix 1** and submitting it to the FAC. The FAC is responsible to update the AMP.

6.3 Asbestos Emergency Response Procedures

In the event of an emergency, such as the partial collapse of a ceiling with asbestos-containing "Transite" ceiling panel boards or the collapse of piping covered with asbestos-containing insulation, special procedures are generally needed to minimize the spread of fibres throughout the building. These procedures are needed whether the ACM disturbance is intentional or unintentional. Therefore, in the event of an asbestos release episode, **the following procedures, in accordance with PWGSC's Departmental Policy (DP:057), will be followed**:

- Clear the area of all occupants;
- Isolate the area by closing doors and/or erecting barriers to restrict airflow as well as access to the site;
- If asbestos fibres could enter the HVAC system, the system should be modified to prevent fibre entry or be shut down and sealed off;
- Post warning signs; and
- Notify the Facility Asbestos Coordinator regarding the asbestos disturbance. The Facility Asbestos Coordinator will notify the Property Manager to arrange for removal, clean-up or repair of the asbestos material by qualified personnel. This may require asbestos consultants and/or contractors to develop a strategy for the cleanup operations.

Prior to restarting the HVAC system in the area, a careful visual inspection and final asbestos clearance air monitoring will be conducted to verify satisfactory cleanup.

7.0 PERIODIC INSPECTIONS

The Property Manager will coordinate the routine ACM inspections that will be completed by an asbestos consultant. The inspections involve identifying and recording changes in the condition of the ACMs including damage and deterioration, as well as changes in the use and activity of spaces containing ACMs. Inspections should be conducted every year for ACMs located at this facility. The Facility Asbestos Coordinator will accompany the asbestos consultant during the inspections so that changes in the condition of the ACM or use of space can be discussed. The Property Manager will ensure that a procedure is in place to collect and maintain all routine inspection documentation and reports. The asbestos information will be maintained in the AMP at the facility.

In addition, facility staff will be trained to recognize damage and changes in the condition of ACMs and suspect ACMs. Facility staff who observe any changes to the condition of the ACMs will notify the Facility Asbestos Coordinator immediately.

A sample checklist for the inspection of Asbestos Containing Materials is contained in **Appendix 3**.

8.0 LABELLING

The Facility Asbestos Coordinator will coordinate labelling the ACM. While not a regulatory requirement, labelling of exposed ACM that can be easily disturbed and subsequently release asbestos fibres, is considered a best management practice. Labelling should be conducted by an asbestos consultant.

With the exception of friable pipe and boiler insulation and friable ceiling texture coatings, the majority of ACMs located in the Fredericton Facility are encapsulated, enclosed or are non-friable. Regardless, materials that can easily be disturbed include:

- the friable asbestos-containing pipe and boiler insulation present in the Boiler Room of Building #6 (Old School);
- the friable asbestos-containing pipe insulation present in several rooms in Building #2 (Entomology) and Building #11 (Farm Services);
- the friable asbestos containing ceiling texture coating in the Meeting Room and Office in Building #23 (Hilton House); and
- the non-friable asbestos-containing walls/ceilings and door ("Transite") panels present throughout the majority of Building #2 (Entomology), in Greenhouse 8-1 of Building #8 (Potato Breeding Greenhouse), and in Dryer Rooms 1 and 2 of Building #9 (Crop Dryer and Storage).

Typically, a label will be placed at a visible position on a highly visible wall in the rooms with asbestos-containing wall/ceiling material and/or pipe insulation and note the following:

DANGER
CONTAINS ASBESTOS
Do Not Disturb

The labels will help remind facility staff and/or outside contractors of the presence of asbestos in the walls/ceilings or insulation present.

9.0 ASBESTOS TRAINING

Under Section 4.3 of *A Code of Practise for Working with Materials Containing Asbestos in New Brunswick* referenced in Regulation 2-106, an owner of a building is required to institute and maintain a training program for workers and occupants in the building who are likely to work in close proximity to and may disturb the ACMs.

A training program designed to address the specific needs of the facility staff will be developed and conducted. The training requirements will consist of instruction in:

1. The hazards of asbestos exposure;
2. Identification of suspect ACMs;
3. Roles and responsibilities; and
4. Emergency procedures.

Instruction and training will be conducted by competent personnel who are fully qualified as a result of their knowledge and experience with the requirements of the asbestos regulations. They will be familiar with performance standards established by the asbestos regulations, and knowledgeable of potential or real danger to health or safety in the work place related to asbestos issues.

Typical awareness and management training requirements will consist of instruction in:

- Introduction to asbestos in general;
- Review and identification of ACM specific to each applicable building;
- Overview of asbestos inventory and assessment reports;
- Friable and non-friable asbestos products;
- Insulation used on mechanical systems;
- Health effects – occupational and non-occupational;
- Provincial and federal asbestos guidelines and regulations;
- Classification of asbestos work;
- Asbestos management;
- Worker protection; and
- Asbestos control options.

The Property Manager will ensure procedures are in place to maintain a list of trained workers with the date and type of training. An example form for maintaining a list of trained employees is provided in **Appendix 4**. New facility staff will be informed of the presence of ACMs and briefed on the AMP before they begin work, and at the earliest possible convenience they will attend a training program.

10.0 NOTIFICATION OF CONTRACTORS

The Facility Asbestos Coordinator will inform cleaning contractors, and outside contractors (if applicable) about the location and physical condition of the ACMs that are located in close proximity, and stress the need to avoid disturbing the material. Facility staff will be notified about the presence of ACMs at the implementation of this AMP. Cleaning and landscaping staff and outside contractors will be notified for two reasons:

1. The law requires that owners inform building occupants of any potential hazard in their vicinity; and
2. Informed persons are less likely to unknowingly disturb the material and cause dust to be released into the air.

Outside contractors will be informed about the presence of ACMs in the work location by the Facility Asbestos Coordinator or the Facility Manager / Project Manager prior to commencement of their work. Contractors must sign a Contractor Notification and Acknowledgement form prior to conducting any work (**Appendix 2**).

The Facility Asbestos Coordinator will inform cleaning and outside contractors by sending them a letter notifying them of the presence and location of ACM that is in close proximity to their work areas. The information given to all contractors doing work at the facility will contain the following points to reflect the building conditions:

- *Asbestos has been found at the Potato Research Centre and is located in the following areas:*

  Building #1 (Research Laboratory)
  - *In oven pad used for storing hot beakers in lab Room 132.*

  Building #2 (Entomology)
  - *In "Transite" panel boards fastened to the ceilings of the majority of the rooms*
  - *In pipe straight run insulation present in several rooms.*
  - *In vinyl floor tiles (9" x 9") present in Growth Rooms 2 and 3.*

  Building #6 (Old School)
  - *In pipe straight run, boiler and associated mechanical insulation present in the Boiler Room.*
  - *In cement pipe ("transite") located in Room 103.*

  Building #8 (Potato Breeding Greenhouse)
  - *In "Transite" panel boards fastened to the lower walls of Greenhouse 8-1.*

Building #9 (Crop Dryer and Storage)

- *In "Transite" panel boards fastened to the doors, behind the metal sheeting on the walls, and possibly behind the metal sheeting on the ceilings in Dryer Rooms 1 and 2.*

Building #11 (Farm Services)

- *In pipe straight run insulation present in several rooms on both the first and second floors.*
- *In cementitious ceiling material present in several rooms located on the second floor.*

Building #23

- *In vinyl floor tiles (9" x 9") present in the side entrance foyer located on the ground floor.*
- *In texture coatings present on ceilings in the Meeting Room and in the Office adjacent to the kitchen.*

Exterior

- *In cement pipes ("transite") stored on the eastern side of Building #70 (Lumber Storage Building).*

- *The majority of ACMs at the Potato Research Centre are in good condition and hence do not pose a risk to human health, however, there are some ACMs in fair to poor condition that require either encapsulation, repair or removal.*

- *Asbestos only presents a health hazard when fibres become airborne and inhaled. The mere presence of ACMs does not represent a health hazard.*

- *Do not disturb the ACMs. Activities that may disturb ACMs include cutting, drilling, sanding, or removing the above mentioned building materials. Contact the Facility Asbestos Coordinator to make the necessary arrangements if you wish to undertake an activity that may disturb any ACM.*

- *Report any evidence of disturbance or damage of ACMs to:*

  Name: Sean Brown, Facility Asbestos Coordinator
  Telephone (506)452-4839

- *Facility staff are taking special precautions during their work to guard against disturbing ACMs.*

- *Report any improper action (relative to ACMs) to the Facility Asbestos Coordinator.*

All ACMs and suspect ACMs are inspected periodically and additional measures will be taken if needed to protect the health of facility staff.

The Facility Asbestos Coordinator will inform facility staff and contractors (if applicable) at least one week in advance of all planned repair, renovation, maintenance or installation work to be completed in the relevant buildings that may disturb ACMs.

11.0 RECORD KEEPING

Documentation regarding any asbestos related activities must be retained. The Facility Asbestos Coordinator will ensure that procedures are in place and are followed to maintain the following documentation/records.

1. Work records documenting all asbestos-related activities, including, but not limited to, repair, enclosure and removal work done onsite must be retained indefinitely;

2. Training records shall be maintained for the duration of employment plus 1 year. Copies shall be placed in worker personnel files;

3. Notification of the presence of ACMs and other asbestos related documents and correspondence with facility staff, contractors and consultants shall be maintained indefinitely;

4. Notification letters sent to cleaning contractors (or other contractors) prior to asbestos related work in areas they may be working in shall be maintained indefinitely;

5. Asbestos survey reports, updates and addenda that reflect the changing condition and quantity of ACMs will be maintained indefinitely.

6. A completed asbestos waste manifest for disposed ACMs must be maintained indefinitely; and

7. The AMP shall be maintained on-site as long as the ACMs remain in the workplace.

APPENDIX 1

ASBESTOS-CONTAINING MATERIALS SURVEY

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA
FOR
AGRICULTURE AND AGRI-FOOD CANADA

ASBESTOS-CONTAINING MATERIALS SURVEY

POTATO RESEARCH CENTRE
850 LINCOLN ROAD
FREDERICTON, NEW BRUNSWICK

PROJECT NO. 1016514.04

Jacques Whitford

Jacques Whitford

PROJECT NO. 1016514.04

REPORT TO

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA
FOR
AGRICULTURE AND AGRI-FOOD CANADA

ON

ASBESTOS-CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD
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January 2, 2007

Jacques Whitford

Jacques Whitford

EXECUTIVE SUMMARY

Jacques Whitford was commissioned by Ms. Heather McCleave of Public Works and Government Services Canada (PWGSC) on behalf of Agriculture and Agri-Food Canada to carry out an Asbestos-Containing Materials Survey of the Potato Research Centre located at 850 Lincoln Road in Fredericton, New Brunswick. All site work was completed between October 11 and December 7, 2006.

The purpose of the Asbestos-Containing Materials (ACMs) Survey was to identify and estimate quantities of ACMs present at the facility in order to prepare an Asbestos Management Plan (AMP). During the investigation, thirty five samples of bulk material were collected and submitted for laboratory analysis.

All work completed was consistent with federal and provincial requirements and current industry practice in asbestos control.

Based upon the visual inspection and results of the laboratory analyses, ACMs were identified in the building. Table 1 provides a summary of the types of ACMs identified, together with an estimate of their quantities.

Table 1 - Estimated Quantities of ACMs

Approximate Quantity[2]							
Straight run "Mag block" pipe insulation	Straight run paper-like "Air cell" pipe insulation	Cementitious fireproofing	9" x 9" vinyl floor tiles	Interior cement board wall, ceiling, and door paneling ("Transite")	Texture Coatings	Boiler insulating cement	Cement pipe ("Transite")
Building #2 (Entomology)							
None observed	35 m	None observed	1 m²	200 m²	None observed	None observed	None observed
Building #6 (Old School)							
None observed	10 m	None observed	None observed	None observed	None observed	15 m²	1.5 m
Building #8 (Potato Breeding Greenhouse)							
None observed	None observed	None observed	None observed	60 m²	None observed	None observed	None observed

Table 1 - Estimated Quantities of ACMs							
Approximate Quantity[2]							
Straight run "Mag block" pipe insulation	Straight run paper-like "Air cell" pipe insulation	Cementitious fireproofing	9" x 9" vinyl floor tiles	Interior cement board wall, ceiling, and door paneling ("Transite")	Texture Coatings	Boiler insulating cement	Cement pipe ("Transite")
Building #9 (Crop Dryer and Storage)							
None observed	None observed	None observed	None observed	100 m²	None observed	None observed	None observed
Building #11 (Farm Services)							
200 m	10 m	270 m²	None observed	None observed	None observed	None observed	None observed
Building #23 (Hilton House)							
None observed	None observed	None observed	4 m²	None observed	60 m²	None observed	None observed
Exterior (To the East Side of Building #70)							
None observed	None observed	None observed	None observed	None observed	None observed	None observed	50 m
Totals							
200 m	55 m	270 m²	5 m²	360 m²	60 m²	15 m²	51.5 m

Notes:
1. This table only lists the locations at which ACMs were observed or assumed to exist.
2. All quantities listed are approximate.
3. No ACMs were identified in Building #17 (Display and Storage Barn), Building #19 (Pump House), Building #44 (Insectary), Building #52 (Lower Farm Storage Barn), Building #68 (Chemical Storage), Building #14 (Small Pole Barn) and Building #15 (Large Pole Barn).

The survey has confirmed that asbestos-containing materials exist at the subject property. *A Code of Practice for Working with Materials Containing Asbestos in New Brunswick* referenced in New Brunswick Regulation 92-106, made under the Occupational Health and Safety Act, N.B., and the PWGSC DP:057 – *Asbestos Management*, requires damaged ACMs be repaired or removed using specific procedures. It also requires the removal of all ACMs that have a potential of being disturbed during planned renovations, and that an Asbestos Management Plan be implemented and kept in place until such time that all ACMs have been removed from the buildings. A certified contractor must complete asbestos repairs or removals.

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Jacques Whitford

1.0 INTRODUCTION

Jacques Whitford was commissioned by Ms. Heather McCleave of Public Works and Government Services Canada (PWGSC) on behalf of Agriculture and Agri-Food Canada to carry out an Asbestos-Containing Materials Survey of the Potato Research Centre located at 850 Lincoln Road in Fredericton, New Brunswick. The purpose of the investigation was to identify and quantify asbestos-containing materials (ACMs) at the facility.

The Lincoln Road Potato Research Centre is used by Agriculture and Agri-Food Canada for the study and development of potato breeds used by the local agricultural industry. The facility buildings that are part of this survey, were constructed between 1923 and 1985. They include: Building #2 (Entomology), Building #6 (Old School), Building #8 (Potato Breeding Greenhouse), Building #9 (Crop Dryer & Storage), Building #11 (Farm Services), Building #17 (Display and Storage Barn), Building #19 (Pump House), Building #23 (Hilton House), Building #44 (Insectary), and Building #52 (Lower Farm Storage Barn). Following the preliminary site visit on October 5, 2006 to discuss the scope of work and view a number of the buildings included in the survey, it was decided to add Building #14 (Small Pole Barn) and Building #15 (Large Pole Barn) to the scope of the survey. During a follow-up site visit on December 7, 2006, Building #68 (Chemical Storage) was also added to the scope of the survey. Building #1 (Research Laboratory) was not part of this survey due to the reported extent of recent renovations in this building. Remaining buildings located at the Lincoln Road Potato Research Centre were not surveyed based on their age (new) or construction style (i.e. constructed with steel or wood only). A site plan of the facility has been included (Figure 1) in Appendix A.

