ASBESTOS REMOVAL AND ABATEMENT
IQALUIT AIRPORT
IQALUIT, NUNAVUT TERRITORY

Submitted to:

TRANSPORT CANADA
Environmental Affairs
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Submitted by:

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EXECUTIVE SUMMARY

Winnipeg Environmental Remediations Inc. (WERI) was retained by Transport Canada to conduct asbestos removal and abatement at the utilidor located north of Apron 1 at Iqaluit Airport, Iqaluit, Nunavut Territory. The work conducted by WERI included the demolition and asbestos abatement of approximately 110m of utilitdor and the transportation of hazardous materials to Montréal, Québec for disposal, in accordance with the regulations of the Transportation of Dangerous Goods (TDG) Act. Additional site work included the removal and disposal of general construction debris, metal pipe, angle iron, *etc.* Non-hazardous materials scheduled for removal were disposed at the local landfill operated by the City of Iqaluit. The demolition and asbestos abatement was primarily labour-intensive, with minimal mechanical assistance. Site activities were conducted during the autumn of 2006 and spring of 2007.

1.0 INTRODUCTION

1.1 Terms of Reference

Winnipeg Environmental Remediations Inc. (WERI) was retained by Transport Canada, also referred to as the Client, to conduct demolition and asbestos abatement of the utilidor located at Iqaluit Airport, Iqaluit, Nunavut Territory. The work included the removal and abatement of hazardous materials (asbestos containing materials) and non-hazardous materias (general construction debris). WERI received authorization to proceed with the site remediation from Mr. Bill Ferguson, Manager, Transport Canada. The decommissioning of the utilidor was conducted in two phases: from September to October 2006 and completion in June 2007.

1.2 Background

As a condition of the transfer agreement between Transport Canada and the Government of Nunavut, the environmental issues that existed prior to the transfer of Iqaluit Airport were to be remediated, as well as any other items that are identified. Environmental investigations were conducted at various airport sites that identified several environmental issues requiring remediation, including the removal and abatement of asbestos containing materials located in the utilidor adjacent to Apron 1. Based upon the results of the investigations, a Remedial Action Plan (RAP) was developed by the department to address the issues.

1.3 Objectives

The purpose of the project was to remove and dispose of hazardous and non-hazardous materials to facilitate the upgrading of Apron 1. Removal included asbestos asbatement using Type 1, 2 and 3 abatement procedures and demolition of a 110m section of utilidor.

1.4 Scope of Work

The scope of work for this project included:

- Removal of general construction debris and disposal of construction debris at the local landfill
- Removal and disposal of asbestos containing materials at a licensed waste facility south of Nunavut
- Recycling metal construction materials

2.0 SITE DESCRIPTION AND REMEDIATION

2.1 Site Location and Description

The work area was located on Iqaluit Airport property, as shown in Drawing No. 1 (Annex A). The utilidor was located approximately 10m north of Apron 1. It was bounded to the south by a drainage ditch and by a road to the north. The utilidor was primarily located aboveground, although a section

was also located in a tunnel that traversed the taxiway, as shown in Drawing No. 2.

2.2 Site Remediation

2.2.1 General

All remediation work was completed by WERI site personnel with additional equipment and labour support from R.L. Hanson Construction Ltd. of Iqaluit, Nunavut Territory. The work areas were secured at all times during the remedial work to prevent the public and airport personnel from contacting potential contaminants of concern (asbestos fibres). Only authorized personnel were granted access to the work areas.

The scope of work for the decommissioning of the utilidor included the transportation of metal recylables south of Nunavut; asbestos abatement and transportation of asbestos containing materials to a licensed facility south of Nunavut; general aesthetic cleanup; demolition of the utilidor and transportation of non hazardous materials to the local landfill. The demolition was completed by hand to minimize environmental impact. Work was done in accordance with environmental, health and safety, and other applicable regulations.

Photographs of site activities are included in Annex B. Waste manifests are included in Annex C.

2.2.2 Utilidor Demolition Activities

The utilidor demolition commenced in the area of Gate 9 and Arctic College and progressed toward Gate 8. Activities conducted in 2006 concluded at the ingress of the First Air tunnel entrance. The utilidor was an above ground structure and approximately 1.5 x 1.5m in size. It was constructed of wood and metal box-like framework that rested on concrete footings.

