



INSTITUTE FOR ENVIRONMENTAL MONITORING AND RESEARCH
INSTITUT POUR LA SURVEILLANCE ET LA RECHERCHE ENVIRONNEMENTALES

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MONITORING AND EFFECTS RESEARCH WORKPLAN

for

April 1, 2009, to March 31, 2010

Prepared by

Dr. Louis LaPierre

February 10, 2009

TABLE OF CONTENTS

1.0 INTRODUCTION	3
2.0 SUMMARY OF PROPOSED CARIBOU INITIATIVES	
2.1 Census/Survey of the Sedentary Caribou Herds (Red Wine, Lac Joseph, and Joir River).....	7
2.2 Collar Deployment.....	7
2.3 Supersonic Monitoring and Field Activities Related to Proposed Military Training Options	7
2.4 George River Collar Program	7
2.5 Processing of Satellite Collar Data from the Woodland Caribou Herds.....	7
2.6 Testing of Noise collars	8
3.0 SUMMARY OF PROPOSED WATERFOWL INITIATIVES	
3.1 Waterfowl Monitoring Initiatives for the Supersonic Field Tests	10
3.2 Barrow’s Goldeneye Habitat Identification and Population Survey.....	10
3.3 Harlequin Duck Survey.....	10
3.4 Sea Duck Survey.....	11
4.0 SUMMARY OF PROPOSED RAPTOR AND EAGLE INITIATIVES	
4.1 Golden Eagle and Bald Eagle Nest Monitoring Program.....	11
4.2 Workshop to Review the Results of the Osprey Data Analysis.....	11
5.0 SUMMARY OF INITIATIVES FOR FUTURE TRAINING OPTIONS	
5.1 Valued Ecosystem Component (VEC) Workshops	12
6.0 SUMMARY OF OTHER INITIATIVES	
6.1 Ikonos Imagery	12
6.2 Economic Profile for Goose Bay	12
6.3 Small Mammal Trapping Program	12
6.4 Porcupine and Beaver Study	13
6.5 Short-eared Owl and Common Nighthawk Review	13
6.6 Literature Compilation of Endangered and Protected Species within the LLTA.....	13
 <u>TABLES</u>	
Table 1 Summary of Proposed IEMR Monitoring and Effects Research Initiatives for 2009-2010	4
Table 2 Priority Ranking of Caribou Issues Associated with Future Training Options Proposed for Goose Bay, Labrador.....	8
 <u>ANNEXES</u>	
ANNEX 1 Draft Service Contract Template	14
ANNEX 2 Summary of Scheduling Table for Each Monitoring and Research Initiative.....	17
ANNEX 3 Request for Proposal	18

1.0 INTRODUCTION

The proposed IEMR Monitoring and Effects Research Workplan for 2009 was developed by the SRC following consultations with the various technical committees and with input from DND (Ottawa) and 5 Wing, Goose Bay. The workplan will be presented to the IEMR Board for adoption at the April 28-29, 2009 meeting.

The technical committees' meetings focused on scoping and classification of the major issues associated with the principal Valued Ecosystem Components (VECs) within the Low-Level Training Area (LLTA). Particular attention was directed toward the monitoring issues associated with the introduction of new training options with special consideration allocated to noise disturbances associated with supersonic training. The challenges associated with monitoring supersonic training has generated considerable attention due to the nature of noise disturbance patterns projecting across the landscape.

Given the uncertainty of when and where noise disturbance from supersonic flights will impact upon VECs, considerable attention has been allocated to the development of the BoomCast model. This model is designed to predict noise disturbance thresholds on specified VECs across the landscape. BoomCast was developed by RWDI Air Inc. in collaboration with IEMR and plans are currently underway to field test it in 2009.

Many of the proposed monitoring initiatives will require specific field protocols to be developed related to the ground truthing of the projection of noise disturbance. With the introduction of the Species at Risk Act (SARA) Legislation, it is incumbent on the IEMR to ensure that all species which are listed under Provincial or Federal Legislation receive the protection specified under their respective Management and Recovery Plans.

To ensure that the best information available is used to assess noise disturbance issues associated with woodland caribou, the IEMR in cooperation with the Provinces of Newfoundland and Labrador (NL) and Quebec is currently in the process of replacing VHF collars with satellite hybrid collars. With these new collars, the IEMR is in a better position to provide information on the movement of woodland caribou within specified time frames. In 2009-2010, there will be continued fieldwork focusing on the characterization of the population of the woodland herds within the Provinces of NL and Quebec.

In 2009 the IEMR in a collaborative partnership with CWS, Quebec Region, will continue to explore the distribution and population of Barrow's Goldeneyes within the 733 training area. The results of the 2008 and 2009 surveys in CYA 733 will provide a complementary data set to the 2007 survey conducted in the 732 training block.

The IEMR monitoring and research initiatives proposed for 2009 field season, with the exception of the collaborative waterfowl surveys with CWS, will be awarded following a public tendering process.

Table 1. Summary of proposed IEMR Monitoring and Effects Research Initiatives for 2009-2010

*Exact amount of in-kind and actual \$ for each project can only be defined once the project is completed. Various government agencies allocate staff time to each project on an ongoing basis.

Monitoring/Research Initiative	Priority	Total Budget (\$)	IEMR Contribution (\$)	Collaborating Partners	Partner Funding Contribution	Remarks
Caribou						
-Red Wine -Lac Joseph -Joir River	1	130K	100K	Province NL Province Quebec	30K (in-kind) NL/Quebec	-Winter survey of lower 733 block -Protocol to be developed
Collar deployment and maintenance of -Red Wine -Lac Joseph -Joir River	1	95K	65K	Province NL Province Quebec (Joir, Lac Joseph)	30K in-kind NL 10k in-kind Quebec	-Collar deployment -Collar maintenance and replacement (April)
George River Herd -Argos collar data collection	1	85K Confirmed 35K Quebec, NL pending	60K	Province Quebec Province NL	25K (in-kind)	-Processing of Argos collar data -Collection, and distribution of data from Province of Quebec and NL
Purchase of satellite hybrid collars for woodland caribou	1	75K	75K	IEMR		-Purchase of 20 additional satellite hybrid collars -Review of deployment protocol with NL and Quebec
Processing of existing satellite data by CLS America	1	60K	60k	IEMR		-Collecting and processing of satellite and Argos collar data
Deployment and testing of noise collars	1	55K	30K	IEMR	25K NL	-Deployment and testing of IEMR noise monitoring collars
Subtotal Caribou		+500K	390K		120K*	

Monitoring/Research Initiative	Priority	Total Budget (\$)	IEMR Contribution (\$)	Collaborating Partners	Partner Funding Contribution	Remarks
Waterfowl						
Harlequin Duck Survey	1	135K	135K	Contract awarded LGL		-Continuation of the 4 th year of survey -2 year contract awarded to LGL -Establish population estimates on selected rivers
Analysis of Harlequin Duck data	1	40K	40K			-Analysis of the data collected from the four years of field surveys
Barrow's Goldeneye Habitat Identification	1	90K	60K	Joint project with CWS	30K in-kind CWS	- Preparation of a second field program with CWS. Collection and analysis of data on selected areas within 733 to verify 2008 results
Sea Duck Survey/Joint Venture Study	1	90K	60K	CWS	30K in-kind CWS	-Continue survey in western section of 733 -Revise protocol -Conduct field survey
Subtotal Waterfowl		355K	295K		60K	
Eagles and Raptors						
Technical workshop to assess results of Osprey data analysis	1	60K	50K	SRC to conduct workshop in St John's.	10K	-Workshop to review Dr Allard's report in St John's -Identify need for future studies.
Monitoring of Golden Eagle, Bald Eagle within training block 733	1	35K	35K	Perry Trimper to conduct survey		-Monitoring of Golden Eagle, Bald Eagle nests within 733 training block to identify active nesting activity for mitigation program.
Subtotal Eagles and Raptors		95K	85K		10K	