The buildings are of varying construction. The buildings generally consist of storage rooms (cold and room temperature), workshops, laboratories, offices, greenhouses and mechanical rooms. A number of the buildings are heated by oil fired hot water boilers. No cooling is provided to the buildings included in the survey with the exception of Building #2 (Entomology).

2.0 SCOPE AND METHODOLOGY

A visual inspection of the buildings and the subsequent collection of samples of suspected ACMs was carried out by Ms. Christine Mullaly, PTech and Mr. Larry Clements of Jacques Whitford between October 11 and 12, 2006. A follow-up site visit was completed by Ms. Mullaly on December 7, 2006. The materials and contents were visually examined and sampled to identify the presence and estimate the approximate quantities of ACMs. The survey was conducted in accordance with current industry practice in asbestos control and the requirements of the following federal and provincial regulations and guidelines;

Federal:

- Treasury Board of Canada Secretariat Hazardous Substances Directive – II, Section 2.9 as it relates to asbestos management; and

- Public Works and Government Services Canada Departmental Policy (DM:057) – *Asbestos Management*, dated March 12, 1997.

Provincial:

- *A Code of Practise for Working with Materials Containing Asbestos in New Brunswick* referenced in New Brunswick Regulation 92-106 made under the Occupational Health and Safety Act, N.B.

The above information was used to evaluate results and make recommendations. Because the Lincoln Road facility is a federal site, the buildings and employees are under federal, not provincial, jurisdiction. Typically, federal buildings and employees come under the Canada Labour Code, however, contractors would be under provincial guidelines.

The survey included both friable and non-friable asbestos building materials. The term friable is applied to a material that can be readily reduced to dust or powder by hand or moderate pressure. Asbestos materials that are friable have a much greater potential to release airborne asbestos fibres when disturbed. Additional background information on asbestos is contained within Appendix C.

Suspected ACMs were assessed by visual inspection and sampled where appropriate. On the basis of this inspection, thirty-five samples were collected from suspected ACMs during the site visit. The samples were submitted to LEX Scientific Inc. of Guelph, Ontario, for analysis using a combination of dispersion staining and polarized-light microscopy (PLM). LEX Scientific Inc. is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples.

3.0 SURVEY LIMITATIONS

The survey was conducted between October 11 and 12, 2006. This report reflects the observations, findings, and analysis of materials sampled during the survey. Analytical results were used to quantify the sampled materials at the specific sample locations. Materials found to be visually similar to those analyzed, where possible, were referenced to specific analyzed samples collected elsewhere.

Only limited access into walls and ceilings was obtained for the investigation of insulation materials. The observations are based on the specific areas inspected. The scope of the survey included mechanical equipment, structures, and finishes within the subject buildings.

This investigation did not involve assessing materials hidden behind walls and ceilings.

4.0 RESULTS

The analytical results for the assessed buildings are summarized in Table B-1 in Appendix B. The laboratory analytical reports are also presented in Appendix B. Sample locations are shown on the floor plan drawings (Figures 2 to 12) in Appendix A.

Based on the building materials observed, no suspected asbestos-containing materials were identified in the following buildings:

- Building #17 (Display and Storage Barn),
- Building #19 (Pump House),
- Building #44 (Insectary),
- Building #52 (Lower Farm Storage Barn),
- Building #14 (Small Pole Barn), and
- Building #15 (Large Pole Barn).

Therefore, no samples were collected from these structures for analysis.

Results from each building are described in the following sections.

4.1 Building #2 - Entomology

4.1.1 Mechanical Insulation

4.1.1.1 Piping

Insulation suspected of containing asbestos was observed on visible piping in Building #2 (Entomology) (Figure 2). A sample of corrugated paper-like ("Air cell") insulation (AS-26) was collected from an apparent abandoned straight run pipe adjacent to the Lunchroom. The sample was found to contain 70% Chrysotile asbestos. This insulation was observed to extend from the Lunchroom through to the Storage Room. Visually similar insulation was observed extending into the Washroom.

In the areas where it could be observed, the majority of remaining straight run piping (i.e. heating, domestic hot and cold water, etc.) was found to be insulated with fiberglass insulation or un-insulated. All pipe straight runs in the Growth Rooms were insulated with fiberglass.

Based on the age of the building, (i.e. constructed in 1959), it should be noted that asbestos-containing pipe insulation or other mechanical insulation may be present in areas of the building that are inaccessible, such as within pipe chases, above inaccessible ceilings or inside wall cavities.

4.1.1.2 Heating System

No suspected asbestos–containing insulation was observed on the boiler or associated mechanical equipment within the Boiler Room. An asbestos abatement was completed in this room in the spring of 2006 hence samples were not collected.

4.1.1.3 Water Tanks

No suspected asbestos-containing insulation was observed on hot water tanks in the building.

4.1.2 Thermal Fireproofing / Insulation

No thermal fireproofing/insulation was observed within the Entomology Building.

4.1.3 Decorative Materials

No suspect decorative materials were observed.

4.1.4 Flooring

A variety of flooring was observed in the building including 9" x 9" vinyl floor tiles, newer style linoleum sheet flooring, concrete, etc. Samples were collected from the following materials:

- 9" x 9" : vinyl floor tile (green) : AS-27
- 9" x 9" : vinyl floor tile (reddish brown) : AS-28

The two samples of the floor tiles were submitted for Transmission Electron Microscopy (TEM) analysis, as some floor tiles contain small asbestos fibres that may not be visible under normal PLM analysis.

The floor tiles (AS-27 and AS-28) were found to each contain 23% Chrysotile asbestos by TEM analysis. These floor tile styles were in GOOD to FAIR condition and were present in a small area adjacent to the door side walls in both Growth Room 2 (approximate area of floor tile 0.5 m^2) and Growth Room 3 (approximate area of floor tile 0.4 m^2).

4.1.5 Acoustic Ceiling Tiles

No suspect acoustic ceiling tiles were observed in the building.

4.1.6 Plaster Finishes

No suspect plaster finishes were observed in the building.

4.1.7 Asbestos Cement Products

Cement board panels ("Transite") were observed on ceilings throughout the majority of the building. A sample of this material (AS-33) was collected from a ceiling panel in the hallway adjacent to the Boiler Room. The ceiling panel sampled was found to contain 20% Chrysotile asbestos.

These asbestos containing panels were generally in GOOD condition. However, there were some isolated areas where the panels were damaged and therefore considered to be in POOR condition.

No other cement products suspected of containing asbestos were observed.

4.1.8 Other Asbestos Containing Material (ACMs)

No other ACMs were visually or analytically identified in the Entomology building at the time of the survey

4.2 Building #6 - Old School

4.2.1 Mechanical Insulation

4.2.1.1 Piping

Insulation suspected of containing asbestos was observed on visible piping in Building #6 (Old School). A sample (AS-22) of corrugated paper-like ("Air cell") insulation was collected from a pipe straight run located adjacent to the boiler in the basement (Figure 3). The sample was found to contain 70% Chrysotile asbestos. This type of insulation was observed in the basement only and was in POOR condition. All other pipes observed in the building were uninsulated.

However, based on the age of the building, (i.e. constructed in 1923), it should be noted that asbestos-containing pipe insulation or other mechanical insulation may be present in areas of the building that are inaccessible, such as within pipe chases, above inaccessible ceilings or inside wall cavities.

4.2.1.2 Heating System

Suspected asbestos–containing insulating cement (parging) was observed on the boiler and associated mechanical equipment within the Boiler Room located in the basement. A sample of this material (AS-23) was collected and was found to contain 10% Chrysotile and 20% Amosite asbestos. These materials were observed to be in POOR condition.

4.2.1.3 Water Tanks

No suspected asbestos-containing insulation was observed on any of the hot water tanks.

4.2.2 Thermal Fireproofing / Insulation

Suspected asbestos-containing thermal fireproofing material was observed covering the wooden backside of the staircase leading from the basement to the first floor. This material consisted of a grey and white outer layer and a beige cementitious inner layer. A sample of this material (AS-24) was collected. The two layers (outer and inner) were analyzed individually and were found to contain no asbestos. No other thermal fireproofing/insulation was observed within Building #6.

4.2.3 Decorative Materials

A woven textile material was observed covering the lower section of the wall in the staircase extending from the main floor to the second floor of the building. A sample of this material (AS-20) was collected and found to contain no asbestos. No other suspect decorative materials were observed.

4.2.4 Flooring

No flooring suspected of containing asbestos was observed in the building.

4.2.5 Acoustic Ceiling Tiles

No suspect acoustic ceiling tiles were observed in the building.

4.2.6 Plaster Finishes

The majority of the ceilings and walls on the main and second floors had plaster finishes. A sample of this material (AS-21) was collected from a wall on the main floor and found to contain no asbestos. No other suspect plaster finishes were observed in the building.

4.2.7 Asbestos Cement Products

A 1.5 m section of cement ("Transite") pipe was observed stored in Room 103 (Figure 4). This type of material is known to contain asbestos. This material was slightly damaged (i.e. nicked) and therefore would be considered to be in POOR condition.

No other cement products suspected of containing asbestos were observed.

4.2.8 Other Asbestos Containing Material (ACMs)

A sample of wire jacketing material (AS-25) was collected from inside a wall cavity that formerly housed a light switch outlet in Room 202 located on the second floor (Figure 5). This material was found to contain no asbestos.

No other ACMs were visually or analytically identified in Building #6 at the time of the survey.

4.3 Building #8 - Potato Breeding Greenhouse

4.3.1 Mechanical Insulation

4.3.1.1 Piping

Insulation suspected of containing asbestos was observed on visible piping fittings in Building #8 (Potato Breeding Greenhouse). Two samples of this insulating ("parging") cement were collected from a pipe fitting (AS-29) located in a corner adjacent to the bay door and from a fitting (AS-31) in the boiler room (Figure 6). No asbestos was detected in either sample.

Pipe straight runs observed in the building were either insulated with fiberglass or not insulated.

4.3.1.2 Heating System

No suspected asbestos–containing insulation was observed on the boiler or associated mechanical equipment within the Boiler Room.

4.3.1.3 Water Tanks

Suspected asbestos–containing insulating ("parging") cement was observed on the end caps and around the fittings and openings on a conversion tank located in the boiler room. A sample of this material (AS-32) was collected and was found to contain no asbestos.

4.3.2 Thermal Fireproofing / Insulation

No thermal fireproofing/insulation was observed within Building #8.

4.3.3 Decorative Materials

No suspect decorative materials were observed.

4.3.4 Flooring

No flooring suspected of containing asbestos was observed in the building.

4.3.5 Acoustic Ceiling Tiles

No suspect acoustic ceiling tiles were observed in the building.

4.3.6 Plaster Finishes

No suspect plaster finishes were observed in the building.

4.3.7 Asbestos Cement Products

Cement board panels ("Transite") were observed on the lower portions of the walls in Greenhouse 8-1 (Figure 6). These boards were visually similar to the panels located on the ceilings in the Entomology Building (Building #2), which were found to contain 20% Chrysotile asbestos.

These asbestos containing unpainted wall panels in Greenhouse 8-1 were generally in FAIR condition.

No other cement products suspected of containing asbestos were observed in Building #8.

4.3.8 Other Asbestos Containing Material (ACMs)

No other ACMs were visually or analytically identified in the building at the time of the survey.

4.4 Building #9 – Crop Dryer & Storage

4.4.1 Mechanical Insulation

4.4.1.1 Piping

No pipe insulation suspected of containing asbestos was observed on visible piping in Building #9 (Crop Dryer & Storage).

4.4.1.2 Heating System

No suspected asbestos–containing insulation was observed on heating systems or associated mechanical equipment within Building #9.

4.4.1.3 Water Tanks

No suspected asbestos-containing water tank insulation was observed within Building #9.

4.4.2 Thermal Fireproofing / Insulation

No thermal fireproofing/insulation was observed within Building #9.

4.4.3 Decorative Materials

No suspect decorative materials were observed within Building #9.

4.4.4 Flooring

No flooring suspected of containing asbestos was observed in Building #9.

4.4.5 Acoustic Ceiling Tiles

Cellulose panel type acoustic ceiling tiles were observed in the Grinder Room of Building #9. A sample (AS-35) of this material was collected and was found to contain no asbestos.

4.4.6 Plaster Finishes

No suspect plaster finishes were observed in Building #9.

4.4.7 Asbestos Cement Products

Cement board panels ("Transite") were observed on the inside of the two Crop Dryer Rooms' doors, as well as behind the metal walls in these rooms. A sample (AS-34) of the cement board panels was collected from the inside door of Dryer Room 1 and found to contain 15% Chrysotile asbestos.

These asbestos containing panels were generally in GOOD condition. However, there were some isolated areas where the panels, were slightly damaged (i.e. nicked) and therefore would be considered to be in POOR condition.

No other cement products suspected of containing asbestos were observed in Building #9.

4.4.8 Other Asbestos Containing Material (ACMs)

No other ACMs were visually or analytically identified in the building at the time of the survey.

4.5 Building #11 – Farm Services

4.5.1 Mechanical Insulation

4.5.1.1 Piping

A variety of pipe insulation was observed in Building #11 (Farm Services) including insulation suspected of containing asbestos (Figures 8 and 9). Samples were collected from the following materials on pipe straight runs:

- "mag block" insulation: AS-3
- corrugated paper-like insulation ("Air cell"): AS-5
- "mag block" insulation: AS-9
- corrugated paper-like insulation ("Air cell"): AS-11

Two samples of corrugated paper-like insulation ("Air cell") were collected from pipe straight runs in the Gator Storage Room (AS-5) located on the second floor and in the Janitor's Room (AS-11) located on the first floor of Building #11. This material was found to contain 70% Chrysotile asbestos. This type of insulation was observed in these two rooms only and was generally in POOR condition in both areas.

Two samples of "mag block" insulation were collected from pipe straight runs in the Carpenter's Workshop located on the second floor (AS-3) and in the Boiler Room (AS-9) located on the first floor of Building #11. This material was found to contain 10% Chrysotile and 10-15% Amosite asbestos. This type of insulation was observed in these two rooms and also on the Second Floor in the Mechanic's Workshop, the Machine Shop, the Gator Storage Room, the Chemical Storage Room, and the Garden Storage Area. As well, stray remnants of this type of insulation were observed on struts below the ceiling in the Tractor Storage Area. The "mag block" pipe insulation was generally in FAIR to POOR condition.

All other pipes observed in the building were either not insulated or insulated with fiberglass.

Insulating cement ("parging") suspected of containing asbestos was observed on visible piping fittings in Building #11 (Farm Services Building). Three samples of parging were collected from pipe fittings located in the Paint Storage Room on the Second Floor (AS-1), from the Mechanic's Workshop on the Second Floor (AS-4), and from the Boiler Room on the First Floor (AS-10). No asbestos was detected in any of the three samples.