The outer shell of the utilidor was removed, including the roof and sides, exposing the asbestos insulated pipe. This was done in 25-50m sections before asbestos abatement activities were conducted. Eight Sea-Can containers (8 x 20ft) and approximately 30 pallets of reusable materials were shipped south by barge to Globe Metal in Montréal, Québec at the end of October 2006.

Demolition activities concluded in June 2007. The metal pipe, brackets, and other salvage materials were removed from the First Air tunnel area, Arctic College tunnel, Gate 9 tunnel, *etc*, to conclude the project. Two Sea-Can containers and 10 pallets of salvage materials were shipped out by barge to Montréal, Québec for reuse/recycling. General construction debris, comprising less than 5 tonnes, was disposed of at the local landfill.

2.2.3 Asbestos Abatement Activities

The removal and abatement of asbestos containing materials was monitored and inspected by the Client's environmental consultant, Pinchin Environmental Ltd. Type 1, 2 and 3 asbestos abatement procedures were followed by the abatement workers, as dictated by site conditions. Air monitoring was conducted throughout the abatement work by Pinchin Environmental. Final clearance was also provided by Pinchin Environmental upon completion of the abatement work.

A three-chamber negative air containment processing facility was erected to remove the asbestos pipe insulation; the chamber was utilized for 22 days. The pipe was wrapped in polyethylene plastic and then transported to the processing facility for abatement, where the asbestos-containing insulation was removed and contained in labeled double-bagged 6 mil polyethylene plastic bags. Any asbestos containing pipe that was not processed in this facility was wrapped in 6 mil rip stop polyethylene plastic and shipped to the licensed waste treatment facility of BFI Canada in Montréal, Québec. The glove bag method was used for removing material in the tunnel during 2007 activities. Three Sea-Can containers were shipped to Montréal, Québec in October 2006 and one container was shipped in 2007. The asbestos containing materials were shipped in accordance with the regulations of the Transportation of Dangerous Goods (TDG) Act.

The following asbestos containing materials were removed:

- Piping (50mmØ)—minimum 300m
- Pipe wrap (150mmØ pipe)—approximately 500m
- Pipe wrap (200mmØ pipe)—approximately 500m
- Pipe wrap (300mmØ culvert)—approximately 500m
- Pipe wrap (100mmØ pipe)—approximately 150m
- Pipe wrap (50mmØ pipe)—approximately 365m
- Aluminum sheeting (1.2 x 1.2m; 22 gauge)—approximately 550m

2.2.4 Removal of General Construction Debris

General construction debris that consisted of non-asbestos containing insulation, metal, wood and other miscellaneous items was removed from the utilidor and the Land Treatment Unit (LTU) site. Approximately 25 tonnes of debris was removed from these sites. All debris was disposed at the landfill site operated by the City of Iqaluit.

2.2.5 Materials Recycling Effort

The majority of utilidor materials were recycled (approxiametely 70%). Recycled materials consisted of aluminium panelling, steel pipe (various sizes), wooden timbers (various sizes), nuts, bolts, copper wire, angle iron, *etc.*

3.0 RECOMMENDATIONS

The work conducted by WERI included the removal of approximately 110m of the aboveground and underground utilidor located north of Apron 1. However, approximately 55m of aboveground utilidor located east of Apron 1 remains. It is recommended that Transport Canada removes this section to complete the removal of the utilidor. There are sections of this utilidor that have asbestos containing materials exposed to the environment, which may pose a significant risk to human and environmental health.

4.0 CLOSURE

The conclusions and recommendations presented in this report were based on the scope of work

outlined for the demolition and asbestos abatement at the work site. The site was restored to the satisfaction of Transport Canada and the Iqaluit Airport Manager. WERI did not perform any work to eliminate potential environmental concerns that were beyond the scope of work.

In addition, other materials or compounds not investigated or addressed, or beyond the scope of work could be present at the site. If other chemical parameters are identified as an environmental concern, WERI must be notified to assess whether modification to any part of this report should be conducted. If you have any questions or concerns regarding the findings, conclusions or recommendations presented herein, please contact the undersigned.

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