Monitoring/Research Initiative	Priority	Total Budget (\$)	IEMR Contribution (\$)	Collaborating Partners	Partner Funding Contribution	Remarks
Future Options						
Porcupine/Beaver Survey	1	50K	50K	IEMR, allocation of Service contract		-Survey on spiritual, cultural and economic relevance of the species to the aboriginal. -Problems associated with military training issues which need to be addressed.
Short-eared owl and common nighthawk	1	30K	20K	IEMR Province NL	10K	-Project with Province NL to assess status of these species.
Endangered and protected species	1	20K	20K	IEMR Province NL		-Literature survey to identify current status of species and identify knowledge gaps
Subtotal Future Options		100K	90K		10K	
Future Training Options						
Supersonic Field Monitoring Program in collaboration with Bagotville Squadron	1	145K	95K	IEMR Province NL Province Quebec RWDI	50K + DND	-Validation of the BoomCast model noise projections. -Field test at Seal Lake Labrador, late August
Subtotal Future Training Options		145K	95K		50K	
Other initiatives						
Economic Profile Update	1	50K	50K	IEMR		-Development of trend model by AMEC
Small mammal trapping program with Data Compilation for 5 yrs	1	40K	20K	IEMR Province NL Aboriginal partners	20K	-Trapping protocol, video -Trapping workshop -Info and support to Aboriginal communities
Subtotal other initiatives		90K	70K		20K	
TOTAL FUNDINGS ALLOCATION 2009		1,285K	1,025K		270K	

2.0 SUMMARY OF PROPOSED CARIBOU INITIATIVES

2.1 Census/Survey of the Sedentary Caribou Herds (Red Wine, Lac Joseph, and Joir River)

These surveys will be conducted in continued partnership with the Province of NL. They will focus on productivity and herd classification as well as providing information on the spatial and temporal distribution of woodland caribou. It is also noted that critical habitat classification would provide important information to assess the increments in the herds.

The protocol for the census/surveys will be developed by the NL Wildlife Division and will focus on an assessment of population and demographic changes within the woodland caribou herds of the Red Wine, Lac Joseph, and Joir River.

2.2 Collar Deployment

In collaboration with the Wildlife Division of the Province of NL, the IEMR is continuing the replacement of the VHF collars currently in place on woodland animals with satellite-hybrid collars. Additional replacements are being considered on the Lac Joseph and Joir River animals outside of the PTA. This work will be conducted in partnership with the Province of Quebec. The objective of the program would be to have 20 collars on both the Red Wine and Lac Joseph herds and 10 on the Joir River caribou. Data from these collars will be used to assess the movement of the woodland caribou herds within the southern portion of the training area (733) and will be used to assist 5 Wing Goose Bay to determine the appropriate mitigation measures.

2.3 Supersonic Monitoring and Field Activities Related to Proposed Military Training Options

A field protocol is currently being developed by the SRC to test the forecasting reliability of the BoomCast model in predicating noise disturbances from high level military training. The field trials will be held at Seal Lake, Labrador, during late August or early September. Aircraft support will be provided from 425 Squadron out of 3 Wing Bagotville.

2.4 George River Collar Program

The IEMR will provide continued funding to the Provinces of Quebec and NL to assist with the collection and processing of Argos collar data by CLS America on the George River Herd. Currently Quebec provides data from 40 collars on a regular basis. The IEMR is continuing discussions with the Province of NL regarding the possibility of accessing data from NL collars deployed on the George River animals.

2.5 Processing of Satellite Collar Data from the Woodland Caribou Herds

The IEMR funds the processing of the woodland caribou satellite data by CLS America. This data is received at the IEMR on a regular basis and forwarded to 5 Wing Goose Bay.

2.6 Testing of Noise collars

The IEMR has allocated funding for the field testing of noise monitoring collars. This field testing would be done in collaboration with the Province of NL once an appropriate training exercise is planned.

Table 2. Priority Ranking of Caribou Issues Associated with Future Training Options Proposed for Goose Bay, Labrador

Issue	Status of Knowledge Scale 1 (poor) to 5 (excellent)	Action to close knowledge gap
1. Joir River population status	1 – limited knowledge	<ul style="list-style-type: none"> • Population survey • Baseline data needed, particularly the lower portion of the herd
2. Population surveys/census of caribou herds	3 – Red Wine 3 – Lac Joseph 1 – Joir River	<ul style="list-style-type: none"> • Red Wine, Lac Joseph, and Joir River population surveys every 5 years
3. Status of past and present migration routes	4 - George River 3 - Red Wine 3 – Lac Joseph 1 – Joir River	<ul style="list-style-type: none"> • Continue to monitor a limited number of collars on George River • Continue collars on Red Wine, Lac Joseph, and Joir River • Move from VHF to satellite-hybrid collars for the woodland animals
4. Impact of sonic boom and startle effects from all military training	1 – Limited	<ul style="list-style-type: none"> • Need a comprehensive monitoring program
5. Productivity and classification of herds	4– George River 3 – Red Wine 3 – Lac Joseph 1 – Joir River	<ul style="list-style-type: none"> • Develop a recruitment index • Late winter, early spring surveys • 5 year ground truthing in March
6. Mortality Factors	2 – George River 3 – Red Wine 3 – Lac Joseph 1 – Joir River	<ul style="list-style-type: none"> • Need data on: <ul style="list-style-type: none"> ○ Hunting mortalities ○ Natural mortalities on male/female ○ Predation
7. Spatial and temporal distribution	3 – George River 2 – Red Wine 2 – Lac Joseph 2 – Joir River	<ul style="list-style-type: none"> • Review existing data • Use of collars • Precise field protocols • Sedentary – habitat classification - Ikonos
8. TenXsys collars	Noise gathering collars	<ul style="list-style-type: none"> • Need to continue baseline monitoring if military training resumes

Issue	Status of Knowledge Scale 1 (poor) to 5 (excellent)	Action to close knowledge gap
9. Physical condition	4 – George River 1 – Red Wine 1 – Lac Joseph 1 – Joir River	<ul style="list-style-type: none"> • Continue field data collection for review • Difficult to get data due to low population numbers • Explore population of genetic markers • Genetic screening • Morphology analysis with changes for time • Habitat alterations
10. Changing Habitats both natural and human induced (climate change, fires, etc.)	4 – George River 3 – Red Wine 3 – Lac Joseph 1 – Joir River	<ul style="list-style-type: none"> • Habitat modification over time. The influence of fires across the range • Habitat classification of Ikonos data • Traditional knowledge mapping
11. Cumulative effects of other activities on the landscape on both George River and Woodland caribou	1 – George River 1 – Sedentary Herds	<ul style="list-style-type: none"> • Limited knowledge, difficult to assess • Need to consider future activities including roads, forestry, mining
12. Historical range distribution	4 – George River 3 – Sedentary Herds	<ul style="list-style-type: none"> • Need to review data • Traditional knowledge • Habitat changes and range shifts
13. Broad environmental issues and these impacts on caribou <ul style="list-style-type: none"> • Climate change • Atmospheric pollution • Etc. 	1 – George River 1 – Sedentary Herds	<ul style="list-style-type: none"> • Need to assess: <ul style="list-style-type: none"> ○ Climate change ○ Regional and local climate change ○ Potential project in partnership with MUN ○ Habitat and Landscape data research ○ Disease ○ Met data, review 50 years of profiles
14. Status of present and past caribou research	4 – George River 3 – Sedentary Herds	<ul style="list-style-type: none"> • Need to analyze data • Integrate traditional knowledge • Assess habitat change

3.0 SUMMARY OF PROPOSED WATERFOWL INITIATIVES

3.1 Waterfowl Monitoring Initiatives for the Supersonic Field Tests

There is a need to understand the impact of noise disturbances associated with supersonic training on resting and feeding waterfowl.

Summary of field trial observations:

- Field results will allow the SRC to assess changes in waterfowl densities from the selected monitoring plots prior to, during, and following the exercise.
- The results will enable the SRC to detect any major shift within the local groups during the exercise.
- Prior to and following the exercise, the SRC will run BoomCast to predict noise disturbance.
- The SRC with the assistance of the Waterfowl Technical Committee will review the results and decide on the future monitoring requirements.
- Field teams will be deployed at strategic areas during the exercise. Aboriginal members will be invited to participate in the field trials.
- Ground monitors will be installed at predetermined sites within the LLTA to verify the reliability in collecting real time noise data.

