DEPARTMENT OF ENVIRONMENT
ENVIRONMENTAL PROTECTION SERVICE
PACIFIC AND YUKON REGION

CONTINGENCY PLAN
FOR ENVIRONMENTAL EMERGENCIES

BRITISH COLUMBIA AND YUKON

Prepared by

Environmental Emergency Branch

December 1985

Department of Environment
Environmental Protection Service
(Pacific and Yukon Region)
Contingency Plan

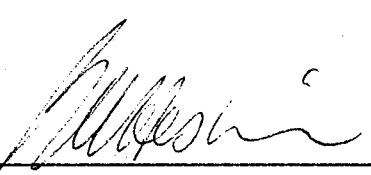
Letter of Promulgation

1. This is the Environmental Protection Service Contingency Plan for the Pacific and Yukon Region. It has been developed under the aegis of the National Emergency Plan to provide the organizational framework necessary to deal with environmental emergencies.

2. Spills of oil and other deleterious substances constitute the prime motivation for the plan but conceivably, other threats to the environment may come under its purview.

3. The plan addresses incidents for which the Environmental Protection Service is tasked as lead agency and for those where the department is requested to act in a supporting role.

4. This plan is issued under the authority of the Regional Director of the Environmental Protection Service.

Signed 

Mr. B. A. Heskin, P. Eng.
Regional Director
Environmental Protection Service

Date December 30, 1985

AMENDMENTS

This contingency plan will undergo extensive yearly review at which time recipients will be provided with amendments. Any major changes in content will be updated immediately. It is incumbent on the recipient of this plan to ensure that all amendments are entered into their copy of the contingency plan and that the Regional Environmental Emergency Coordinator of EPS is informed of any alterations required in the plan.

FOREWORD

This contingency plan is meant to outline the tasks which would be carried out during an environmental emergency by staff of the Environmental Protection Service, Pacific and Yukon Region and to describe the organization by which they are carried out and the means of calling into place that organization. The plan applies to the Province of British Columbia, Yukon and their adjacent marine waters.

The plan also incorporates appendices describing the ancillary services provided by other government agencies. Their contribution to successful resolutions to environmental emergencies are invaluable, if not crucial.

This plan complements the Transport Canada Canadian Coast Guard Regional Marine Emergency Plan (Western) and the British Columbia Provincial Emergency Program's Provincial Emergency Plan.

For the purpose of this plan, an environmental emergency is defined as the sudden, unexpected, or apprehended introduction into the air, water, or land of a pollutant in sufficient quantity to cause serious and possibly irreversible damage to the environment and which may endanger human health as a result of its presence.

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1 INTRODUCTION

1.1 Background

This plan is published under the authority of the Regional Director, Pacific and Yukon Region, Environmental Protection Service.

In November 1973 the Cabinet of the Government of Canada gave the Department of Environment (DOE) the responsibility to develop, in cooperation with other government departments and agencies having relevant statutory authority, a program to deal with environmental emergencies. The Cabinet agreed that Environment Canada should undertake the following:

a) Develop in conjunction with other departments and agencies having relevant statutory authority, and with the Emergency Preparedness Secretariat of PCO, government-wide programming, and where necessary coordinate efforts, to deal with environmental emergencies;
b) Enter into discussions with provincial agencies for mutual cooperation in the development of plans and effective responses to environmental emergencies;
c) Provide leadership and guidance as required, to other federal departments and agencies, provinces, and industry in the development and integration of contingency plans for environmental emergencies, including reporting and response systems at the national, regional, and local level;
d) Provide technical advice on environmental matters to other departments and agencies with statutory responsibilities, to provinces, and industry, both for contingency planning and on-scene operations;
e) Assume operational leadership to deal with environmental emergencies where not assigned to other agencies or in specific situations where the environment is not being adequately protected;
f) Implement, making maximum possible use of existing facilities of all agencies, a national system for reporting environmental emergencies and alerting appropriate authorities of the situation;

g) In conjunction with departments and agencies, provinces, and industry, develop, evaluate or test new equipment and techniques, and develop an integrated technology program to improve preventive measures and ensure that field operators are trained in new techniques;

h) Establish and chair a committee (or team) entitled National Environmental Emergency Team (NEET) from federal, provincial and industrial agencies with responsibilities in the environmental emergency field as the major instrument of coordination of the activities set out in these recommendations; and establish and chair similar committees on a regional basis;

i) Develop, through NEET and with the Treasury Board Secretariat guidelines for the funding of cleanup expenses incurred in environmental emergency operations;

j) Subject to the approval of the Treasury Board, obtain the resources and the manpower required to establish a National Environmental Emergency Centre and five Regional Centres and to maintain the program as outlined above.

1.2 DOE Environmental Emergency Responsibilities

In keeping with the cabinet decision, DOE assumes the following responsibilties during environmental emergencies:

a) to provide technical advice on environmental matters to other departments and agencies with statutory responsibilities, to provinces, and to industry,

b) to assume operational leadership to deal with environmental emergencies where not assigned to other agencies or in specific situations where the environment is not being adequately protected, and

c) to operate the reporting and alerting system to notify appropriate authorities of the situation and to obtain details of the spill for statistical purposes.

Detailed responsibilities of the separate DOE services are discussed further in Section 2. Response plans of the Atmospheric Environment Service (AES) and Environmental Protection Service (EPS) are published separately. The Canada/BC Understanding (Appendix I) and the EPS/Canadian Coast Guard (CCG) agreement (Appendix II) describe more completely the division of emergency responsibilities.

There are three conditions which result in direct government action by the lead agency to clean up the spill. They are as follows:

a) the company or operator does not initiate action on cleanup,
b) the company or operator does not have the capability to clean up adequately, or
c) the government does not feel the environment is being adequately protected by the action taken.

If the government takes action to clean up a spill for any of these reasons, it may also take legal action to recover from the company or operator the expenses incurred.

For spills from land to marine waters, DOE is the lead agency. DOE may request that the CCG of DOT coordinate the response. In marine spills from ships, DOT is the lead agency in directing emergency operations under authority of the Canada Shipping Act. In such incidents, DOE acts as a resource agency, providing environmental impact assessment, oceanographic and meteorological data, and other environmental advice as required.

The provincial government responds to spills from land-based facilities and inland shipping. Excluded are spills into marine waters, those areas under control of Ports Canada Harbour Commission Authority, federal properties and those at or crossing the Canada-U.S.A. border. The Provincial Emergency Program (PEP) is the lead agency for the provincial response. The Canada/B.C. Understanding, re-printed in Appendix I of this document, elaborates on this allocation of roles. Spills in Yukon are addressed in Appendix XI.

1.3 Responsibilities of the Polluter

It is an accepted principle that the polluter bears the prime responsibility for any emergency created and that the costs incurred for environmental protection are legitimate costs of doing business. This puts the responsibility for the cost of cleanup in the hands of the polluter, therefore, whether it is industry, government, or a private individual.

Under Sec. 33 of the federal Fisheries Act, which is administered by DOE, the polluter has the primary responsibility for notification of government agencies and for taking remedial action. In British Columbia, DOE, DOT, and PEP must be kept fully informed of spills within their jurisdiction and with spill countermeasures being taken. Keeping them informed will ensure that both the polluter's and the government's legal responsibilities are fulfilled. On request, these agencies will also offer advice on spill cleanup. Details on emergency roles in Yukon are provided in Appendix XI.

Company or operator responsibilities for spill cleanup must also include assurance that the cleanup techniques employed are environmentally sound. Physical cleanup methods are encouraged. Should the company or operator consider using dispersants or sinking agents, application must be filed with EPS in Vancouver - telephone: (604) 666-0370 or (604) 666-6100 (24-hour emergency line). The DOE list of acceptable oil spill dispersants and guidelines for their use is in Appendix IV.

1.4 Contingency Plans for Transboundary Incidents

The DOE Contingency Plan is designed to interlock with plans of other government agencies and industry in the affected area, as required by the Departmental Contingency Plan dated June 15, 1973, and the Canada/ United States Memorandum of Understanding on Accidental and Unauthorized Discharges of Pollutants Along the Inland Boundary (Appendix XII). It is possible that at some time a spill, originating in B.C., affecting the adjacent shoreline and marine waters, will threaten to cross the B.C. -

Yukon or B.C. - Alaska borders to the north or the Canada - U.S.A. border (B.C. - State of Washington, Idaho and Montana borders) to the south. Should such a threat exist, the appropriate Canadian federal government agency must be notified. The contacted agency then ensures that the proper authorities in Yukon, or the States of Washington, Idaho, Montana, and the U.S. federal government are notified (Appendix VI). Each of these agencies has their own alerting system and contingency plans.

2 LEGISLATIVE AUTHORITY AND RESPONSIBILITIES

2.1 Relevant Legislation

DOE administers legislation pertinent to this Contingency Plan which provides penalties for such actions as deposition of pollutants and failure to report spills. The following acts are used by DOE to deal with environmental emergencies:

a) Fisheries Act (Section 33),
b) Environmental Contaminants Act,
c) Migratory Bird Convention Act, and
d) Ocean Dumping Control Act.

2.1.1 Fisheries Act

Section 31.(1) - No one may carry out any work that results in the degradation of fish habitat. Maximum fine of $5,000 for first offence, $10,000 for subsequent offences or two years imprisonment.

Section 33.(2) - It is illegal to deposit "a deleterious substance". Maximum fine of $50,000 dollars for first offence, $100,000 maximum for subsequent offences.

Section 33.(6) - Each day is a continuing offence.

Section 33.(7) - Court may order the person to take action to prevent further offences of the same nature.

Section 33.2 - Where regulations exist regarding a deleterious substance, there is a mandatory reporting requirement 33.2(4). Failure to report $5,000 maximum fine for first offence, $10,000 maximum for subsequent offences.

Section 33.2(5) - Persons who cause spills or who own or have custody or control of deleterious substances are obligated to take all reasonable measures to counteract or prevent deposits

of these substances. Failure to comply $25,000 maximum fine for first offence, $50,000 maximum for subsequent offences.

Section 33.2(6) - Inspectors have the power to direct clean up where immediate action is necessary. Failure to comply with these directions $25,000 maximum fine for first offence, $50,000 maximum for subsequent offences.

2.1.2 Environmental Contaminants Act

Section 8.(1) - It is illegal to permit the release of substances specified in the schedule in excess of limits specified.

Section 8.(2) - No one shall import, manufacture, or sell a substance specified in the schedule.

Section 8.(4) - No one shall import, manufacture, or sell products containing substances in excess of the limits set out in the schedule.

Section 8.(5) - Anyone contravening this section is guilty of an offence and liable to a maximum fine of $100,000 or two years imprisonment.

Section 8.(7) - Each day constitutes a separate offence.

2.1.3 Migratory Birds Convention Act and Regulations

Section 35.(1) of the Regulations

- It is an offence to deposit oil, oil waste, or other substances harmful to migratory birds into water inhabited by migratory birds. The penalty for an offence upon summary conviction is a fine of not more than $300.00 and not less than $10.00 or six months imprisonment.

2.1.4 Ocean Dumping Control Act

Section 4. - No ocean dumping without a permit.
Section 6. - No disposal on ice without a permit.
Section 13. - Fines range from $50,000 to $100,000.
Section 14.(1) - Each day is an additional offence.
Section 14.(2) - The Court may issue orders to persons to refrain from committing an offence.

2.2 DOE Services Environmental Emergency Responsibilities

2.2.1 Environmental Protection Service

EPS is responsible for the following activities related to environmental emergencies:

a) amend and execute the DOE Pacific Region Contingency Plan for Environmental Emergencies,
b) maintain the Environmental Emergency Operations Reporting Service in Vancouver with a 24-hour-a-day response capability,
c) encourage and provide assistance to regional industries and government agencies to write and implement contingency plans for environmental emergencies,
d) maintain an up-to-date data bank on available personnel, equipment, and techniques for handling environmental emergencies and encourage contributions by industry and other government agencies,
e) provide trained OSCs for environmental emergencies in which DOE becomes directly involved in cleanup,
f) arrange for emergency financing, administration, field headquarters, communication equipment, and transportation as required,
g) inform DOE Ottawa Headquarters on details of emergencies and status of remedial action,

h) make decisions on the methods of spill cleanup and use of materials such as sinkants and dispersants in consultation with REET,
i) submit a final OSC and REET report on incidents to EPS, REEC, and DOE Ottawa Headquarters,
j) act as a contact point between DOE and other government agencies, industries and associations, and the general public,
k) provide, on behalf of DOE, a representative to the U.S.-Canada Joint Response Team for dealing with environmental emergencies in the Pacific Region,
l) contribute technical advice on cleanup equipment and methods through the Environmental Emergency Technology Division, Environmental Emergency Protection Programs Branch Directorate, EPS Ottawa, Ontario,
m) coordinate the collecting of samples and initiation of legal action, and
n) maintain and train the DOE Response Team in anticipation of major spill mobilization and involvement.

2.2.2 Canadian Wildlife Service

CWS is responsible for the following activities:

a) maintain a regional emergency action plan for the Canadian Wildlife Service, Vancouver,
b) provide, on request, a member for the REET to advise on migratory wildlife matters and contribute a written report to the final REET report on the spill incident,
c) provide guidance and arrange for the establishment of facilities and personnel for the cleaning of oiled birds and other animals affected by a spill when required,
d) collect evidence of damage to wildlife for possible prosecution under the Migratory Birds Convention Act, and
e) provide personnel and equipment if requested by the OSC or REET coordinator.

2.2.3 Inland Waters Directorate

IWD is responsible for the following activities:

a) maintain an emergency action plan for regional IWD,

b) provide, on request, a member to REET to contribute inland water chemistry and hydrology information, advise on dyking systems and ground water when required, contribute a written report to the final REET report on the spill incident,

c) be responsible for sampling and analysis of spills involving petroleum products in order to estimate the extent of shoreline contamination, and

d) provide personnel, boats, and equipment if requested by the OSC or REET coordinator.

2.2.4 Atmospheric Environment Service

AES is responsible for the following activities:

a) maintain a regional emergency action plan for AES,

b) provide, on request, a member to REET to supply meterological data and forecasts for the specific area of the spill and contribute a written report to final REET report on the spill incident,

c) provide communications through the weather office reporting system, and

d) set up a temporary weather station on scene if requested by the OSC or REET coordinator.