Based on the age of the building, (i.e. constructed in 1948), it should be noted that asbestos-containing pipe insulation or other mechanical insulation may be present in areas of the building that are inaccessible, such as within pipe chases, above inaccessible ceilings or inside wall cavities.

4.5.1.2 Heating System

No suspected asbestos–containing insulation was observed on the boiler and associated mechanical equipment within the Boiler Room located on the first floor.

4.5.1.3 Water Tanks

No suspected asbestos-containing insulation was observed on hot water tanks.

4.5.2 Thermal Fireproofing / Insulation

Cementitious thermal fireproofing/insulating material was observed on ceilings in several areas on the second floor. This material was observed in the Chemical Storage Area, the Office across from the Chemical Storage Area, the Garden Storage Area, the Lunchroom (above the drop ceiling), the Tractor Storage Area adjacent to the Lunchroom, and the hallway in this section of the building.

Three samples of this material were collected (AS-6, AS-7, and AS-8) and only one of the samples (AS-7) was found to contain asbestos. That sample (AS-7) contained Actinolite and Tremolite asbestos which are amphiboles typically found in Vermiculite. This material was in FAIR to GOOD condition.

Another style of insulating material was observed on a hallway ceiling on the First Floor. This hallway runs between Rooms 1 and 16. A sample of each of the four layers (AS-12, 13, 14 and 15) of this insulating material was collected and no asbestos was detected in any of these samples.

A tar paper-like insulation was observed on the ceiling of the Paint Storage Room located on the First Floor of the building. A sample (AS-2) of this material was collected and was found to contain no asbestos.

No other thermal fireproofing/insulation was observed within Building #11.

4.5.3 Decorative Materials

No suspect decorative materials were observed.

4.5.4 Flooring

No flooring suspected of containing asbestos was observed in the building.

4.5.5 Acoustic Ceiling Tiles

No suspect acoustic ceiling tiles were observed in the building.

4.5.6 Plaster Finishes

No suspect plaster finishes were observed in the building.

4.5.7 Asbestos Cement Products

No cement products suspected of containing asbestos were observed.

4.5.8 Other Asbestos Containing Material (ACMs)

No other ACMs were visually or analytically identified in Building #11 at the time of the survey.

4.6 Building #23 – Hilton House

4.6.1 Mechanical Insulation

4.6.1.1 Piping

No pipe Insulation suspected of containing asbestos was observed on visible pipe fittings in Building #23 (Figures 10, 11, and 12). An abatement program was completed in the basement of this building in the spring of 2006. All accessible asbestos-containing pipe insulation and "Tectum" sheeting paper on walls (previously identified by Jacques Whitford) was removed during the abatement program (Figure 12).

Based on the age of the building, (i.e. constructed in 1925), it should be noted that asbestos-containing pipe insulation or other mechanical insulation may be present in areas of the building that are inaccessible, such as within pipe chases, above inaccessible ceilings or inside wall cavities.

4.6.1.2 Heating System

No suspected asbestos–containing insulation was observed on heating systems or associated mechanical equipment within Building #23.

4.6.1.3 Water Tanks

No suspected asbestos-containing water tank insulation was observed within Building #23.

4.6.2 Thermal Fireproofing / Insulation

No thermal fireproofing/insulation was observed within Building #23.

4.6.3 Decorative Materials

Texture coatings were observed on the ceilings in the Meeting Room and in the office adjacent to the kitchen, both located on the ground floor of Building #23 (Figure 10). A sample (AS-17) of this material was collected from the Meeting Room and was found to contain 2% Chrysotile asbestos. This material was generally in GOOD to FAIR condition.

No other suspect decorative materials were observed within Building #23.

4.6.4 Flooring

A variety of flooring was observed in the building including 9" x 9" vinyl floor tiles, wood flooring, concrete, etc. A sample (AS-16) of 9" x 9" vinyl floor tile (grey with white, black, and red streaks) was collected and submitted for Transmission Electron Microscopy (TEM) analysis (Figure 10). The sample of floor tile was found to contain 59% Chrysotile asbestos by TEM analysis. These floor tiles were in GOOD to FAIR condition and were present in the side entrance foyer on the ground floor of Building #23.

No other flooring suspected of containing asbestos was observed in Building #23.

4.6.5 Acoustic Ceiling Tiles

No suspect acoustic ceiling tiles were observed in the building.

4.6.6 Plaster Finishes

The majority of the ceilings and walls on the ground and second floors had plaster finishes (Figure 11). A sample of this material (AS-19) was collected from an overhang at the top of the stairs to the attic and found to contain 0.6% Chrysotile asbestos. However, New Brunswick regulations classify materials that contain 1 % or greater asbestos by volume as asbestos-containing materials. Materials that contain less than 1 % asbestos by volume are considered to have asbestos as a "minor component" of the material and therefore do not necessarily require special handling or disposal. A sample (AS-18) of the cementitious material underneath AS-19 was also collected and was found to contain no asbestos.

No other suspect plaster finishes were observed in the building.

4.6.7 Asbestos Cement Products

No cement products suspected of containing asbestos were observed in Building #23.

4.6.8 Other Asbestos Containing Material (ACMs)

No other ACMs were visually or analytically identified in Building #23 at the time of the survey (Figure 10).

4.7 Building #68 – Chemical Storage

4.7.1 Mechanical Insulation

4.7.1.1 Piping

Insulation suspected of containing asbestos was observed on visible piping fittings in Building #68 (Chemical Storage). One sample of this insulating ("parging") cement was collected from a pipe fitting (AS-37) located in the building. No asbestos was detected in the sample.

Pipe straight runs observed in the building were either insulated with fiberglass or not insulated.

4.7.1.2 Heating System

No suspected asbestos–containing insulation was observed on heating systems or associated mechanical equipment within Building #68.

4.7.1.3 Water Tanks

No suspected asbestos-containing water tank insulation was observed within Building #68.

4.7.2 Thermal Fireproofing / Insulation

No thermal fireproofing/insulation was observed within Building #68.

4.7.3 Decorative Materials

No suspect decorative materials were observed within Building #68.

4.7.4 Flooring

No flooring suspected of containing asbestos was observed in Building #68.

4.7.5 Acoustic Ceiling Tiles

No ceiling tiles suspected of containing asbestos was observed in Building #68.

4.7.6 Plaster Finishes

No suspect plaster finishes were observed in Building #68.

4.7.7 Asbestos Cement Products

No cement products suspected of containing asbestos were observed in Building #68.

4.7.8 Other Asbestos Containing Material (ACMs)

No other ACMs were visually or analytically identified in the building at the time of the survey.

4.8 Exterior Concerns

Fifteen cement ("Transite") pipes were observed in a waste pile to the eastern side of Building #70 (Lumber Storage Building). One sample (AS-37) of this piping was collected and found to contain 8% Chrysotile and 1% Amosite asbestos. The pipes were 15 cm to 20 cm in diameter and approximately 3 m in length. This material appeared to be in GOOD to FAIR condition.

No other products suspected of containing asbestos were observed in the waste pile.

5.0 SUMMARY

Based upon the results of eleven samples of bulk material and visual comparison of similar materials, ACMs were identified in the subject building. Table 2 lists the estimated quantities of ACMs found.

Table 2 - Estimated Quantities of ACMs

Approximate Quantity[2]							
Straight run "Mag block" pipe insulation	Straight run paper-like "Air cell" pipe insulation	Cementitious fireproofing	9" x 9" vinyl floor tiles	Interior cement board wall, ceiling, and door paneling ("Transite")	Texture Coatings	Boiler insulating cement	Cement pipe ("Transite")
Building #2 (Entomology)							
None observed	35 m	None observed	1 m²	200 m²	None observed	None observed	None observed
Building #6 (Old School)							
None observed	10 m	None observed	None observed	None observed	None observed	15 m²	1.5 m
Building #8 (Potato Breeding Greenhouse)							
None observed	None observed	None observed	None observed	60 m²	None observed	None observed	None observed

Table 2 - Estimated Quantities of ACMs							
Approximate Quantity[2]							
Straight run "Mag block" pipe insulation	Straight run paper-like "Air cell" pipe insulation	Cementitious fireproofing	9" x 9" vinyl floor tiles	Interior cement board wall, ceiling, and door paneling ("Transite")	Texture Coatings	Boiler insulating cement	Cement pipe ("Transite")
Building #9 (Crop Dryer and Storage)							
None observed	None observed	None observed	None observed	100 m²	None observed	None observed	None observed
Building #11 (Farm Services)							
200 m	10 m	270 m²	None observed	None observed	None observed	None observed	None observed
Building #23 (Hilton House)							
None observed	None observed	None observed	4 m²	None observed	60 m²	None observed	None observed
Exterior (To the East Side of Building #70)							
None observed	None observed	None observed	None observed	None observed	None observed	None observed	50 m
Totals							
200 m	55 m	270 m²	5 m²	360 m²	60 m²	15 m²	51.5 m

Notes:
1. This table only lists the locations at which ACMs were observed or assumed to exist.
2. All quantities listed are approximate.
3. No ACMs were identified in Building #17 (Display and Storage Barn), Building #19 (Pump House), Building #44 (Insectary), Building #52 (Lower Farm Storage Barn), Building #68 (Chemical Storage), Building #14 (Small Pole Barn) and Building #15 (Large Pole Barn).

The survey has confirmed that asbestos-containing materials exist at the subject property. *A Code of Practice for Working with Materials Containing Asbestos in New Brunswick* referenced in New Brunswick Regulation 92-106, made under the Occupational Health and Safety Act, N.B., and the PWGSC DP:057 – *Asbestos Management*, requires damaged ACMs be repaired or removed using specific procedures. It also requires the removal of all ACMs that have a potential of being disturbed during planned renovations, and that an Asbestos Management Plan be implemented and kept in place until such time that all ACMs have been removed from the buildings. A certified contractor must complete asbestos repairs or removals.

6.0 CLOSURE

This report has been prepared for the sole benefit of Public Works and Government Services Canada (PWGSC) and the Agriculture and Agri-Food Canada. The report may not be relied upon by any other person or entity without the express written consent of Jacques Whitford, PWGSC and Agriculture and Agri-Food Canada.

Any use that a third party makes of this report, or any reliance on decisions to be made based on it, are the responsibility of such third parties. Jacques Whitford accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The information presented in this report represents the best judgement of Jacques Whitford based on observations of accessible areas of the building and is subject to the limitations described herein. Due to the nature of the investigation and the limited data available, we cannot warrant against undiscovered asbestos containing materials. It should be recognized that asbestos-containing materials may be present in concealed areas and other areas of the building not accessed during this survey.

Should additional information become available, Jacques Whitford requests that this information be brought to our attention so that we may re-assess the conclusions presented herein.

This report was prepared by Paul D. Paulin, P. Eng and Christine Mullaly, PTech. and reviewed by Clayton D. Barclay, Ph.D., P.Eng. We trust that this report meets your present requirements. Should you have any questions or concerns regarding the above, please do not hesitate to contact the undersigned.

JACQUES WHITFORD LIMITED

Original Signed by Paul Paulin

Paul D. Paulin, P. Eng.
Environmental Engineering

Original Signed by Clayton Barclay

Clayton D. Barclay, Ph.D., P.Eng.
Senior Reviewer

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Jacques Whitford

APPENDIX A

FIGURES

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ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE

Date: 2007 01 04	Scale: 1 : 5000
Job No.: 1016514.04	Fig. No.: 1

Jacques Whitford

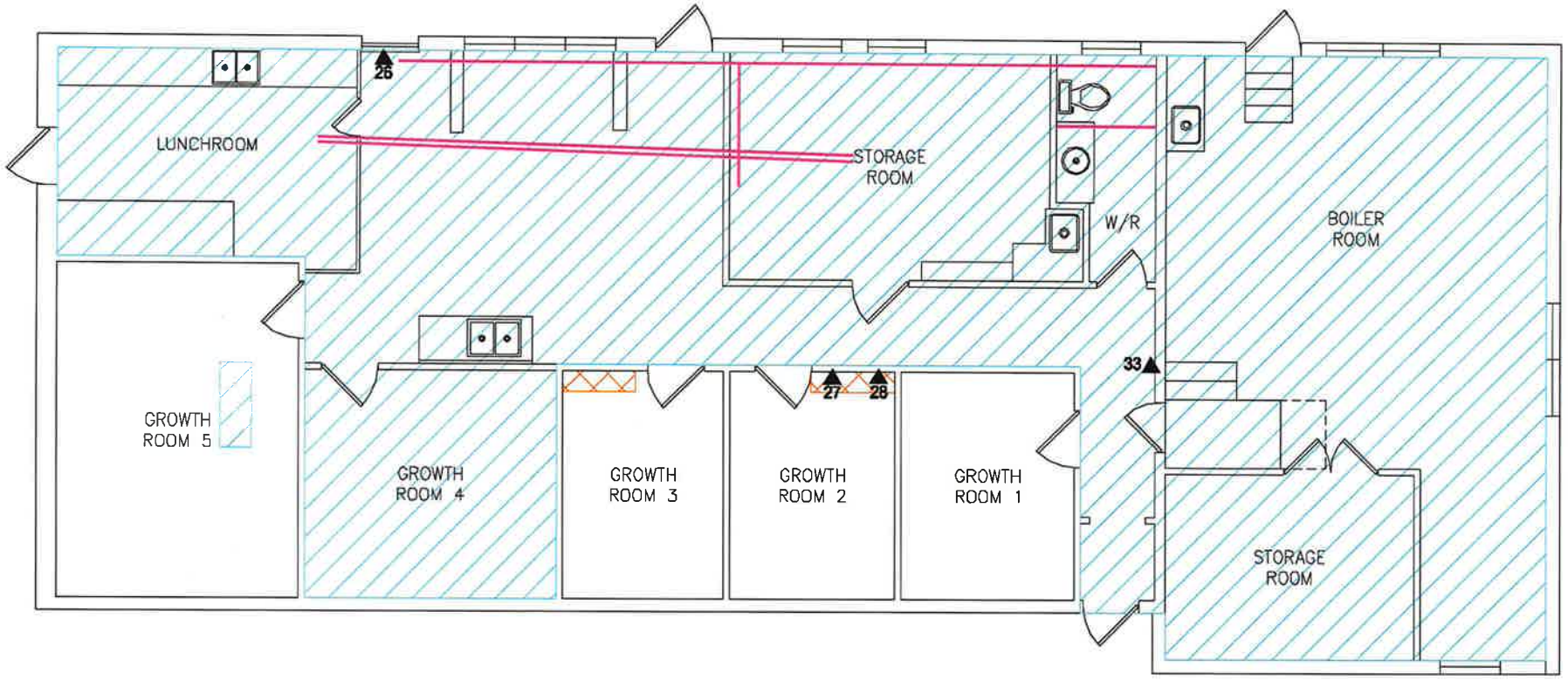
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FILE: SUB JOB 04 POTATO\POTATO RESEARCH CENTRE

FILE: 1016514\SUB JOB 04\ENTOMOLOGY

LEGEND

- BULK SAMPLE
- ASBESTOS–CONTAINING CEILING BOARD ("TRANSITE")
- ASBESTOS–CONTAINING VINYL FLOOR TILES (9" x 9")
- ASBESTOS–CONTAINING PIPE INSULATION