3.2 Barrow's Goldeneye Habitat identification and population survey

As this species nest in high altitudes within fishless lakes, it could be subjected to noise disturbance from proposed training initiatives. The eastern population of Barrow's Goldeneye is considered a species at risk as it is listed as a species of "special concern" under SARA. It is listed as "vulnerable" under the NL Endangered Species Act and in Quebec is on the List of Threatened or Vulnerable Wildlife Species.

The IEMR initiated a field study in 2007 to identify potential breeding habitat within proposed training block 732, but it did not detect the presence of the species. In 2008, the IEMR in collaboration with CWS conducted a field monitoring program in the 733 training block. Data collected during 2008 indicated the presence of Barrow's Goldeneye in the area. Given the timing of the 2008 survey, it was decided that the survey would be repeated in 2009 to verify the presence of breeding pairs and to gather additional information on the habitat preferences of the species within the area.

3.3 Harlequin Duck Survey

The Harlequin Duck Monitoring Program was a condition for the removal of the closures. In 2007 the survey was curtailed for technical reasons, however, the SRC suggested that the study be continued for an additional two years in 2008 and 2009. A request for proposals was issued to pre-qualified contractors, and on recommendation by the SRC a two year contract was awarded to LGL Ltd.

The primary objective of the surveys is to monitor Harlequin Duck numbers on selected rivers or river segments using a design that allows testing of trend differences between

the population occurring within the Military Flight Training Area and those occurring outside. The design also allows for comparison of population changes on rivers that were frequently or infrequently over flown or had closures removed.

The final reports following the 2008 and 2009 field seasons will:

- Assess the status of the Harlequin Ducks on the rivers monitored.
- Assess the impacts of the monitoring regime disturbance on the Harlequin Ducks.
- Following the 2009 field season the SRC will commission an analysis of the data collected and determine if future monitoring initiatives are required.

Once completed, the IEMR will undertake a comprehensive analysis of the data collected during the four years of field monitoring prior to deciding if additional information is required.

3.4 Sea Duck Survey

Sea ducks, a species within the LLTA, have received limited attention in past surveys. Scoters are of a particular interest as they breed inland and could possibly be located within the LLTA and be subjected to noise disturbance during their breeding cycle.

In 2008, in collaboration with the CWS, the IEMR funded a field study which monitored the distribution and densities of Surf and Black Scoters within the eastern region of the 732 training area. In 2009, the IEMR in collaboration with CWS will conduct a similar study within the western portion of the 733 training area.

The results from the two years survey will be reviewed by the SRC to assess what additional information may be required.

4.0 SUMMARY OF PROPOSED RAPTOR AND EAGLE INITIATIVES

4.1 Golden Eagle and Bald Eagle Nest Monitoring Program

In anticipation of future monitoring studies to address the potential effects of aircraft disturbance (e.g., noise and visual disturbance associated with military aircraft activities) on Golden Eagles, the objective of the 2009 monitoring program will be to continue the monitoring of occupied Golden and Bald Eagle nest sites in support of the current DND mitigation program. It is noted that active nests of Golden Eagle within CYA 731 are currently excluded from subsonic activity by a 2.5 nm radius.

4.2 Workshop to Review the Results of the Osprey Data Analysis

The SRC will host a workshop in 2009 to review the results of the Osprey data analysis which was completed in 2008 by Atlantic Statistical Analysis Ltd. The major stakeholders will be invited to participate and provide guidance to the IEMR on future Osprey monitoring initiatives.

5.0 SUMMARY OF INITIATIVES FOR FUTURE TRAINING OPTIONS

5.1 Valued Ecosystem Component (VEC) Workshops

In 2007, the IEMR convened two workshops to gather input on VECs from scientific expertise and the Aboriginal communities. In the course of its discussions with the Aboriginal Board members, several species were presented to be added the VEC listing.

The objectives of these workshops were:

- Scope important VECs which need to be considered in the mitigation program.
- Identify critical noise sensitive parameters for each VEC.
- Identify noise thresholds for each noise sensitive periods.
- Identify potential mitigation measures.
- Provide data for the BoomCast noise prediction model.
- Provide information to support IEMR monitoring initiatives.

In 2008 the SRC completed the review of the revised VEC listing and have allocated noise thresholds which need to be incorporated into the mitigation program. The final results will be incorporated into the BoomCast model and will serve as the baseline for the mitigation program. Currently, the IEMR is planning to conduct field testing of the Boomcast model in 2009 with assistance of DND and 3 Wing Bagotville.

6.0 SUMMARY OF OTHER INITIATIVES

6.1 Ikonos Imagery

It is noted that habitat data is important and that effort should continue to secure partners who may be interested in working with the IEMR on this issue. The IEMR will review the 2008 Ikonos data and decide if further data is needed.

6.2 Economic Profile for Goose Bay

Following the completion of the 2007-2008 analysis, the IEMR on recommendation from its Economic Committee decided to ask the consultant to conduct a trend model to correlate all of the data from the last three reports. This project will be initiated in 2009.

6.3 Small Mammal Trapping Program

Following the recommendations of the Small Mammal Workshop held in October 2006, the IEMR agreed to participate in the establishment of a Labrador wide monitoring program to focus on collecting data on small mammal populations and to assist with a data compilation exercise. The data will provide information on population trends and fluctuation.

The data collected from the 2007 and 2008 small mammal trapping network will continue to be data based by the Province of NL and will be available to all of the partners. It is anticipated that the data will provide useful information on ecosystem health and provide background data on the fluctuation of small mammal population in Labrador.

In 2009 the IEMR will continue providing support to the Aboriginal communities. Trapping supplies as well as video and additional training will be provided as required.

6.4 Porcupine and Beaver Study

In 2009, the IEMR will initiate a survey of the problems associated with noise disturbance on porcupine and beaver. The Aboriginal communities have frequently expressed concerns with the impacts of noise disturbances on the health of these animals as both are considered important species for the Aboriginal communities. The 2009 survey will identify the cultural and biological importance of these species for the Aboriginal members. The survey will also strive to define the concerns associated with the impact of noise disturbances from military training. Following an analysis of the results, the SRC will provide recommendation on possible field initiatives.

6.5 Short-Eared Owl and Common Nighthawk Review

The SRC will contact the NL Wildlife Division to assess the potential of developing a collaborative project to assess the impacts on noise disturbances on these species.

6.6 Literature Compilation of Endangered and Protected Species within the LLTA

The SRC in collaboration with the NL Wildlife Division will explore the possibility of funding a literature compilation on the distribution of listed and protected species within the LLTA.

ANNEX 1

Draft Service Contract Template

CONTRACT AGREEMENT

THIS AGREEMENT is made in duplicate in Happy Valley-Goose Bay in the Province of Newfoundland and Labrador, Canada this _____ day of _____, 2009.

B E T W E E N

INSTITUTE FOR ENVIRONMENTAL MONITORING AND RESEARCH, in the Province of Newfoundland and Labrador and having a principle place of business in Happy Valley-Goose Bay, Labrador hereinafter referred to as the "**Institute**"

AND

(Name of organization)

hereinafter referred to as the "**Contractor**",

WHEREAS the Institute is providing assistance to the Contractor for:

(Title of proposal)

AND WHEREAS the proposed research, budget, and deliverables are outlined in the following:

- Attachment A (Project)
- Attachment B (Payment and Deliverables Schedule).

