Canadian Environmental Assessment Registry

CEA Registry Reference Number: *06-01-17366*

(Document List)

NOTICE OF COMMENCEMENT
of an environmental assessment

Iqaluit Airport Hydrant Remediation
Iqaluit (NU)

March 1, 2006 (Update) -- Transport Canada will conduct a screening commencing on February 6, 2006 of the project: Iqaluit Airport Hydrant Remediation.

Removal of refueling hydrant piping below Apron 1 and associated remediation of contaminated soil that may be encountered.

Under section 5 of the *Canadian Environmental Assessment Act*, an EA is required for this project because Transport Canada may provide financial assistance to the proponent for the purpose of enabling the project and is the proponent for the project.

For further information on this environmental assessment, please contact:
Mike Molinski
Environmental Officer
Transport Canada
P.O. Box 8550
3rd Floor - 344 Edmonton Street
winnipeg MB R3C 0P6
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and refer to CEAR reference number **06-01-17366**

Note: The Notice of Commencement has been amended on the following dates.

February 06, 2006 at 16:38
March 01, 2006 (Current)

Updated:2006-03-01

Important Notices

Transport Canada Transports Canada

CEAA ENVIRONMENTAL SCREENING REPORT

SUMMARY

PROJECT IDENTIFICATION

Project Title: Iqaluit Airport Hydrant Distribution System Removal

Estimated Cost: $400.0K

Project Location: Iqaluit Airport, Nunavut

Project Scheduling - Estimated Work Start Date: June 2006
- Estimated Work Completion Date: July 2006

Trigger: Transport Canada the proponent and is funding the project.

EA Start Date: January 3, 2006

CEAR No.: 06-01-17366 TC File No.: **K9-W583-410X**

CONTACTS

Transport Canada	Name: Mike Molinski Telephone No.: (204) 984-0440	Fax No.: (204) 983-5048
Other RAs (Contact):	Name: Telephone No.:	Fax No.:
Proponent	Name: Mike Molinski, Transport Canada Telephone No.: (204) 984-0440	Fax No.: (204) 983-5048

NOTIFICATION

Federal departments notified in accordance with Federal Coordination Regulations:

	Yes	[X]	None identified	[ ]
Other Responsible Authorities:	Yes	[ ]	None identified	[X]

MITIGATION AND FOLLOW-UP

Mitigation to be implemented for this project?	*Yes*	*[X]*	*No*	*[ ]*
Follow-up program to be implemented for this project?	Yes	[ ]	No	[X]

This project work is primarily applying mitigative measures to address the removal of contaminated soil and fuel hydrants with associated piping below Apron 1. Waste generated

from this project will be disposed of by approved methods. The Contaminated soil will be placed in a Land Treatment Unit (LTU) and remediated within safe levels based on the Canadian Council of Ministers of the Environment (CCME) guidelines. The hydrants and associated piping will be inspected and disposed of at the landfill in a proper manner acceptable to the Government of Nunavut.

DETERMINATION

Determination: Inclusion List Regulations Determination Date: January 3, 2006

The Environmental Assessment conducted for this project, Iqaluit Airport Apron 1 Hydrant Removal Soil Remediation has determined that the Inclusion List Regulations of CEAA apply. The project works include the removal and disposal of the abandoned hydrant system and associated piping, which poses a potential health hazard to the public and environmental concern. Any environmental impacts or concerns from this project can be addressed and mitigated with sound environmental practices. This remedial project once completed will have a positive effect for the environment and the facility. Removal of the System and any contaminated soil will eliminate the related environmental health and safety concerns.

1.0 PROJECT DESCRIPTION

1.1 Project Description

Prior to July 1, 1995 Iqaluit Airport was owned by the Government of Canada and operated by the Quebec Region of the Department of Transport. From July 1, 1995 until April 1, 1999 the airport was owned by the Government of Northwest Territories (GNWT) and operated by the Arctic Airports Division of the Department of Transportation. Since April 1, 1999 the airport has been owned by the Government of Nunavut and operated by the Nunavut Airports Division of the Nunavut Department of Community Government, Housing and Transportation.

The Government of Nunavut submitted a proposal to Transport Canada (TC) under the Airport Capital Assistance Program (ACAP) requesting funds for upgrading the runway and Apron 1. As part of the proposal, a request for funding was made to rehabilitate and return Apron 1 to serviceable conditions to alleviate zoning violations for large aircraft parking.