0 2 4m

SCALE

BUILDING # 2, ENTOMOLOGY BUILDING FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 100
Job No.: 1016514.04	Fig. No.: 2

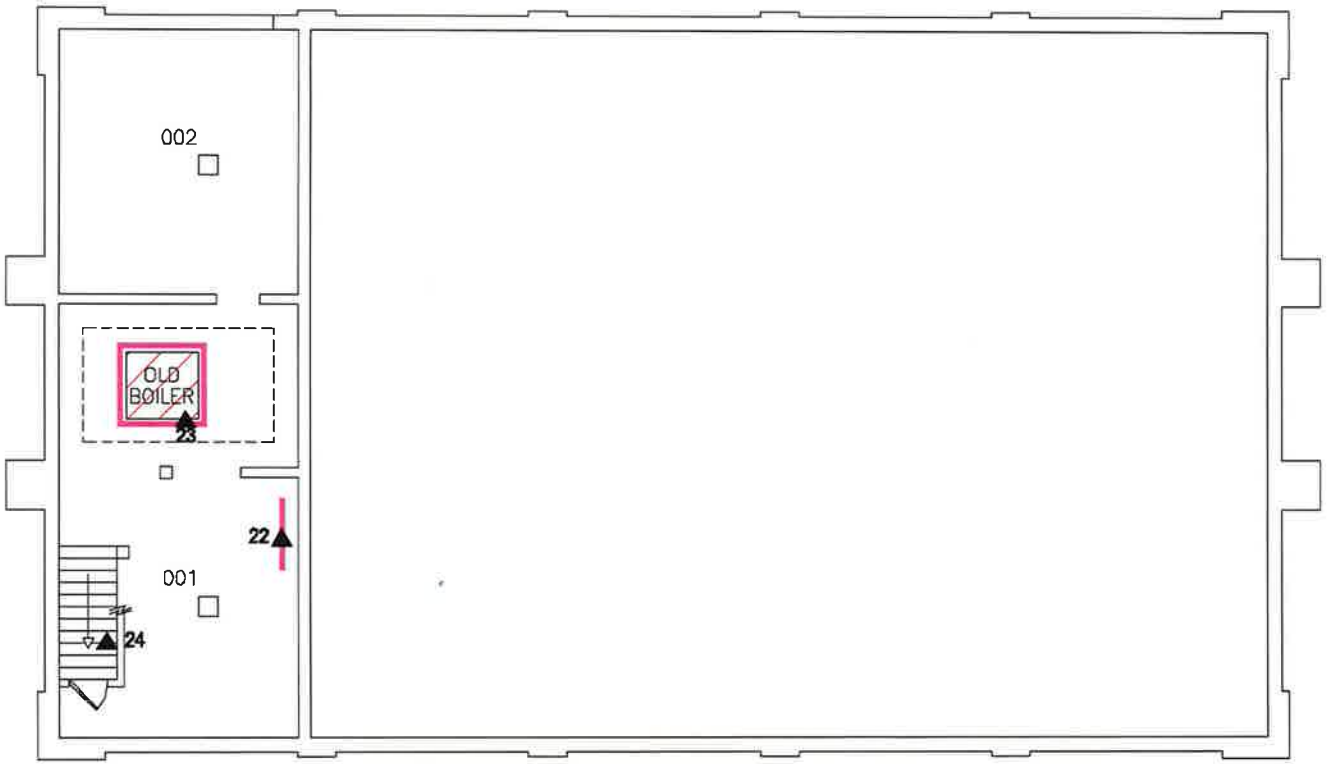
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FILE: 1016514\SUB JOB 04\STORAGE BASEMENT

LEGEND

- ▲ BULK SAMPLE
- ASBESTOS–CONTAINING BOILER INSULATION
- ASBESTOS–CONTAINING PIPE INSULATION



0 5 m
SCALE

BUILDING # 6, STORAGE (OLD SCHOOL), BASEMENT FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 150
Job No.:	Fig. No.:
1016514.04	3

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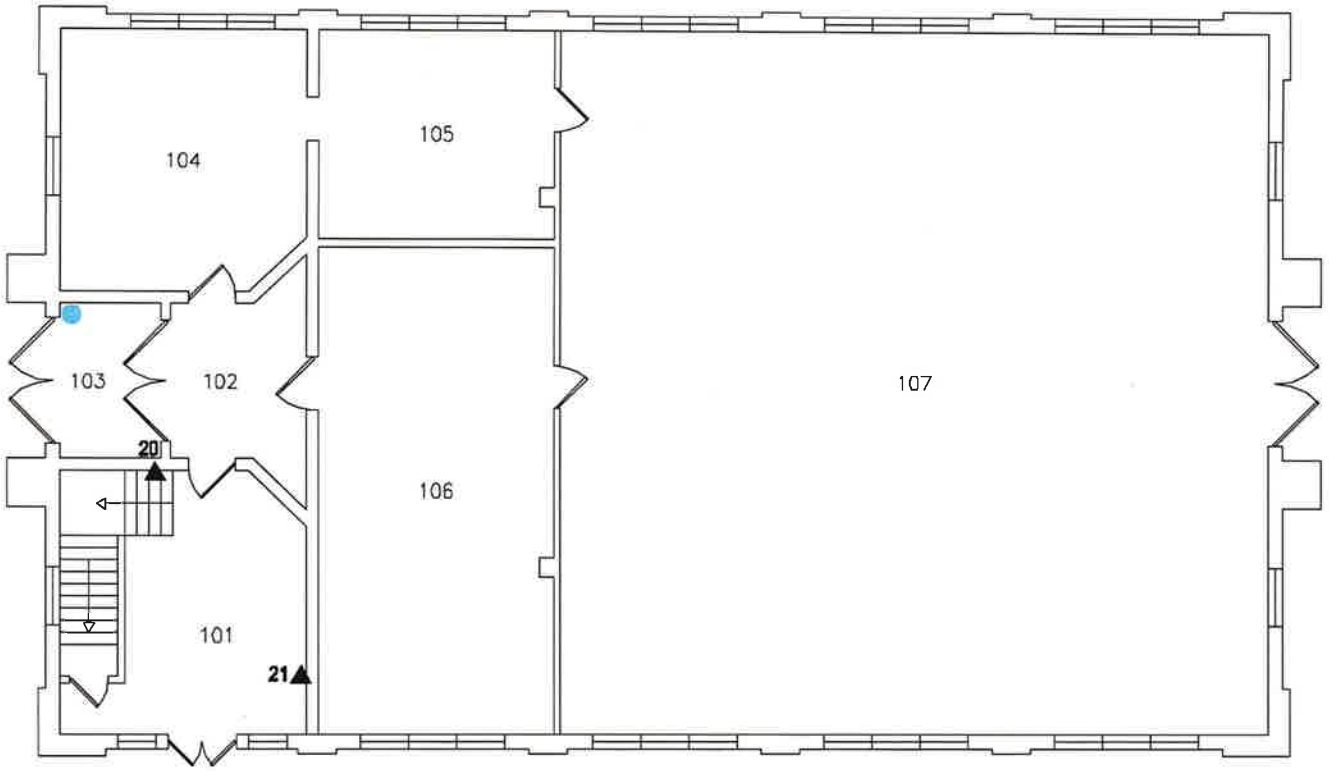
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FILE: 1016514\SUB JOB 04\STORAGE MAIN FLOOR

LEGEND

▲ BULK SAMPLE

● ASBESTOS–CONTAINING PIPING ("TRANSITE")



0 5 m

SCALE

BUILDING # 6, STORAGE (OLD SCHOOL), MAIN FLOOR FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 150
Job No.:	Fig. No.:
1016514.04	4

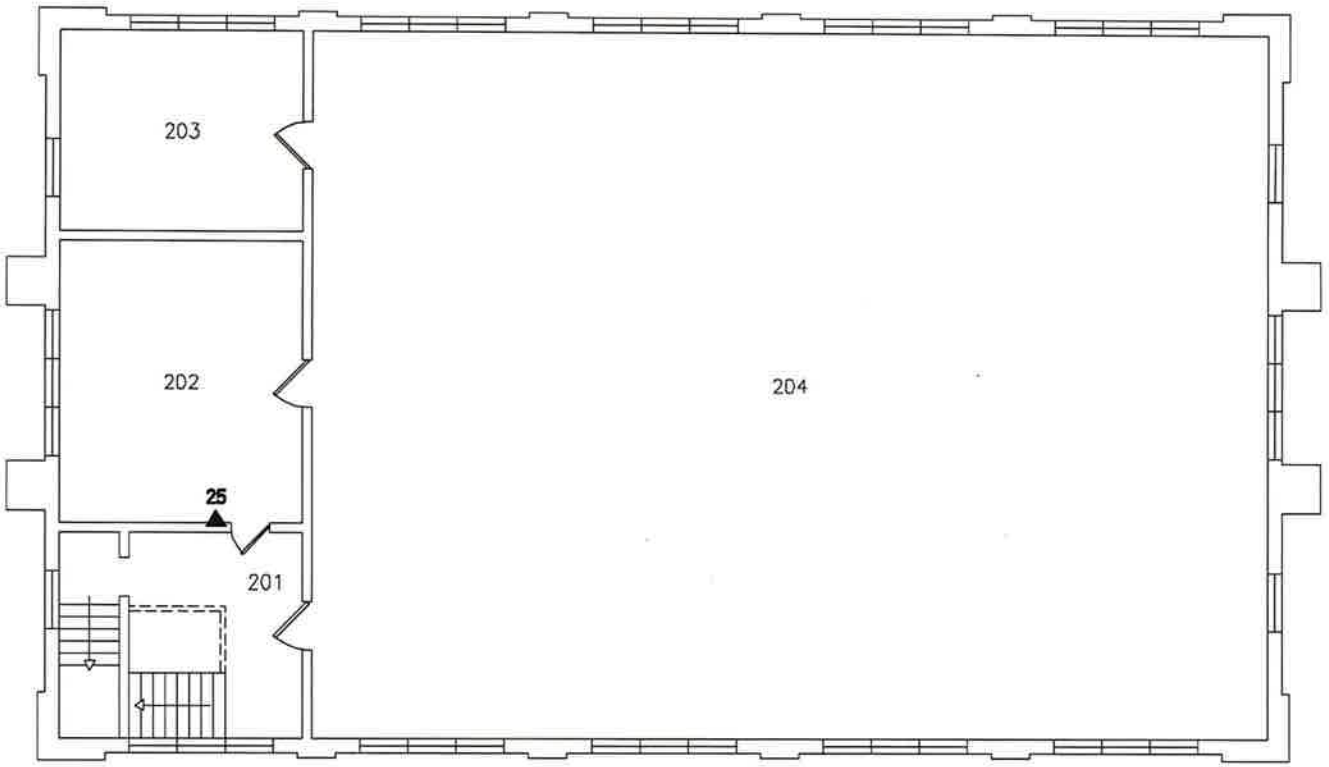
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FILE: 1016514\SUB JOB 04\STORAGE SECOND FLOOR

LEGEND

▲ BULK SAMPLE



0 5 m

SCALE

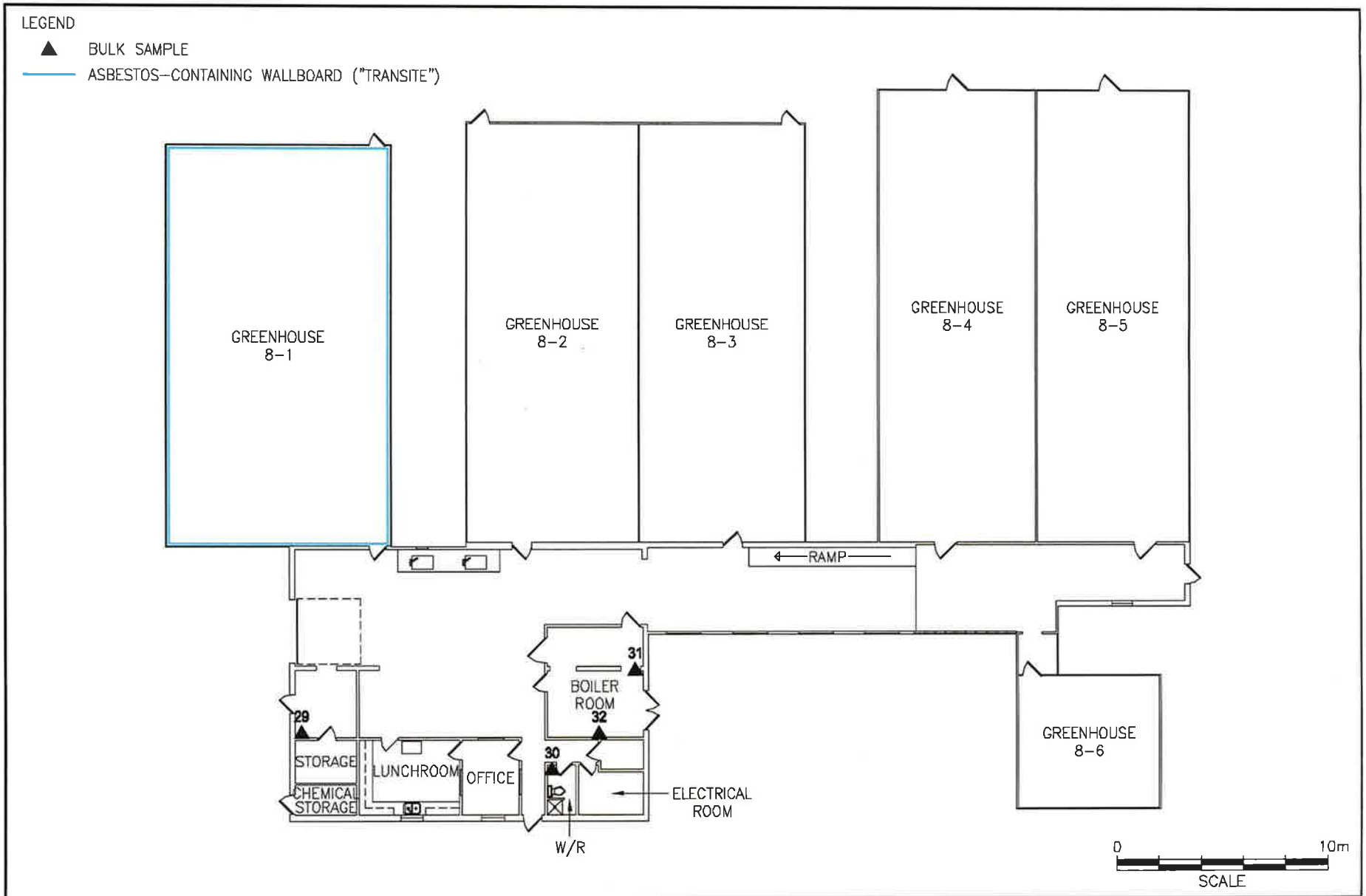
BUILDING # 6, STORAGE (OLD SCHOOL), SECOND FLOOR FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 150
Job No.:	Fig. No.:
1016514.04	5

