Environment Canada
Atlantic Region

Environment Canada Position Statement On Military Flying Activities In Labrador and Quebec

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INTRODUCTION

Environment Canada has reviewed the environmental assessment documents prepared in support of the proposal to continue and expand military flying activities in Labrador and Quebec. Environment Canada is of the opinion that if the Department of National Defence (DND) incorporates the recommendations presented in this Position Statement, potential adverse effects on the environment, as a result of this proposal, will be insignificant.

The revised Environmental Impact Statement (EIS) and supplementary technical reports provided by the DND have identified several important environmental, resource management and socio-economic issues which must be resolved to ensure the Military Flying Program can be expanded, as proposed, with insignificant environmental impact. While many of these issues have been thoroughly addressed and appropriate mitigation measures identified, Environment Canada has concerns in the following areas which require further consideration by DND:

- Migratory Birds
- Air Issues
- Shipment and Delivery of Fuel
- Fuel Storage
- Hazardous Waste Management at CFB Goose Bay
- Inert Weapons
- Fuel Dumping
- Sewage Treatment
- Environmental Effects Monitoring in Hamilton Inlet.

The issues presented in this Position Statement have been more fully described in Environment Canada's July 1994 Technical Review.

MIGRATORY BIRDS

DND has acknowledged in the EIS that low level flying activities potentially could result in adverse effects on migratory bird resources. DND has proposed two options to mitigate the effects of low level flying on wildlife resources, including migratory birds. These options are:

- **Avoidance of Harlequin Duck Populations (Option A)** - In support of Option A, DND plans to conduct low level flying activities within the existing 100,000 km^2 training areas. Under this option, DND will not fly over areas which support populations of Harlequin Duck during breeding periods. While this approach should protect the Harlequin Duck, other important waterfowl species could still be affected by low level flying activities.

These other species (e.g. Surf Scoter, Black Duck) are protected under the **Migratory Birds Convention Act** administered by Environment Canada. Until it is clearly demonstrated that military overflights will not have an adverse affect on these other waterfowl species, the Department could not support this approach.

- **Avoidance of Critical Waterfowl Populations (Option B)** - In support of this option, DND plans to reconfigure and increase the existing training areas to incorporate 130,000 km^2 of air space for military flying. Under this option, DND will not fly over areas which support important waterfowl populations during breeding, staging, and moulting periods. Environment Canada is of the opinion that DND has not conducted sufficient surveys of potentially affected waterfowl populations to develop an effective avoidance strategy. If DND selects this option, the Flight Training Program will be expanded to include areas which have not yet been fully surveyed. Unless additional survey work is conducted to determine the distribution of important waterfowl populations during staging, breeding, and moulting periods, this option is not acceptable to Environment Canada.

Environment Canada therefore recommends that:

1. ***DND place an immediate priority on surveying critical waterfowl populations in all existing and proposed overflight areas. Environment Canada is prepared to continue to provide scientific assistance to support DND's ongoing efforts to complete the necessary survey work.***

2. ***Once completed, the survey data be reviewed with Environment Canada and other resource management agencies to identify where and when waterfowl populations are concentrated and to reach agreement on appropriate mitigative measures (e.g. avoidance of important habitats at critical times).***

Environment Canada supports DND's plans to conduct effects monitoring studies on waterfowl and songbirds when low level flying activities occur. The focus of this work will be placed on assessing the effects of military flying on waterfowl (breeding Harlequin Duck, other waterfowl species during moulting and staging periods) and also on breeding songbirds (passerines) within select river valleys. These efforts will provide important data needed to determine if adjustments to low level flying activities would be necessary.

Environment Canada believes that DND should expand the scope of their planned monitoring efforts to address the effects of overflights on important breeding waterfowl species (in addition to conducting the planned effects monitoring studies on the Harlequin Duck population). Environment Canada also supports the need for DND to conduct long-term effects monitoring

studies on staging, moulting and breeding populations to determine if waterfowl populations are forced into other habitats to avoid overflights.

Environment Canada therefore recommends that:

3. ***DND's proposed monitoring programs be expanded to address the short-term effects of low level flying on breeding waterfowl populations (in addition to Harlequin Ducks), and the longer-term effects of overflights on important waterfowl populations during staging, breeding, and moulting periods. Environment Canada is prepared to support DND in the design of the monitoring program and in the interpretation of its results.***

4. ***DND refine mitigation approaches, based on monitoring results, in consultation with Environment Canada and other resource management agencies.***

AIR ISSUES

Environment Canada is generally satisfied that DND has identified air quality issues associated with military flying activities by modelling the dispersion of exhaust emissions and predicting increased concentrations of air contaminants. It is suggested, however, that the following specific concerns related to predicted increases in certain air contaminants (nitrogen dioxide, sulphur dioxide, unburned hydrocarbons) in the CFB Goose Bay area be given further consideration by DND.