3 RESPONSE ORGANIZATION STRUCTURE

Implementation of the contingency plan during an emergency requires experienced leadership and the close cooperation of all participating bodies. Effective response is aided by good communication and clearly defined responsibilties. The following components are intended to provide the structure for successful implementation of the plan on a consistent basis.

3.1 On-Scene Commander

The OSC makes the operational decisions at the site of the emergency. For emergencies that fall under federal jurisdiction, the polluter has the first responsibility to appoint an OSC. This is the case for most spills. If the polluter does not assign an individual to this task he is appointed by the lead agency.

Briefly, the duties of the OSC include:

a) mobilizing available manpower and equipment to combat the emergency,
b) directing the containment, cleanup, and restoration, and
c) providing documentation and other support as requested during follow-up.

3.2 Regional Environmental Emergency Team

In order to coordinate the efforts of government and industry in dealing with environmental emergencies, the Regional Environmental Emergency Team (REET) is formed from a number of federal, provincial, and municipal agencies and industrial organizations which have a mandate for emergency response. REET functions in two separate and well-defined modes depending on the particular situation. These are the management and response modes. In the management mode, REET is chaired by the Regional Director of EPS with the secretariat function carried out by the federal Regional Environmental Emergency Coordinator (REEC), also of EPS. In this

mode, REET is a forum for exchange of information and ideas on contingency planning, equipment, and emergency response in general.

In the response mode, REET consists of persons from organizations in REET management who are requested by the REEC to assist in responding to a specific environmental emergency. Generally, REET in the response mode is the forum for resolving questions and preparing advice for the OSC on environmental matters. The team is responsible for collecting information form the various services of DOE, other federal and provincial agencies, and presenting it to the OSC on a regular basis. Specifically, REET:

a) identifies priority areas for protection or cleanup,
b) recommends methods of containment, control, cleanup, and disposal,
c) advises on the use of dispersants,
d) provides up-to-date weather forecasts,
e) provides current, wind, and tide information for spill tracking, and
f) provides any other information required by the OSC for inclusion in situation reports.

3.3 EPS/DOE Response Team

The EPS/DOE Response Team consists primarily of Environmental Emergency Branch personnel with experts recruited from other EPS sections and DOE services as required. Following the receipt of a major spill alert, the response team will be mobilized through the EPS Operations Centre. If required, the team will play a lead role in directing spill countermeasures. Where DOE has a resource agency role, for instance to DOT during a ship disaster, the team will provide environmental advice and support to the OSC.

3.4 EPS Operations Centre

EPS operates a 24 hour communications system for environmental emergencies staffed by EEB personnel. The operations centre is located at Kapilano 100, Park Royal, West Vancouver. The facilities include:

a) an operations room complete with radio/telephone patch system,

b) a conference room,
c) five direct outside lines, three of which have hands-free conference phones,
d) video tape recording and playback equipment (1/2"VHS and 3/4"BETA), National Topographic Series maps, resource maps and nautical charts,
e) a National Emergency Equipment Locater System (NEELS) portable computer console and an IBM PC slick tracking system,
f) DEX, telex, and AES communications equipment, and
g) a library of technical literature on properties of spilled chemicals.

Functions of the operations centre include:

a) operation of a 24-hour telephone system through which environmental emergencies are reported ((604) 666-6100),
b) assessment of emergency calls - if necessary, the EPS dispatcher contacts responsible agencies, dispatches DOE personnel to the scene, and ensures an OSC has been appointed, and
c) activation of REET and the EPS/DOE Response Team when required.

EEB is responsible for the annual updating and distribution of two DOE publications. The Environmental Emergency Contact List has business and home numbers for personnel to be contacted for advisement or to provide assistance during an emergency. The Environmental Emergency Equipment List provides an inventory of spill control equipment by type, location, and owner. It includes pertinent contact information and procedures for equipment release.

4 EMERGENCY RESPONSE OPERATION

4.1 Alerting and Assessment

After the emergency report is received by the EPS Operations Centre, the personnel on duty ensure that appropriate DOE response activities are initiated. On-scene assessment of the spill may not have been made and assessing the required level of response for either a major or minor emergency may be difficult. If it is not clear from the initial notification, the duty officer may request additional information from the person or agency reporting the spill. This information includes:

a) name of observer and contact number,
b) location of spill,
c) source of spill (if known),
d) substance spilled,
e) estimated quantity spilled,
f) contact on scene,
g) name of polluter (if known),
h) date and time of incident,
i) threat to human health or to the environment, and
j) summary of remedial measures taken.

Based on this information and other reports that may arrive from individuals at the scene, a decision will be made by the REEC or his designated officer on the level of response required.

4.2 Response

There are three levels of response at which EPS will act depending on the nature of the emergency. Most spills are small in size, easily controlled, and pose little threat to the environment. These types are monitored by alerting other agencies and ensuring that appropriate action is taken by them.

When a greater threat is perceived, an EPS or other DOE environmental agency officer is normally sent to the scene. His function is to gather more detailed technical information about the incident and to collect samples and take photographs. If, after making an appraisal, the investigating officer feels that a major response is required, he then contacts the EPS duty officer who initiates the response.

When the initial assessment, based on the incident report or inspecting officer visit, indicates a major response is required, the EPS Operations Centre ensures that the following actions are taken.

1. Appointment of an On-Scene Commander

The first priority of the Operations Centre is to ensure that an OSC is at or on the way to the scene. In all types of spills the polluter is expected to appoint an OSC and accept physical and financial responsibility for cleanup to the satisfaction of government agencies having jurisdiction. If the polluter cannot or will not accept responsibility for the spill, or if the polluter is unknown, the lead government agency has the responsibility for the appointment of an OSC and the funding and directing of containment and cleanup operations. The gathering of legal evidence begins at once to permit cost recovery for the expenditures.

2. Mobilization of EPS/DOE Response Team

The mobilization of the EPS/DOE Response Team depends upon DOE's role. If DOE is the lead agency and appoints an OSC, the EPS/DOE Response Team is activated by the EPS action. However, if DOE is either a lead government agency without appointing an OSC or acts as a resource agency to another government agency, the level of response is less.

The senior DOE representative on the response team will be the coordinator and spokesman for it. He establishes a communications headquarters for the team, coordinates its environmental advice and recommendations, and relays the information to the OSC, the EPS Operations Centre, the media, and the general public.

3. Notification of DOE Ottawa Headquarters

The EPS Operations Centre relays all relevant information to the Environmental Emergency Branch Operations Centre in Ottawa. This Centre in turn informs the office of the Minister of Environment.

4. Containment, Countermeasures and Ecological Damage Assessment

Once at the scene, the OSC should take the following actions:

a) ensure the source of the spill is stopped,
b) initiate procedures for the containment of spilled material,
c) arrange for additional equipment and manpower as required,
d) maintain contact with appropriate government departments to report on progress of cleanup and obtain advice if necessary,
e) arrange for the recovery of the spilled material and the disposal of contaminated material, and
f) ensure that the spill area is entirely cleaned up and rehabilitated.

Although the polluter is responsible for spill response and cleanup, the government provides advice as requested and monitors cleanup activities to ensure an adequate job is done. Only if the polluter does not respond or if the response is inadequate does the government step in and take over cleanup operations. In such a case the responsible government agency appoints an OSC to function as outlined above.

In all incidents, DOE, through the EPS/DOE Response Team is responsible for supplying environmental impact predictions, damage assessment, weather data, water analysis, shoreline surveillance, and other technical information. The team must also provide guidance on the protection of wildlife under federal jurisdiction and ensure that cleanup techniques are both appropriate and environmentally safe. Logistical support in any emergency can also be provided by the department in the form of communications, boat or vehicle transport, and field office facilities. In all incidents the use of dispersants or sinkants in cleanup requires

approval by the EPS duty officer or DOE on-scene coordinator in consultation with other DOE service representatives. (For DOE policy and approval procedures on dispersant use see EPS-1-EE-84-1 "Revised Guidelines on the Use and Acceptability of Oil Spill Dispersants.)

5. Cleanup, Restoration and Disposal

This phase includes the cleanup of shorelines, boats, and marine installations and the restoration of plant and animal populations so far as is practical. It may last for several weeks or months. The OSC is responsible for making operational decisions during this phase in association with the EPS/DOE Response Team. It is considered finished when the REET and other directly affected government and industrial agencies agree that the necessary restoration is complete.

4.3 Post Emergency Analysis and Legal Action

The object of this phase is to take any necessary action which will recover costs of cleanup and serve to decrease occurrences of future environmental emergencies. The OSC and EPS/DOE Response Team members who have specific authority to enforce legislation such as the Canada Shipping Act, Fisheries Act, Migratory Birds Convention Act, Canada Water Act, and the Clean Air Act, should assume from the start that legal investigations will be undertaken. Necessary on-scene evidence should be obtained and handled appropriately according to procedures outlined in Appendix III.

In order to improve methods of managing future emergencies, individual members of the EPS/DOE Response Team submit reports to the team leader. These reports detail actions taken, draw conclusions regarding to incident, and make recommendations for changes in procedures. The OSC and team leader then submit a joint final report to the REEC.

Environmental emergencies may provide opportunities for the scientific observation of effects and collection of data. Initiation of such environmental studies in the responsibility of those scientific bodies with particular interests affected. The EPS/DOE Response Team will cooperate fully to the extent that operation duties are not jeopardized.

APPENDIX I

UNDERSTANDING BETWEEN CANADA AND BRITISH COLUMBIA

CONCERNING

FEDERAL/PROVINCIAL RESPONSIBILITIES

IN OIL AND HAZARDOUS MATERIAL SPILLS

UNDERSTANDING BETWEEN CANADA AND BRITISH COLUMBIA CONCERNING FEDERAL/PROVINCIAL RESPONSIBILITIES IN OIL AND HAZARDOUS MATERIAL SPILLS

1.0 Introduction

1.1 The purpose of this understanding between Environment Canada and the British Columbia Ministry of Environment is to outline our common understanding of the administrative arrangements pertaining to environmental emergencies in British Columbia.

1.2 Both Canada and British Columbia have legislation concerning spills of oil and hazardous materials into the environment. Among other things, these Acts and regulations provide that the governments may investigate such spills, permit the governments to order those responsible for the spill to take remedial actions, and permit direct government remedial action and recovery of costs if necessary.

1.3 This common understanding will facilitate a timely and effective response to spills of oil and hazardous materials, and will optimize the use of resources by both governments by clearly identifying complementary tasks. For the purposes of this understanding Canada's response will be that provided by the Department of Environment except in those cases where responses are called for by other Federal Departments in accordance with already established arrangements or response plans such as the National Marine Emergency Plan or the Joint Canada-United States Marine Pollution Contingency Plan.

2.0 General

2.1 This document is intended to define an agreed division of tasks. It is not intended to prejudice any authority granted by Federal or Provincial statute nor in the case of marine emergencies, to prejudice or supersede established procedures set out in the National Marine Emergency Plan, the Joint Canada-United States Marine Pollution Contingency Plan or the Western Region (CCG) Marine Pollution Contingency Plan. This understanding focuses on Federal and Provincial roles and does not deal with responsibilities of other parties such as municipalities or the polluter.

2.2 This understanding is not intended to and shall not prejudice any Federal or Provincial authority granted by the Constitution of Canada. For greater certainty, this understanding shall not prevent any agency having statutory responsibility from exercising such responsibilities as it deems necessary.

2.3 This understanding shall be reviewed annually.

3.0 Definitions

3.1 "Boundary waters" means those fresh waters which cross or form the Canada-U.S. border, and those marine waters in which spills are dealt with by the Joint Canada-United States Marine Pollution Contingency Plan.

3.2 "Federal facilities" means all Federal lands and works and facilities of the agencies listed in Schedules A and B of the Financial Administration Act, and of the National Harbours Board and Harbour Commissions.

3.3 "Foreshore" means that part of the shore between high tide and low tide marks.

3.4 "Hazardous material" means any solid, liquid or gaseous material, substance or product, which by itself, or in conjunction with other materials because of its presence or proximity, presents a hazard to or adversely affects man or any plant matter, animal or other living thing, or has a potential to do so; but for purposes of this document, does not include radioactive materials or radioactive waste products of any kind which are under the jurisdiction of the Atomic Energy Control Board.

3.5 "Lead Agency" means that agency designated by statute, interagency agreement, Cabinet decision and/or custom and precedent to lead the response to an emergency on behalf of that government.

3.6 "Marine waters" means any salt water and the foreshores contiguous to the coast of British Columbia including river estuaries to the salt water sports fishing boundaries.

3.7 "Municipality" means a village, town, city or district constituted under any Act, and includes a regional district or improvement district.

3.8 "NATES" means National Analysis of Trends in Emergencies System.

3.9 "NEELS" means National Emergency Equipment Locator System.

3.10 "Oil" means oil of any kind or in any form, including but not limited to petroleum, fuel oil, vegetable or similar oils, sludge oil, and oil mixed with wastes, debris, soil or any matter other than dredged spoil.

3.11 "RTC/CTC" means the Railway Transport Committee of the Canadian Transport Commission.

3.12 "Ship" means every description of vessel used in navigation and not propelled by oars, and includes every description of lighter, barge, or like vessel used in navigation in Canada however propelled.

4.0 Lead Agency Responsibilities

4.1 The lead agency is required to undertake the necessary preparatory measures such as contingency planning, training, and appropriate liaison with resource agencies, involved commercial organizations, the public and other interested parties. When an emergency occurs that is within a lead agency's mandate, that agency is responsible for organizing, commanding and funding (subject to clause 4.2) the government response. However, a lead agency is not expected to provide all the resources and expertise required to undertake an emergency response, but rather, those that are not available elsewhere in the total lead-resource agency inventory.

4.2 The lead agency will assume the immediate financial obligations for response activities which it authorizes, in accordance with the established financial procedures. Action for recovery of such expenditures will be the responsibility of the lead agency.

5.0 Response to Spills

5.1 Canada will provide a lead agency responsible for spills of oil and hazardous materials in the following circumstances:

a) Spills from ships. Such spills will be dealt with in accordance with the Western Region (CCG) Marine Pollution Contingency Plan, the National Marine Emergency Plan, or the Joint Canada-United States Marine Pollution Contingency Plan.

b) Spills from Federal facilities, or from any source to such facilities.

c) Spills of unknown (mystery) origin in or to marine waters.

d) Spills from land-based facilities to marine waters.

e) Spills from any origin which threaten to cross the Canada/U.S.A. boundary waters. For marine waters, the Joint Canada/U.S. Marine Contingency Plan determines the response. For other boundary (fresh) waters federal commitments exist under the Boundary Waters Act and the Joint Canada/U.S. Water Quality Agreement.