The United States Air Force (USAF) constructed an underground pipeline and hydrant system in place during the 1940's to fuel aircraft on the eastern portion of Apron 1. The system consists of a total of ten concrete refueling boxes and associated underground piping that were previously connected to four one million-litre above ground storage tanks (AST) and dispensing cabinets at the edge of the Apron. In 1999, the ASTs and cabinets were removed and the land remediated under the terms of the transfer of the airport. However, the hydrant boxes and distribution pipes remain in place.

A Phase II ESA was completed in 1994 to investigate the presence of contamination below Apron 1. Analytical results for the borehole soil samples collected from beneath the Apron did not identify the presence of contaminants at concentrations exceeding historical guidelines. PHC concentrations exceeding historical guidelines were identified off-site to the south of the Apron, in the location of the former USAF ASTs. The analysis of one groundwater sample from a monitoring well near hydrant 10, indicated the presence of cadmium, copper, nickel, lead and zinc

at concentrations exceeding historical guidelines. This area was identifies as an area of environmental concern for the project based on the concentration of cadmium in the analytical results exceeding current guidelines. As a result of this investigation, five areas of environmental concern were identified below Apron 1.

An investigation was undertaken to complete a Phase II Environmental Site Assessment (ESA) in February 2005. Up to 30 boreholes were advanced and 10 monitoring wells were installed to collect soil samples and groundwater. The contaminants of concern are petroleum hydrocarbons, metals and glycol. Three soil samples collected from boreholes advanced adjacent to Hydrant 1, 6 and 9 at depths of 0.9 to 2.3 metres below surface had concentrations of tin in excess of the CCME guidelines while one sample collected from a borehole advanced adjacent to hydrant 9 at a depth of 1.5 to 2.3 meters below surface had a concentration of toluene in excess of the CCME guidelines. In addition, elevated concentrations of PHC fractions were observed in several samples.

Since the reopening of Apron 1 requires major resurfacing, additional lighting, fencing, signage, improvements to the drainage channels and taxiway improvements, it is opportunistic at this time to complete the soil remedial activities and the removal of the hydrant system with associated piping below Apron 1 prior to the above construction being initiated.

There are no water bodies or waterways in the general vicinity of the airfield. The drainage channels direct the melt water and rain away from the Apron and airstrip eventually making its way to drainage channels off the property.

1.2 Project Justification - Need / Alternatives to the Project (Optional)

The rehabilitation of Apron 1 is to alleviate zoning violations for large aircraft parking. Currently, there are frequent safety violations with Code D and Code E aircraft that periodically arrive and mix with scheduled traffic. It is, therefore, opportunistic at this time to complete the soil remedial activities and the removal of the hydrant system below Apron 1 prior to the above construction being initiated. Remedial action must be implemented to address health and safety regulatory requirements and the potential of future environmental contamination off site. Transport Canada is obligated under the transfer agreement to conduct the required remedial activities.

2.0 CEAA TRIGGER

___X_ Transport Canada is the proponent of the project.
___X_ Transport Canada proposes to fund part or all of the project.
____ Transport Canada proposes to sell, lease or otherwise dispose of land for the project.
____ Transport Canada proposes to issue a permit, approval or other authorization on the CEAA Law List Regulations.

3.0 SCOPE OF PROJECT

Table1
Project works and Physical activities

Project Phase	Primary Project Components (Physical Works and Physical Activities)	Related Project and Ancillary Works (Physical Works and Physical Activities)
Construction / Expansion (Include timing of undertaking)	Apron 1 asphalt surface will be removed. The underlying hydrant and piping system will be removed and disposed of in a proper manner at the local landfill. Contaminated soil will be removed and placed in the newly constructed LTU to be remediated. Clean fill will be used to replace the contaminated soil. These project activities will occur in the spring /summer of 2006.	N/A
Operations / Modifications (Include timing of undertaking)	N/A	N/A
Decommissioning / Abandonment / Demolition (Include timing of undertaking)	N/A	N/A

4.0 DESCRIPTION OF EXISTING ENVIRONMENT

4.1 Description of Biophysical Environment

The Iqaluit Airport is situated on Baffin Island in Frobisher Bay, Nunavut. The airport is located in the Northern Arctic Ecozone consists of low rolling plains covered with soil and rock debris left by glaciers. In these areas, the landscape may be covered by nothing more than frost-patterned soils, frost-shattered limestone, and sandstone for hundreds of square kilometres. The area has numerous landscape features more commonly associated with the badlands of the American southwest. which encompasses northeastern Manitoba to Western Quebec. This lowland is comprised of flat rock with slight changes in elevation and is dominated by extensive wetlands and raised sand beaches.

