



Health
Canada

Santé
Canada

Federal Nuclear Emergency Plan

PART 1: MASTER PLAN

Fourth Edition

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LIST OF DESIGNATED DEPARTMENTS AND AGENCIES

The following federal departments and agencies have designated responsibilities under the Federal Nuclear Emergency Plan.

Health Canada (Lead Federal Department)
Agriculture and Agri-Food Canada, *and*
 Canadian Food Inspection Agency
Canada Customs and Revenue Agency
Canadian Heritage
Citizenship and Immigration Canada
Environment Canada
Fisheries and Oceans Canada
Department of Foreign Affairs and International Trade
Human Resources Development Canada
Indian and Northern Affairs Canada
Industry Canada
National Defence, *and*
 Office of Critical Infrastructure Protection and Emergency Preparedness
Natural Resources Canada, *and*
 Atomic Energy of Canada Ltd.
 Canadian Nuclear Safety Commission
Privy Council Office
Solicitor General Canada
Transport Canada

FOREWORD

The goals of nuclear emergency planning, preparedness and response are to protect the public from immediate or delayed health effects due to exposure to uncontrolled sources of radiation and to mitigate the impacts of a nuclear emergency on property and the environment. Due to the wide ranging effects and concerns of a nuclear emergency on public health and safety, property and the environment, jurisdictions of all orders of government have to be considered.

The *Federal Nuclear Emergency Plan* and related Annexes describe in general terms the planning concepts, preparedness activities, and response structures, processes and linkages for a coordinated federal and provincial response to nuclear emergencies affecting Canada or Canadians at home or abroad. Operational details for emergency response will be contained in supporting documentation to the *Federal Nuclear Emergency Plan*, such as site/scenario-specific Parts, emergency procedures manuals, and technical guidelines.

Federal support and joint coordination with provincial or territorial governments during a nuclear emergency will be carried out in accordance with the principles and measures contained in the *Federal Nuclear Emergency Plan*, Provincial Annexes¹, and relevant plans and agreements.

Coordination with the government of the United States of America during a nuclear emergency impacting on both countries will be carried out in accordance with the principles and measures contained in the *Canada-United States Joint Radiological Emergency Response Plan*.

The *Federal Nuclear Emergency Plan* is divided into different parts as follows:

- Part I Master Plan
- Annexes: British Columbia
- Ontario
- Quebec
- New Brunswick
- Nova Scotia

Additional Parts and Annexes will be developed in the future.

¹ Priority was given to provinces having one or more CANDU reactors or having facilities which host scheduled visits by nuclear powered vessels. Annexes for other provinces and territories may be developed in the future.

ADMINISTRATIVE AUTHORITY

The *Federal Nuclear Emergency Plan*, and other supporting documents, are administered by the Radiation Protection Bureau, Safe Environments, Healthy Environments and Consumer Safety Branch of Health Canada. The Administrative Authority will maintain a distribution list of all recipients of the *Federal Nuclear Emergency Plan*. Additional copies, routine inquiries, suggested changes, or additions to the *Federal Nuclear Emergency Plan* should be directed to:

Manager, Nuclear Emergency Preparedness and Response Division
Radiation Protection Bureau
Health Canada
775 Brookfield Road, Address Locator 6302 D2
Ottawa, Ontario K1A 1C1
CANADA

Telephone: (613) 954-0794
Facsimile: (613) 957-0792

AMENDMENTS AND CONTROL

The *Federal Nuclear Emergency Plan* is a “living document” that will undergo minor revisions, regular updates and modifications necessary to reflect changes and evolving mandates of the federal and provincial organizations involved.

Holders of the *Federal Nuclear Emergency Plan* are responsible for maintaining current, and verifying on a quarterly basis, the distribution information for their organization, and for informing the Administrative Authority of any required changes to the lists.

The 2002 edition of the *Federal Nuclear Emergency Plan - Part 1: Master Plan (4th edition)* is in effect upon receipt and replaces the *Interim Plan* (1997), as well as previous versions of the *Federal Nuclear Emergency Response Plan* (FNERP) issued in 1984, 1991 and 1996.

No.	DATE (m/yr)	SECTIONS AFFECTED	COMMENTS	STATUS	INSERTED BY (Name or Initials)
1	09-1984	Complete Plan	1 st edition	Out of date	
2	10-1991	Complete Plan	2 nd edition - updated	Out of date	
3	10-1996	Complete Plan	3 rd edition - Revised draft	Out of date	
4	12-1997	Complete Plan	3 rd edition - Interim Plan	Out of date	
5	05-2002	Part 1	4 th edition - Revised Master Plan	Current	

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FEDERAL NUCLEAR EMERGENCY PLAN

PART 1: MASTER PLAN

1 INTRODUCTION

1.1 AIM

The aim of the *Federal Nuclear Emergency Plan*² (FNEP) is to minimize the impact of a nuclear or radiological emergency (herein referred to simply as **nuclear emergency**³) on the health, safety, property and environment of Canadians.

The FNEP details the measures to be followed by the Government of Canada to manage and coordinate federal response activities dealing with a nuclear emergency affecting Canada or Canadians abroad, either in delivery of its federal responsibilities, or in support of provincial actions.