IT IS HEREBY AGREED AS FOLLOWS:

1. The contractor will be responsible for the technical content and submission of the reports to the Institute as outlined in Article 5 below.
2. The effective date of this agreement shall be (date), and it shall terminate on (date), unless the Contractor and the Institute concur that the period covered by the Agreement be extended.
3. The Institute shall provide funding towards the above noted project in accordance with the payment schedule outlined in Attachment B.
4. The Contractor shall be granted a total amount not to exceed (**amount**). Payment to be made as specified in Attachment B.
5. As more particularly described in Attachment B, project deliverables including reports and a copy of digital data gathered (intellectual property) under this Agreement will be provided to the Institute.
6. The Contractor acknowledges that it is not an agent of the Institute, and that it is dealing with the Institute as a separate entity and not with the individual partners of the Institute. The Contractor does hereby waive any right it has or may hereafter have against any individual partner of the Institute by virtue of it being a partner, and agrees to indemnify each individual partner of the Institute in relation to any and all claims against each such partner of the Institute by any employee, agent or affiliate of

the Contractor, Relating to the activity of this Agreement.

- 7. a). Intellectual Property developed solely by funding of the Institute shall be owned by the Institute. The Institute will grant to the contractor a non-exclusive, non-transferable, royalty-free license to use such Intellectual Property.
- b). Intellectual Property developed partially by funding of the Institute and partially by funding of one or more other third parties, shall be jointly owned by the Institute and such third parties in proportion to the contribution of each to funding. The Institute will grant to the Contractor a non-exclusive, non-transferable, royalty-free license to use its interest in such Intellectual Property.
- c). Except with prior written consent of the Institute and subject to such confidentiality requirements as may be reasonably required by the Institute, no reports or papers on such goods or services as may be provided pursuant to this Agreement, either oral or written, shall be published or made by the Contractor until twelve months after the Institute has received the final report unless approval for earlier publication is given by the Institute. Requests for earlier publication shall be made to the Institute, with draft copies of such proposed publication, not less than 90 days before the proposed publication.
- d). Any Intellectual Property used by the Contractor to perform his or its obligations under this Agreement, which was in possession of the Contractor before the date of this Agreement shall remain the property of the owner thereof.
- 8. The Contractor shall use the amount of funding received as outlined in paragraph 4 hereof for such purposes as outlined in Attachment A and upon completion of the provision of such goods and/or services as outlined in Attachment A will warrant that such funds have been so used. This Agreement shall be interpreted according to the laws of the Province of Newfoundland and Labrador.
- 9. The Institute will hold back 20% of the contract amount until all the deliverables have been submitted to the Institute.
- 10. Contingencies for fuel caches and helicopter contracts are the responsibility of the Contractor and will not involve the Institute.

IN WITNESS WHEREOF the parties hereto have signed as of the effective date shown in Article 2 above.

**ON BEHALF OF
(Name of organization)**

**ON BEHALF OF
THE INSTITUTE**

(Name)

Dr. Louis LaPierre, Chair

Witness

Witness

Date: _____

Date: _____

Attachment A

(Proposal)

Attachment B

Institute for Environmental Monitoring and Research

Payment and Deliverables

Project: (title of proposal)

Contractor: (name of organization)

PAYMENT SCHEDULE

Upon receipt of invoices and receipts	Initial payments	\$
Upon receipt of a final report.	Final Payment	\$
	Total IEMR Funding	\$

DELIVERABLES

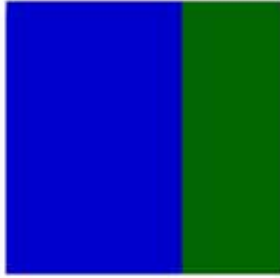
1. The (name of organization) will provide a draft report on the compiled data from the (year) surveys to the Institute by (date), which will include recommendations for future surveys. This draft report will be submitted to the SRC for review and comment.
2. The (name of organization) will provide a final report 30 days after the receipt of comments from the reviewed draft report.
3. Data files will be delivered as an Excel spreadsheet and raw data sheets to the IEMR. The report will be submitted as a Word electronic document and on paper copy.

ANNEX 2

Summary Scheduling Table for Each Monitoring or Research Initiative

Initiatives	J	F	M	A	M	J	J	A	S	O	N	D
Project description and approval by IEMR	X	X	X									
Request for proposal		X	X	X								
Review and approval of project, budget; prepare contract			X	X	X							
Experimental field work				X	X	X	X	X	X			
Review final report of field activities by SRC									X	X		
Review and approval of recommendations by IEMR											X	
Recommendation to DND												X
Review mitigation options												X
Revised initiatives for future field activities											X	X
Annual Report												X

ANNEX 3



INSTITUTE FOR ENVIRONMENTAL
MONITORING AND RESEARCH

INSTITUT POUR LA SURVEILLANCE ET
LA RECHERCHE ENVIRONNEMENTALES

REQUEST FOR PROPOSAL

RETURN BIDS TO THE CONTRACTING AUTHORITY:

Maureen Baker
Administrative Manager
Institute for Environmental Monitoring and Research
114 Hamilton River Road, Northstar Building
P.O. Box 1859, Stn. B
Happy Valley Goose Bay, NL
AOP 1E0

Title:

Date:

Request for Proposal: #

Solicitation Closes On:

at 1400 hrs

ADDRESS ENQUIRIES TO THE CONTRACTING AUTHORITY:

Maureen Baker
Administrative Manager
Institute for Environmental Monitoring and Research
114 Hamilton River Road, Northstar Building
P.O. Box 1859, Stn. B
Happy Valley Goose Bay, NL
A0P 1E0

Telephone: 709-896-6231
Facsimile: 709-896-3076
e-mail: maureen.baker@iemr.org
www.iemr.org

CONTRACTOR NAME & ADDRESS

(Print or type complete legal entity)

Telephone No:
Facsimile No:

I (We), the undersigned, hereby offer to sell to the Institute for Environmental Monitoring and Research (IEMR), in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the services and/or supplies listed herein and on any attached sheets at the price(s) set out therefore.

Name and title of person authorized to sign on behalf of vendor (type or print).	
Signature	Date

SECTION 1 PROPOSAL INSTRUCTIONS

1. RECEIPT

The specified office will receive the sealed proposals or revisions up until the time and date specified on page 1 of the Request for Proposal.

Proposals or Revisions to Proposals may be sent by facsimile to the specified office, subject to receipt of the facsimile prior to the closing times specified in the Request for Proposal.

2. UNACCEPTABLE

Proposals received after the proposal closing time will not be considered.

Proposals must have a statement certifying that the Contractor has environmental insurance and be bondable.

Proposals **NOT** submitted with a duly completed Financial Proposal (Offer of Service) form in the format specified by the IEMR will not be accepted.

Incomplete proposals will be considered non-responsive and rejected.

Any Financial Proposal (Offer of Service) that exceeds the stated ceiling or maximum price, if any, shall be considered non-responsive and rejected.

Proposals not signed on page 1 of the Request for Proposal document shall be considered non-responsive and rejected.

3. ACCEPTANCE

The IEMR will not necessarily accept the lowest priced or any of the proposals submitted.

4. COMPLETION

The Request for Proposal document must be completed, and submitted in the format presented by the IEMR.

It is the proposer's responsibility to ensure his/her complete understanding of the requirements and instructions specified by the IEMR. In the event clarification is necessary, proposers are advised to contact the Contracting Authority named on page 1 of this document prior to making their submissions.

5. MANDATORY T4A DOCUMENTATION

The successful contractor **must** provide the T4A documentation referenced herein **prior to a contract award**. Failure to provide this information will make the contractor's bid non-responsive.

6. REFERENCE

If your proposal is of \$200,000 or more and your organization employs 100 or more permanent full-time or permanent part-time employees, it is mandatory that the requirements contained in the Federal Contractors Program for Employment Equity be met or your proposal will not be considered.

The IEMR reserves the right, before awarding the Contract, to require the Contractor to submit such evidence of qualifications as it may deem necessary, and will consider evidence concerning the financial, technical and other qualifications and abilities of the contractor.

7. ENQUIRIES

All enquiries regarding the solicitation must be submitted in writing to the Contracting Authority named on page 1 of this document as early as possible in the solicitation period. Enquiries must be received no less than eight (8) calendar days prior to the closing date to provide sufficient time to provide a response. Enquiries received after that time may not be able to be answered prior to the closing of date of the solicitation.