Nitrogen Dioxide (NO_2) Emissions - During poor dispersion conditions (e.g. low atmospheric mixing heights), modelling studies completed by DND have predicted that increases of NO_2 concentrations in ambient air exceed acceptable air quality objectives established under the Canadian Environmental Protection Act (CEPA). Environment Canada supports DND's commitment to verify these predicted increases through ambient air quality monitoring of NO_2 concentrations in the vicinity of CFB Goose Bay. Furthermore, the Department is prepared to support DND in the design of the monitoring program and in the interpretation of its results.

Environment Canada therefore recommends that:

5. ***Based on ambient air monitoring results, DND refine mitigation plans and implement appropriate measures (e.g. managing the flight program based on real-time forecasts of dispersion conditions) to ensure acceptable ambient air quality objectives for NO_2 are maintained.***

Sulphur Dioxide (SO_2) Emissions - In predicting ambient air concentrations of SO_2 in the vicinity of CFB Goose Bay, DND assumed a sulphur content in aviation fuel 40% lower than the average value reported for aviation fuel imported to, and produced in, Atlantic Canada.

Environment Canada therefore recommends that:

6. ***The sulphur content of aviation fuel used at CFB Goose Bay be verified, and if necessary, measures be taken (e.g. using fuel with lower sulphur content) to ensure acceptable ambient air quality objectives for SO_2 are maintained.***

Unburned Hydrocarbon Emissions - While DND has predicted increased concentrations of unburned hydrocarbons in the vicinity of CFB Goose Bay, the environmental significance of these increases has not been discussed in the EIS. It is known that unburned hydrocarbons may include ozone forming compounds and other substances which have been placed on the priority substances list under CEPA and evaluated by Environment and Health Canada.

Environment Canada therefore recommends that:

7. ***DND assess the release of unburned hydrocarbon emissions from military aircraft in terms of their environmental effects and the need to refine mitigation plans.***

SHIPMENT AND DELIVERY OF FUEL

Environment Canada is concerned that DND has not considered the environmental effects of potential accidents in Hamilton Inlet which involve vessels supplying fuel to CFB Goose Bay. While DND has concluded that this issue is outside the scope of the review, in our opinion, DND has a responsibility for ensuring that the shipment and delivery of fuel to the Base does not pose an undue risk to the environment.

Environment Canada therefore recommends that:

8. ***DND ensure a contingency plan, that will enable a timely and effective response to accidents during transport and delivery of fuel to CFB Goose Bay, is in place. This plan should be reviewed in consultation with regulatory and resource management agencies, including Environment Canada, which have responsibilities for responding to emergency incidents.***

FUEL STORAGE

DND is upgrading the fuel tank storage facility over the next several years to ensure compliance with applicable design and operating standards. However, until completed, any release of fuel from a tank or associated piping could threaten groundwater and surface water resources. We would, therefore, encourage DND to expedite its efforts to complete this upgrading work.

Environment Canada therefore recommends that:

9. ***DND give an initial priority to constructing impermeable dykes that will adequately contain fuel within storage facilities.***

HAZARDOUS WASTE MANAGEMENT AT CFB GOOSE BAY

DND acknowledges that as military flying activities expand, the volume of hazardous wastes generated at the Base (e.g. oil, glycol, perchlorethylene) will increase. A comprehensive approach to hazardous waste management is required since the accidental release or improper disposal of these wastes could result in significant adverse effects on the environment. In this regard, the Environmental Action Plan and draft Hazardous Materials Management Plan prepared by DND and referenced in the EIS represent important and commendable initiatives. However, further work which enlarges upon these efforts is important in the context of an expanded military flight training program.

Environment Canada therefore recommends that:

10. ***DND conduct and maintain a detailed inventory of wastes generated by Canadian and Allied forces at CFB Goose Bay (sources, quantities, volumes, physical-chemical properties, toxicities).***

11. ***Based on a detailed hazardous waste inventory, DND place a priority on the further development of a comprehensive pollution prevention and control strategy for the Base that will help minimize the generation of wastes and ensure compliance with applicable regulations, guidelines and codes of practice. Such a strategy should outline options for containment of hazardous wastes at source, identify reuse and recycling opportunities, and describe proper storage, transport and disposal methods.***

INERT WEAPONS

While DND has acknowledged that hazardous compounds (vanadium oxitrichloride, titanium tetrachloride) will be released through the use of inert weapons dropped from military aircraft in practice target areas, the potential need for remedial measures has not been addressed.