5.2 British Columbia will provide a lead agency responsible for spills of oil and hazardous materials under all circumstances not specified under paragraphs 5.1 regardless of origin.

5.3 Canada and British Columbia shall each maintain a 24-hour, 7 day/week capacity to receive and disseminate spill reports on an immediate basis and to initiate appropriate responses.

5.4 In any spill situation, both Canada and British Columbia shall cooperate by providing available support services to the designated lead agency as specified in the contingency plan or as requested by the lead agency following the principles set out in Section 4.0.

5.5 In respect of every spill, both Canada and British Columbia shall cooperate by advising each other of actions taken and by consulting each other regarding concerns under the other's jurisdiction.

5.6 British Columbia shall designate specific areas and authorize specific means for the disposal of recovered oil or hazardous materials and associated debris from all spills.

6.0 Legal Action Resulting from Spills of Oil and Hazardous Materials

6.1 Each government will coordinate preliminary investigations for incidents where it provides the lead agency, but without prejudice to the right or responsibility under statute of any agency of Canada or the Province to investigate.

7.0 Contingency Planning

7.1 Canada and British Columbia agree to prepare a Canada/B.C. Oil and Hazardous Materials Spill Contingency Plan and supporting Action Plans, which will elaborate on specific arrangements for implementing this Understanding.

7.2 Canada and British Columbia will be responsible for training of their respective employees but may conduct joint education and training programs to meet the requirements of both governments.

8.0 Prevention

8.1 British Columbia, with the cooperation of Canada, will promote and assist spill prevention and contingency planning for municipalities and industries, including those municipalities and industries which may cause or experience spills into or near marine and fresh waters.

8.2 Canada, with the cooperation of British Columbia, will promote and assist spill prevention and contingency planning for the railways under the jurisdiction of RTC/CTC. British Columbia, with the cooperation of Canada, will promote and assist spill prevention and contingency planning programs for railways under provincial jurisdiction.

8.3 Canada shall develop and maintain NEELS and NATES programs. British Columbia shall support these programs by providing appropriate data.

8.4 Both governments may conduct studies on any aspect of the oil and hazardous material spill problem and shall consult each other about the conduct and results of such studies.

8.5 Canada will continue to conduct research and development of oil and hazardous material spill countermeasures technology, and to make available results of this program to government, industry, and the public.

Signed:

J. B. Seaborn,
Deputy Minister,
Department of the Environment,
Canada

26 June 1981, Victoria, B.C.

B. E. Marr, P. Eng.,
Deputy Minister of Environment,
Province of British Columbia

26 June 1981, Victoria, B.C.

APPENDIX II

AN AGREEMENT

BETWEEN

THE DEPARTMENT OF THE ENVIRONMENT

AND

THE MINISTRY OF TRANSPORT

WITH RESPECT TO

RESPONDING TO THE PROBLEMS OF OIL SPILLS

AND OTHER HAZARDOUS MATERIALS

The purpose of this agreement is to clarify the statutory and accepted responsibilities of the Department of the Environment and the Ministry of Transport and to establish the co-operative and co-ordinated actions that will be undertaken by the two Departments, in respect to the problems of spills of oil and other hazardous materials.

For the Ministry of Transport

Original Signed By

W.A. O'Neil
Deputy Administrator
Canada Marine Transportation Administration

For the Department of the Environment

Original Signed By

L. Edgeworth
Assistant Deputy Minister
Environmental Protection Service

March 25, 1975

.../2

OPERATIONS

(1) M.O.T. is designated as the lead Department for the clean-up of oil spills from ships and will be advised by D.O.E. on environmental matters.

(2) M.O.T. has complete jurisdiction and responsibility with respect to shipping (e.g. ship safety; ship movement procedures, etc.), while D.O.E. has jurisdiction and responsibility for environmental matters relating to oil spills (e.g. use of dispersants; protection of wildlife, fisheries, shorelines etc.). Therefore, in cases where operational decisions made by the On-Scene Commander are considered inappropriate on environmental grounds by the On-Scene D.O.E. representative, the Regional Director, of E.P.S., on behalf of D.O.E. will appeal to the Regional Director, Marine Services, M.O.T. If agreement is not achieved, the matter will be referred for final resolution to the Deputy Administrator, Marine Administration, M.O.T., Ottawa, and the Assistant Deputy Minister, E.P.S., Ottawa, by their respective Regional Directors. It is understood that the decision in question will stand until the appeal is settled.

(3) In the absence of formal agreements, such as the one established for the Great Lakes, D.O.E. may request operational support from M.O.T. in land originated spill incidents, or for mystery spills threatening the environment. Under such circumstances, D.O.E. will designate the On-Scene Commander. The Canada Shipping Act will be used in defining the division between ship spills and shore installation spills in transfer operations.

PREPAREDNESS

(1) Regional contingency plans will be prepared and/or reviewed by both Ministry of Transport and the Department of the Environment. These plans are to be integrated or co-ordinated to avoid conflicts and unnecessary duplication. Such plans are to take into account other contingency plans relevant to them, and in particular, National Emergency Contingency Plans presently under preparation.

(2) The Federal Government will continue to encourage development of provincial and municipal contingency plans within the development of provincial and municipal contingency plans within the provinces, that are consistent with the proposed Federal-Provincial Accords on the Environment.

(3) Consideration will be given to establishing a national contingency fund to pay for the clean-up spills of unknown or unproven origin or where in the case of land spills the responsible party refuses to act. Follow-up litigation would be considered to recover these costs.

(4) M.O.T. and D.O.E. will jointly provide or arrange for suitable training programs for government and industry officials covering techniques, equipment and materials used in oil spill clean-up operations.

TECHNOLOGY DEVELOPMENT

(1) Since D.O.E. has the primary mandate for research and development of spill countermeasure equipment and methodology, D.O.E. and M.O.T. will develop a program through the Advisory Group on Research and Development (AGRAD)* which will enable decisions to be made on the type of materials and equipment that should be purchased and the method of operation that should be applied.

(2) Funding for the Research and Development Program should be substantially increased and provision for joint funding of projects by M.O.T. and D.O.E. should be considered, where applicable (e.g. evaluation of a boom prototype).

(3) Information on the progress of R. & D. projects supported by AGRAD will be disseminated on a regular basis to headquarters and regional offices of the Departments.

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*AGRAD is composed of members from those federal departments and industry groups having direct concern in the problems of spills.

DISCOVERY, REPORTING AND ALERTING

(1) M.O.T. and D.O.E. will exchange information promptly on all accidents that involve spills or threat of spills of oil into the water environment.

(2) M.O.T. and D.O.E. will exhange information and agree on intended response action at the time of an incident so that a co-ordinated response is made.

EFFECTS

(1) The program initiated to develop detailed large scale (1:25,000) maps of biological and physical resources in coastline and other areas, should be scheduled for completion by December, 1976.

(2) The program of laboratory and field testing the effects of dispersant methods of clean-up on the biological resources will be continued by D.O.E. and M.O.T.

HARBOURS

The required action will be taken to have:

(1) Harbour authorities given clear direction as to their level of involvement of oil spill clean-up.

(2) The major harbours equipped with personnel and resources to enable them to provide an effective full-time, waterborne surveillance and response function.

(3) Present harbour by-laws amended so that offenders may be held immediately responsible for the full costs of any action taken by the harbour authorities as a result of an oil spill.

APPENDIX III

PROCEDURES FOR COLLECTING

AND

HANDLING LEGAL EVIDENCE

LEGAL EVIDENCE

Adequate evidence must be gathered to support legal claims laid against a polluter. There are three main categories of evidence which are gathered at the scene of an incident. These are:

a) samples and specimens of pollutants,
b) photographs, and
c) personal notes of investigating officer and statements of witnesses taken at the scene.

Certain procedures should be followed when gathering evidence to ensure its acceptability in a court of law and these are listed below.

1 SAMPLES

1.1 Purpose

Samples are taken for the following purposes:

a) to identify the pollutant by determining toxicity, concentration, and chemical composition,
b) to establish the pollution source, and
c) to establish that environmental damage has occurred.

1.2 Samples Required

The larger the pollution incident the larger is the number of samples required over space and time. The On-Scene Commander and the Regional Environmental Emergency Team will determine the exact sampling locations and schedule. Regardless of the incident size, the following samples should be taken:

a) a sample of the pollutant from the main polluted area,

b) a sample representative of the local unpolluted environment (e.g. upstream or outside a boomed area or of clean beach sand or stones),
c) a sample of the pollutant from its source (e.g. from the ship's hold or tank), and
d) a sample or specimen of any clean up material used and resulting water cleanup material mixture (e.g. dispersants and sorbents).

1.3 Handling Procedures

Care must be taken to ensure that the samples are handled correctly so that they may be used as legal evidence. The main consideration is to ensure and be able to prove that the sample taken was and is representative of what it is claimed to be. Some specific handling procedures are:

a) Use new or demonstrably clean containers.
b) Ensure that container material is non-contaminating (glass is usually the best).
c) Use an air tight, leak-proof and non-contaminating cover and seal.
d) Collect adequate amounts. One quart samples are usually sufficient. If fish toxicity is to be determined, five gallon samples will be required.
e) Label the sample as follows: sample number, date and time taken, brief description of sample, name of sampler and witness, sampler's signature. The label must be permanent, etching on the container is the best method. Ensure that no previous markings are on the container.
f) Have control over the sample at all times. This means that if it is not in your possession, it must be secured in a location accessible only to yourself. Allow as few people as possible to handle the sample and ensure that they are reputable agents who could appear in court as witnesses.

g) Send or take the sample to a reputable lab as soon as possible.

h) Following these procedures if the sample must be mailed.
   - wrap it yourself,
   - initial and seal package as for sample container itself,
   - send via registered mail and retain the receipt,
   - attach to the outside a covering letter which is accessible without breaking the package seal, and
   - advise the lab of the expected arrival time of the samples.

i) Measure indices such as pH and temperature on scene and record them in your notes.

2 PHOTOGRAPHS

2.1 Purpose

Photographs are taken for a visual record of the pollution incident. They are particularly useful in showing the aerial extent of pollution and property damage.

2.2 Recommended Subjects

Photographs should be taken showing:

a) total aerial extent of pollution at timed intervals,
b) pollutant escaping from the source,
c) damaged property,
d) containment and clean-up techniques, and
e) personnel taking samples.

2.3 Handling Procedures

Photographs should be handled with as much care as samples. To facilitate handling, it is recommended that polaroid cameras be used in order to avoid delays and complications in getting the film developed. The pictures should be labelled as for samples.

3 NOTES AND STATEMENTS

3.1 Purpose

Charges may be laid up to two years after an incident occurs. In that length of time an individual can easily lose track of information obtained on scene and kept only in his mind. Personal notes recording activities and conversations on scene should be taken to serve as an aid to memory. These notes may be used in a court of law.

3.2 Methods

When recording events and conversations, the following guidelines should be considered:

a) Take neat, concise notes.
b) Record events in the order in which they take place.
c) Record questions and answers.
d) When interrogating a potential offender, a preliminary set of non-incriminating questions should be asked first. When and if the interrogator decides that charges will be laid, the potential offender must be informed that their strategies may incriminate them and that no further questions need be answered. If this is not done soon enough, the evidence gathered by the interrogator from the potential offender may not be allowed in a court of law.
e) Drawn diagrams are extremely helpful when discussing the incident at a later date.
f) Questions beginning with the words who, what, when, where, why, and how should be asked to aid the interrogator in describing the essentials of any incident.
g) Tape recordings are admissible as evidence providing the witness is warned ahead of time and preferably on tape. Tape recordings, like samples and photographs must be cared for.

h) Written and signed statements by witnesses are valuable as permanent records of their conversations. These may also be used in court as evidence if the witness is unable to appear.

APPENDIX IV

DOE GUIDELINES

ON

OIL DISPERSANTS

DEPARTMENT OF ENVIRONMENT GUIDELINES ON THE USE AND ACCEPTABILITY OF OIL SPILL DISPERSANTS

STANDARD LIST OF OIL SPILL DISPERSANTS	
PRODUCT NAME	MANUFACTURER OR DISTRIBUTOR
ENERSPERSE 1100X ENERSPERSE 700	B.P. Canada Limited, 1245 Sherbrooke St. W., Montreal, Quebec
COREXIT 9527 COREXIT 9527111	Esso Chemicals of Canada, St. Clair Ave. W., Toronto, Ontario
OILSPERSE 43	Diachem Industries Limited, 5289 Regent St., Burnaby, B.C.
DREW DISPERSANT LT	Drew Chemical Limited, Ajax, Ontario
GAMELIN 2000	

The use of oil spill dispersants requires in all cases the approval of the Department of Environment. An EPS document entitled "Revised Guidelines on the Use and Acceptability of Oil Spill Dispersants" describes the EPS concern with this topic. In addition, EPS has tested the available dispersants and has found only a few to be acceptable under the constraints outlined above. Unapproved use of dispersants, whether among those acceptable or not, may result in prosecution.

As specified in the guidelines, acceptable dispersants must contain no highly toxic compounds, must satisfy toxicity and biodegradability specifications, must be reasonably effective under conditions of use and must be applied in a recommended manner. Procedures for obtaining approval of dispersants are presented in the guidelines along with labelling requirements and recommended methods for determining toxicity, biodegradability and effectiveness. These guidelines have recently been revised to include the most recent developments in the field of dispersant technology.

The following is a summary of information contained in the guidelines. (Published copies of the DOE guidelines may be obtained from the EPS Pacific Region Office at Kapilano 100, Park Royal, West Vancouver).

1 GENERAL REQUIREMENTS

a) Except in the cases of extreme emergency as noted in 3 (a) below, chemical dispersants shall be used only with the express permission of EPS. Chemical dispersants can then be used under competent direction and in accordance with recommended techniques.

b) The On-Scene Commander together with the Chairman of REET (Senior DOE Representative) in consultation with the appropriate agencies, will determine the priorities of protection in each spill incident; the use of dispersants is subject to these priorities.

c) Only those dispersants that satisfy the Acceptability Criteria as set forth in the Environment Canada guidelines shall be used.

d) All uses of chemical dispersants must be formally documented, as outlined in the Environment Canada guidelines.