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FILE: 1016514\SUB JOB 04\BREEDING MAIN FLOOR



BUILDING # 8, POTATO BREEDING GREENHOUSE, MAIN FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 250
Job No.: 1016514.04	Fig. No.: 6

Jacques Whitford

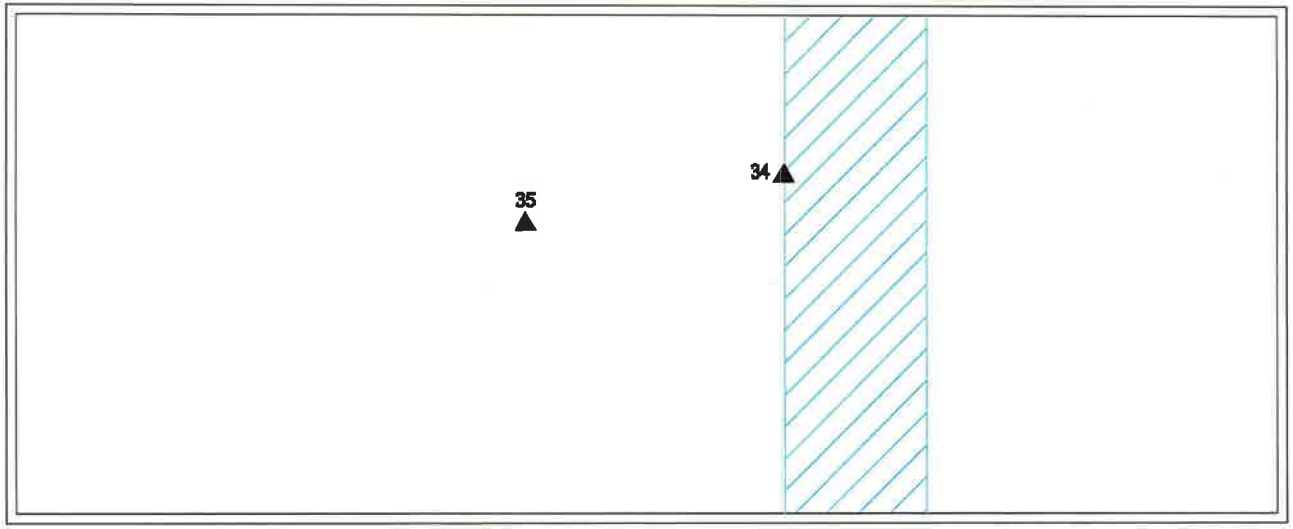
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FILE: 1016514\SUB JOB 04\CROP DRYER

LEGEND

▲ BULK SAMPLE

ASBESTOS–CONTAINING DOOR, WALL AND CEILING BOARD ("TRANSITE")



0 5 m

SCALE

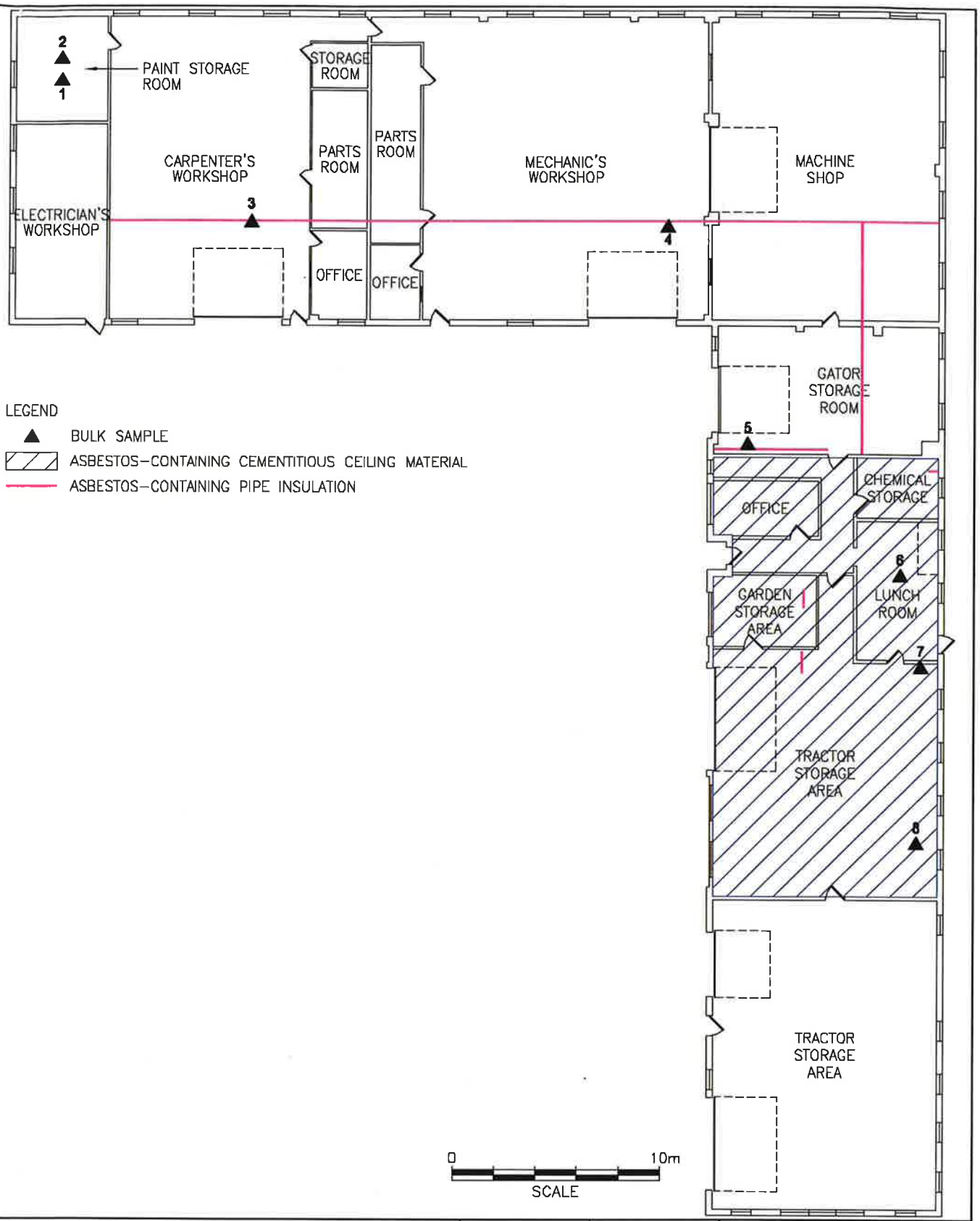
BUILDING # 9, CROP DRYER AND STORAGE, MAIN FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 150
Job No.:	Fig. No.:
1016514.04	7

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FILE: 1016514\SUB JOB 04\FARM SERVICES SECOND FLOOR



BUILDING # 11, FARM SERVICES, SECOND FLOOR FLOOR PLAN ASBESTOS CONTAINING MATERIALS SURVEY POTATO RESEARCH CENTRE 850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK	Date: 2007 01 04	Scale: 1 : 250
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Jacques Whitford

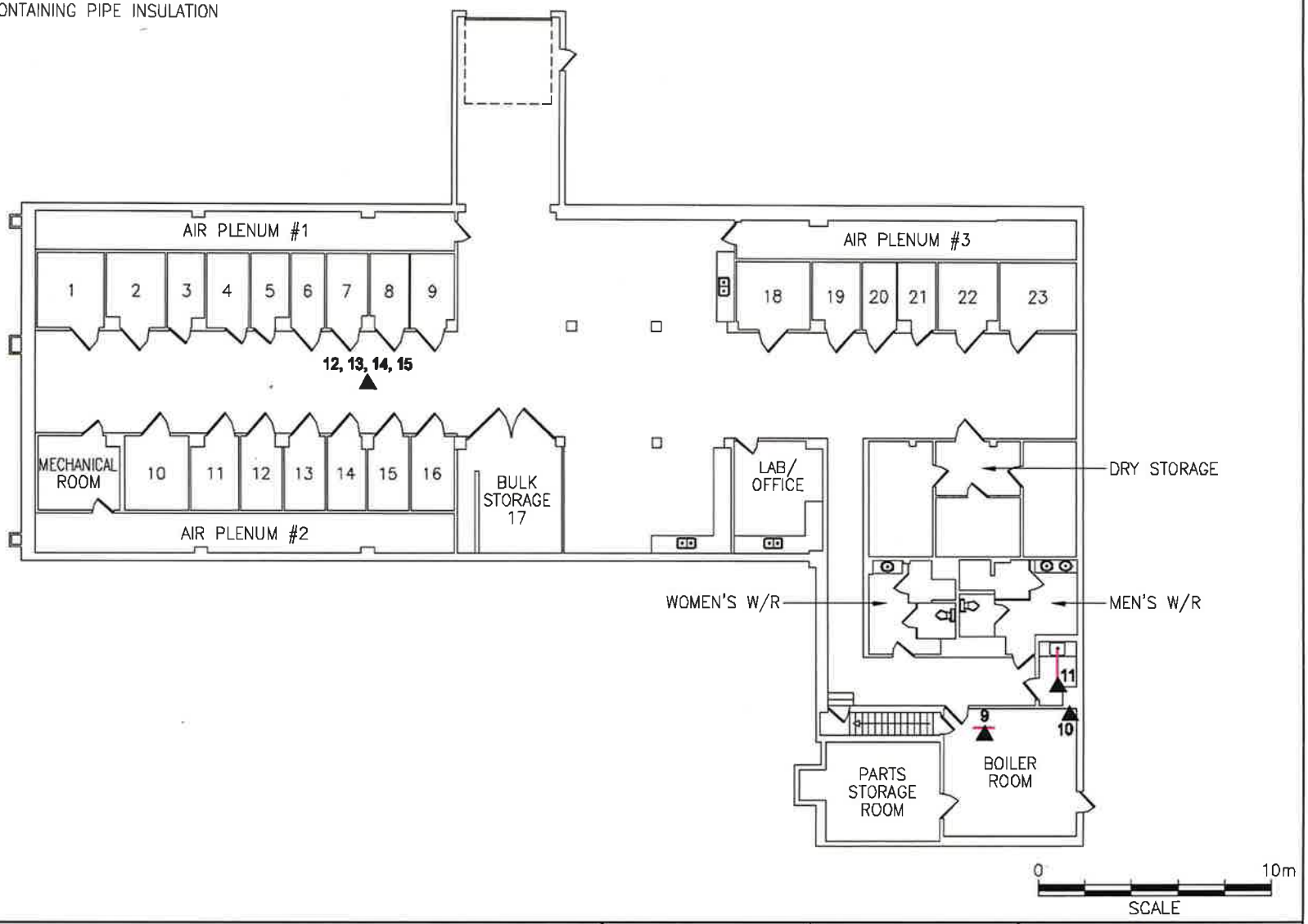
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FILE: 1016514\SUB JOB 04\FARM SERVICES FIRST FLOOR

LEGEND

▲ BULK SAMPLE

ASBESTOS–CONTAINING PIPE INSULATION



BUILDING # 11, FARM SERVICES, FIRST FLOOR FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 250
Job No.:	Fig. No.:
1016514.04	9

Jacques Whitford

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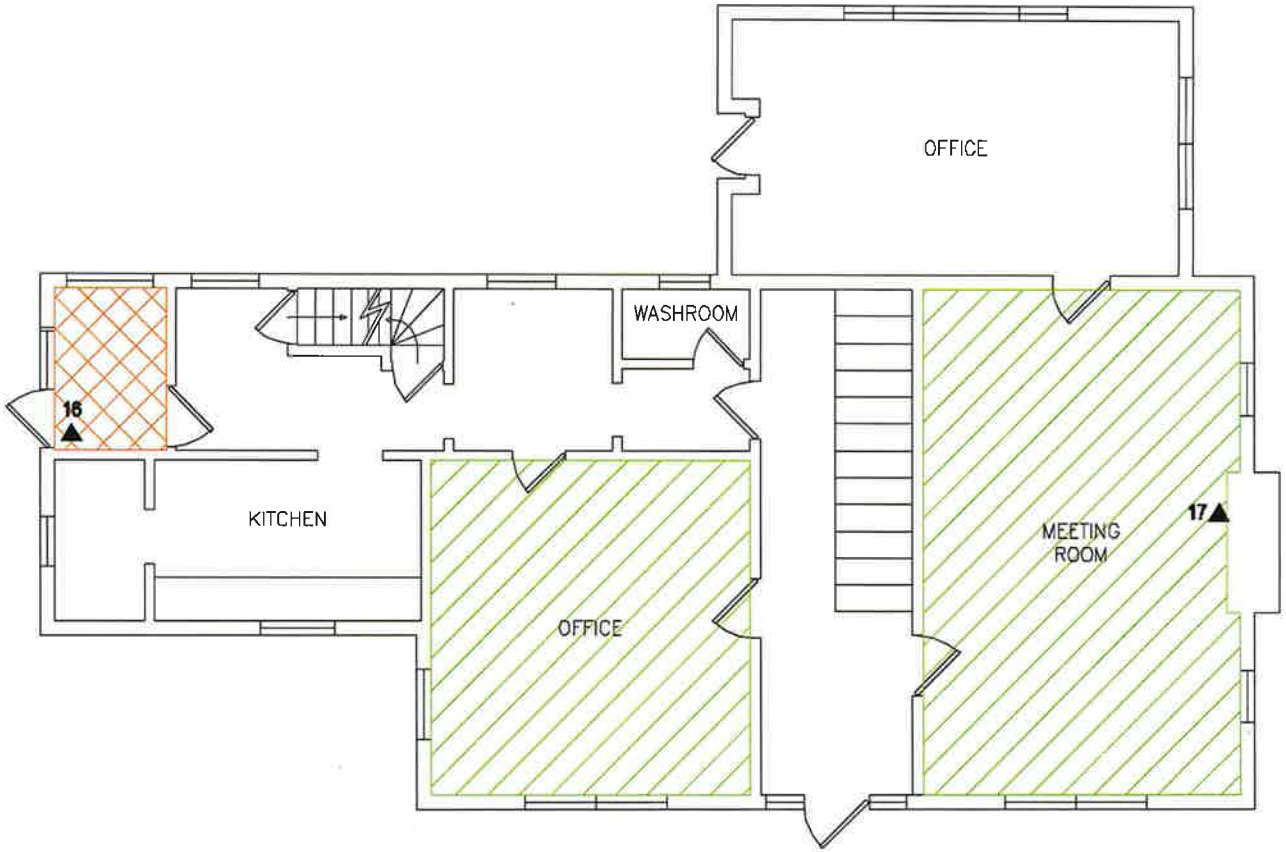
FILE: 1016514\SUB JOB 04\HILTON HOUSE GROUND FLOOR

LEGEND

▲ BULK SAMPLE

ASBESTOS–CONTAINING TEXTURE COAT ON CEILING

ASBESTOS–CONTAINING VINYL FLOOR TILES (9" x 9")



0 2 4m

SCALE

BUILDING # 23, HILTON HOUSE, GROUND FLOOR FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 100
Job No.:	Fig. No.:
1016514.04	10