Perennial frozen ground known as permafrost lies beneath the entire ecozone. Under a thin active layer, which freezes in winter and thaws each summer, permafrost may extend almost 1 km downwards. The constant freezing and thawing creates unstable soils that form cell-like shapes known as "patterned ground."

The only small mammal hardy enough to survive the harsh climate of this region is the Collared Lemming. It seeks protection from frigid winter temperatures under a protective blanket of snow. Lemmings are active all winter, scurrying through tunnels to their well-stocked food chambers. To the Arctic Fox, Ermine, and birds such as the Gyrfalcon and Snowy Owl, they are a vital source of food. A reduction in lemming numbers, caused by severe weather or as yet unexplained population cycles, can have a ripple effect in many arctic food chains.

This land at first may appear to be empty of life, particularly in winter. But three large mammals; the Muskox, Caribou, and Polar Bear are very much at home here throughout the year.

In spring, the land reverberates with the sound of thousands of migrant birds. Immediately after arrival, they begin a frantic schedule of breeding, nesting, and rearing young. Snow Geese, Brant, and Canada Geese nest in moist wetlands that line coastal areas and river valleys. Eider and Oldsquaw Ducks nest beside small ponds on grassy tundra. These areas also support a surprising number of shorebirds, including the Black-bellied Plover, Ruddy Turnstone, and Red Phalarope. Hoary Redpolls, Horned Larks, and Snow Buntings need very little vegetation cover for nesting and thus can survive in even the most sparse arctic landscape.

4.2 Description of Socio-Economic and Cultural Environment

Prior to July 1, 1995 Iqaluit Airport was owned by the Government of Canada and operated by the Quebec Region of the Department of Transport. From July 1, 1995 until April 1, 1999 the airport was owned by the Government of Northwest Territories (GNWT) and operated by the Arctic Airports Division of the Department of Transportation. Since April 1, 1999 the airport has been owned by the Government of Nunavut and operated by the Nunavut Airports Division of the Nunavut Department of Community Government, Housing and Transportation.

The catchment area for the airport includes Nunavut and especially the Eastern Arctic, Baffin Island communities and the city of Iqaluit. The Baffin Region includes 15 communities ranging in size from 270 people to 4,220 people in Iqaluit. Apart from these communities, the Baffin Region includes Arctic Bay, Nanisivik, Pangnirtung, Pond Inlet, Resolute Bay and Sanikiluaq.

During the fall, winter and spring, all material sent to the Eastern Arctic arrives by air through Iqaluit Airport. The Iqaluit Airport is the only year round means of access to the community. The airport, located at sea level is capable of handling all large aircraft.

The airport continues to play an integral role in the movement of and handling of people and commodities.

5.0 CONSULTATION

5.1 Consultation with the public and stakeholders:

TC will consult with the Nunavut Impact Review Board and the Nunavut Land and Water Board for comments and input regarding the project. TC will also inquire if a License/permit may be required for the project.

5.2 Consultation with other federal departments and agencies:

Transport Canada will contact the Canadian Environmental Assessment Agency (CEAA), Federal Environmental Assessment Coordinator (FEAC) under the federal coordination regulations who will be provide a brief of the project. The CEAA agency in turn will advise other federal departments and agencies to determine if these departments or agencies have an interest in the project. If other federal departments or agencies express an interest consultations will take place at that time.

5.3 Consultation with other jurisdictions:

Transport Canada will contact The Government of Nunavut to ensure that their environmental concerns and requirements are addressed and implemented as part of the project scope of work..

6.0 REFERENCES

References for this Environmental Assessment are listed below.

Biogenie Phase II Environmental Site Assessment Iqaluit Airport Apron 1, 1994. Dillion Phase II Environmental Site Assessment Abandonded Hydrant an Distribution System Iqaluit Airport Apron 1, 2005. Ecozone information was obtained from the Natural Resources Canada Website Forest Ecozones of Canada webpage.