2 RESTRICTIONS ON THE USE OF DISPERSANTS

The use of dispersants will usually be avoided:

a) in any waters containing major fish populations or large breeding or migration areas for species of fish or other aquatic life which may be damaged or reduced in market value by exposure to dispersants and/or dispersed oil,

b) in any waters where such use may significantly affect surface water supplies,

c) where eventual dilution of the dispersed oil is limited either because the water is quiescent or because the water volume is small relative to the spill size,

d) on oils that have been deposited on sandy beaches or on shorelines with important flora and fauna, and

e) under conditions where the dispersant is ineffective as determined by the effectiveness tests described in these guidelines or in the judgement of the senior DOE representative.

3 POSSIBLE CONDITIONS FOR THE USE OF DISPERSANTS

Approved dispersants may be considered for use:

a) when their use will prevent or reduce hazard to human life or limb or substantial hazard of fire to property. Caution is advised in the case of spills of volatile oils where both the application of the dispersant and the subsequent agitation may increase fire hazards.

Furthermore, it should be realized that in spills of volatile oils (e.g. No. 1 to No. 4 fuel oils), agitation by winds, waves, and currents may rapidly disperse the oil naturally).

b) when their use will prevent or substantially reduce hazards to a significant population of waterfowl, or

c) when their use will prevent or substantially reduce significant damage to valuable property except in conditions:

- where such use is restricted as noted in 2 above and
- where other methods for controlling and removing the oil are reasonably effective.

3.1 Reports of Dispersant Use

Environment Canada considers it essential that each dispersant use be well documented and expects a detailed report from the On-Scene-Commander (or the responsible personnel in charge) on each instance of dispersant application. Such reports may assist later in surveys of spill areas and will contribute to knowledge of effectiveness and possible ecological effects under various field conditions.

The reports need not be made in a specific form but should contain as much information as possible and should generally follow the check list given here.

3.2 Check List of Required Information

a) Details of the Spill

- location
- date and time of spill
- source and type of oil

- estimated amount, slick area and thickness
- appearance of the oil
- "age" of the oil

b) Environmental Conditions

- air and water temperature
- wind, waves, and currents
- water depth
- shoreline type and degree of exposure

c) Dispersant Application

- reason for dispersant use
- type of dispersant
- amount used/application rate
- application and mixing methods (equipment, manpower, time)
- date and time application commenced and ceased

d) Observations

- estimated amount of oil left on the water surface
- observations on the dispersed oil (spreading, disappearance, resurfacing etc.)
- any observations on possible effects of oil (waterfowl, fish, shorelines, vegetation)
- any observations hours/days after the application

Reports should be addressed to:

Emergency Coordinator,
Environmental Emergency Group,
Kapilano 100 - Park Royal,
West Vancouver, B.C. V7T 1A2
(604) 666-6100

APPENDIX V

CANADIAN COAST GUARD NATIONAL MARINE EMERGENCY PLAN

SECTION XIV

SPILLS OF OIL AND NOXIOUS MATERIALS INTO WATERS OF CANADIAN INTEREST

SECTION XIV SPILLS OF OIL AND NOXIOUS MATERIALS INTO WATERS OF CANADIAN INTEREST

GENERAL

1) Spills, or the threat of spills, usually form part of any marine emergency. In addition, the spill generally represents the main threat to the public interest.

2) Both federal and provincial governments have established departments and agencies specifically tasked to protect the environment. Their activities are covered by legislation, regulation and several levels of agreement. In addition, industry has established organizations for the conduct of cleanup operations. Finally, the pollutor also has statutory responsibilities under the Canada Shipping Act, Arctic Water Pollution Prevention Act and other Acts.

3) For any spill, therefore, the lead agency may call on a range of public and private organizations to provide resources and expertise and/or, carry out their obligations.

4. Allocation of Lead Agency Responsibility

By law the casualty is primarily responsible for cleaning up its own spill and/or reimbursing the government agency for all its costs. However, the lead agency has the responsibility to protect the public interest by establishing a monitoring or operational response, as appropriate. By legislation, agreement, custom and precedent, lead agency responsibility is allocated as follows:

SPILL SOURCE	LEAD AGENCY	CCG RESPONSIBILITY
Marine traffic in waters of Canadian interest and public harbours	CCG	Lead Agency
Any source into the Great Lakes	CCG	Lead Agency
Marine traffic in NHB and Commission Harbours	Harbour Commissions, NHB	Resource
Marine traffic in St. Lawrence Seaway Authority waters	SLSA	Resource
Offshore mooring points	1. CCG (if spill from ship or ship's equipment) 2. Department of the Environment and the provinces if spill from the buoy, its underwater pipeline or other equipment supplied from shore.	Lead Agency Resource
Land based	DOE and the provinces	Resource
Unknown	DOE	Resource
*Offshore mineral exploration or production platform	1. Energy, Mines and Resources, south of Line of Administrative Convenience (LOAC) Indian Affairs and Northern Development of north LOAC	Resource

*EMR and DIAND have, in addition, responsibility for operations on the rig and the seabed. Coast Guard is responsible for waterborne and shoreline clean-up.

On the Great Lakes, the Canadian Coast Guard has lead agency responsibility, in accordance with the Great Lakes Water Quality Agreement. The Ontario Ministry of Natural Resources is responsible for operations on the rig and the lake bed.

5. Operational Liaison with the Department of Fisheries and the Environment and Provincial Environmental Agencies when the Canadian Coast Guard is Lead Agency

The long term objective of Government is to complete a framework of agreements which will clarify the responsibilities of the different federal, provincial, and local agencies. Additional agreements have been or will be arranged with neighboring countries. This framework will provide the authority on which will be based a comprehensive national pollution plan, of which the Canadian Coast Guard Plan will form part.

At present, federal and provincial environmental agencies have statutory repsonsibilities for the protection of fisheries, wildlife and other natural resources. In matters under their jurisdiction, and in such related areas as the use of dispersants, they are responsible for advising the OSC and their advice must be given appropriate weight. Specifically CCG will:

a) include the names of the relevant environmental officers in its Call Lists, and.
b) invite environmental officers to staff positions on its Command Team, where required.

6. Canadian Coast Guard Response as a Resource Agency

CCG will:

a) ensure that CCG resources are properly and effectively used,
b) staff positions on the lead agency's Command Team if requested to do so,
c) operate CCG's specialized equipment, and
d) record CCG's costs for later recovery.

7. Operational Liaison with the Pollutor (Casualty) and Beneficial Parties

In working with the pollutor, the OSC should be guided by the following factors:

a) the pollutor is financially responsible for both the impact of a spill and the cleanup, and, if in doubt, should be made fully aware of this,

b) the pollutor may be willing and able to conduct an effective cleanup, in which case, the lead agency will, therefore, only have to monitor the operation. This should be ascertained immediately;

c) the pollutor may be a member of an industry cleanup co-operative with access to its resources,

d) the pollutor may have special knowledge of the casualty,

e) the relationship may influence post-operative claims and legal actions, and

f) the OSC may have to issue instructions to the casualty. He must ensure that they are received by a representative having sufficient authority to carry them out.

8. Operational Liaison with Industries and Organizations Involved with the Production, Storage, Transportation, and/or Utilization of Oil and Other Toxic Substances

Such organizations, and the local co-ops which they have established, can be considered as sources of:

a) expertise concerning the spilled material,

b) facilities for the handling, transportation, and storage of the material, and

c) pollution cleanup equipment.

Canadian Coast Guard emergency officers, therefore will:

a) be familiar with industry plans, working arrangements, etc,

b) place the names of designated industry officials on their Call Lists, and

c) invite such officials to staff positions on the Command Teams where appropriate.

9. Joint Canada-United States Marine Pollution Contingency Plan

Should this plan be invoked, it will supercede the National Plan as well as regional and local plans.

10. Operational Considerations

The general concepts for establishing command structures, communications, public relations, emergency funding, etc., set out in the NMEP will be followed, tailored to the requirements of the cleanup operation.

11. Reporting

a) The warning Sitrep should include the nature and source of the pollutant, its owner and carrier, their proposed response, and other relevant data. It is recognized that this data may not be readily available initially, but it should be forwarded as the situation clarifies;

b) Once the Command Team is established, the names and positions of its officers should be included in the next Sitrep.

APPENDIX VI

EMERGENCY CONTACTS

FOR

TRANSBOUNDARY SPILLS

TRANSBOUNDARY SPILLS: EMERGENCY CONTACTS FOR REPORTING SPILLS LIKELY TO CROSS OVER INTERNATIONAL OR INTERPROVINCIAL BOUNDARIES

(Extracted from Environmental Emergency Contact List)

ALBERTA
Regional Environmental Emergency Coordinator
(403) 468-8014 (24 hrs.)

YUKON
Coordinator, Operations and Protection
(403) 667-7244 (24 hrs.)

STATE OF ALASKA
Environmental Protection Agency
(907) 271-5083

U.S. Coast Guard
(907) 586-7340 (24 hrs.)

STATE OF WASHINGTON
Environmental Protection Agency
(206) 442-1295

U.S. Coast Guard
(206) 442-5886 (24 hrs.)

STATE OF IDAHO
Emergency Services Coordinator
(208) 334-2241 (24 hrs.)

STATE OF MONTANA
Disaster and Emergency Services Division
(406) 444-6911 (24 hrs.)

APPENDIX VII

ENVIRONMENTAL PROTECTION SERVICE

RESPONSE PLAN

ENVIRONMENTAL PROTECTION SERVICE RESPONSE PLAN

1 ENVIRONMENTAL PROTECTION SERVICE

In the event of a major spill emergency, EPS is required to provide specific services described in Appendix I. In order to meet these responsibilities, it is necessary to augment full time Environmental Emergency Branch (EEB) staff with those from other EPS units. Thus, EPS developed the EPS Response Team to provide services and assistance in all areas of its designated responsibility during environmental emergencies. The response team can be expanded to a departmental level, becoming the DOE Response Team for emergency situations that require the expertise of other departmental personnel from AES, IWD, CFS, or CWS. The structure of the team remains unchanged as do the reporting arrangements. Provision can be made to include DFO and provincial environmental personnel on this response team.

The level of response by DOE to emergency spill incidents depends upon the extent, location, and departmental jurisdiction of the reported spill. The following job descriptions detail specific responsibilities assigned to individuals in EPS.

2 JOB DESCRIPTIONS FOR EPS/DOE RESPONSE TEAM

2.1 On-Scene Commander, Deputy On-Scene Commander and Regional Environmental Emergency Coordinator

Although these three positions are not nominally part of the EPS/DOE Response Team, their duties and responsibilities affect the manner in which the team operates. The duties of the OSC are detailed previously in section 3.1. DOE may or may not appoint on OSC or deputy OSC.

The REEC is a full time EPS position capable of providing leadership and coordination during any emergency situation. In cases where the

REEC is appointed the OSC, EPS also appoints an alternate or designated REEC. The duties of the REEC in an emergency are to:

a) act as liason between the REET and the OSC on environmental concerns,
b) coordinate the actions of the EPS/DOE Response Team,
c) assume responsibility for the overall operations of the Operations Centre,
d) advise and inform senior regional and headquarters staff in EPS and DOE as the situation dictates, and
e) coordinate the response to all applications for the use of chemical treating agents.

2.2 Legal Support Staff

Some support staff are responsible for conducting legal investigations during and after spill incidents. Their duties include taking legal samples, collecting real evidence, and interviewing witnesses for legal statements.

2.3 Cleanup Coordinator

The cleanup coordinator oversees the activities of the contractor(s) to ensure that areas designated for cleanup are efficiently and adequately dealt with. The coordinator may also be required to manage cleanup in place of a contractor and to act as a supervisor in charge of directing labour assigned to various areas of the spill. He is also responsible for collating expenditures incurred by DOE during spill countermeasure operations.

2.4 Environmental Support Staff

Other EPS or DOE staff are responsible for the design and conduct of environmental assessment studies at the spill scene. Such studies are intended more to evaluate methods of spill containment and cleanup than to identify specific biological impacts. This group also advises the OSC on cleanup procedures on request.

2.5 Logistics Support Staff

Logistics support staff are responsible for establishing and maintaining communication links with other government agencies and DOE personnel in the field. This is carried out through the Communication Centre by radio, telephone, and personal contact. The group also purchases and distributes materials and equipment to assist in cleanup, environmental assessment, and legal investigation. When required, they coordinate the photographing and filming of the spill and the countermeasure activities.

2.6 Information Support Staff

Information support staff assist the OSC in alerting government agencies and the public of major spill incidents. They act as a communications link between the EPS Regional Office, the OSC, and field members of the EPS/DOE Response Team. They provide information to other federal and provincial government departments, the public, the media, and DOE Headquarters as countermeasures proceed.

2.7 Advice and Support Staff

Advice and support staff provide on-scene technical advice during spill incidents, cleanup operations, and follow-up activities. A Technical Investigations Coordinator and support staff are responsible for obtaining data and providing for evaluation and analysis of equipment and procedures.

3 EPS/DOE PACIFIC - RESPONSE TEAM - 666-6100 (24 hours)

3.1 Assignments for Major Environmental Emergencies

1. Senior EPS Management	B. Heskin
	K. Kupka
	M. Ito

2. On-Scene Commander	S. Pond, EEB
3. Deputy On-Scene Commander(s)	K. Hebron, EEB
	F. Beech, EEB
- Backup	F. Claggett
	R. Kussat
4. Legal Support Staff Coordinators	Lee Harding
	Gord Thompson
- Backups	K. Wile
	S. Liu
	P. Kluckner
5. Clean-up Coordinator	K. Hebron, EEB
	J. Straforelli
- Backup	D. Brothers
	H. Nelson
	D. Wilson
6. Environmental Support Staff	R. Kussat
	J. Millen
	E. Wituschek
	M. Pomeroy
	D. Goyette
	G. Derkson
	B. Kay
	B. Kelso
	R. Sherwood
	A. Colodey

7. Logistics Support Staff	
Logistics & Communications	M. Jones
	B. Kooi
- Backup	G. Bradshaw
	D. Walker
Financial/Purchasing/Travel	R. Stevens
	A. Ho
	S. Doss
	M. Gautier
	K. Layton
8. Information Support Staff	S. Ritchie
	C. McGill
- Backup	N. Holman
	P. Wakeman
9. Advice and Support Staff	R. Watts
	K. Ferguson
	D. Ellis
	D. Wilson
	E. Wituschek
	D. Poon
	G. Tanner
	B. Shepherd
	P. Kluckner
10. Safety Coordinator and Advisors	J. Simpson
	D. Yoshioka
	B. Kooi

Environment Canada | Environnement Canada

Atmospheric Environment Service | Service de l'environnement atmosphérique

700 - 1200 West 73rd Avenue
Vancouver, B.C. V6P 6H9

Your file Votre référence

Our file Notre référence

1240-1 (A/PAEW)

July 19, 1985

Regional Director
Environmental Protection Service
Kapilano 100, Park Royal
West Vancouver, B.C.
V7T 1A2

Dear Sir:

The Atmospheric Environment Service, Pacific Region, has prepared an Environmental Emergency Plan to ensure that appropriate actions are taken in the event of an environmental emergency. Please find attached a copy of this plan for your information.

