

15 March 2015

Amec Foster Wheeler Project Number: TV147005

Public Works and Government Services Canada
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Winnipeg, Manitoba

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Attn. Ms. Tammy Burr

**Re: Preliminary Closure Report
Hazardous Materials Removal Consulting Services
Nose Dock Hangar Building Demolition
Iqaluit Airport, Iqaluit, Nunavut**

1.0 INTRODUCTION AND PROJECT BACKGROUND

Amec Foster Wheeler Environment & Infrastructure, a division of Amec Foster Wheeler Americas Ltd. (Amec Foster Wheeler), was retained by Public Works and Government Canada (PWGSC), to oversee the removal of hazardous building materials previously identified within the Nose Dock Hangar at the Iqaluit Airport in Iqaluit, Nunavut (the 'Site').

The hazardous building materials were previously identified at the Site in the report prepared by Amec Foster Wheeler entitled "Targeted Hazardous Materials Assessment and Risk Management Plan", dated 14 May 2015 and the Site specific specifications "Hazardous Materials Removal Specifications Nose Dock Hangar Building Demolition", dated 08 June 2015. The removal of the identified materials was to be conducted in accordance with these specified documents and the Nunavut regulations and guidelines.

2.0 PROJECT SCOPE OF WORK

Removal of hazardous building materials from the facility was to be completed by Quantum Murray Partnership Limited (QMLP) who were retained by PWGSC. The schedule for the removal was developed and maintained by QMLP based on agreements with PWGSC. Amec Foster Wheeler provided on Site supervision and technical support for the duration of the removal activities.

The contractor scope of work for the removal of hazardous building materials consisted of the following based on the project specification documents:

- Asbestos-containing cement board (transite) located on the dividing wall and door between the mechanical and electrical rooms (approximately 16.5 m²);

- Asbestos-containing mechanical pipe fitting insulation at the ceiling level of the main hangar area (approximately 90 fittings with diameter of 100 mm; approximately 5 fittings with a diameter of 150 mm);
- Asbestos-containing spray applied insulation on the hangar doors along the east and west walls (approximately 365 m²);
- Asbestos-containing mastic on canvas duct wrap in the southeast corner underneath the structure (approximately 1 m²);
- Asbestos-containing loose fill insulation (vermiculite) between floors of the office/mezzanine area (approximately 52.5 m²);
- Asbestos-containing vinyl roll flooring backing and associated mastic in the kitchen area of the trailer (approximately 9.5 m²);
- Lead containing paint (yellow) on man door along the east wall and two other exterior doors (approximately 6 m²);
- Lead containing paint (blue/grey over cream) on three doors associated to the mechanical / electrical room (approximately 16 m²);
- Lead acid batteries associated with emergency lighting (approximately 10 units);
- Suspected PCB containing lighting ballasts/capacitors suspended from the ceiling of the hangar area (28 units); and
- Mercury associated with bulbs from lamps as well as thermostats/switches at the Site (approximately 196 bulbs and tubes).

During removal activities QMLP identified the presence of additional asbestos-containing materials that were verified visually or through laboratory analysis by Amec Foster Wheeler. These materials included the following:

- Asbestos-containing cement board (transite) located along a west office wall behind painted plywood (approximately 7.5 m²);
- Asbestos-containing cement board (transite) located behind the metal cladding in the former oil storage room (approximately 13.5 m²);
- Suspected asbestos-containing mechanical pipe insulation along a 2 metre section of pipe located at the ceiling of the hangar;
- Asbestos-containing loose fill insulation (vermiculite) beneath the floors in the office area (approximately 42 m²); and
- Asbestos-containing mastic associated with the hangers used to install the insulation materials on the overhead doors. (approximately 3400 fasteners).

Amec Foster Wheeler's scope of work was to oversee the removal activities at the Site, including pre-abatement inspections of abatement enclosures prior to the removal of ACMs, daily inspections and air sampling within the work area, and post-abatement inspections to ensure the complete removal of all identified ACMs. Amec Foster Wheeler observed the removal process, bagging or packaging of the waste and placement into a suitable storage

container for the hazardous materials identified in the summary report. Removal of the materials from the Site was not complete prior to Amec Foster Wheeler leaving the Site and is scheduled to be removed during the summer of 2016.

3.0 SUMMARY OF REMOVAL ACTIVITIES

Removal of ACMs was conducted in accordance with Low Risk, Low Risk (wrap and cut procedures) and High Risk asbestos abatement procedures where applicable, as outlined by The Workers' Safety and Compensation Commission, Northwest Territories and Nunavut Asbestos Abatement Code of Practice.

Amec Foster Wheeler observed the removal of the transite panels from the mechanical room and former oil storage tank room. QMLP conducted the removal of these materials commencing 11 January 2016 with final inspections and air sampling completed 13 January 2016. The removal was conducted in accordance with Low Risk asbestos abatement procedures.