Environment Canada therefore recommends that:

12. DND ensure that clean-up of practice target areas includes provisions for detecting and remediating contaminated areas associated with the use of inert weapons.

FUEL DUMPING

Environment Canada agrees with DND's conclusion that dispersion of aviation fuel over a wide area during emergency events should not result in significant environmental effects. However, incidents involving jettisoned fuel tanks which rupture on impact have not been fully addressed.

Environment Canada therefore recommends that:

13. DND ensure that the Base Emergency Response Plan effectively deals with the rupture of jettisoned fuel tanks on impact. This plan should be reviewed in consultation with Environment Canada and other regulatory and resource management agencies.

SEWAGE TREATMENT

Environment Canada supports DND in its commitment to treat sewage from CFB Goose Bay. The aeration lagoon recommended in the feasibility study and referenced in the EIS should provide adequate treatment of domestic sewage if it is properly designed, operated and maintained. However, DND has not presented a schedule that clarifies when such a facility will become operational.

Environment Canada therefore recommends that:

14. DND place a priority on, and outline a schedule for, the construction of a facility that provides secondary treatment of sewage released from the Base.

ENVIRONMENTAL EFFECTS MONITORING IN HAMILTON INLET

While environmental effects monitoring is an important element for any larger-scale development, DND did not identify, in the EIS, a specific need for such monitoring in Hamilton Inlet. There is a potential for various activities associated with military flight training to degrade water quality within Hamilton Inlet, especially in the vicinity of the Base. Therefore, Environment Canada believes that an Effects Monitoring Program is required to ensure that planned mitigation measures are successful in minimizing adverse effects on Hamilton Inlet and its resources.

Environment Canada therefore recommends that:

15. ***DND, in cooperation with government agencies, industry, and the public, develop an Environmental Effects Monitoring Program for Hamilton Inlet. Based on monitoring results, and in consultation with Environment Canada and other resource agencies, DND should be prepared to further refine mitigation measures to ensure Hamilton Inlet and its resources are adequately protected.***

SUMMARY OF ENVIRONMENT CANADA ROLES AND RESPONSIBILITIES

The primary mission of Environment Canada is to "foster harmony between society and the environment for the benefit of present and future generations of Canadians". The Department is principally responsible for fulfilling federal obligations concerning inland water resources, wildlife, meteorology, sea ice, and pollution control. These responsibilities arise from the national mandates provided by the Department of the Environment Act and other Acts administered by the Minister of the Environment, as described below.

Environment Canada is also responsible for performing certain other functions that bear on the policies and operations of all federal departments and agencies. For example, it is Environment Canada's responsibility to provide the federal leadership and government-wide coordination necessary in working towards the successful realization of our mission. This leadership takes many forms ranging from research, the provision of scientific and public information and advice, the identification of environmental concerns, and the exercise of influence on the numerous policies and the programs of all federal departments and agencies. In addition, the Department of the Environment Act provides the Minister with certain "horizontal" powers to enable her to exercise the necessary influence on the government's departments and agencies on environmental matters.

Environment Canada's roles focus on four principal objectives:

1. To conserve and enhance Canada's renewable resources for sustained economic and social benefit;

2. To protect the environment from the adverse impact of human activities;

3. To facilitate the adaptation of human activities to the environment;

4. To safeguard and foster public understanding and enjoyment of Canada's natural resources.

These objectives are pursued throughout the nation.

The federal Minister of the Environment is wholly responsible for the administration of the following government Acts:

- the Canadian Environmental Protection Act, 1988
- the Canada Water Act, 1970
- the Canada Wildlife Act, 1970
- the Game Export Act, 1970
- the International Rivers Improvement Act, 1970
- the Migratory Birds Convention Act, 1970
- the Weather Modification Information Act, 1970-71-72
- the Wild Animal and Plant Protection Act, 1992.

In addition to the above, there are certain sections of other federal Acts which the Minister is responsible for administering or for which the department delivers an advisory role.

These Acts include:

- the Arctic Waters Pollution Prevention Act
- the Canada Shipping Act
- the Fisheries Act (Section 36)
- the International Boundary Waters Treaty Act
- the Motor Vehicle Safety Act (the emission provision)
- the Northern Inland Waters Act
- the Pest Control Products Act
- the Transportation of Dangerous Goods Act.