7.0 ENVIRONMENTAL EFFECTS & MITIGATION

7.1 ENVIRONMENTAL EFFECTS CHECKLIST (For all project phases)

Valued Ecosystem Component	Potential Project Effects						Residual Effects	
	Significant Adverse Effect?			Can Be Mitigated?			Significant?	
	Yes	No	N\A	Yes	No	Unknown	Yes	No
Species/Habitat of Special Status (including SARA) Vegetation/ Wildlife/Habitat			X					
Vegetation			X					
Wildlife			X					
Fish and Fish Habitat			X					
Marine			X					
Soils	X			X				X
DrinkingWater			X					
Groundwater			X					
Surface Water			X					
Wetlands			X					
Air Quality	X			X				X
Noise			X					
Vibration			X					
Land Use			X					
Human Health[1]	X			X				X
Socio-economic Conditions[1]	X			X				X
Physical/Cultural Heritage[1]			X					
Aboriginal Use of Traditional Lands/Resources[1]			X					
Structures/Sites of Significance[1]			X					
Other			X					

Factors to consider for their potential impacts on the above components

Cumulative Effects		X		X				X
Accidents/Malfunctions		X		X				X
Wastes and Hazardous Wastes		X		X				X
Other			X					
Environment on the project								
Effects of Environment on the Project		X		X				X

7.2 DISCUSSION OF EFFECTS AND PROPOSED MITIGATION

7.2.1 Site Preparation and Construction

Valued Ecosystem Component: Ground Water
Description of effect: Possible PHC/metal contamination leaching off site.
Description of proposed mitigation: Removal of the abandoned hydrant system and associated contaminated soil will eliminate any future contamination and leaching material to other locations off site and in groundwater.
Residual effect: None

Valued Ecosystem Component: Human Health/Ecosystem contamination.
Description of effect: Potential for contaminates to leach into groundwater contaminating other watercourses and ecosystems that may create a vector effecting human health.
Description of proposed mitigation: Removal of the abandoned hydrant system and associated contaminated soil will eliminate any future contamination and leaching material to other locations off site and in groundwater.
Residual effect: None

Valued Ecosystem Component: Socio-Economic Conditions
Description of effect: The risk of contamination off site may affect the use of the facilities.
Description of proposed mitigation: The contaminated soil and hydrant system will be removed and disposed of in a proper manner. This will eliminate any future risk to the airport facilities if the contamination leaches further underground possibly disrupting the facility further.
No residual effects.

7.2.2 Operation and Maintenance

No valued ecosystem components were identified.

7.2.3 Decommissioning

N/A

7.3 Cumulative Effects

No existing or future projects or activities have been identified as having a Cumulative environmental effect. After the remedial work is complete. This will have a positive health and

safety effect at the airport and for the environment.

7.4 Accidents and Malfunctions

Contractor will have a security and health and safety plan in place for the duration of the project activities. No residual effects are likely.

7.5 Any Other Matter

No significant adverse environmental effects are likely.

7.6 Effects of the Environment on the Project

Sustained strong winds or wind gusts and inclement weather could delay the implementation or stop work in progress. No significant adverse residual effects are likely.

7.7 Environmental Considerations

1. Consult with the local governing jurisdictional (Government of Nunavut) and seek their input and satisfy their environmental regulatory requirements and health and safety concerns.
2. Dispose of all waste by approved methods at an approved facility.
3. Ongoing testing of air quality to determine its status and compare to accepted health and safety standards.
4. Ensure a Plan of Operations is in place, which includes the development of a health, safety and security operational plan to be implemented for the duration of the project.
5. A licensed Asbestos Abatement Contractor will perform the required asbestos work.

8.0 CEAA DETERMINATION

On the basis on this screening, the Department has determined, in accordance with subsection 20(1) of the Act, that the impact of this project on the environment is as follows;

[X] The project is not likely to cause significant adverse environmental effects: the project can proceed with application of the mitigation measures specified in this report.

[ ] The project is likely to cause significant adverse environmental effects that cannot be justified. The project does not proceed.

[ ] Refer the project to the Minister of the Environment for referral to a mediator or a review panel because:

- [ ] of uncertainty as to whether the project is likely to cause significant adverse environmental effects;
- [ ] the project is likely to cause significant adverse environmental effects;
- [ ] of public concern.