QMLP requested that the removal of the mechanical pipe insulation materials be conducted following Low Risk wrap and cut procedures rather than the specified Moderate Risk glovebag abatement procedures. This was agreed upon by PWGSC and Amec Foster Wheeler. During the course of the removal procedures QMLP encountered approximately 2 meters of suspect ACM insulated piping that was removed and bagged as ACM waste. Removal of the pipe insulation was conducted from 14 January through to 5 February.

QMLP conducted the removal of the spray applied insulation materials from the overhead doors following High Risk asbestos abatement procedures within five containments. The insulation was removed from the northwest door 24-26 January, removal from the southwest door was completed 27-30 January and the east hangar door was separated into three areas with removal conducted from 31 January through to 12 February 2016.

The ducting with asbestos-containing mastic located beneath the structure was completed over a few days as weather was suitable for exterior work. The removal was completed following Low Risk procedures and included the complete removal of the ducting from 30 January through to 9 February 2016.

Removal of the vermiculite insulation materials from between the floors of the office area was conducted from 18 to 20 January 2016. The removal was conducted following high risk asbestos abatement procedures. The abatement of the transite paneling from the west office wall was completed within the High Risk containment. The presence of vermiculite insulation materials beneath the floor of the office area was not identified until the completion of the final inspection and aggressive air sampling.

The additional vermiculite insulation materials located in the flooring of the office area was removed following High Risk asbestos abatement procedures from 4 to 9 February 2016. Amec Foster Wheeler completed the final inspection and air clearance sampling on 9 February 2016. QMLP conducted removal of the insulation hangers and associated mastic upon approval from PWGSC. The removal from the west overhead doors was completed following Low Risk abatement procedures as the air sampling for the High Risk removal of insulation materials had been completed. The removal of the hangars from the hangar door (east wall) was complete within the High Risk asbestos abatement enclosures at the time of the insulation removal.

QMLP had used the trailer as a Site office and removal of the vinyl roll flooring and mastic was conducted at the end of the project. The removal was conducted on 11 February with final clearance inspection and air sampling completed on 12 February 2016.

Removal of flaking lead paint from the interior sides of the exterior doors was conducted following procedures outlined in the project specifications. The exterior sides of the doors were not disturbed and removal of the doors is to be completed during the demolition of the structure. PWGSC requested that the materials that encompassed the envelope of the structure not be removed during the hazardous removal portion of the project.

The doors associated with the mechanical / electrical room were removed and wrapped with poly sheeting.

QMLP removed the lead acid batteries from the emergency lighting throughout the facility and packaged them for disposal.

Ballasts for the light fixtures mounted on the ceiling throughout the hangar area were removed and brought to the floor of the hangar to be inspected for the presence of PCB. All ballasts that were observed by QMLP and Amec Foster Wheeler were labelled as "No PCBs". These ballasts were left on Site to be disposed of during the demolition of the structure.

Mercury containing bulbs and tubes associated with the lighting throughout the building were removed from the structure. The light tubes associated with fluorescent light ballast were disposed of with the use of a bulk eater.

All of the above waste materials including asbestos, lead painted doors from the interior of the building, and mercury containing bulbs were packaged and stored in a Sea-Can for future disposal. QMLP are scheduled to remove the wastes from the site and dispose of at an appropriate facility in summer of 2016. On disposal, QMLP are to provide a record of disposal in accordance to the project specifications.

4.0 CONCLUSIONS

Based on Amec Foster Wheeler's observations, identified hazardous building materials have been removed from the Site with the exception of the following:

- Lead containing paint (yellow) on the exterior man door along the east wall and the exterior side of two other exterior doors;
- Lead containing paint (grey over red) on structural steel members. Abatement not required - paint to remain and special handling required during demolition; and
- Lead containing paint (cream/white) associated with the steel exterior building skirting.

These materials that have been identified as having lead containing paint coatings were to remain in place at the request of PWGSC to ensure the security and integrity of the structure until the demolition commences. These materials with lead paint coatings will be removed and disposed of as part of the demolition phase of the project.

5.0 CLOSURE

Amec Foster Wheeler has prepared this report for the express use of the Public Works and Government Services Canada and may be relied upon by Public Works and Government Services Canada. No other person or organization is entitled to rely upon any part of this report without the prior written consent of Amec Foster Wheeler. Public Works and Government Services Canada may release all or part(s) of this report to third parties; however, such third party in using this report agrees that it shall have no legal recourse against Amec Foster Wheeler or its subsidiaries, and shall indemnify and defend Amec Foster Wheeler or its subsidiaries from and against all claims arising out of or in conjunction with such use or reliance.

This report presents an overview of issues of concern with the specified substances, reflecting Amec Foster Wheeler's best judgment using information reasonably available at the time of Amec Foster Wheeler's evaluation / survey.

No other warranty, expressed or implied, is made. This Report is also subject to the contractual project agreement.

We trust this report meets your requirements. If you have any questions, please contact the undersigned.

Respectfully,
Amec Foster Wheeler Environment & Infrastructure



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