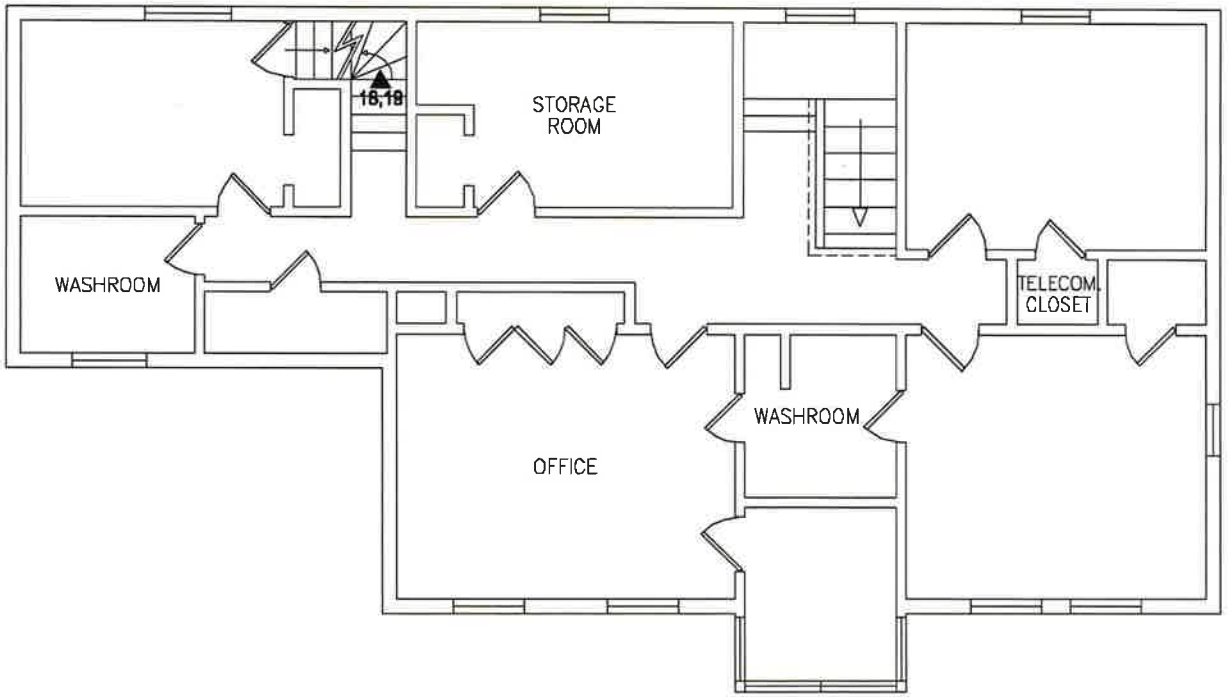
Jacques Whitford

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FILE: 1016514\SUB JOB 04\HILTON HOUSE SECOND FLOOR

LEGEND

▲ BULK SAMPLE



0 2 4m

SCALE

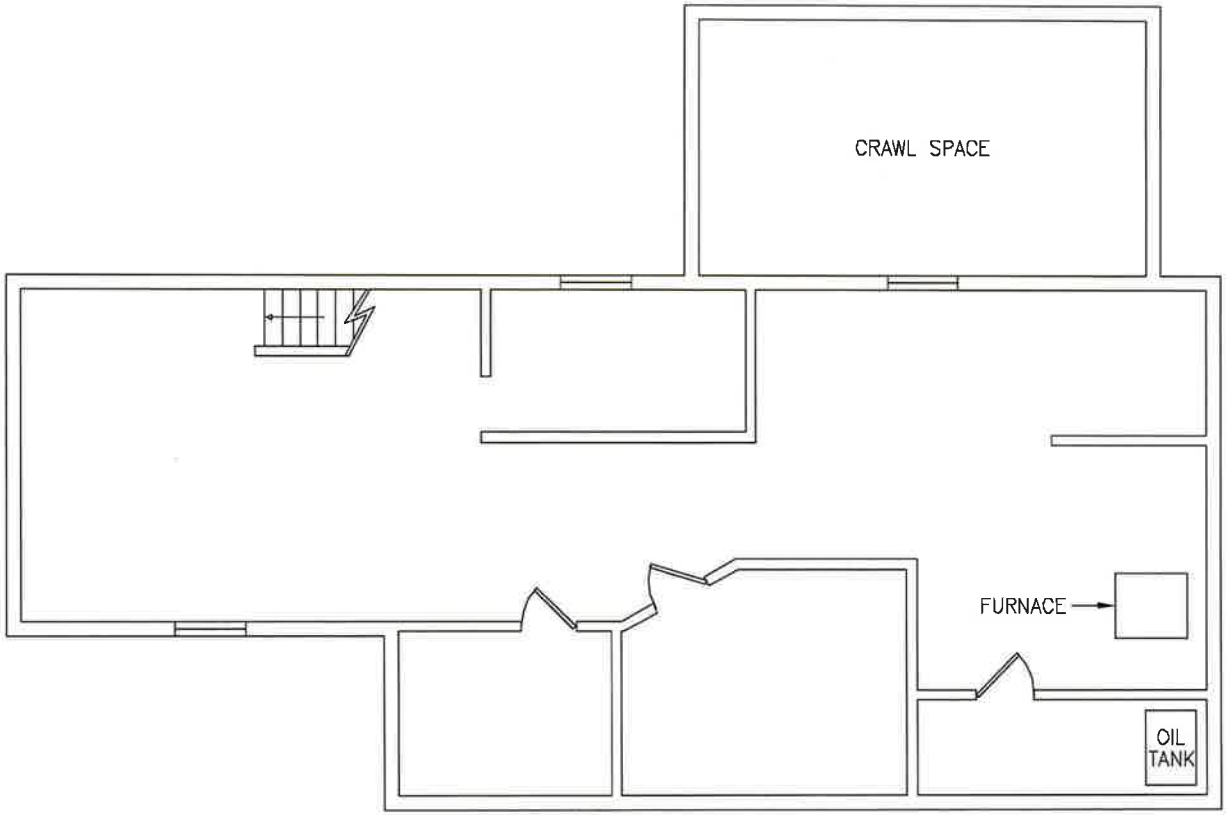
BUILDING # 23, HILTON HOUSE, SECOND FLOOR FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 100
Job No.:	Fig. No.:
1016514.04	11

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FILE: 1016514\SUB JOB 04\HILTON HOUSE BASEMENT



0 2 4m

SCALE

BUILDING # 23, HILTON HOUSE, BASEMENT FLOOR PLAN
ASBESTOS CONTAINING MATERIALS SURVEY
POTATO RESEARCH CENTRE
850 LINCOLN ROAD, FREDERICTON, NEW BRUNSWICK

Date:	Scale:
2007 01 04	1 : 100
Job No.:	Fig. No.:
1016514.04	12

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APPENDIX B

ANALYTICAL RESULTS - ASBESTOS AND COPIES OF LABORATORY CERTIFICATES OF ANALYSIS

Jacques Whitford

Jacques Whitford

Table B-1 **Analytical Results For Asbestos**
Potato Research Centre, 850 Lincoln Road, Fredericton, New Brunswick

Sample Number (Lex)	Sample Number (JW)	Description / Location	Asbestos Results	Friable (Yes/No)
1	AS-1	Pipe - elbow - "parging cement" - Paint Storage Room - Ground Floor - Building #11 (Farm Services Building)	None Detected	Yes
2	AS-2	Ceiling material - outer layer thin brown paper, inner layer black thread-like tar paper -over poured concrete ceiling - Paint Storage Room - Ground Floor - Building #11 (Farm Services Building)	None Detected	Yes
3	***AS-3**	**Pipe - straight run - "mag block" - Carpenter's Shop - Ground Floor - Building #11 (Farm Services Building)**	**10% Chrysotile 10% Amosite**	**Yes**
4	AS-4	Pipe - elbow - "parging cement" - Mechanic's Shop - Ground Floor - Building #11 (Farm Services Building)	None Detected	Yes
5	***AS-5**	**Pipe - straight run - corrugated paper-like insulation ("Air cell") - Mechanic's Shop - Ground Floor - Building #11 (Farm Services Building)**	**70% Chrysotile**	**Yes**
6	AS-6	Ceiling material - cementitious - Lunch Room - Ground Floor - Building #11 (Farm Services Building)	None Detected	No
7	***AS-7**	**Ceiling material - cementitious - Tractor Storage Area 2 - Ground Floor - Building #11 (Farm Services Building)**	**3% Actinolite and Tremolite**	**No**
8	AS-8	Ceiling material - cementitious - Tractor Storage Area 1 - Ground Floor - Building #11 (Farm Services Building)	None Detected	No
9	***AS-9**	**Pipe - straight run - "mag block" - Boiler Room - Basement - Building #11 (Farm Services Building)**	**10% Chrysotile 15% Amosite**	**Yes**
10	AS-10	Pipe - elbow - "parging cement" - Boiler Room - Basement - Building #11 (Farm Services Building)	None Detected	Yes
11	***AS-11**	**Pipe - straight run - corrugated paper-like insulation ("Air cell") - Janitor's Room - Basement - Building #11 (Farm Services Building)**	**70% Chrysotile**	**Yes**
12	AS-12	Ceiling insulating material - inner layer - Dark Brown Cork - over concrete - Cold Storage Area - Basement - Building #11 (Farm Services Building)	None Detected	Yes
13	AS-13	Ceiling insulating material - Reddish Brown Cork - over AS-12 - Cold Storage Area - Basement - Building #11 (Farm Services Building)	None Detected	Yes
14	AS-14	Ceiling insulating material - Yellow Foam-Like Material - over AS-13 - Cold Storage Area - Basement - Building #11 (Farm Services Building)	None Detected	Yes
15	AS-15	Ceiling insulating material - Beige Fibrous Material - Outer layer over AS-14 - Cold Storage Area - Basement - Building #11 (Farm Services Building)	None Detected	Yes
0001	***AS-16**	**Vinyl floor tiles - 9" x 9" - greyish brown with white, black and red streaks - Side Entrance Foyer - Ground Floor - Building #23 (Hilton House)**	**59% Chrysotile**	**No**

Table B-1 **Analytical Results For Asbestos**
Potato Research Centre, 850 Lincoln Road, Fredericton, New Brunswick

Sample Number (Lex)	Sample Number (JW)	Description / Location	Asbestos Results	Friable (Yes/No)
16	***AS-17**	**White Texture Coat - Ceiling - Meeting Room - Ground Floor - Building #23 (Hilton House)**	**2% Chrysotile**	**Yes**
17	AS-18	Wall - Inner Beige Cementitious Material - Top of Stairs - Attic - Building #23 (Hilton House)	None Detected	No
18	*AS-19	Wall - Plaster Outer White Smooth Layer - Top of Stairs - Attic - Building #23 (Hilton House)	0.6% Chrysotile	No
19	AS-20	Wall Covering - Woven Textile - Ground Floor - Building #6 (Old School)	None Detected	No
20.1	AS-21	Wall - Plaster Outer White Smooth Layer - Room 101 - Ground Level - Building #6 (Old School)	None Detected	No
20.2	AS-21	Wall - Inner Beige Cementitious Material - Room 101 - Ground Level - Building #6 (Old School)	<0.5% Chrysotile	No
21	***AS-22**	**Pipe - straight run - corrugated paper-like insulation ("Air cell") - Basement - Building #6 (Old School)**	**70% Chrysotile**	**Yes**
22	***AS-23**	**Boiler Insulation - Basement - Building #6 (Old School)**	**10% Chrysotile 20% Amosite**	**Yes**
23.1	AS-24	Wall - Outer Gray and White Layer - Staircase - Basement - Building #6 (Old School)	None Detected	No
23.2	AS-24	Wall - Inner Beige Cementitious Material - Staircase - Basement - Building #6 (Old School)	None Detected	No
24	AS-25	Wire Jacketing - Light Switch Wall Cavity - Room 202 - Second Floor - Building #6 (Old School)	None Detected	No
25	***AS-26**	**Pipe - straight run - corrugated paper-like insulation ("Air cell") - Building #2 (Entomology)**	**70% Chrysotile**	**Yes**
0002	***AS-27**	**Vinyl floor tiles - 9" x 9" - green - Growth Room 2 - Building #2 (Entomology)**	**23% Chrysotile**	**No**
0003	***AS-28**	**Vinyl floor tiles - 9" x 9" - reddish brown - Growth Room 2 - Building #2 (Entomology)**	**23% Chrysotile**	**No**
26	AS-29	Pipe - elbow - "parging cement" - Building #8 (Potato Breeding Greenhouse)	None Detected	Yes
27	AS-30	Linoleum Sheet Flooring - Beige and Brown Patchwork Pattern - Washroom - Building #8 (Potato Breeding Greenhouse)	None Detected	No
28	AS-31	Pipe - elbow - "parging cement" - Boiler Room - Building #8 (Potato Breeding Greenhouse)	None Detected	Yes
29	AS-32	Conversion Tank - "parging cement" - Boiler Room - Building #8 (Potato Breeding Greenhouse)	None Detected	Yes
30	***AS-33**	**Ceiling - Transite Panel - Building #2 (Entomology)**	**20% Chrysotile**	**No**

Table B-1 **Analytical Results For Asbestos**
Potato Research Centre, 850 Lincoln Road, Fredericton, New Brunswick

Sample Number (Lex)	Sample Number (JW)	Description / Location	Asbestos Results	Friable (Yes/No)
31	***AS-34**	**Door - Transite Panel - Inside Door - Dryer Room 1 - Building #9 (Crop Dryer and Storage)**	**15% Chrysotile**	**No**
32	AS-35	Ceiling - Panel ceiling material - Grinder Room - Building #9 (Crop Dryer and Storage)	None Detected	No
01	**AS-36**	**Pipe – Cement piping "Transite" – Stored near the exterior of Building #70 (Lumber Storage Building)**	**8% Chrysotile 1% Amosite**	**No**
02	AS-37	Pipe - elbow - "parging cement" - Building #68 (Chemical Building)	None Detected	No

* **Bold** indicates asbestos containing material (ACM) 1 % by volume or greater.

LEX SCIENTIFIC INC.

SOLUTIONS
FOR A WORKING WORLD

Company:	Jacques Whitford Environment Ltd.	**Report Date:**	25-Oct-06
Contact:	Ms. Christine Mullaly	**Analysis Date:**	24-Oct-06
Client Address:	711 Woodstock Road, Fredericton, NB	**Received Date:**	18-Oct-06
Client Reference:	1016514.04 Z9100	**LEX Project Number:**	08062110
Sampling Date:	12-Oct-06	**Number of Analyses:**	36

Analysis Requested **Bulk Asbestos by PLM**

Analysis was performed in accordance with the method EPA/600/R-93/116, Method for the Determination of Asbestos in Bulk Building Materials adopted in Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations - made under the Occupational Health and Safety Act Ontario Regulation 278/05. LEX Scientific Inc. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP 101949) by the National Institute of Standards and Technology for analysis of bulk materials for asbestos.