All enquiries and other communications with IEMR officials through the solicitation period are to be directed **ONLY** to the Contracting Authority named on page 1 of the solicitation. Non-compliance with this condition during the solicitation period may (for that reason alone) result in disqualification of your bid.

SECTION 2 FINANCIAL PROPOSAL

OFFER OF SERVICE

1. PROFESSIONAL SERVICES AND ASSOCIATED COSTS

1.1 Professional Services

The following is a summarized breakdown for the Professional Services (show fee structure all-inclusive of profit and overhead).

Name (& Title) of Personnel	Per Diem Rate(s)	Number of Days	Total
	\$		\$
	\$		\$
	\$		\$
	\$		\$

OR

Name (& Title) of Personnel	Hourly Rate(s)	Number of Hours	Total
	\$		\$
	\$		\$
	\$		\$
	\$		\$

1.2 Associated Costs

Breakdown of associated costs not included in professional service fees, such as helicopter charters, courier, long distance calls, document reproduction, language interpretation, etc., if applicable.

1.3 Travel Expenses

Reimbursable at cost in accordance with the attached Treasury Board Travel Directive (see addendum 2).

1.4 Total Tender Price (Canadian Currency)	\$ _____
+ GST	\$ _____
+ PST	\$ _____
TOTAL	\$ _____

The Offer of Service will remain firm for a period of thirty (30) calendar days after the tender closing date.

Payment for professional services and associated costs will be effected upon completion, and acceptance by the Contracting Authority, of each phase of the work, and the submission of an invoice(s) detailing the work completed and delivered to date.

Claims for travel and accommodation expenses will be reimbursed at cost, in accordance with the current Federal Treasury Board Travel Directive, upon submission of the aforementioned invoice(s) and supported by receipts, vouchers, or other appropriate documents.

SECTION 3 REQUIREMENT / STATEMENT OF WORK

1. STATEMENT OF WORK

1.1 Introduction: The Institute for Environmental Monitoring and Research (IEMR) was established by the Government of Canada in 1995 in response to a recommendation of the Environmental Assessment Panel appointed to review environmental and socio-economic impacts of military flight training activities from the Canadian Forces base at Goose Bay, Labrador. As an advisory body to the Ministers of Environment and Defence, the IEMR has the following mandate:

- a. Focus on the protection of the environment and within the concept of sustainable development, support the viability of the military flight-training program;
- b. Provide independent verification of environmental effects as well as expertise and advice on structuring adequate monitoring and mitigation measures; and
- c. Foster a level of trust among all groups affected by the military training program.

1.2 Background: The Statement of Work is provided in Addendum 1.

2. REQUIREMENT

2.1 Corporate Qualifications: All contractors considered for this project have already submitted a Statement of Interest for work through the IEMR and have already pre-qualified for consideration. Nonetheless, the Contractor should provide commentary on demonstrated knowledge or experience in this or related work, in particular references to completed relevant studies.

2.2 Workplan: The Contractor will provide general background information on the issues at hand. Also the Contractor will provide a detailed narrative describing how each objective of the study will be conducted, and will minimally include the following:

- a. A detailed work plan for all tasks, along with the associated budget for each task.
- b. A discussion of all activities required to complete the task.
- c. Detailed methodologies and analytical procedures, where appropriate.
- d. The locations of work activities.
- e. How locally sensitive issues, if any, will be addressed.

2.3 Schedule: The proposal shall provide a schedule for delivery of the workplan and for each specific task will identify staff resources by title and billing rates, and shall estimate the number of field and office days required to complete the work.

2.4 Study team and Management Structures: The Contractor will identify all members of the proposed study team, including sub-consultants, and provide a copy of their curriculum vitae as well as a description of their relevant work experience. The proposal must describe in detail how the project will be managed, including the names of

the Program Manager, Project Leader and other project staff and their respective responsibilities.

2.5 Incorporation of Traditional Environmental Knowledge (TEK): The proposal shall address the following:

- a. How traditional knowledge will be integrated into the project.
- b. How the involvement of Aboriginals could assist in capacity building and the development of advanced skills.
- c. What level of involvement the Aboriginals would play in the development of the project.
- d. How Aboriginals would be involved in the review of the data and the preparation of the final report.

2.6 Quality Assurance and Control: The Contractor must confirm whether it is ISO 1401 approved, operates a formal, documented quality management system and had standard operating procedures for conducting the various aspects of the work.

2.7 Logistics: The contractor will provide details on the following: a) the number of helicopter hours required, and b) any other specialized logistics requirements.

2.8 Reporting: The contractor will provide the following: a) periodic status reports during the field portion of the study; b) an electronic copy of a draft report by **(insert date)**; and c) a bound copy of the final report within 30 days after receiving IEMR's comment on the draft report. All reports will be delivered in a PDF format. All draft and final reports will contain the following:

- a. An executive summary
- b. An introduction
- c. Clear statements of the objectives of the study
- d. A description of the study area
- e. A clear description of all field and analytical methods
- f. A discussion of the results of the study with recommendations as appropriate
- g. A conclusion that addresses major findings.

2.9 Health and Safety: The consultant will comply with the Health and Safety provisions of the respective provincial Occupational Health and Safety Act and Regulations and will provide details of their occupational health and safety program.

2.10 Insurance: The tender must demonstrate to IEMR's satisfaction that the Contractor has the appropriate types and levels of insurance in place throughout the period of this contract.

2.11 Permits and Approvals: The successful contractor will be required to obtain all permits and approvals required to conduct the services from both the Federal and Provincial authorities.

2.12 Confidentiality: The parties anticipate that it may be necessary to transfer to each other information relating to the Licensed Process, Patents, Trade-Mark, Know-How or other information relating to this Agreement, of a confidential nature. The parties shall keep all such information confidential during the life of this Agreement and for a period of five years after expiration or termination of this Agreement. Subject to the Access to Information Act, R.S. 1985, c.A-1, the parties agree that the terms of this Agreement are confidential and each party shall use the same degree of care to prevent disclosure of the terms of this Agreement to third parties as it uses to protect its own confidential information of similar nature.

2.12.1 The Contractor will be required to sign the Code of Conduct Guidelines and Conflict of Interest Policy acknowledgement form of the IEMR, which will be provided by the Contracting Authority.

3. PERIOD OF CONTRACT

The proposed contract will be from the date of contract award to **xx-month-year**.

4. BASIS OF PAYMENT

Payment is to be based on submission of a detailed account (**Invoice**) forwarded to the IEMR Contracting Authority named herein for approval as per contract agreement.

For **authorized travel** incurred directly in the performance of the work, the Contractor will be paid in accordance with the Federal Treasury Board Travel Directive in effect at the time of travel (Refer to Addendum 2), with no allowance for overhead or profit.

Authorized administrative expenses will be reimbursed at cost, supported by appropriate receipts, without any allowance for overhead or profit.

The maximum budget allocated for this project shall not exceed (**insert amount**) (plus applicable taxes). Bids valued in excess of this amount will be considered non-responsive. This disclosure of project funds does not commit the IEMR to pay such an amount.

5. METHOD OF PAYMENT

Payment will be made monthly, upon submission of a detailed invoice indicating work completed to date, and upon acceptance of the work and invoice by the Contracting Authority prior to invoice payment.

6. CONTRACTING AUTHORITY

Name: Maureen Baker

7. EVALUATION OF BIDS

IEMR will evaluate the bids received based on the following factors:

- a. Compliance with the terms and conditions of this solicitation
- b. Assessment of all deliverables
- c. Delivery date
- d. Price is a consideration but not necessarily a deciding factor. The lowest or any bid will not necessarily be accepted.
- e. Bids will be evaluated by the Scientific Review Committee of the IEMR and other technical expertise as required.

7.1 Mandatory Criteria: Proposals meeting the mandatory requirements will be evaluated in accordance with the following criteria. Bidders are advised to address these criteria in sufficient depth in their proposals.

Non-Ranked Mandatory Criteria			
#	Criteria	Yes	No
1	Aboriginal involvement on the project.		
2	Flexibility and capacity to adjust schedule in response to environmental variability.		
3	Identification of locally relevant social issues and how they will be addressed.		