If you should have any comments, suggestions or questions regarding the plan, please do not hesitate to contact me at the above address at (604) 666-6620.

Yours sincerely,

for F.J. Herfst
Chief, Weather Services
Pacific Region

attach.

Canada

1240-1 (PAEW)

CONTINGENCY PLAN

for

ENVIRONMENTAL EMERGENCIES

ATMOSPHERIC ENVIRONMENT SERVICE

Pacific Region

July 15, 1985

PACIFIC REGION ENVIRONMENTAL EMERGENCY PLAN - JULY 15, 1985

DISTRIBUTION EXTERNAL TO A.E.S.

1. Regional Director (B.C.), Emergency Planning Canada*
2. Regional Director, Fisheries and Oceans Canada;
   Attention: Emergency Planning Officer
3. Regional Administrator, Canadian Coast Guard;
   Attention: Regional Manager,
   Emergency Operations
4. Regional Director, Environmental Protection Service;
   Attention: Environmental Emergency *
   Coordinator
5. Director General, Institute of Ocean Sciences
6. Director, Provincial Emergency Program
7. Director, Waste Management Branch (B.C.)
8. Seattle Ocean Services Unit (NOAA)
9. Regional Administrator, Canadian Air Transportation
   Administration, Pacific Region
10. MIC, Seattle Forecast Office, NWS
11. Regional Director, Western Region, NWS

With appendices for information only.

A.E.S. DISTRIBUTION

PACIFIC REGION:

Regional Heaquarters:

PAEA
PAEM
PAEO
PAES
PAEW
PAEWR

Weather Offices:

Castlegar
Fort Nelson
Fort St. John
Kamloops
Kelowna
Penticton
Port Hardy
Prince George
Terrace
Vancouver
Victoria

Weather Stations:

Cape St. James
Dease Lake
Hope
Lytton
Port Alberni
Revelstoke
Vancouver Int'l.
Vancouver Harbour
Vernon
Victoria Gonzales Heights

Upper Air Stations:

Fort Nelson
Port Hardy
Prince George
Vernon

OTHER A.E.S.:

AFDG
AFSD
AFDH
AFDA
APDG
APEC
APCO
ARQD

OAP

CMCD
DMETOC

OAED
WAED
CAED
QAED
MAED

1. AUTHORITY

Environment Canada is the agency of the federal government with the prime responsibility to ensure that appropriate reporting, surveillance and response mechanisms are available to deal with environmental emergencies and to ensure that counter measures are effective. The Environmental Protection Service (EPS) discharges this responsibility.

In marine disasters Transport Canada is the lead agency in directing emergency operations under authority of the Canada Shipping Act.

2. DEFINITIONS

Environmental Emergency

For the purposes of this plan an environmental emergency is an emergency caused by the unplanned introduction into the air, water, or land environment of a pollutant in sufficient quantity to pose a threat to life, property or the quality of the environment.

On Scene Commander (OSC)

The On Scene Commander is the person making the operational decisions at the scene of the emergency. The OSC may be from EPS, but may also be from the RCMP, local police, private industry, etc. In the case of a marine emergency a Coast Guard Officer will likely be the OSC.

3. REPORTING ENVIRONMENTAL EMERGENCIES

The number for reporting environmental emergencies is 666-6100 (Vancouver number). This is the 24 hour emergency number at the Environmental Protection Service.

4. A.E.S. ROLE

The A.E.S. role in an environmental emergency is to provide meteorological information, including forecasts and back-up communications if required:

4.1 setting up special observing sites; refer to Appendix D Guidelines;

4.2 providing site specific meteorological forecasts;

4.3 providing scientific assistance in areas where expertise exists in A.E.S. or identifying the centres or individuals outside of A.E.S. having special expertise;

4.4 providing on site support at an "advance base" refer to Appendix D Guidelines.

5. PROCEDURES FOR FIELD STAFF

NOTE: KEEP A LOG OF ALL EVENTS

The following guidelines regarding requests for special meteorological support should be followed.

5.1 Staff receiving an outside report of an environmental emergency should obtain as much of the following information (where applicable) as possible.

1) nature of emergency

2) caller's name, location, and affiliation (if relevant)

3) time emergency first detected

4) probable source of pollutant and quantity involved

5) probable time of first occurrence

6) type of pollutant

7) probable volume if a spill

8) area affected

9) movement of pollutant

10) weather, water, geographic conditions

11) action being taken to terminate or confine the pollution

12) identify any other personnel at scene

13) identify any special services required

5.2 A two-way communications link should be established with the caller immediately, i.e., ask him "How can I get back to you?" This is important if additional information, revisions, etc. are to be relayed to the caller without delay.

5.3 Requests for emergency meteorological support which go beyond that normally available at your A.E.S. office should be referred to:

Shift Supervisor, Pacific Weather Centre 666-2728
666-2672

5.4 The provision of site specific forecasts should be coordinated with the Shift Supervisor, Pacific Weather Centre.

5.5 The setting up of special observing sites must be coordinated with the Emergency Coordinator.

5.6 The provision of professional on site support will be authorized by the Emergency Coordinator. No A.E.S. personnel will be sent to the scene of an environmental emergency without the knowlege and approval of the On Scene Commander.

5.7 Fort St. John and Fort Nelson to contact Alberta Weather Centre for emergency meteorological support beyond that locally available:

Shift Supervisor, Alberta Weather Centre 403-437-1885

6. PROVISION OF INFORMATION TO THE MEDIA AND THE PUBLIC

6.1 Weather service outlets and forecast centres must confine their statement to routine weather information. Under no circumstances should they make statements on the intensity of radiation or the effects, or on the concentration of chemicals or the effects. Persistent questioners regarding the effects of atmospheric pollutants should be referred to the agency providing the On Scene Commander if this is known, or to the AES Emergency Coordinator.

APPENDIX A

LIST OF ATMOSPHERIC ENVIRONMENT SERVICE SITES IN PACIFIC REGION WHERE HAND-HELD ANEMOMETERS, COMPASSES AND SLING PSYCHROMETERS ARE AVAILABLE FOR EMERGENCY OBSERVATIONS

Pacific Weather Centre, Vancouver, Shift Supervisor	24 hours per day	666-2728 or 666-2672
Victoria Weather Office	24 hours per day	656-3377 or 656-3131
Port Hardy Weather Office	0700-1700 local	949-6559
	OIC - Roy Koch, home #	949-6498
Terrace Weather Office	0710-1710 local	635-3224
	OIC - George Blakey, home #	635-6484
Prince George Weather Office	0400-2315 local	963-7737 or 963-7552
	OIC - Earl Zilkie, home #	963-7182
Kamloops Weather Office	0700-1700 local	376-0727 or 376-2160
	OIC - Bryan Jensen, home #	579-8773
Kelowna Weather Office	0445-0015 local	765-3792 or 765-6598
	OIC - Ralph Janes, home #	766-2129
Castlegar Weather Office	0630-1630 local	365-3607 or 365-3131
	OIC - Tom Willson, home #	365-6340
Fort St. John Weather Office	0715-1715 local	785-4304 or 785-6322
	OIC - Randy McCumsey, home #	787-9886
Revelstoke Weather Station	0400-1700 local, winter 0500-1800 local, summer	837-4164
	OIC - Jules Mohr, home #	837-3557
Lytton Weather Station	0400-2200 local, winter 0500-2300 local, summer	455-2236
	OIC - Gary Myers, home #	867-8801 (Boston Bar)
Hope Weather Station	0400-2200 local, winter 0500-2300 local, summer	869-5765
	OIC - Peter Willms, home #	941-7808
Port Alberni Weather Station	0700-1700 local	724-1333
	OIC - Stu Wood, home #	723-8408

Note: Requests for special observations should be coordinated with the Emergency Coordinator.

OPERATING INSTRUCTIONS

SILVA RANGER COMPASS

A. To determine direction of wind

1. Wind direction is measured in degrees from a line drawn from the North Pole to the observer. This line has a direction of 360 in degrees. In using a compass to determine the position of the North Pole an allowance must be made for the magnetic influence of the earth. This is accomplished by presetting the compass so that the needle point is about 20 degrees east of the North Pole.

2. Raise compass lid and fold out flat so that its black mirror top is pointing away from the observer. Hold the compass level and point the mirror top towards the wind. The general direction of the wind can be found by keeping the wind full on the face for a minute.

3. With compass held steady, away from any effects of metal and pointing into the wind, rotate black compass ring until the compass needle matches with the arrow outline in the base of the compass; i.e.the luminous end of the compass needle rests between the two luminous dots.

4. Read direction to the nearest 10 degrees, e.g. 240, 080, etc. from the black compass ring against the small luminous mark on the mirror side of the compass. This will give the wind direction. (Note wind direction is the direction from which the wind is blowing).

5. Record the wind direction against the time of the observation and the location on the observation record sheet.

HAND HELD ANEMOMETER

B. To measure wind speed

1. Stand with face to the wind and hold anemometer, in the vertical position, at arms length to one side. The anemometer cups should be approximately 6 feet above the ground.

2. Observe the movement of the wind speed pointer for a full minute and calculate the mean reading of the wind speed for the time period. Note any high reading indicating the strength of a wind gust.

3. Record the wind speed and any gusts on the observation record sheet noting location and time.

PROCEDURE IF TEMPERATURE, DEW POINT AND RELATIVE HUMIDITY REQUESTED

SLING PSYCHROMETER

C. To measure dry and wet bulb temperatures

1. Preparation

A standard muslin sleeve is placed over the bulb of the wet bulb thermometer. This should be the thermometer nearest the handle. Moisten the bulb (muslin sleeve) immediately before starting an observation by applying distilled water from a plastic squeeze bottle. (Extra care must be taken when temperatures are below freezing to ensure that the wet bulb has a thin coating of ice. At temperatures below -12 C, the muslin sleeve should be removed and the ice bulb coated with ice using a camel hair brush.)

2. Taking Temperature Readings

Firmly grasp the handle and take up a position where the psychrometer may be whirled at least four times per second. Whirling should be continued for as long as is necessary to obtain a maximum wet bulb depression, i.e., the largest difference between the dry bulb and the wet bulb thermometer readings. Care should be taken not to stand too close to obstructions, and that the whirling psychrometer is held up-wind from the observer's body.

3. Reading

The whirling of the psychrometer should be stopped smoothly and both thermometers read as quickly as possible to the nearest tenth of a degree.

4. Recording

Enter the wet bulb and dry bulb thermometer readings in the appropriate place on the record sheet against the location and time.

5. Calculation of Dew Point and Relative Humidity

Use the appropriate psychrometer table for ventilated thermometers and location elevation to calculate the dew point and relative humidity. These are:

Book 1 - Ventilated psychrometer at elevation less than 305 metres (1000 ft.).

Book 2 - Ventilated psychrometer at elevation between 305 and 760 metres (1000 and 2500 ft.).

Book 3 - Ventilated psychrometer at elevations more than 760 metres (2500 ft.).

Enter these values on the observation sheet.

OBSERVATION

Record Sheet

Location	Time	Wind			Temperature		Dew Point	Relative Humidity	Observer
		Dir.	Speed	Gust	Dry Bulb	Wet Bulb			

APPENDIX B

CHECKLIST FOR EMERGENCY CO-ORDINATOR

NOTE: The following is not an exhaustive list of contacts or activities that will cover every situation. Rather it is a brief resumé that will, in most cases, ensure that essential contacts and resources are not overlooked.

NOTE: An exhaustive list of regional federal, provincial, private contacts is available at the Pacific Weather Centre. (White plastic binder with red lettering.)

1. In every case - maintain a diary of calls and actions taken, including names and times. Ensure costs are monitored.

2. In every case- establish immediate contact with the Environmental Protection Service, and/or Emergency Planning Canada, the Regional Director of A.E.S., and the Pacific Weather Centre.

3. In every case - contact either directly or through arrangements with EPS, depending on the circumstances, the appropriate provincial authorities.

4. If necessary - determine which agency is the lead agency, and who is the On Scene Commander, and establish contact.

5. If necessary - arrange for special services to be provided by AES.

6. If necessary - mobilize the necessary resources to provide these special services.

7. If necessary - determine who is the official government spokesman, and inform operational staff so that they may refer requests for non-meteoroogical information to him.

8. Cross-Regional Emergency - contact the appropriate AES Region and/or their Weather Centre (available 24 hours per day); arrange for the necessary co-operation and co-ordination. Alberta Weather Centre: 403-437-1885. Arctic Weather Centre 403-437-1540.

9. Cross-Boundary (USA-Canada) Emergency: - contact appropriate NWS forecast offices - this is usually best done by the Weather Centre; arrange for any necessary co-operation and co-ordination regarding relevant forecasts.