9.0 FOLLOW-UP PROGRAM

Follow-up program required for this project Yes [ ] No [X]

If yes, provide details of the follow-up program.

10.0 SIGN-OFF

Mitigation required for this project Yes [X] No [ ]
Follow-up program required for this project Yes [ ] No [X]

Environmental Screening Report prepared by: M. MOLINSKI Date: MARCH 27/06
Title: Environmental Officer

The above has completed this environmental screening report to the best of her/his ability or knowledge.

Environmental Screening report recommended for approval by:
_____ Date: _____
Title: Manager, Environmental Affairs

The above has reviewed this environmental screening report and certifies that it complies with the requirements of the CEAA.

Environmental Screening Report Approved by:
_____ Date: _____

Title: Regional Director, Programs

The above agrees with the CEAA determination indicated in this environmental screening report and accepts responsibility for ensuring the implementation of mitigative measures or for ensuring the design and implementation of follow-up programs, if any, identified in this report.

Environmental Screening Report Decision Acknowledged by:
_____ Date: _____

Title: Environmental Officer

The above acknowledges receipt of the environmental screening report and accepts responsibility for implementing the specified mitigation measures and/or follow-up program. The above also acknowledges that upon completion of project works, formal confirmation will be provided to Transport Canada that the specified mitigation and/or follow-up program was implemented and will provide the effects or results on the project.

11.0 CEAA CERTIFICATION

Pursuant to section 39 of the Canadian Environmental Assessment Act (the Act), we certify on behalf of the Minister of Transport that an environmental assessment of this project has been completed in accordance with the requirements of the Act and is duly signed by the Responsible Authority who exercises a power or performs a duty or function referred to in paragraph 5(1)(c) of the Act.

Prepared by: _____ Date: MARCH 27/06

Title: Environmental Officer

Recommended by: _____ Date: March 21/06

Title: Manager, Environmental Affairs

Approved by: _____ Date: _____

Title: Regional Director, Programs

REQUEST FOR PROPOSALS

Iqaluit Airport
Apron I
Soil Remediation - Abandoned Hydrant and Distribution System

Iqaluit Airport
Iqaluit, Nunavut

Environmental Affairs
Prairie and Northern Region
Transport Canada

May 1, 2006

1.0 Preface

Environmental Affairs, Programs, Transport Canada is requesting interested consultant/contractor's to submit proposals, bid prices and a work plan for the supply of materials, equipment and labour necessary to conduct the required "Scope of Work" at the Iqaluit Airport Iqaluit Nunavut, as described in the following Request for Proposal (RFP) documentation.

2.0 Introduction

Prior to July 1, 1995 Iqaluit Airport was owned by the Government of Canada and operated by the Quebec Region of the Department of Transport. From July 1, 1995 until April 1, 1999 the airport was owned by the Government of Northwest Territories and operated by the Arctic Airports Division of the Department of Transportation. Since April 1, 1999 the airport has been owned by the Government of Nunavut and operated by the Nunavut Airports Division of the Nunavut Department of Community Government, Housing and Transportation.

As a condition of the Arctic A Airport transfer agreement (July 1995) between Government of Nunavut (GN) and Transport Canada, the environmental issues, which existed prior to the airport transfer, are to be remediated as well as any items identified by the GN within six years of the transfer date. Works identified under this document address some of the issues identified in the Transfer agreement as well as post transfer issues. Apron I was identified as a concern due to the underground refuelling hydrant system that existed but has since been abandoned. Upon investigation by Transport Canada, the presence of soil contamination and hazardous materials was confirmed via a phase II site investigation conducted by Dillion Environmental Ltd in 2004.

Transport Canada is obligated to remediate all hazardous substances that are the department's responsibility that do not comply with the applicable environmental laws.

Works under this request for proposal cover the, removal and placement of contaminated soil into the LTU and confirmatory soil sampling. A final report will be prepared and submitted after the work is completed.

3.0 Scope of Work

The work in the proposal will include:

1. The provision of all approvals, permits, labour and equipment necessary for the excavation of approximately 1,000 m^3 of hydrocarbon-contaminated soil. Work also includes the latter provision to prepare the site, place the soil in the Land Treatment Unit (LTU), obtain confirmatory soil samples, backfill excavations and restore the areas to the previous or similar conditions.

2. Removal of the ten concrete refuelling boxes and associated piping.

3. All hydrocarbon-contaminated soil encountered is to be taken to the LTU constructed on the Iqaluit Airport, at a site agreed to by the project manager.