RANKED MANDATORY CRITERIA						
#	Criteria	Max. Weight	Applicable		Weight	Comments
			Yes	No		
1	<p>Demonstrated knowledge of the duties as outlined in Statement of Work.</p> <p><i>Knowledge of all duties of the contract must be considered and will normally include familiarity with: project design, the species under consideration, field aspects of the study and an appreciation of weather and environmental vagaries that may influence conduct of the work, field methodologies, analytical procedures and report writing.</i></p>	100				
2	<p>Demonstrated experience of the contractor, either direct or related, in conducting the duties as outlined in Statement of Work.</p> <p><i>Experience with all duties of the contract must be considered and will take in all facets included under the broad umbrella of design, project management and project delivery, including logistical aspects. Normally direct experience would not take precedence over related experience, though it may be given priority in the event scores are equal.</i></p>	100				

#	Criteria	Max. Weight	Applicable		Weight	Comments
			Yes	No		
3	<p>Demonstrated capability to design, manage and deliver the project.</p> <p><i>The demonstrated capability to design, manage, and deliver the project will be evaluated primarily on the actual content of the proposal. Previously demonstrated capabilities will be assessed in subsequent evaluation criteria.</i></p>	100				
4	<p>Experience and track record of Contractor.</p> <p><i>Experience and track record of the Contractor should be assessed considering both the quantity and quality of previously completed project work, given particular attention to its relevancy, as well as the punctuality and fiscal responsibility of project delivery. The publication record of the Contractor should also be considered.</i></p>	100				
5	<p>Experience of Program Manager, Project Supervisor, and other project personnel.</p> <p><i>The experience of Program Manager, Project Supervisor, and other project personnel will be assessed not only on the merits of each component but also in recognition of the fact that these components are interdependent and that competency is required at all levels.</i></p>	100				
6	<p>Proposed field methodologies.</p> <p><i>The proposed field methodologies will be evaluated primarily on the basis of effectiveness and efficiency, and where applicable, will demonstrate an understanding of researcher induced biases and how such impacts will be reduced or eliminated.</i></p>	100				
7	<p>Proposed analytical procedures.</p> <p><i>Proposed analytical procedures will be evaluated based on the relevancy of application to the type and quantity of data being collected. Statistical methodology should be clearly defined.</i></p>	100				
Total Score						

Note: Potential bidders must meet a minimum overall rating of 80% or better on each of the rated, and applicable, requirements to be considered.

7.2 Selection of Contract: Any proposal not meeting the mandatory requirements of the Request for Proposal will be considered non-responsive and will be given no further consideration.

A contract will be awarded based on best value taking into account technical merit and price for those proposals meeting the mandatory requirements of the Request for Proposal.

8. T4A DOCUMENTATION

In addition to the T4A Supplemental Invoicing Instructions detailed below, IEMR will contact the successful contractor to obtain the required T4A documentation **prior to contract award**. **Any contractor unwilling to provide this mandatory information will not be awarded a contract.**

Supplemental Invoicing Instructions

Pursuant to paragraph 221 (1) (d) of the Income Tax Act, payments made by **services** and agencies under applicable service contracts (including contracts involving a mix of goods and services) must be reported on a T4A supplementary slip. To comply with this requirement, contractors are required to provide the following information on each invoice:

- a. the legal name of the entity or individual, as applicable, i.e. the name associated with the Social Insurance Number (SIN) or Business Number (BN), as well as the address and the postal code;
- b. the status of the contractor, i.e. individual, unincorporated business, or corporation;
- c. for individuals and unincorporated businesses, the contractor's SIN and, if applicable, the BN or if applicable, the Goods and Services Tax (GST)/ Harmonized Sales Tax (HST) number;
- d. for corporations, the BN, or if this is not available, the GST/HST number. If there is no BN or GST/HST number, the T2 Corporation Tax number must be shown; and
- e. the following certification signed by the Contractor or an authorized officer:

"I certify that I have examined the information provided above, including the legal name, address, and Revenue Canada identifier, (c) or (d) as applicable, and that it is correct and complete, and fully discloses the identification of this Contractor."

SECTION 4 TERMS OF PAYMENT

TP1 BASIS OF PAYMENT

- 1.1** The Contractor shall not arrange or incur any expenditure on behalf of IEMR without prior authorization by the Contracting Authority.
- 1.2** There will be a holdback of 20% of the value of the Contract until all deliverables have been received by the Contracting Authority.
- 1.3** Travel, living and other miscellaneous expenses that are a direct result of discharging the duties noted herein may be reimbursed at cost, with no allowance for markup or profit.
- 1.4** Original invoices or certified true copies must be submitted for reimbursement.
- 1.5** Travel and living expenses shall be reimbursed in accordance with Federal Treasury Board guidelines.
- 1.6** All such expenses require the prior approval of the Contracting Authority.

TP2 METHOD OF PAYMENT

- 2.1** A claim in the form of an itemized account certified by the Contractor with respect to the accuracy of its contents shall be submitted to the Contracting Authority.
- 2.2** Payment by IEMR to the Contractor for the work shall be made:
 - 2.2.1** In the case of a progress payment other than a final payment, within thirty (30) days following the date on which a claim for progress payment is received according to the terms of the contract;
 - 2.2.2** In the case of a final payment, within thirty (30) days following the date of receipt of a final claim for payment, or within thirty (30) days following the date on which the work is completed, whichever date is the later;
- 2.3** If the IEMR Contracting Authority has any objection to the form of the claim for payment, he/she shall, within ten (10) days of its receipt, notify the Contractor in writing of the nature of the objection.

TP3 PAYMENT OF INTEREST ON OVERDUE ACCOUNTS

- 3.1** In this section, an amount is “due and payable” when it is due and payable by IEMR to the Contractor according to the provisions of the contract.

3.2 For the purposes of this section, an amount is overdue when it is unpaid on the first day following the day upon which it is due and payable.

3.3 In this section, “date of payment” means the date of the negotiable instrument drawn by the IEMR and given for payment of an amount due and payable.

3.4 In this section, “Bank Rate” means the discount rate of interest set by the Bank of Canada.

3.5 IEMR shall be liable to pay to the Contractor simple interest at the “Average Rate” plus 3 per cent per annum on any amount that is overdue; from the day such amount becomes overdue until the date of payment. Interest shall be paid without notice from the Contractor for payment that has been outstanding for more than 15 days. For payment made within 15 days from the date that the payment becomes overdue, interest will be paid at the request of the Contractor. Interest will not be payable on overdue advance payments.

3.6 IEMR shall not be liable to pay to the Contractor any interest on unpaid interest.

TP4 GOODS AND SERVICES TAX

4.1 The Goods and Services Tax (GST) is, unless otherwise indicated herein, excluded from the contract price. The GST, to the extent applicable, will be incorporated into all invoices and claims for progress payments made on or after the date of introduction of this tax and will be paid by the IEMR. The Contractor agrees to remit any GST paid or due to Revenue Canada. All invoices submitted containing GST will list GST as a separate item or contain a statement that GST is included in the invoice price.

SECTION 5 GENERAL CONDITIONS

GC1 INTERPRETATION

1.1 In the contract,

1.1.1 “Contract” means the contract documents;

1.1.2 “Invention” means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement thereof;

1.1.3 “Work”, unless otherwise expressed in the contract, means everything that is necessary to be done, furnished or delivered by the Contractor to perform the Contractor’s obligations under the contract;

1.1.4 “Contracting Authority” means the officer or employee of the IEMR who is designated by the IEMR to perform the functions under the contract;

1.1.5 “Prototype” includes models, patterns and samples;

1.1.6 “Technical documentation” means designs, reports, photographs, drawings, plans, specifications, computer software, surveys, calculations and other data, information and material collected, computed, drawn or produced, including computer printouts.

GC2 SUCCESSORS AND ASSIGNS

2.1 The contract shall ensure to the benefit of and be binding upon the parties hereto and their lawful heirs, executors, administrators, successors and assigns.