10. Consider and Activate Sources of Assistance

Although the resources and expertise required will vary with the situation, the following is a list of resources that can provide support in an environmental emergency:

10.1 Oil Spill

Reporting and coordinating: EPS 666-6100 (24 hours)

Technical Advice:

Al Ages	IOS		604-656-8341
S. Tabata	IOS		604-656-8273
C. Jarvis	AES	Office:	416-667-4811
		Home:	416-493-5115
S. Venkatesh	AES	Office:	416-667-4849
		Home:	416-669-4848

Mobile Marine Radio:

E.D. Kirkpatrick CCG	604-984-3875

10.2 Mobile Observing Services/Personnel

Minisonde:

Scientific Services Division		
Ron McLaren	Office:	604-666-6432
	Home:	604-946-1805

Portable Pibal:

Prince George Weather Office	Office:	604-963-7737
O.I.C. - Earl Zilkie	or	604-963-7552
	Home:	604-963-7182

10.3 Waves and Sea State

METOC Centre Esquimalt	604-380-2958
	604-380-2957

10.4 Dispersion of Contaminants

Scientific Services Division - Vancouver		
Don Faulkner	Office:	604-666-2184
	Home:	604-943-5049
Chief, Scientific Services	Office:	604-666-6699

ARQD, Air Quality Branch - Toronto

A.D. Christie	AES Office:	416-667-4981
	Home:	416-884-1170
J. Young	AES Office:	416-667-4937
	Home:	416-483-1106

10.5 CMC Parcel Trajectory Model

- Available at CMC by contacting Shift Supervisor:

  514-683-8554
  514-683-8557

- Output as a bulletin on AES circuits.

- Expert M.P. Olson (ARQT).

- A forecast trajectory model using the forecast wind fields every 3 to 48 hours; hence only as good as the wind fields.

- Can do any layer in the vertical.

APPENDIX C

PROCEDURES FOR ENVIRONMENTAL EMERGENCIES FOR SHIFT SUPERVISORS PACIFIC WEATHER CENTRE

1. If the incoming call to the Pacific Weather Centre is a reported emergency not from the Environmental Protection Service Emergency Coordinator:

   a) Record NAME OF CALLER, LOCATION, TYPE AND TIME OF EMERGENCY, and his/her PHONE NUMBER where he/she can be reached.

   b) Phone Environmental Emergency Coordinator of EPS at 666-6100. Take down his/her name and give him/her the information that was received from the caller including caller's phone number. Give hime/her your phone number.

   c) Wait for instructions and request for information from the Environmental Emergency Coordinator.

   d) Assess requests and take appropriate actions. These may or must include:

      1. Assigning normal duties of Shift Supervisor position to other meteorologists.

      2. Phone Chief of Weather Services (AES Emergency Coordinator). Fred Herfst 666-6620 Work
         943-1709 Home

         If no reply phone Officer-in-Charge, Pacific Weather Centre. Gary Wells 666-0523 Work
         536-0455 Home

         If no reply phone Regional Director.
         Dr. Kirk Dawson 666-6399 Work
         596-4236 Home

         If no reply YOU are the Regional Director - take action and make appropriate decisions. USE CHECKLIST APPENDIX B.

   e) Document all actions taken and information that was given out. This is a MUST.

   f) Give report of incident to OIC of Pacific Weather Centre. This is a MUST.

2. If incoming call to the Pacific Weather Centre is from the Emergency Coordinator of the Environmental Protection Service:

   a) Take his/her name and the phone number where he/she can be reached. Ensure that it is the Coordinator.

   b) Follow procedures as outlined in 1.c) to 1.f).

EMERGENCY PROCEDURE REPORT FORM

NAME OF CALLER: _____

AFFILIATION: _____

PHONE NO. CALLER CAN BE REACHED: _____

TYPE OF EMERGENCY: _____

LOCATION OF EMERGENCY: _____

TIME OF EMERGENCY: _____

ENVIRONMENTAL EMERGENCY COORDINATOR

NAME: _____

PHONE NO. HE/SHE CAN BE REACHED: _____

TIME OF CALL: _____

REQUESTED INFORMATION: _____

_____

_____

_____

INFORMATION GIVEN OUT: _____

_____

_____

_____

ACTIONS TAKEN: _____

_____

_____

_____

APPENDIX D

GUIDELINES FOR THE DEPLOYMENT OF ATMOSPHERIC ENVIRONMENT SERVICE (AES) STAFF TO THE SCENE OF AN EMERGENCY

1. The AES must ensure that its knowledge and expertise is used in the most effective manner in support of the management of emergencies. The AES must also ensure that its employees covered by this guideline have received adequate emergency response training and are familiar with the more detailed written contingency plans covering AES response to emergencies.

2. AES employees shall not be sent to the site of an emergency unless requested to do so by the lead agency or On-Scene-Commander, or possibly through EPS or its provincial/territorial equivalent. This does not preclude AES from strongly suggesting its services are required.

3. (a) Under NO circumstances should AES personnel be asked to enter an area which is known to be or likely to become hazardous to life or health.

   (b) The responsibility for the determination of safe/unsafe areas lies entirely with the On-Scene-Commander or his designated representative. The On-Scene-Commander, or his designated representative, shall also control the movement and location of all supporting services for the emergency operation.

   (c) An AES employee has the right to refuse or to withdraw from work assignments if he/she believes that the duties pose a danger to his/her safety or health.

4. The decision to deploy AES personnel to the scene of an emergency shall be made by a Director or the designated AES coordinator for emergencies in the Region/Branch. He/she shall inform the On-Scene-Commander that AES personnel are not to be sent to hazardous, or likely to become hazardous, locations. This shall be raised by the relocated AES staff when they report to the On-Scene-Commander to ensure that both parties have the same clear understanding of their responsibilities and relationships.

5. AES employees sent to a "safe" location near the accident shall be instructed to abandon the site and, if necessary, their equipment if the situation changes or appears likely to change in a way that might put them at risk.

6. For additional safety, employees asked to provide support near the site of an emergency will be provided with and trained by AES, in the use and care of sufficient equipment such as escape packs and vehicles, for their safe exit from the site in case of need for unexpected, sudden evacuation.

APPENDIX IX

CONTINGENCY PLAN

FOR

ENVIRONMENTAL EMERGENCIES

PACIFIC GEOSCIENCE CENTRE

Provision of Geological Services for Environmental Emergencies on the West Coast*

1. The role of the Pacific Geoscience Centre, Institute of Ocean Sciences, is to provide the following expertise in the event of an oil spill:

   A. Prior to shoreline contamination:

      i. Communications will be maintained to ensure a continual update on the movements of the spill.

      ii. All existing reports, map, vertical air photos, oblique photos and videotapes of the threatened coastal areas will be consulted. All efforts will be made to fly over the coast and, depending on the size of the spill, time available and coastal characteristics, a sediment sampling program may be instigated. All information will be used to advise the on-scene-commander on (a) the probable routes the oil will take in the nearshore zone, (b) the relative sensitivity of the coastal environments and (c) protective measures.

   B. After shoreline contamination:

      i. All contaminated shorelines will be visited and mapped to provide immediate advice on cleanup procedures taking into account (a) the relative probable longevity of oil in the coastal environments, (b) the probability of recontamination, and (c) the possibility of environmental damage by cleanup techniques.

---

*This is a draft plan and has not yet been approved by the Pacific Geoscience Centre.

ii. Depending on the size and extent of the oil spill a long term shoreline monitoring program will be instigated in order to: (a) understand better the interaction of oil with coastal environment (b) determine the actual longevity of oil on different shorelines and (c) assess the effects of cleanup techniques.

2. Coordination of an oil spill emergency response by the Pacific Geoscience Centre will be through the Institute of Ocean Sciences via Al Ages (Centrex 569-656-8341). The above program will be instigated on request by one or both of the following persons.

1. Dr. B. Bornhold	604-656-8267 (office)
	604-652-5680 (home)
2. Dr. J. Luternauer	604-656-8424 (office)
	604-652-1651 (home)

APPENDIX X

CONTINGENCY PLAN

FOR

ENVIRONMENTAL EMERGENCIES

INSTITUTE OF OCEAN SCIENCES

Provision of Oceanographic Services for Environmental Emergencies

The role of the Institute of Ocean Sciences will be to provide expertise in the following areas during oil spill emergencies.

1. **Monitoring**

   Personnel will be provided to monitor the progress of oil slicks on an availability basis. It is assumed that costs incurred for monitoring operations will be authorized by the designated lead agency.

2. **Prediction**

   To the best of their ability, staff of the Institute of Ocean Sciences section of CHS will provide predictions as to slick movement when requested by the lead agency.

3. **Modeling**

   The Institute of Ocean Sciences will make their slick modeling capability available to the lead agency when requested.

It is understood that provision of the services listed above will require mobilization time should a spill occur outside of working hours. The co-ordinator of emergency services will be Dr. Al Ages of the Institute of Ocean Sciences or his designate. The Regional Environmental Emergency Coordinator of EPS will initiate contact with Dr. Ages when his services are required.

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*This a draft plan and has not yet been approved by the Institue of Ocean Sciences.

APPENDIX XI

CONTINGENCY PLAN

FOR

OIL AND CHEMICAL SPILLS

DECEMBER 1985

ENVIRONMENTAL PROTECTION SERVICE

YUKON

ENVIRONMENTAL PROTECTION SERVICE
YUKON DISTRICT
ENVIRONMENT CANADA

CONTINGENCY PLAN FOR OIL AND CHEMICAL SPILLS

DECEMBER 1985

This document is for use within the office of the Environmental Protection Service in Whitehorse and will act as a guide in dealing with reports of oil and chemical spills as well as prenotification requirements in the event of transboundary shipments of hazardous wastes from Alaska.

INDEX

INTRODUCTION

Spill response in Yukon is comparable to that in British Columbia with the exception that the Department of Indian and Northern Affairs takes on many responsibilities that would otherwise be controlled by provincial governments. These are detailed in the following text.

Spill responsibilities are currently under review in Yukon; the following section reflects the present state of environmental emergency organization.

1. REPORTING

1. Obtain as much information as possible as per the Environmental Emergencies Reporting Form attached. It is unlikely the caller will be able to provide all information requested but it is imperative that a call back number be obtained in order to maintain contact with the caller.

2. For the initial response report the basic infomation required is:

   - name of caller
   - call back number/location
   - whether leak/spill/fire
   - product(s) involved
   - type(s) of vehicle/container(s)
   - time/location of accident

3. Ensure the information is correct, particularly the name of any chemical substance. The standard reporting form can be used as the basis to fill in the Pollution Incident Report form required by EPS Ottawa and can be used much like a checklist.

4. Securing as much information as possible provides a relatively complete picture and helps assess the seriousness of the incident. Based on the information in the spill report other agencies would be alerted and involved, depending on the circumstances.

5. Information about a spill incident may be obtained by going on scene yourself. This should be considered if the event is close to Whitehorse where quick access is possible. In the event the spill is some distance from the district office consideration should be given to request an on site report from someone such as a Resource Management Officer or RCMP officer in the vicinity.

Environmental Emergencies Reporting Form

1. Type of Accident: (check) _____ Oil _____ Chemical
   Other (name) _____
2. Specific Substance: _____ Quantity: _____
3. Source (Company): _____
4. Date of Incident: _____ Time: _____
5. Location: _____ Lat(N): _____ Long(W): _____
6. Specifics of location within Community. _____
7. Cause of Incident: (eg. truck overturn) _____
   _____
8. Reason: (eg. poor road conditions) _____
   _____
9. Weather Conditions in Area: Temperature: _____ Wind: _____
   Precipitation: _____ Other info: _____
10. Streams, Rivers or Lakes in Area: _____
11. Fish Kill: Yes _____ No _____ Bird Kill: Yes _____ No _____
12. Fire Hazard: _____
13. Threat to Drinking Water: _____
14. Who to contact at the Scene: _____
    Company: _____ Phone: _____
15. General Comments: _____
    _____
    _____
    _____
    _____
    _____
    _____
16. ACTION TAKEN TO DATE
    Containment: _____
    Clean-up: _____

REPORTED TO:
Name _____ Dept. _____ Phone _____

REPORTED BY:
Name _____ Dept. _____ Phone _____

6. As a general guide, dealing with reports is most often an information gathering exercise to attempt to delineate the circumstances surrounding the event. A complete picture puts you in a good position to make any decisions on the response required.

Ottawa Reporting Requirements

1. A POLLUTION INCIDENT REPORT form must be completed and forwarded for all reported incidents where a spill has occurred. Oil spills greater than 300 gallons and all spills involving chemicals must be DEXED to EPS in Ottawa to the National Environmental Emergency Center to the attention of R. Beach, manager of the center. All other completed report forms that do not meet the above criteria can simply be mailed.

2. Copies of all POLLUTION INCIDENT REPORTS should also go to Vancouver to the attention of the Regional Environmental Emergency Coordinator or his alternate at the time.

3. Examples have been included to show how the forms should be completed.

4. Use the attached "Conversion Factors For Spill Reporting and Nates Coding" to determine metric tons of material lost.

5. Mary Sofko and Rose Roberts are familiar with completion of the forms as they type up the information and assign a PACY number to each incident.

Environment Canada / Environnement Canada

Environmental Protection / Protection de l'environnement

FILE NO. 4464.3

POLLUTION INCIDENT REPORT

REGION	SEQ. NO.	ACCIDENT DATE & TIME
PACY		

POLLUTANT	SPECIFIC HAZARD	QUANTITY & UNIT
☐ Oil ☐ Chemical ☐	NAME OF SUBSTANCE SOURCE (Name of Carrier/Facility) NAME OF COMPANY/AGENCY	PLEASE QUOTE IN TONNES

LOCATION	LAT. (N)	LONG. (W)	CAUSE & REASON
IDENTIFY SITE			eg. TRUCK OVERTURN DUE TO ROAD CONDITIONS

PRESENT DAMAGE TO ENVIRONMENT/PROPERTY – OTHER RISKS/HAZARDS – WEATHER

A BRIEF DESCRIPTION OF THE INCIDENT AND THE IMPACTS, POTENTIAL OR OTHERWISE, TO THE IMMEDIATE AREA AND ANY OTHER RELEVANT IMPLICATIONS SUCH AS IMPACTS TO AREAS OUTSIDE IMMEDIATE SPILL SITE.

SHORT TERM ACTION

- ☐ None
- ☐ Containment
- ☐ Cleanup
- ☐ Observation
- ☐ Control
- ☐

STATUS

- ☐ Cleaned-up/ terminated
- ☐ Controlled/ dormant
- ☐ Mobile/active
- ☐ Uncontrolled
- ☐

AGENCIES ADVISED/INVOLVED – LONG TERM ACTION – EST. COMPLETION DATE – LEGAL ASPECTS

IDENTIFY ALL THE AGENCIES ALERTED WITH THE NAMES OF INDIVIDUALS IF POSSIBLE FOR FUTURE REFERENCE

COPIES OF THE REPORT SHOULD AUTOMATICALLY GO TO EPS VANCOUVER AND TO EPS OTTAWA. ONLY THE NEEC REQUIRE THEIR COPY TO BE DEXED. MAIL VANCOUVER'S COPY.