4. Once all contaminated soil has been removed, the sites will be back filled and compacted with clean fill material that is of acceptable quality to the Project Manager.

5. A soil and groundwater sampling program must also be included that will be comprehensive enough to ensure that all contamination has been removed prior to backfilling of the sites. At a minimum, the sampling program must ensure enough samples are taken to meet with Nunavut environmental guidelines.

6. Preparation of a final report.

7. The estimated time frame of the work to be completed is two (2) weeks, based on a seven (7) day workweek. Works to commence in the summer of 2006.

4.0 Methodology

4.1 Removal of Abandoned Piping and Refueling boxes

The total length of piping is estimated to be 50m. The piping will be stockpiled at a location at the airport designated by the airport manager and removed for recycling designated by the contractor. There are ten refueling boxes made of concrete. The boxes will be broken and removed from the location and placed in the local landfill.

4.2 Soil Hydrocarbon Contamination Remediation

Excavate contaminated soil encountered will be placed in the Land Treatment Unit. The remaining soil should not exceed the CCME Level III remediation criteria for commercial/industrial zoned sites unless the excavation of this material negatively affects the structural integrity of any nearby buildings. The Project Manager must approve in writing if any further contaminated soil is to remain due to structural integrity concerns. The excavation area will be back filled with approved common fill and graded to match the surrounding area.

4.3 Sampling Requirements for Hydrocarbon Contaminated Sites

Collect a minimum of six (6) soil samples from the bottom and four walls of each of the excavations and submit to a certified laboratory (CAEAL/Standards Council of Canada) for analysis of Benzene, Toluene, Ethyl benzene, Xylene (BTEX), lead, and 2001 CCME Canada Wide Standards for Petroleum Hydrocarbons in Soil (PHC) for Fractions 1to 4 Tier 1 criteria. If groundwater is encountered, the contractor will collect a minimum of four (4) water samples from each of the excavations for submission to a certified laboratory for analysis of BTEX and lead. The soil and water samples will be compared to the most current GN and CCME criteria for industrial sites, including the 2001 CCME Canada Wide Standards for Petroleum Hydrocarbons for the Eco Soil Contact

criteria for the applicable soils (surface and subsoil). The results will be presented in a table format and submitted to Transport Canada in a final report upon completion of the project.

If groundwater sampling indicates hydrocarbon contamination, the consultant/contractor will use its previously approved groundwater treatment program. A unit cost per 100 Litres of recovered water will be provided in the bid.

4.4 Back Filling of Excavated Sites

Do not begin back filling or filling operations until Project Manager has approved the extent of excavation. Any excavations taken below previously authorized depths will not be paid for. Only clean fill that has come from a source approved by the Project Manager can be used as back fill. Consultant/contractor shall perform Standard Proctor tests on back filled areas to confirm compaction requirements, which are to natural soil conditions to a maximum of 90 standard Proctor. Results must be inspected and approved by Project Manager. The back filled area must match the general landscape and local drainage patterns to ensure water pooling does not occur. Project Manager may confirm Proctor test results at their discretion.

4.5 Protection of Buried Infrastructure

The **contractor/consultant** is responsible for locating all underground services prior to commencing work. Any costs incurred for doing this work are the responsibility of the consultant. While the work is in progress, the consultant/contractor will protect all utility lines and buried services, water, sewer, gas, electric, telephone, and other utilities and structures encountered. If any utilities are damaged, the consultant/contractor will restore them to original or better condition unless directed otherwise. If any previously unknown underground services are damaged during this project, report the find to the Project Manager and discuss on how to proceed.

4.6 Protection of Existing Site Conditions/Site

1. Prevent movement, settlement or damage of adjacent services, paving, adjacent grades and parts of existing buildings. Provide bracing, shoring, and underpinning as required. Repair damage caused by excavation as directed by Project Manager.
2. Contractor is responsible to ensure that all paved areas are maintained free of soil or debris at all times.
3. Support affected structures and if safety of structure appears to be endangered, take preventative measures and then cease operations and notify Project Manager.
4. Prevent debris from blocking surface drainage system, mechanical, and electrical systems which must remain in operation.
5. Ensure that excavation work does not adversely affect adjacent watercourses, groundwater, and wildlife, or contribute to excess air and noise pollution.