GC3 ASSIGNMENT

3.1 The contract shall not be assigned in whole or in part by the Contractor without the prior written consent of the Contracting Authority and any assignment made without that consent is void and of no effect.

3.2 No assignment of the contract shall relieve the Contractor from any obligation under the contract or impose any liability upon IEMR.

GC4 TIME IS OF THE ESSENCE

4.1 Time is of the essence of the contract.

4.2 Any delay or change in schedule by the Contractor in performing the Contractor's obligations under the contract which is caused by an event beyond the control of the Contractor, and which could not have been avoided by the Contractor without incurring unreasonable costs through the use of work-around plans including alternative sources or other means, constitutes an excusable delay or change in schedule. Events may include, but are not restricted to: acts of God, acts of local, provincial or federal governments, fires, floods, epidemics, quarantine restrictions, strikes or labour unrest, freight embargoes and unusually severe weather.

4.3 The Contractor shall give notice to IEMR immediately after the occurrence of the event that causes the excusable delay or change in schedule. The notice shall state the cause and circumstances of the delay or change in schedule and indicate the portion of the work affected by the delay or change in schedule. When requested to do so by the Contracting Authority, the Contractor shall deliver a description in a form satisfactory to the Contracting Authority, of work-around plans including alternative sources and any other means that the Contractor will utilize to overcome the delay or change in schedule and endeavour to prevent any further delay or change in schedule. Upon approval in writing by the Contracting Authority of the work-around plans, the Contractor shall implement the work-around plans and use all reasonable means to recover any time lost as a result of the excusable delay or change in schedule.

4.4 Unless the Contractor complies with the notice requirements set forth in the contract, any delay or change in schedule that would constitute an excusable delay or change in schedule shall be deemed not to be an excusable delay or change in schedule.

4.5 Notwithstanding that the Contractor has complied with the requirements of **GC4.3**, IEMR may exercise any right of termination contained in **GC8**.

GC5 LIABILITY AND INDEMNIFICATION

5.1 The Contractor shall indemnify and save harmless IEMR from and against all claims, losses, damages, costs, expenses, actions and other proceedings, made, sustained, brought, prosecuted, threatened to be brought or prosecuted, in any manner based upon, occasioned by or attributable to any injury to or death of a person or damage to or loss of property arising from any wilful or negligent act, omission or delay on the part of the Contractor, the Contractor's servants or agents in performing the work or as a result of the work.

5.2 The Contractor shall indemnify IEMR from all costs, charges and expenses whatsoever that IEMR sustains or incurs in or about all claims, actions, suits and proceedings for the use of the invention claimed in a patent, or infringement or alleged infringement of any patent or any registered industrial design or any copyright resulting from the performance of the Contractor's obligations under the contract, and in respect of the use of or disposal by IEMR of anything furnished pursuant to the contract.

5.3 The Contractor's liability to indemnify or reimburse IEMR under the contract shall not affect or prejudice IEMR from exercising any other rights under law.

5.4 It is understood and agreed by the parties hereto, that IEMR will not be liable for claims in respect of death, disease, illness, injury or disability which may be suffered by employees or agents employed by the Contractor due to their negligence in carrying out the services described herein.

5.5 It is further understood and agreed by the parties hereto, that the Contractor shall be liable for any damage to or loss of IEMR property occasioned by or attributable to the Contractor's employees or agents in carrying out the services described herein.

GC6 NOTICES

6.1 Where in the contract any notice, request, direction, or other communication is required to be given or made by either party, it shall be in writing and is effective if delivered in person, sent by registered mail, courier or by fax addressed to the party for whom it is intended at the address mentioned in the contract and any notice, request, direction or other communication shall be deemed to have been given if by registered mail, courier, or fax, when the receipt is acknowledged by the other party. The address of either party may be changed by notice in the manner set out in this provision.

GC7 CANADIAN LABOUR AND MATERIALS

7.1 The Contractor shall use Canadian labour and material in the performance of the work to the full extent to which they are procurable, consistent with proper economy and the expeditious carrying out of the work.

GC8 TERMINATION OR SUSPENSION

8.1 The IEMR may, by giving written notice to the Contractor, terminate or suspend the work with respect to all or any part or parts of the work not completed.

8.2 All work completed by the Contractor to the satisfaction of IEMR in accordance with the provisions of the contract and, for all work not completed before the giving of such notice, IEMR shall pay the Contractor's costs as determined under the provisions of the contract and, in addition, an amount representing a fair and reasonable fee in respect of such work.

8.3 In addition to the amount which the Contractor shall be paid under **GC8.2**, the Contractor shall be reimbursed for the Contractor's cost of and incidental to the cancellation of obligations incurred by the Contractor pursuant to such notice and obligations incurred by or to which the Contractor is subject with respect to the work.

8.4 Payment and reimbursement under the provisions of **GC8** shall be made only to the extent that it is established to the satisfaction of the IEMR that the costs and expenses were actually incurred by the Contractor and that the same are fair and reasonable and are properly attributable to the termination or suspension of the work or the part thereof so terminated.

8.5 The Contractor shall not be entitled to be reimbursed any amount which, taken together with any amounts paid or becoming due to the Contractor under the contract, exceeds the contract price applicable to the work or the particular part thereof.

8.6 The Contractor shall have no claim for damages, compensation, loss of profit, allowance or otherwise by reason of or directly or indirectly arising out of any action taken or notice given by the IEMR under the provisions of **GC8** except as expressly provided therein.

GC9 TERMINATION DUE TO DEFAULT OF CONTRACTOR

9.1 IEMR may, by notice to the Contractor, terminate the whole or any part of the work if:

(i) the Contractor becomes bankrupt or insolvent, or a receiving order is made against the Contractor, or an assignment is made for the benefit of creditors, or if an order is made or resolution passed for the winding up of the Contractor, or if the Contractor takes the benefit of any statute for the time being in force relating to bankrupt or insolvent debtors, or

(ii) the Contractor fails to perform any of the Contractor's obligations under the contract, or, in the IEMR's view, so fails to make progress as to endanger performance of the contract in accordance with its terms.

9.2 In the event that IEMR terminates the work in whole or in part under **GC9.1**, IEMR may arrange, upon such terms and conditions and in such manner as IEMR deems appropriate, for the work to be completed that was so terminated, and the Contractor shall be liable to IEMR for any excess costs relating to the completion of the work.

9.3 Upon termination of the work under **GC9.1**, the IEMR may require the Contractor to deliver and transfer title to IEMR, in the manner and to the extent directed by the IEMR, any finished work which has not been delivered and accepted prior to such termination and any materials or work-in-process which the Contractor has specifically acquired or produced for the fulfilment of the contract. IEMR shall pay the Contractor for all such finished work delivered pursuant to such direction and accepted by IEMR, the cost to the Contractor of such work plus the proportionate part of any fee fixed by the said contract and shall pay or reimburse the Contractor the fair and reasonable cost to the Contractor of all materials or work-in-process delivered to IEMR pursuant to such

direction. IEMR may withhold from the amounts due to the Contractor such sums as the IEMR determines to be necessary to protect IEMR against excess costs for the completion of the work.

9.4 The Contractor shall not be entitled to be reimbursed any amount which, taken together with any amounts paid or becoming due to the Contractor under the contract, exceeds the contract price applicable to the work or the particular part thereof.

9.5 If, after the IEMR issues a notice of termination under **GC9.1**, it is determined by the IEMR that the default of the Contractor is due to causes beyond the control of the Contractor, such notice of termination shall be deemed to have been issued pursuant to **GC8.1** and the rights and obligations of the parties hereto shall be governed by **GC8.1**.

GC10 RECORDS TO BE KEPT BY CONTRACTOR

10.1 The Contractor shall keep proper accounts and records of the cost of the work and of all expenditures or commitments made by the Contractor including the invoices, receipts and vouchers, which shall at reasonable times be open to audit and inspection by the authorized representatives of the IEMR who may make copies and take extracts there from.