ON SCENE COMMANDER	TITLE	DEPT./ORG'N	PHONE
THE PERSON IN CHARGE AT THE SCENE USUALLY FROM THE RESPONSIBLE COMPANY			

REPORTED BY	POSITION/TITLE	LOCATION	PHONE	DATE
NAME THE INDIVIDUAL WHO PHONED IN THE REPORT TO THE 24 HOUR NUMBER				

REPORT PREPARED BY	POSITION/TITLE	LOCATION	PHONE	DATE

2. ALERTING REQUIREMENTS

1. EPS Yukon operates and maintains the 24 hour spill reporting telephone and as "custodian" of the reporting system we have a responsibility to alert other agencies and individuals which we have both formal and informal agreements with.

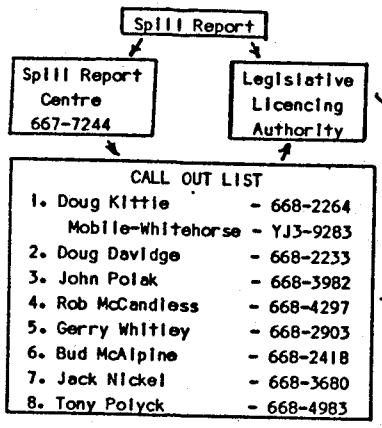
2. When an operation has a licence or permit, it has an obligation to the government body which administers the legislation to comply with the conditions of the licence. When a spill occurs from an operation subject to specific legislation or under licence, permit or authorization, the spill should be reported to the licencing authority which will take the appropriate action. If a spill from such an operation under permit is reported to the 24 hour number it should in turn be passed on to the appropriate authority.

3. The following is a listing of the agencies which are potential candidates to alert and the cirteria for alerting them:

a) DIAND Water Resources - reports of spills from water users under licence.
b) DIAND Land Use - reports of spills from operations under a Land Use Permit.
c) DFO - reports of spills into fish bearing waters, water leading to fish bearing waters or with the potential for affecting fish bearing waters.
d) YTG Protective Services Branch - spills from bulk fuel storage facilities.
e) Emergency Measures Coordinator - all spills for information purposes and for assistance in the event of a major incident.
f) NHW - for spills which may have human health implications such as impacts to surface and ground drinking water supplies.

g) Municipal governments - for spills which may have implications for degrading water supplies to the communities or be potentially hazardous to residents in the area. Consideration for evacuation should be discussed with municipal government representatives as well as the RCMP.

YUKON ENVIRONMENTAL EMERGENCY ALERTING CONTACTS



Legislative/Licencing Authorities

1. Land Use Permits - Territorial Lands Act
   DIAND 668-5151
2. Water Use Licences-Northern Inland Waters Act
   DIAND 668-5151
3. Gasoline Handling Ordinance
   Yukon Gov't Protective Services 667-5217
4. Environmental Contaminants Act
5. Ocean Dumping Control Act
6. Fisheries Act [Section 33(2)]
   Environmental Protection Service 667-6487

Perry Savoie	(H) 668-2125
Ted Boodle	(H) 668-5658
Gerry Whitley	(H) 668-2903
Jack Nickel	(H) 668-3680
Larry Hipperson	(H) 633-2084
Bob Galloway	(H) 668-4183
Doug Kittle	(H) 668-2264
Mobile - Whitehorse	YJ3-9283
Doug Davidge	(H) 668-2233
John Polak	(H) 668-3982

YUKON DISASTER COMMITTEE - ENVIRONMENTAL PROTECTION SUBCOMMITTEE

DFO 667-2235	DIAND 668-5151	EPS 667-6487	NHW 668-6461	RCMP 667-5555	YTG 667-5798	Yukon Emergency Measure Organization 667-5220
All spills where there are deleterious deposits in fish bearing waters and/or fish habitat destruction	All spills which involve Land Use Permits Ted Boodle (H)668-5658	All reported spills Doug Kittle (H)668-2264 Mobile YJ3-9283	All incidents with implications for human health	In the event of concern for public safety/evacuation/ traffic & crowd control	Renewable Resources All spills were there is potential for impacts to wildlife.	All reported spills
Gordon Zealand (H)633-3364 Tim Young (H)668-2453	All spills which involve Water Use Licences or wastes deposited in water. Gerry Whitley (H)668-2903 Bud McAlpine (H)668-2418	Doug Davidge (H)668-2233 John Polak (H)668-3982 Rob McCandless (H)668-4297	Richard Lawrence (H)668-3492 Dr. George Walker(H)668-5785 Brad Colpitts (H)668-7909	Insp. Len Jerritt (H)668-7352 Stg. Dave Martin (H)667-4952 Const. H. Mackenzie (H)667-7775	Joe Kuhn (H)668-7560 Local Conservation Officer Bob Galloway (H)668-4183	Art Deer (H)667-2933

Also YTG TRANSPORT SERVICES 667-5833
For all transportation of dangerous goods incidents reported to the 24 hour number RON WILSON 668-7227

October, 1985

3 RESPONSE

1. It is a general principle that the polluter bears the prime responsibility for the emergency created and the costs of cleanup.

2. EPS's role is mainly one of monitoring the activities of others to ensure that a reasonable degree of action is taken to provide the necessary protection to the environment and to provide technical advice on cleanup for operators when necessary.

3. Although our legislative mandate with respect to emergencies is limited to Section 33(2) of the Fisheries Act and is rather narrow in scope (i.e. limited to fish bearing waters) we have a broader responsibility in acting as environmental watchdogs and must exercise this broader advocacy role where appropriate. In other words, simply dismissing an incident when it does not involve water is not sufficient, we should still be voicing concern over other aspects of the environment with the objective of reducing environmental degradation generally.

4. In generic terms for initial response no matter what the substance spilled, the actions that are most applicable are as follows:

a) Determine materials involved; toxicity along with physical chemical properties if possible.
b) If possible, without further assistance, control danger to human safety.
c) If possible, cut off the source.
d) Once the source has been cut off, attempt to contain the spilled material.

5. A primary response could be simply dispatching an individual to the scene to obtain more information about the incident. For areas

outside Whitehorse, you may wish to contact a Resource Management Office from DIAND to act in this capacity and to possibly relay information and advice to operators responsible for the incident at the scene. We have a formal agreement with DIAND which allows us to do this. In addition, although we do not have formal agreements, requests could be made to the RCMP, Conservation Officers with YTG, Fisheries Officers or other suitable individuals.

Agencies not party to any formal agreements with EPS are not obligated to proceed to the scene of an accident to provide first hand information, however, the RCMP have assisted on request.

6. The following can be used as a checklist to assist in determining what actions may be necessary and any subsequent advice to operators or others on scene:

a) **Can you identify and assess the hazard?**
   - fire?
   - explosion?
   - poison?
   - corrosive?
   - reactive?

b) **Is it necessary to protect people?**
   - rescue?
   - evacuate?

c) **Can the source be stopped?**
   - valve?
   - switch?
   - upright?
   - plug?

d) **Is help necessary?**
   - heavy equipment
   - specialist spill control expertise?

e) **Can the substance be contained?**
   - dam?
   - trench?
   - cover?
   - boom?

f) **Is monitoring the situation the only recourse?**

g) **Is it necessary to treat?**
   - evaporate?
   - neutralize?
   - detoxify?
   - oxidize/reduce?
   - dilute?
   - wash/disperse?

h) **Can the substance be recovered?**
   - absorb?
   - shovel?
   - pump?
   - skim/scrape?

7. Initial response to contain a spill using hand tools available at or near the scene may be sufficient. Should containment require heavy duty equipment such as front end loaders these may be available through private contractors or the YTG Department of Highways. Resource Management Officers in the communities maintain a listing of private contractors (for fire fighting purposes) and can be called upon to provide potential equipment suppliers.

8. Caution should be exercised when either approching a chemical spill or providing information to those at the scene. Particular attention should be paid to the type of personal protection equipment necessary to approach and handle the material. Refer to more than one chemical reference manual to determine whether or not a situation is

approachable. There may be times when nothing can be done until breathing apparatus and total encapsulated suits with trained individuals are at the scene. The advice then would be to keep upwind, uphill and well away. Remote observation of the spill site using binoculars may be sufficient to ascertain if there is leakage and subsequently whether or not its safe to approach.

9. Assistance for handling chemical and oil spills may be available from E.P.S. Whitehorse, from the chemical manufacturers emergency response groups (T.E.A.P.), through the company responsible for the spill; or the Canadian Transport Emergency centre (CANUTEC).

10. There are various references in the Coordinator's office which can be referred to, to obtain specific response strategy measures. The most useful are identified below with some review notes:

a) **The Basics of Oil Spill Cleanup** - Chapter 5, Containment; Chapter 6, Recovery and Chapter 10, Land Spills are the most useful. Good color plates in Chapter 5 for improvised containment barriers.**

b) **Response to Inland Spills** - a thin volume published by the Consortium on Spill Training which is a good guide to assist in the cleanup of oil spills on land and into small water courses.***

c) **Manual of Spills for Hazardous Materials** - EPS publication the manual provides qualitative and quantitative information for those responding to spills. Encompasses quantitative data on chemical and physical properties, fire properties, human health and toxicity, reactivity and environmental toxicity as well as qualitative response information. Includes 150 top priority chemical substances including fuels and oils.***

d) **Chris Hazardous Chemical Data** - (large black binders - 2 volumes chemical data) Includes 900 chemicals as well as oils. Lists specific chemical, physical and biological data and suggests general responses to accidental discharge.***

e) **Environ Tips (Technical Information for Problem Spills)** - Comprehensive information on chemicals spilled frequently in Canada. They are intended to be used by spill specialists for designing countermeasures for spills and to assess their effects on the environment. Each volume is dedicated to a specific substance; a total of 50 volumes to be produced.****

f) **Emergency Response Guide for Dangerous Goods** - (small orange handbook) A DOT publication containing United Nations numerical index for placarded shipments; response guide in the event of spills or leaks; french and english alphabetical index; table of placards.***

g) **The Condensed Chemical Dictionary** - A good general reference with information on properties, derivation, and uses of a great number of chemicals.***

There are additional references along with those identified above, however, these have been found to be the most useful in identifying response options and for providing advice and information to those on scene.

4 EPS YUKON - DIRECT INVOLVEMENT IN CLEAN UP

1. Although our main role is to monitor the actions of others there may be times when EPS must undertake clean up. Mystery spills which threaten surface and ground water supplies and which a responsible party cannot be found are prime examples.

2. No definitive rules apply to EPS involvement. A certain degree of judgement is required and consultation with senior EPS staff in Whitehorse and Vancouver should be sought prior to any major committment to a clean up operation. If immediate action is necessary the E.P.S. officer on scene may intervene to prevent further spread of the pollutant.

3. For guideline purposes, we may get involved where an operator does not initiate clean up, where they do not have the capability, or where the environment is not adequately protected. This is certainly not specific for all eventualities however the seriousness of the situation and the type of environment being affected are prime considerations.

4. Emergency funds for hiring clean up contractors are available but the intent to expend monies must be passed on to senior E.P.S. management along with an explanation of the circumstances so that arrangements can be made to secure emergency funding from Ottawa.

5. It is not expected that individuals get involved beyond initial response using tools at hand for containment purposes. Should we get involved where we have responsibility over hiring contractors, etc., then we would assume the role of on-scene-commander until the situation has stabilized. This would include directing contract staff and equipment for containment, recovery and disposal operations; coordinating other government department involvement; acting as the media contact and other duties as required.

5 HAZARDOUS WASTE NOTIFICATION OF TRANSBOUNDARY SHIPMENTS FROM ALASKA

1. An informal agreement between EPS and Canada Customs in Beaver Creek provides for notification to EPS via the 24 hour spill reporting number. In addition to this an information 7 day notification of hazardous waste shipments from operators has been implemented but is not entirely fool proof.

2. Recipients of calls from Beaver Creek (accept collect calls) should obtain as much information as per the attached notification form.

3. This information should be relayed to EPS Vancouver who will forward same to the Provincial Emergency Program. Use the regular Vancouver office number (666-6711) during office hours and the emergency number (666-6100) during off hours. An answering service will take your name and number. The individual on call will get back to you for details. For shipments through Alberta, simply inform Vancouver who will relay the information to the Edmonton EPS offices.

4. If calls are received on weekends or at odd hours, the alert to Vancouver can be delayed until a reasonable time so long as the shipment has not entered B.C.

5. The RCMP in Yukon should be alerted in the event the materials included in the shipment pose a particularly serious threat. This can be done by requesting RCMP Whitehorse (Sgt. Dave Martin) or the Telecom unit to alert Alaska highway detachments on the particulars of the vehicles. This is not for action but to warn personnel to approach any accident involving these vehicles with due caution.

6. Should an inspection of the load be required in your judgement (in particular PCB's) arrangements with the company have to be made to ensure an inspector arrives at Beaver Creek coincidental with the operator. Failing that, inspections may be performed at the Whitehorse Weigh Scale Station. Soliciting the weight scale operator to hold the truck will be necessary. Canada Customs may also have to be alerted to provide for suitable sealing of the vehicle.

HAZARDOUS WASTE NOTIFICATION INFORMATION

Date: _____ Time: _____

TRANSPORT COMPANY NAME: _____

NAME OF DRIVER(s): 1. _____
2. _____

WASTE ORIGINATING FROM (City): _____

VEHICLE DESCRIPTION:

Make:	1.	_____	_____	_____	_____
	2.	_____	_____	_____	_____
Color:	1.	_____	_____	_____	_____
	2.	_____	_____	_____	_____
Licence:	1.	_____	_____	_____	_____
	2.	_____	_____	_____	_____

DESCRIPTION OF CONTENTS: (eg: 5 x 45 gallon drums - PCB Liquids)

Vehicle 1. _____

_____

_____

Vehicle 2. _____

_____

_____

DESTINATION: _____

ROUTING AND TIMING: (eg: Whitehorse, July 15; Fort St. John, July 16, etc.)

_____

_____

_____

Please phone in the above information to Whitehorse Number 667-7244 COLLECT
(24 hour coverage)

6 A LETTER OF UNDERSTANDING BETWEEN THE ENVIRONMENTAL PROTECTION SERVICE, YUKON BRANCH AND YUKON REGION OF THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT, RENEWABLE RESOURCES BRANCH

This Understanding cannot in any way prejudice any legal mandate and responsibility to give to either department. This Understanding will be reviewed annually after the date of signing to determine its adequacy in dealing with spill and non-compliance conditions.