German Leal, B.Sc.
Laboratory Manager

Jason Cooper, B.Sc.
Analyst

			Fibrous Asbestos Content %	Other Materials Content %	
Client Sample:	AS-1	**Asbestos Detected?**	No		
LEX Sample:	01	**Chrysotile:**	None Detected	**Cellulose:**	20
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	20
Colour:	Cream/Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Parging pipe fitting	**Other Amphiboles:**	None Detected	**Non Fibers:**	60
		Comments:			

Other Amphiboles: ac=actinollte, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst

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2 Quebec Street, Suite 204 Guelph, Ontario N1H 2T3
Phone: 519.824.7082 Fax: 519.824.5784 Toll Free: 1.800.824.7082
e-mail: admin@lexscientific.com Website: www.lexscientific.com

		Fibrous Asbestos Content %		Other Materials Content %	
Client Sample: AS-2	**Asbestos Detected?**	**No**			
LEX Sample: 02	**Chrysotile:**	None Detected	**Cellulose:**	90	
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected	
Colour: Black/Brown	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Ceiling material	**Other Amphiboles:**	None Detected	**Non Fibers:**	10	
	Comments:				
Client Sample: AS-3	**Asbestos Detected?**	**Yes**			
LEX Sample: 03	**Chrysotile:**	10	**Cellulose:**	None Detected	
Layers Analyzed: Sample homogenized	**Amosite:**	10	**MMVF:**	None Detected	
Colour: Cream	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Pipe insulation	**Other Amphiboles:**	None Detected	**Non Fibers:**	80	
	Comments:				
Client Sample: AS-4	**Asbestos Detected?**	**No**			
LEX Sample: 04	**Chrysotile:**	None Detected	**Cellulose:**	30	
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:**	20	
Colour: Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Parging pipe fitting	**Other Amphiboles:**	None Detected	**Non Fibers:**	50	
	Comments:				
Client Sample: AS-5	**Asbestos Detected?**	**Yes**			
LEX Sample: 05	**Chrysotile:**	70	**Cellulose:**	20	
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected	
Colour: Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Pipe insulation	**Other Amphiboles:**	None Detected	**Non Fibers:**	10	
	Comments:				
Client Sample: AS-6	**Asbestos Detected?**	**No**			
LEX Sample: 06	**Chrysotile:**	None Detected	**Cellulose:**	5	
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected	
Colour: Brown	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Cementitious material	**Other Amphiboles:**	None Detected	**Non Fibers:**	95	
	Comments:				

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst 

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		Fibrous Asbestos Content %		Other Materials Content %	
Client Sample: AS-7	**Asbestos Detected?**	**Yes**			
LEX Sample: 07	**Chrysotile:**	None Detected	**Cellulose:**	2	
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected	
Colour: Brown	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Cementitious material	**Other Amphiboles:**	ac/t: 3	**Non Fibers:**	95	
	Comments:				
Client Sample: AS-8	**Asbestos Detected?**	**No**			
LEX Sample: 08	**Chrysotile:**	None Detected	**Cellulose:**	2	
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected	
Colour: Brown	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Cementitious material	**Other Amphiboles:**	None Detected	**Non Fibers:**	98	
	Comments:				
Client Sample: AS-9	**Asbestos Detected?**	**Yes**			
LEX Sample: 09	**Chrysotile:**	10	**Cellulose:**	None Detected	
Layers Analyzed: Sample homogenized	**Amosite:**	15	**MMVF:**	None Detected	
Colour: Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Pipe insulation	**Other Amphiboles:**	None Detected	**Non Fibers:**	75	
	Comments:				
Client Sample: AS-10	**Asbestos Detected?**	**No**			
LEX Sample: 10	**Chrysotile:**	None Detected	**Cellulose:**	30	
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:**	20	
Colour: Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Parging pipe fitting	**Other Amphiboles:**	None Detected	**Non Fibers:**	50	
	Comments:				
Client Sample: AS-11	**Asbestos Detected?**	**Yes**			
LEX Sample: 11	**Chrysotile:**	70	**Cellulose:**	20	
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected	
Colour: Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected	
Description: Pipe Insulation	**Other Amphiboles:**	None Detected	**Non Fibers:**	10	
	Comments:				

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst _____

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		Fibrous Asbestos Content %		Other Materials Content %	
Client Sample:	AS-12	**Asbestos Detected?**	**No**		
LEX Sample:	12	**Chrysotile:**	None Detected	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Brown	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Dark brown cork - inner layer	**Other Amphiboles:**	None Detected	**Non Fibers:**	100
		Comments:			
Client Sample:	AS-13	**Asbestos Detected?**	**No**		
LEX Sample:	13	**Chrysotile:**	None Detected	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Brown	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Reddish brown cork	**Other Amphiboles:**	None Detected	**Non Fibers:**	100
		Comments:			
Client Sample:	AS-14	**Asbestos Detected?**	**No**		
LEX Sample:	14	**Chrysotile:**	None Detected	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Yellow	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Yellow foam-like material	**Other Amphiboles:**	None Detected	**Non Fibers:**	100
		Comments:			
Client Sample:	AS-15	**Asbestos Detected?**	**No**		
LEX Sample:	15	**Chrysotile:**	None Detected	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	40
Colour:	Beige	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Beige ceiling insulation - outer layer	**Other Amphiboles:**	None Detected	**Non Fibers:**	60
		Comments:			
Client Sample:	AS-17	**Asbestos Detected?**	**Yes**		
LEX Sample:	16	**Chrysotile:**	2	**Cellulose:**	3
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	White	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Texture coat - ceiling	**Other Amphiboles:**	None Detected	**Non Fibers:**	95
		Comments:			

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

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		Fibrous Asbestos Content %		Other Materials Content %	
Client Sample:	AS-18	**Asbestos Detected?**	No		
LEX Sample:	17	**Chrysotile:**	None Detected	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Brown	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Wall - Inner Beige (cementitious material)	**Other Amphiboles:**	None Detected	**Non Fibers:**	100
		Comments:			
Client Sample:	AS-19	**Asbestos Detected?**	Yes		
LEX Sample:	18	**Chrysotile:**	0.6	**Cellulose:**	None Detected
Layers Analyzed:	White layer	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	White	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Wall - Outer white smooth layer	**Other Amphiboles:**	None Detected	**Non Fibers:**	99.4
		Comments:			
Client Sample:	AS-20	**Asbestos Detected?**	No		
LEX Sample:	19	**Chrysotile:**	None Detected	**Cellulose:**	15
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Beige/Brown	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Wall covering - Woven textile	**Other Amphiboles:**	None Detected	**Non Fibers:**	85
		Comments:			
Client Sample:	AS-21	**Asbestos Detected?**	No		
LEX Sample:	20.1	**Chrysotile:**	None Detected	**Cellulose:**	2
Layers Analyzed:	Outer white layer	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	White	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Wall plaster	**Other Amphiboles:**	None Detected	**Non Fibers:**	98
		Comments:			
Client Sample:	AS-21	**Asbestos Detected?**	Yes		
LEX Sample:	20.2	**Chrysotile:**	<0.5	**Cellulose:**	1
Layers Analyzed:	Inner beige cementitious layer	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Wall plaster	**Other Amphiboles:**	None Detected	**Non Fibers:**	99
		Comments:			

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

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		Fibrous Asbestos Content %	Other Materials Content %
Client Sample: AS-22	**Asbestos Detected?**	**Yes**	
LEX Sample: 21	**Chrysotile:**	70	**Cellulose:** 20
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:** None Detected
Colour: Black/Grey	**Crocidolite:**	None Detected	**Other Fibers:** None Detected
Description: Pipe insulation	**Other Amphiboles:**	None Detected	**Non Fibers:** 10
	Comments:		
Client Sample: AS-23	**Asbestos Detected?**	**Yes**	
LEX Sample: 22	**Chrysotile:**	10	**Cellulose:** None Detected
Layers Analyzed: Sample homogenized	**Amosite:**	20	**MMVF:** None Detected
Colour: Grey	**Crocidolite:**	None Detected	**Other Fibers:** None Detected
Description: Boiler Insulation	**Other Amphiboles:**	None Detected	**Non Fibers:** 70
	Comments:		
Client Sample: AS-24	**Asbestos Detected?**	**No**	
LEX Sample: 23.1	**Chrysotile:**	None Detected	**Cellulose:** None Detected
Layers Analyzed: Outer grey and white layer	**Amosite:**	None Detected	**MMVF:** None Detected
Colour: Grey/White	**Crocidolite:**	None Detected	**Other Fibers:** None Detected
Description: Fireproofing Material	**Other Amphiboles:**	None Detected	**Non Fibers:** 100
	Comments:		
Client Sample: AS-24	**Asbestos Detected?**	**No**	
LEX Sample: 23.2	**Chrysotile:**	None Detected	**Cellulose:** None Detected
Layers Analyzed: Inner beige cementitious layer	**Amosite:**	None Detected	**MMVF:** None Detected
Colour: Grey	**Crocidolite:**	None Detected	**Other Fibers:** None Detected
Description: Fireproofing Material	**Other Amphiboles:**	None Detected	**Non Fibers:** 100
	Comments:		
Client Sample: AS-25	**Asbestos Detected?**	**No**	
LEX Sample: 24	**Chrysotile:**	None Detected	**Cellulose:** 80
Layers Analyzed: Sample homogenized	**Amosite:**	None Detected	**MMVF:** None Detected
Colour: Black	**Crocidolite:**	None Detected	**Other Fibers:** None Detected
Description: Wire jacketing	**Other Amphiboles:**	None Detected	**Non Fibers:** 20
	Comments:		

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst _____

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			Fibrous Asbestos Content %	Other Materials Content %	
Client Sample:	AS-26	**Asbestos Detected?**	**Yes**		
LEX Sample:	25	**Chrysotile:**	70	**Cellulose:**	20
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Pipe insulation	**Other Amphiboles:**	None Detected	**Non Fibers:**	10
		Comments:			
Client Sample:	AS-29	**Asbestos Detected?**	**No**		
LEX Sample:	26	**Chrysotile:**	None Detected	**Cellulose:**	20
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	20
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Parging pipe fitting	**Other Amphiboles:**	None Detected	**Non Fibers:**	60
		Comments:			
Client Sample:	AS-30	**Asbestos Detected?**	**No**		
LEX Sample:	27	**Chrysotile:**	None Detected	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Beige/Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Linoleum Sheet Flooring	**Other Amphiboles:**	None Detected	**Non Fibers:**	100
		Comments:			
Client Sample:	AS-31	**Asbestos Detected?**	**No**		
LEX Sample:	28	**Chrysotile:**	None Detected	**Cellulose:**	20
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	30
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Parging pipe fitting	**Other Amphiboles:**	None Detected	**Non Fibers:**	50
		Comments:			
Client Sample:	AS-32	**Asbestos Detected?**	**No**		
LEX Sample:	29	**Chrysotile:**	None Detected	**Cellulose:**	20
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	30
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Parging conversion tank	**Other Amphiboles:**	None Detected	**Non Fibers:**	50
		Comments:			

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst _____

This test report relates only to the items tested and must not be used to claim product endorsement by NVLAP or any agency of the United States government. This test report must not be reproduced except in full without the written consent of the laboratory.

LEX SCIENTIFIC INC.

			Fibrous Asbestos Content %		Other Materials Content %
Client Sample:	AS-33	**Asbestos Detected?**	**Yes**		
LEX Sample:	30	**Chrysotile:**	20	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Grey/White	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Transite Panel Ceiling	**Other Amphiboles:**	None Detected	**Non Fibers:**	80
		Comments:			
Client Sample:	AS-34	**Asbestos Detected?**	**Yes**		
LEX Sample:	31	**Chrysotile:**	15	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Transite on Door	**Other Amphiboles:**	None Detected	**Non Fibers:**	85
		Comments:			
Client Sample:	AS-35	**Asbestos Detected?**	**No**		
LEX Sample:	32	**Chrysotile:**	None Detected	**Cellulose:**	80
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Beige/White	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Panel Ceiling Material	**Other Amphiboles:**	None Detected	**Non Fibers:**	20
		Comments:			
Client Sample:	Lab SA-1	**Asbestos Detected?**	**No**		
LEX Sample:	33	**Chrysotile:**	None Detected	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Cream	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Oven Brick	**Other Amphiboles:**	None Detected	**Non Fibers:**	100
		Comments:			
Client Sample:	Lab SA-2	**Asbestos Detected?**	**Yes**		
LEX Sample:	34	**Chrysotile:**	50	**Cellulose:**	40
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Oven Pad	**Other Amphiboles:**	None Detected	**Non Fibers:**	10
		Comments:			

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst _____

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LEX SCIENTIFIC INC.

EMSL Analytical, Inc.
107 Haddon Ave., Westmont, NJ 08108
Phone: (856) 858-4800 Fax: (856) 858-4960 Email: westmontasblab@EMSL.com

Attn: **Natalija Njegus**
Lex Scientific
2 Quebec Street
Suite 204
Guelph, Ontario, Canada N1H-2T3

Fax: Phone: (519) 824-7082
Project: **11062111/1016514.04.Z9100**

Customer ID: LEXS50
Customer PO: G0834
Received: 10/19/06 9:30 AM
EMSL Order: 040622224

EMSL Proj:
Analysis Date: 10/23/2006
Report Date: 10/23/2006

Asbestos Analysis of Bulk Materials via Transmission Electron Microscopy. Chatfield Method (rev 2)

SAMPLE ID	COLOR	MATRIX MATERIAL	NON-ASBESTOS FIBERS	ASBESTOS RANGE	ASBESTOS TYPE	ASBESTOS AVG
AS-16 *040622224-0001*	Gray	41.0%		56.0-63.0%	Chrysotile	59.0%
AS-27 *040622224-0002*	Green	77.0%		21.0-26.0%	Chrysotile	23.0%
AS-28 *040622224-0003*	Red	77.0%		21.0-25.0%	Chrysotile	23.0%

Analyst(s)
Robyn Denton (2)
Steve Siegel (1)

Stephen Siegel, CIH
or other approved signatory

The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.
ACCREDITATIONS: AIHA #100194, NVLAP #101048-0 and NY STATE ELAP #10872

THIS IS THE LAST PAGE OF THE REPORT.

LEX SCIENTIFIC INC

SOLUTIONS
FOR A WORKING WORLD

Company:	Jacques Whitford Environment Ltd.	**Report Date:**	13-Dec-06
Contact:	Ms. Christine Mullaly	**Analysis Date:**	13-Dec-06
Client Address:	711 Woodstock Road, Fredericton, NB	**Received Date:**	08-Dec-06
Client Reference:	1016514.04 Z9100	**LEX Project Number:**	08062463
Sampling Date:	07-Dec-06	**Number of Analyses:**	2

Analysis Requested **Bulk Asbestos by PLM**

Analysis was performed in accordance with the method EPA/600/R-93/116, Method for the Determination of Asbestos in Bulk Building Materials adopted in Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations - made under the Occupational Health and Safety Act Ontario Regulation 278/05. LEX Scientific Inc. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP 101949) by the National Institute of Standards and Technology for analysis of bulk materials for asbestos.