10.2 The Contractor shall afford facilities for audit and inspection and shall furnish the authorized representatives of the IEMR with such information as the IEMR or they may from time to time require with reference to the documents referred to herein.

10.3 The Contractor shall not dispose of the documents referred to herein without the written consent of the IEMR, but shall preserve and keep them available for audit and inspection for such period of time as may be specified elsewhere in the contract or, in the absence of such specification, for a period of two years following completion of the work.

GC11 OWNERSHIP OF INTELLECTUAL AND OTHER PROPERTY INCLUDING COPYRIGHT

Interpretation

11.1 "Background Information" means all Technical Information that is not Foreground Information and that is proprietary to or the confidential information of the Contractor, its Subcontractors or any other supplier of the Contractor;

11.2 "Firmware" means any computer program stored in integrated circuits, read-only memory or other similar devices;

11.3 "Foreground Information" means any Invention first conceived, developed or reduced to practice as part of the Work under the Contract and all other Technical Information conceived, developed or produced as part of the Work under the Contract;

11.4 "Intellectual Property Right" means any intellectual property right recognized by the law, including any intellectual property right protected through legislation (such as that governing patents, copyright, industrial design, integrated circuit topography, or plant breeders' rights) or arising from protection of information as a trade secret or as confidential information;

11.4.1 "Intellectual Property" also includes aboriginal knowledge;

11.5 "Invention" means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter, whether or not patentable;

11.6 "Software" means any computer program whether in source or object code (including Firmware), any computer program documentation recorded in any form or medium, and any computer database, and includes modifications to any of the foregoing;

11.7 "Technical Information" means all information of a scientific, technical or artistic nature relating to the Work, whether oral or recorded in any form or medium and whether or not subject to copyright, including but not limited to any Inventions, designs, methods, processes, techniques, know-how, models, prototypes, patterns, samples, schematics, experimental or test data, reports, drawings, plans, specifications, photographs, collections of information, manuals and any other documents, and Software. Technical Information does not include data concerned with the administration of the Contract by the IEMR or the Contractor, such as internal financial or management information, unless it is a deliverable under the Contract.

11.8 It is the position of the IEMR that the Contractor be the owner of any Foreground created by the Contractor arising by virtue of this contract, subject to:

Right to License

The Contractor represents and warrants that the Contractor has, or the Contractor undertakes to obtain, the right to grant to IEMR the license to exercise the Intellectual Property Rights in the Foreground Information and the Background Information as required by the Contract.

11.9 The IEMR requires a royalty-free license to have the right to use, or have used by a third party, the Foreground owned by the Contractor for IEMR activities. The right to use the Foreground could include, without being limited to, the right to manufacture, reproduce and modify.

GC12 CONFLICT OF INTEREST

12.1 The Contractor declares that the Contractor has no pecuniary interest in the business of any third party that would cause a conflict of interest or seem to cause a conflict of interest in carrying out the work. Should such an interest be acquired during the life of the contract, the Contractor shall declare it immediately to the IEMR Chair.

12.2 It is a term of the contract that during the term of the contract any persons engaged in the course of carrying out this contract shall conduct themselves in compliance with the principles of the Conflict of Interest Policy and Code of Conduct Guidelines of the IEMR. Should an interest be acquired during the life of the contract that would cause a conflict of interest or seem to cause a departure from the principles, the Contractor shall declare it immediately to the Contracting Authority.

GC13 CONTRACTOR STATUS

13.1 This is a contract for the performance of a service and the Contractor is engaged under the contract as an independent contractor for the sole purpose of providing a service. Neither the Contractor nor any of the Contractor's personnel is engaged by the contract as an employee, servant or agent of IEMR. The Contractor agrees to be solely responsible for any and all payments and/or deductions required to be made including those required for Canada or Quebec Pension Plans, Unemployment Insurance, Workmen's Compensation, or Income Tax.

GC14 WARRANTY BY CONTRACTOR

14.1 The Contractor warrants that the Contractor is competent to perform the work required under the contract in that the Contractor has the necessary qualifications including the knowledge, skill and ability to perform the work.

14.2 The Contractor warrants that the Contractor shall provide a quality of service at least equal to that which contractors generally would expect of a competent contractor in a like situation.

GC15 MEMBER OF HOUSE OF COMMONS

15.1 No member of the House of Commons shall be admitted to any share or part of this contract or to any benefit to arise there from.

GC16 AMENDMENTS

16.1 No amendment of the contract nor waiver of any of the terms and provisions shall be deemed valid unless effected by a written amendment.

GC17 ENTIRE AGREEMENT

17.1 The Contract constitutes the entire agreement between the parties with respect to the subject matter of the contract and supersedes all previous negotiations, communications and other agreements relating to it unless they are incorporated by reference in the contract.

GC18 CRIMINAL CODE PROHIBITIONS

18.1 Subsection 784(3) of the Criminal Code prohibits anyone who has been convicted for an offence under:

- Section 121 - Frauds upon the Government
- Section 124 - Selling or Purchasing Office
- Section 418 - Selling Defective Stores to Her Majesty

from contracting with the government or receiving any benefit from a government contract.

GC19 ECOLOGO

19.1 The contractor should make every effort to ensure that all documents prepared or delivered under this contract are printed double-sided on Ecologo certified recycled paper or on paper with equivalent post-consumer recycled content, to the full extent to which it is procurable.

SECTION 6 SUPPLEMENTAL CONDITIONS

INTERNATIONAL SANCTIONS

Persons and companies in Canada are bound by economic sanctions imposed by Canada by regulations passed pursuant to the United Nations Act (UNA), R.S.C. 1985, c. U-2, the Special Economic Measures Act (SEMA), R.S.C. 1992, c. 17, or the Export and Import Permits Act (EIPA), R.S.C. 1985, c.E-19. As a result, the Government of Canada cannot accept delivery of goods or services that originate, either directly or indirectly, from the countries subject to economic sanctions. At the time of contract award, the following regulations implement economic sanctions:

United Nations Iraq Regulations;
United Nations Libya Regulations;
United Nations Federal Republic of Yugoslavia (Serbia and Montenegro) Regulations.

It is a condition of this Contract that the Contractor not supply to the IEMR any goods or services which are subject to economic sanctions as described in paragraph 1 above.

During the performance of the Contract should the addition of a country to the list of sanctioned countries or the additions of a good or service to the list of sanctioned goods or services cause an impossibility of performance for the Contractor, the situation will be treated by the Parties as a force majeure. The Contractor shall forthwith inform the IEMR of the situation; the procedures applicable to force majeure shall then apply.

LOBBYIST CLAUSE

Certification - Contingency Fees:

The Contractor certifies that he/she has not directly or indirectly paid or agreed to pay covenants that he/she will not directly or indirectly pay a contingency fee for the solicitation, negotiation, or obtaining of this contract to any person other than an employee acting in the normal course of the employee's duties;

All accounts and records pertaining to payments of fees or other compensation for the solicitation, obtaining or negotiation of the contract shall be subject to the Accounts and Audit provisions of the contract;

If the Contractor certifies falsely under this section or is in default of the obligations contained therein, the IEMR may either terminate the contract for default provisions of the contract or recover from the Contractor by way of reduction to the contract price or otherwise the full amount of the contingency fee.

In this section:

“Contingency fee” means any payment or other compensation that is contingent upon or is calculated upon the basis of a degree of success in soliciting or obtaining an IEMR contract or negotiating the whole or any part of its terms;

“Employee” means a person with whom the Contractor has an employer/ employee relationship;

“Person” includes an individual or group of individuals, a corporation, a partnership, an organization and an association and, without restricting the generality of the foregoing, includes any individual who is required to file a return with the registrar pursuant to section 5 of the Lobbyist Registration Act R.S. 1985 c.44 (4th Supplement) as the same may be amended from time to time.

PROVINCIAL SALES TAX

The Contractor is not relieved of any obligation to pay Provincial Sales Taxes on goods or taxable services which the Contractor uses or consumes in the performance of this contract.

Provincial Sales Taxes apply to goods or taxable services delivered to under this contract.