The Department of Environment and the Department of Indian Affairs and Northern Development both have legislative responsibilities concerning water quality.

This understanding outlines administrative and procedural arrangements to be followed for spills, non-compliance, and prosecution.

General

4 DIAND will assume the primary federal government responsibility for spill response for permitted operations under DIAND legislation (with the exception of NCPC).

5 EPS will assume the primary federal government responsibility for spill response for all other reported incidents. (Including NCPC).

6 The 24 hour spill reporting number (667-7244) will be listed on all new licences, authorizations and permits where appropriate.

7 All reported incidents will be treated as spills until such time as it becomes obvious to both parties that the situation is in fact a non-compliance problem.

8 Dual inspections for preliminary or initial investigations have been effective and will be continued.

9 Regardless of where the prime responsibility for spill response rests, the onus is upon the department with prime responsibility to keep the other fully apprised of the situation.

10 Both departments will, to the best of their ability, make available to the other manpower and/or resources where the response required to a particular situation exceeds the capability of the department with the primary reaction responsibility.

11 Guidelines prepared by E.P.S. for sample container preparation and sample collection and preservation will be used by both departments for the purposes of legal sampling.

12 Both departments agree to collect legal samples in such a way that they would be suitable for a prosecution by either department.

13. DIAND will continue to provide the Resource Management Officers (RMO's) for preliminary or initial investigations of road related spills or events at sites which are distant from Whitehorse. To facilitate the rapid exchange of information there can be direct contact between EPS an RMO's provided DIAND region is kept informed.

14. Copies of significant correspondence (letters, telexes, et cetera) relating to spills or non-compliance incidents between the respective departments and the companies, agencies, et cetera, involved shall be promptly exchanged.

15. DIAND, when reacting to incidents (spills and non-compliance), will collect those samples (primarily bioassays) that EPS requires for its assessment.

Specific to Prosecution

16 Upon completion of an investigation the decision concerning the preferred legislative action must be made via joint consultation prior to going to the Crown Prosecutor.

17 DIAND has the first option of laying charges for permitted operations. If DIAND should choose not to proceed then EPS has the option to proceed against the offender. EPS has the first option of laying charges for all other spills. If EPS should choose not to proceed then DIAND has the option to proceed against the offender.

18 EPS and DIAND agree that each department will only lay charges under Acts which are part of their respective legislative mandates.

19 Both departments realize the present inconsistencies in penalties between the Fisheries Act and the Northern Inland Waters Act. Discussions between department will take place with respect to proceeding under either Act in exceptional circumstances, such as second related offences or incidents involving fish kills.

20 Once the legislative alternative has been selected, both departments will be present for any strategy decision at all stages of the prosecution to ensure the departments are informed of all elements of the case.

21 One person from the prosecuting department will be designated to work with the Crown Prosecutor and all communication to the Crown Prosecutor concerning the prosecution will go through this individual.

22 A postmortem will be instituted to review each case with the results of the postmortem being incorporated into future decision-making procedures.

23 This postmortem will replace any continuous review of the lead department's action throughout an ongoing investigation/prosecution.

Specific to Non-Compliance

24 An informal but regular (monthly) information exchange between the Administrator, Pollution Control (DIAND) and Manager, Assessment and Appraisal (EPS) concerning the status of licencees' compliance will be continued. Compliance monitoring reports received from operators will also continue to be forwarded by DIAND to EPS for their review.

25 DIAND will be responsible to communicate to EPS immediately upon receipt of such information, any significant non-compliance condition, including potentially toxic discharges.

26 Cyclical or recurring non-compliance problems will initially be discussed during the informal communications between the Administrator, Pollution Control (DIAND) and Manager, Assessment and Appraisal (EPS). The Controller will be notified of potential or existing problems and then may give direction to licencee concerning the situation.

27 In cases where the licencee has not, cannot or will not comply with the directions of the Controller, a meeting may be called by the Administrator of Pollution Control (DIAND) and Manager, Assessment and Appraisal (EPS) between senior EPS and DIAND officials.

28 There may arise an occasion where one department views a particular incident as a more serious situation than the other department. In these situations the meeting (referred to above) can be requested by either department and will be convened at an early date.

29 DIAND will consider proceeding with a non-compliance prosecution based solely on toxicity should a bioassay sample exhibit 100% mortality at extremely low concentrations or short time spans to 100% mortality.

C.E. Wykes	J. Ganske
Director	Director
Environmental Protection Service	Renewable Resources
Yukon Branch	Department of Indian Affairs
	& Northern Development
August 23, 1984	August 23, 1984
Date	Date

APPENDIX XII

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE DEPARTMENT OF THE ENVIRONMENT
OF THE GOVERNMENT OF CANADA

AND

THE ENVIRONMENTAL PROTECTION AGENCY
OF THE UNITED STATES OF AMERICA

REGARDING ACCIDENTAL AND UNAUTHORIZED DISCHARGES

OF POLLUTANTS ALONG THE INLAND BOUNDARY

This Memorandum of Understanding between the Department of the Environment and the Environmental Protection Agency of the United States of America (hereafter; "the Parties") outlines a plan of cooperative measures for dealing with accidental and unauthorized releases of pollutants that cause or may cause damage to the environment along the shared inland boundary and that may constitute a threat to the public health, property or welfare.

ARTICLE I

For the purpose of this Memorandum of Understanding (M.O.U.):

(a) "a polluting incident" means an accidental or unauthorized release of any pollutants on either side of the inland international boundary of a magnitude which causes, or threatens to cause, substantial adverse effects on the environment, public health, property or welfare of the other side.

(b) "Environment" means the atmosphere, land, and surface and ground waters, including the natural resources therein, and all other components of the ecosystem.

(c) "Pollutants" means substances which, if discharged, cause or may cause damage to the environment, public health, property or welfare according to Co-Chairman of the Joint Response Team (JRT). The JRT and its responsibilities are defined in Appendix I.

(d) "Inland international boundary" means the non-maritime boundary common to both countries, including boundary and transboundary waters not included in the Canada-United States Joint Marine Pollution Contingency Plan.

ARTICLE II

The Parties will establish the "Canada-United States Joint Pollution Contingency Plan" (hereafter; "The Plan", See Appendix I) with the objective to provide cooperative measures to deal effectively with accidental or unauthorized discharge of pollutants along the inland boundary.

ARTICLE III

The Plan is designed to (a) alert the appropriate authorities within the federal and provincial/state jurisdictions of the existence or threat of polluting incidents, and (b) to initiate measures that will restrict, contain or eliminate to the extent possible the threat posed to the environment, the public health, property or welfare by such incidents.

ARTICLE IV

The Parties, through the coordinating authorities, will establish a Joint Response Team to design and implement the Plan.

ARTICLE V

The coordinating authority for the Plan for Canada is the Environmental Protection Service of the Department of the Environment, and for the United States of America is the Environmental Protection Agency.

ARTICLE VI

The JRT will respond to a polluting incident in accordance with the Plan. The Plan will be applicable whenever a polluting incident occurs that affects both countries or, although only directly affecting one country, is of such a magnitude as to justify a call on the other country for assistance.

ARTICLE VII

Nothing in this M.O.U. shall be construed to prejudice existing or future agreements concluded between the two Parties, or affect the rights and obligations of the Parties under international agreements or arrangements to which they are or may become party.

ARTICLE VIII

The coordinating authories may conclude or amend technical appendices or area-specific annexes to the Plan to facilitate prompt and effective measures in response to polluting incidents. In Canada, the appendices and annexes will be concluded or amended by agreement with the jurisdictions listed in Appendix I, Section 5.

APPENDIX IX

The Plan will enter into force by signature of the coordinating authorities.

APPENDIX X

(1) This M.O.U. shall enter into force upon signature.

(2) Either Party may give notice of its intention to terminate this M.O.U. The M.O.U. shall terminate six months after such notification.

Done in duplicate at Ottawa this 17 October, 1985.

Tom McMillan
Minister
Department of the Environment
For
Canada

Lee M. Thomas
Administrator,
Environmental Protection Agency
For the
United States of America

AN ABSTRACT OF THE JOINT CONTINGENCY PLAN

1. THE PLAN

The Canada-United States of America Joint Pollution Contingency Plan provides an organization for cooperative responses to transborder polluting incidents.

2. THE PURPOSE

The purpose of the Plan is to establish cooperative measures to deal with polluting incidents by coordinating the federal, state, provincial and regional contingency plans of both countries.

3. THE OBJECTIVES

The objectives of the Plan are:

(a) to establish appropriate measures for reporting of polluting incidents along the inland international border;

(b) to establish measures and procedures for responding promptly to such polluting incidents so as to eliminate or minimize any threat to the environment, and to the public health, property or welfare; and

(c) to identify the resources required for coordinated responses to polluting incidents.

4. PROCEDURES

The coordinating authority for each Party will divide its territory into planning areas (provinces, regions, states) and will provide annexes to the Plan that, among other matters, will define the jurisdiction, roles and response procedures of regulatory and support agencies within the specific areas of each country.

The Plan will provide for a federal Joint Response Team (JRT) to advise and assist area On-Scene Coordinators/Commanders (OSC) and Advisory and Liaison Coordinators (ALC). The Plan will also provide for alerting and reporting procedures, command structures, clean-up and post clean-up requirements, and arrangements for assuming the responsibility for the cost of clean-up operations.

5. ANNEXES TO THE PLAN

In Canada, annexes to the Plan will be developed and maintained by agreement with the following jurisdictions:

- Alberta
- British Columbia

- Manitoba
- New Brunswick
- Ontario
- Quebec
- Saskatchewan
- Yukon

and in cooperation with the following federal departments and agencies:

- Department of Energy, Mines and Resources
- Department of Fisheries and Oceans
- Department of Indian Affairs and Northern Development
- Department of National Health and Welfare
- Department of Transport
- Canadian Oil and Gas Lands Administration
- Canadian Transport Commission

In the United States of America, annexes to the Plan will be developed and maintained by agreement with the following departments and agencies:

Department of Agriculture	Department of Commerce
Department of Defense	Department of Energy
Federal Emergency Management Agency	Dept. of Health & Human Services
Department of Interior	Department of Justice
Department of Labor	Department of Transportation
Environmental Protection Agency	United States Coast Guard
Department of State	

and in accord with the plans listed below:

- National Oil and Hazardous Substances Contingency Plan.
- Regional Contingency Plans
  - Region 1 - Boston
  - Region 2 - New York
  - Region 5 - Chicago
  - Region 8 - Denver
  - Region 10 - Seattle

and appropriate authorities thereof.

6. JOINT RESPONSE TEAM (JRT)

The coordinating authority for each Party will designate its Co-Chairman and its members on the JRT and will inform the other Party of its choices.

The JRT will meet as necessary and as determined by the Co-Chairmen. The U.S. Co-Chairman will preside at meetings held in the U.S.A., the Canadian Co-Chairman will preside at meetings in Canada.

On receipt of reports of polluting incidents along the inland international border, the Co-Chairmen of the JRT, following consultation with the OSC, will decide if a joint response is required and if so, will advise the appropriate authorities in each country of the time and place for the initiation and the termination of such a response.

During a joint response, the primary functions and responsibilities of the JRT are to:

- provide an Advisory and Liaison Coordinator (ALC) at the scene of the polluting incident for liaison between the OSC and the JRT, and to advise the OSC on JRT matters;

- provide environmental, technical, logistic, legal, customs, immigration, financial and public information/media-relations advice and assistance requested or needed by the OSC and ALC. (Neither the JRT nor the ALC has operational control over the OSC);

- coordinate all reporting on the status of the polluting incident to the respective national authorities;

- evaluate actions taken by the OSC and make recommendations for additional measures needed to respond to the incident;

- take measures to coordinate the provision and maximum use of the resources that agencies or persons of Canada, or of the United States of America, or of a third party can contribute to support the ALC and the OSC in their respective coordination and operational roles; and

- consider the daily logs and reports of the OSC and ALC, and prepare recommendations for improvements needed in the Plan and in any suppporting contingency plans.

7. ON-SCENE COORDINATOR/COMMANDER (OSC)

OSCs will be appointed by an agency of the federal or other level of government having direct jurisdiction over the parties involved in the polluting incident in the province, region or state concerned.

The coordinating authority for each Party will divide its territory into planning areas (provinces, regions, states), and will appoint Advisory and Liaison Coordinators (ALCs) to assist the On-Scene Coordinator/Commander for the province, region or state concerned.

Each ALC will be an ex-officio member of the Joint Response Team (JRT).

The OSC will integrate and coordinate the federal/provincial/

state/regional contingency plans for his/her area of responsibility to ensure that alerting, reporting and response are in place for polluting incidents along the border area.

The OSC, assisted by the ALC, is responsible for ensuring that alerting and situation reports are made promptly to the appropriate agency and to the Co-Chairmen of the JRT on any polluting incidents that requires or may require the initiation of a joint response.

The OSC is responsible for recommending the initiation and the termination of a joint response to the Co-Chairmen of the JRT.

If response action is required in the territories of both Parties, the OSCs of both Parties will coordinate the measures to be adopted through the collaboration of both ALCs.

The OSC is responsible for determining all facts relevant to a polluting incident, including:

- the identity of the polluter;

- the nature, quantity, location and probable migration of the pollutant;

- the available resources and the additional resources required to deal with the incident;

- the potential effects on public health and welfare, on property or on the environment; and

- priorities for protection in an action plan.

The OSC is the final authority for all decisions related to response countermeasures operations. In exercising this authority, the OSC will be guided by national and domestic laws and policies, and good environmental practices in such matters as, for example, the use of chemical dispersants or neutralizers.

The OSC will maintain a daily log of events that occur during the response operation and will communicate this daily log, along with periodic situation reports (SITREPs) to the JRT.

On completion of the response operation, the OSC, assisted by the ALC, will submit to the JRT a final report that includes but is not limited to recommendations for improving contingency plans and response operations.

OSCs on both sides of the border will develop and maintain video, graphic or other records of sensitive areas that are to be given a high priority for protection in the event of a polluting incident.

The OSCs, with the assistance of ALCs and the JRT, will ensure that special customs, immigration and other emergency

authorisation procedures are in place and understood by area authorities.