German Leal, B.Sc.
Laboratory Manager

Jason Cooper, B.Sc.
Analyst

		Fibrous Asbestos Content %	Other Materials Content %
Client Sample:	AS 36	**Asbestos Detected?**	**Yes**
LEX Sample:	01	**Chrysotile:** 8	**Cellulose:** None Detected
Layers Analyzed:	Sample homogenized	**Amosite:** 1	**MMVF:** None Detected
Colour:	Grey	**Crocidolite:** None Detected	**Other Fibers:** None Detected
Description:	Transite Pipe	**Other Amphiboles:** None Detected	**Non Fibers:** 91
		Comments:	

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tre · olite, u=unide· ·ied.
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst

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2 Quebec Street, Suite 204 Guelph, Ontario N1H 2T3
Phone: 519.824.7082 Fax: 519.824.5784 Toll Free: 1.800.824.7082
e-mail: admin@lexscientific.com Website: www.lexscientific.com

Company: Jacques Whitford Environment Ltd. **LEX Project # 08062463** **Page 2 of 2**

			Fibrous Asbestos Content %		Other Materials Content %
Client Sample:	AS 37	Asbestos Detected?	No		
LEX Sample:	02	Chrysotile:	None Detected	Cellulose:	20
Layers Analyzed:	Sample homogenized	Amosite:	None Detected	MMVF:	20
Colour:	Grey/White	Crocidolite:	None Detected	Other Fibers:	None Detected
Description:	Pipe Fitting Parging	Other Amphiboles:	None Detected	Non Fibers:	60
		Comments:			

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst

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LEX SCIENTIFIC INC

APPENDIX C

ASBESTOS BACKGROUND INFORMATION

Jacques Whitford

Jacques Whitford

Asbestos

The disturbance of asbestos-containing materials (ACMs) on construction projects is governed by the Code of Practice for Materials Containing Asbestos (New Brunswick Regulation 92-106) and the federal Public Works and Government Services Canada (PWGSC) directive (i.e. DIR:057). ACMs must be removed prior to any demolition or renovation that may potentially disturb the asbestos materials.

The New Brunswick Regulation 92-106 requires the disposal of asbestos waste in a double sealed container, properly labeled and free of cuts, tears or punctures. The waste must be disposed of in a licensed waste facility, which has been properly notified of the presence of asbestos waste.

The transport of asbestos waste to the disposal site is covered by the federal "Transportation of Dangerous Goods Act". Asbestos waste is to be handled by a licensed waste hauler.

Asbestos is a family of naturally occurring fibrous silicates from two mineralogical groups:

- Serpentines, which include chrysotile (white asbestos). These fibres are pliable, curly and made up of tiny individual fibrils. They are spiral in shape.

- Amphiboles, which include amosite (brown asbestos) and crocidolite (blue asbestos). These fibres are straight and needle like.

The qualities of asbestos that promoted its use in construction are as follows:

- fire resistance
- tensile strength
- durability
- flexibility
- resistance to heat, wear, corrosion

Asbestos is typically found in plaster, mechanical insulation, gaskets, thermal insulation on pipes, refractory material, roofing felts, floor tiles, ceiling tiles and parging, heat resistant panels, incandescent light fixture reflector plates, and any other material requiring a high degree of durability or thermal resistance. The common use of potential friable (breakable by hand) ACMs in construction ceased voluntarily in the mid 1970s; however, the spray application of asbestos-containing fireproofing was not prohibited until 1986.

Asbestos has many building applications, which include:

- Effective insulator against heat, cold, electricity and noise.
- Used as sprayed insulation and fireproofing materials in the period following the Second World War until the mid 1970s.

- Used as a thermal insulator in pipes, boilers and incandescent light reflectors.
- Structural steelwork fireproofing of high-rise buildings.
- Acoustical and decorative purposes in ceiling tiles and building walls.
- Durability in floor tiles, wall board, roof shingles and felts, gaskets, caulking, wall and ceiling plasters.

Asbestos is a health hazard only if it can get into the body through:

- inhalation
- ingestion
- absorption

The primary health related concern of the above list is asbestos inhalation. Respiratory diseases such as asbestosis (lung scarring) and cancers have been clinically linked to prolonged and heavy occupational exposure to airborne asbestos.

Health related concerns prompted the Ontario Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario (1981) to study and report on the health effects of asbestos in buildings in the early 1980's. The conclusions of the Royal Commission report (Chapter 9) were that (Bold added to section to emphasize critical conclusions of the Royal Commission Report):

> "The exposure of building occupants to asbestos fibres during normal building use is insignificant, whether as compared to the exposure of insulation workers in the past or as compared to the much lower exposures permitted by the Ontario workplace control limits. Studies of asbestos concentrations in building air have shown that many buildings containing asbestos insulation do not exhibit fibre levels exceeding those in the outdoor air or in buildings not insulated with asbestos. Even when a building exhibits elevated asbestos fibre levels, these are still very low compared to current workplace control limits and are orders of magnitude below the levels to which workers were exposed in the past."

"We will conclude that it is rarely necessary to take corrective action in buildings containing asbestos insulation in order to protect the general occupants of the buildings. **On the other hand, construction, demolition, renovation, maintenance and custodial workers in asbestos-containing buildings may be exposed to significant asbestos fibre levels and may, during their work, cause elevated fibre levels for nearby occupants. THE PROBLEM OF PROTECTING THESE WORKERS, AND OF PROTECTING OCCUPANTS FROM POSSIBLE FIBRE RELEASE AS A RESULT OF BUILDING WORK, IS THE REAL CHALLENGE THAT ASBESTOS INSULATION IN BUILDINGS PRESENTS."**

Jacques Whitford

Engineering, Scientific, Planning and Management Consultants

P.O. Box 1116
711 Woodstock Road
Fredericton NB
Canada E3B 5C2

Bus 506 457 3200
Fax 506 452 7652

www.jacqueswhitford.com

Project No. 1016514.04

November 8, 2006

Ms. Heather McCleave, P.Eng.
NB Provincial Coordinator
Environmental Services
Office of Greening Government Operations
Public Works and Government Services Canada
189 Prince William St.,
P.O. Box 7350, Saint John, NB, E2L 4J4

Dear Ms. McCleave:

RE: ASBESTOS SAMPLING, BUILDING #1 (RESEARCH LABORATORY), POTATO RESEARCH CENTRE, 850 LINCOLN ROAD, FREDERICTON, NB

At the request of Sean Brown, Facilities Manager at the Potato Research Centre, a representative of Jacques Whitford Limited (Jacques Whitford) collected two samples of suspected asbestos-containing material from Laboratory 132 located in the Research Laboratory at the above noted site on October 13, 2006. The sample was submitted to LEX Scientific Inc. of Guelph, Ontario, for analysis using a combination of dispersion staining and polarized-light microscopy (PLM). Lex Scientific Inc. is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples.

The analytical results from the sampling are presented in Table 1 below and the laboratory analytical report is contained in Appendix A.

Table 1 Analytical Results For Asbestos
Potato Research Centre, 850 Lincoln Road, Fredericton, NB

Sample Number (Lex)	Sample Number (JW)	Description / Location	Asbestos Results	Friable (Yes/No)
33	Lab SA-1	Oven Brick – Lab Oven – Lab 132 – Research Laboratory	None Detected	No
34	**Lab SA-2**	**Oven Pad for Hot Beakers – Lab Countertop – Lab 132 – Research Laboratory**	**50% Chrysotile**	**Yes**

* **Bold** indicates asbestos containing material (ACM) 1 % by volume or greater.

As indicated in Table 1, asbestos, as defined by *A Code of Practice for Working with Materials Containing Asbestos in New Brunswick (Regulation 92-106)*, was identified in the sample of oven pad material analysed. Lab results indicate that there was no asbestos detected in the sample of oven brick analysed.

Based on the above, any work involving the repair (i.e. cutting, sanding and drilling) or removing of the oven pad material that was tested, should be

conducted by a qualified contractor using Type 1 Asbestos Precautions as defined by *N.B. Regulation 92-106*.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned at (506) 634-2185.

Yours truly,

JACQUES WHITFORD LIMITED

Original signed by Paul D. Paulin

Paul D. Paulin, P.Eng.,
Environmental Engineering

CKM/PDP/bb

P:\1016xxx\1016514\04 AAFC Potato Research Centre Asbestos Survey\Report\AAFC letter Nov 6_2006_sampling letter-ckm.doc

Jacques Whitford

APPENDIX A

Jacques Whitford

			Fibrous Asbestos Content %		Other Materials Content %
Client Sample:	AS-33	**Asbestos Detected?**	**Yes**		
LEX Sample:	30	**Chrysotile:**	20	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Grey/White	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Transite Panel Ceiling	**Other Amphiboles:**	None Detected	**Non Fibers:**	80
		Comments:			
Client Sample:	AS-34	**Asbestos Detected?**	**Yes**		
LEX Sample:	31	**Chrysotile:**	15	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Transite on Door	**Other Amphiboles:**	None Detected	**Non Fibers:**	85
		Comments:			
Client Sample:	AS-35	**Asbestos Detected?**	**No**		
LEX Sample:	32	**Chrysotile:**	None Detected	**Cellulose:**	80
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Beige/White	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Panel Ceiling Material	**Other Amphiboles:**	None Detected	**Non Fibers:**	20
		Comments:			
Client Sample:	Lab SA-1	**Asbestos Detected?**	**No**		
LEX Sample:	33	**Chrysotile:**	None Detected	**Cellulose:**	None Detected
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Cream	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Oven Brick	**Other Amphiboles:**	None Detected	**Non Fibers:**	100
		Comments:			
Client Sample:	Lab SA-2	**Asbestos Detected?**	**Yes**		
LEX Sample:	34	**Chrysotile:**	50	**Cellulose:**	40
Layers Analyzed:	Sample homogenized	**Amosite:**	None Detected	**MMVF:**	None Detected
Colour:	Grey	**Crocidolite:**	None Detected	**Other Fibers:**	None Detected
Description:	Oven Pad	**Other Amphiboles:**	None Detected	**Non Fibers:**	10
		Comments:			

Other Amphiboles: ac=actinolite, a=anthophyllite, t-tremolite, u=unidentified
MMVF: Man Made Vitreous Fibers: Fiberglass, Min. Wool, Rockwool, Glasswool
PLM - method detection limit is 0.1%

Analyst _____

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LEX SCIENTIFIC INC

APPENDIX 2

CONTRACTOR NOTIFICATION AND ACKNOWLEDGEMENT FORM
AND
ASBESTOS RELATED WORK RECORD

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

CONTRACTOR NOTIFICATION AND ACKNOWLEDGEMENT
NOTIFICATION ET CONSENTEMENT DE L'ENTREPRENEUR

Working with asbestos can be dangerous unless appropriate work practices and personal protective equipment are utilized. Inhaling asbestos fibres can cause various types of lung disease including cancer. Smoking increases the risk of lung cancer from asbestos exposure.

Le travail de l'amiante présente des dangers pour la santé des travailleurs, à moins que ceux-ci utilisent des méthodes de travail et un équipement de protection individuelle appropriés. L'inhalation de fibres d'amiante peut causer diverses maladies pulmonaires, dont le cancer du poumon. Le tabagisme aggrave le risque d'être atteint d'un cancer du poumon par suite d'une exposition à l'amiante.

PWGSC has identified the presence of various friable and nonfriable asbestos containing materials at:

TPSGC a décelé la présence de divers matériaux friables et non friables contenant de l'amiante à l'endroit suivant :

Address - Adresse

An asbestos inventory report showing the locations and amounts of these materials is available for viewing from:

On peut prendre connaissance d'un relevé indiquant les emplacements et les quantités de matériaux contenant de l'amiante auprès de :

Name - Nom	Location - Lieu	Telephone no. N° du téléphone

The PWGSC Asbestos Management Code of Practice applies to all maintenance and renovation work that may disturb asbestos materials. The disturbance of asbestos building materials may only be undertaken by contractors who have received training in asbestos-related precautions.

Le code de pratique de gestion de l'amiante de TPSGC s'applique à tous les travaux d'entretien ou de rénovation susceptibles d'exposer les travailleurs à des matériaux contenant de l'amiante. Seuls les entrepreneurs qui ont reçu une formation sur les précautions à prendre face à l'amiante peuvent être autorisés à entreprendre des travaux comportant une exposition à des matériaux contenant de l'amiante.

As a condition of our contract to provide services and materials to PWGSC, this company will not disturb asbestos-containing materials without prior notification to:

Aux termes du contrat de fourniture de services et de matériaux conclu entre TPSGC et l'entreprise soussignée, cette dernière s'est engagée à ne pas entreprendre de travaux entraînant une expositon à l'amiante sans en informer d'abord :

Name - Nom	Location - Lieu	Telephone no. N° du téléphone

This firm and the employees of this firm will follow all procedures as specified by the PWGSC Asbestos Management Code of Practice, while working in:

L'entreprise et son personnel sont tenus de respecter toutes les procédures prescrites par le Code de pratique de gestion de l'amiante de TPSGC, pendant toute la durée des travaux effectués à l'endroit suivant :

Address - Adresse

Company name - Nom de la compagnie	
Name - Nom	Title - Titre
Signature	Date

PWGSC-TPSGC 16 (1/1998)

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

ASBESTOS-RELATED WORK RECORD
FICHE DE TRAVAIL - TRAVAUX COMPORTANT UNE EXPOSITION À L'AMIANTE

Room - Pièce	Description of work - Description du travail
Date work requested Date de la demande d'exécution des travaux	
Manager in Charge of Worksite or Supervisor Chef de chantier ou surveillant	

Classification of work - Type de travaux

- ☐ Type 2 Ceiling Entry / Type 2 - Accès au vide de plafond
- ☐ Type 2 Asbestos Clean-up / Type 2 - Nettoyage d'amiante
- ☐ Type 2 Repair / Type 2 - Réparation
- ☐ Type 2 Insulation Removal / Type 2 - Enlèvement de matériaux isolants
- ☐ Type 3 Removal / Type 3 - Enlèvement d'amiante

Start (date and time) - Début (date et heure)	Completion (date and time) - Fin (date et heure)
Department (indicate PWGSC or if a Contractor indicate Company Name) Ministère (TPSGC ou, dans le cas de travaux confiés à un entrepreneur, raison sociale de l'entreprise)	Person in Charge - Personne responsable

Asbestos workers (Indicate all names in full. Please print)
Travailleurs affectés au travail de l'amiante (inscrire leur nom au long en lettres moulées)

Asbestos work record to be initiated by Manager in Charge of the Worksite or Supervisor.

To be completed by the Person in Charge and submitted to the Manager in Charge of the Worksite or Supervisor, upon completion of the work.

A copy of this record shall be placed on each employee's employment file and a copy shall be forwarded to the Regional Asbestos Co-ordinator.

A separate record must be prepared for each Type 2 or Type 3 Work Order or Project.

Il incombe au chef du chantier ou au surveillant de voir à faire remplir la fiche de travail concernant des travaux comportant une exposition à l'amiante.

Le contremaître remplit la fiche de travail et la remet au chef de chantier ou au surveillant à la fin des travaux.

Un exemplaire de la fiche est versé au dossier de chaque employé et un exemplaire est transmis au coordonnateur régional des travaux d'amiante.

Une fiche distincte doit être établie pour chaque demande d'exécution de travaux ou chaque projet de type 2 et de type 3.

APPENDIX 3

ASBESTOS-CONTAINING MATERIALS INSPECTION CHECKLIST