1.2 OVERVIEW

In regards to nuclear emergencies in Canada, the operators of nuclear generating stations, research reactors or other **nuclear facilities** are responsible for **on-site** emergency planning, preparedness and response. Provincial⁴ governments have the primary responsibility for protecting public health and safety, property and the environment within their borders. The federal government is responsible for the development, control and regulation of peaceful uses of nuclear energy, manages nuclear liability, and coordinates with and provides support to provinces in their response to a nuclear emergency. Areas of emergency response within its jurisdiction include:

- federal lands, programs and services,
- emergencies affecting more than one province or territory,
- liaison with the international community,
- coordination of international support for an emergency in Canada,
- liaison with diplomatic missions in Canada,
- assisting Canadians abroad and
- coordinating the national response to a nuclear emergency occurring in a foreign country.

As a result, **off-site** planning, preparedness and response to nuclear emergencies are multi-jurisdictional responsibilities shared by all orders of government.

To the extent possible, the federal government's emergency planning, preparedness and response are based on the "all-hazards" approach. However, because of the inherent technical nature and complexity associated with a nuclear emergency, hazard-specific planning, preparedness and response arrangements are required. The FNEP Master Plan and Annexes describes the federal government's preparedness and coordinated response to a nuclear emergency. Specifically, the FNEP:

2 Titles of acts, plans and supporting documents are formatted in *italics* in the text.

3 Specific terms and expressions, defined in Appendix 1, are formatted in **bold** when first used in the text.

4 In this document, the generic terms "provincial" and "province" also refer to Canadian Territories

1. Outlines the federal government's aim, authority, emergency organization and concept of operations for dealing specifically with the **response phase** of a nuclear emergency (within the limitations described in Section 1.5);
2. Describes the framework of federal emergency preparedness policies, the planning principles on which the FNEP is based, and the links with other specific documents of relevance to FNEP;
3. Describes specific federal responsibilities of participating organizations that have a significant role in the planning, preparedness, or response phase of a nuclear emergency; and
4. Contains specific Provincial Annexes that describe an interface between the federal and provincial **emergency management organizations**, and the arrangements for a coordinated response and the provision of federal support to provinces affected by a nuclear emergency.

1.3 DEFINITIONS

Within the FNEP, a nuclear emergency is defined as:

any event which has led or could lead to a radiological threat to public health and safety, property, or the environment.

Activation is defined as:

bringing together members of the **National Support Structure**.

Implementation of the FNEP is defined as:

bringing into force the provisions of the *Federal Nuclear Emergency Plan* as the basis for coordination of actions and related expenditures at the federal level in response to a nuclear emergency.

Definitions of other terms and expressions specific to nuclear emergency preparedness and response are contained in Appendix 1.

1.4 AUTHORITY

The FNEP is issued under the authority of the Minister of Health. The Minister's authority is derived from the following:

1. A 1984 letter from the Prime Minister of Canada designating the Minister of Health and the (then) Department of Health and Welfare as the responsible authorities to lead and coordinate the federal government's planning, preparedness and response to peacetime nuclear emergencies [1];
2. *Emergency Preparedness Act* (1988), Section 7(1)(a) [2]⁵;
3. *Federal Policy for Emergencies* (1995) [16]; and
4. *Departmental Planning Responsibilities for Emergency Preparedness* (1995) [10] affirmed in conjunction with the above policy.

⁵ Reference number refers to listing in Appendix 2, Bibliography.

1.5 LIMITATIONS

The FNEP is not intended to deal with the military use of nuclear weapons against North America (i.e., declared war)⁶. In addition, events which may pose a radiological threat over a localized area and which are not anticipated to exceed the capabilities of regulatory, local, or provincial authorities to respond do not fall within the scope of the FNEP. The following situations are examples of nuclear emergencies where the FNEP would not normally be implemented:

1. Events at licensed nuclear facilities with limited or no radiological off-site impacts;
2. Events at licensed nuclear facilities which could lead or have led to a non-radiological hazard to the personnel at the facilities, the public or the environment; and
3. Events involving the transportation of regulated quantities of radioactive material on Canadian territory, or which could affect Canadian territory.

The FNEP addresses the Federal government's involvement in the planning, preparedness and response phase of a nuclear emergency. Federal responsibilities during the **recovery phase** would be assigned to a specific Minister of the Crown either during or immediately following the response phase. Hence, management and coordination of the federal government's actions during the recovery phase fall outside the scope of the FNEP and are not within the mandate or authority of the Minister of Health to implement.

1.6 OTHER EMERGENCY PLANNING DOCUMENTS

The FNEP is a component part within a larger government emergency preparedness framework described in greater detail in the *National Support Plan*, Part 1: Annex D [12]. The FNEP is intended to complement and be compatible with relevant nuclear emergency plans from other jurisdictions.

A list of legislative, and other documents relevant to the FNEP is provided in Appendix 2. Since FNEP builds on an existing government framework, the documents summarized below are of particular importance to the FNEP.

- a. *Emergency Preparedness Act* (1988) and *Emergencies Act* (1988) [2,3]

The *Emergency Preparedness Act* and the *Emergencies Act* are two pieces of general emergency legislation at the federal level. The *Emergency Preparedness Act* establishes emergency preparedness as a required activity of the federal government and among other things charges all Ministers of the Crown to identify potential emergency situations which would affect, impact, or involve their mandated program areas, to develop and maintain appropriate plans and to conduct periodic testing of those plans. It also makes ministers responsible, when authorized, for the implementation of such plans.

The *Emergencies Act* is contingency legislation that is invoked when specified conditions are met. The *Act* defines a “national emergency”, prescribes four types of national emergencies and contains the powers and limitations available to, and placed upon, the government for each type. The *Act* also contains provisions for compensation of those individuals or organizations

⁶ This limitation does not apply to acts of terrorism involving radiological or nuclear devices, or to the military use of nuclear weapons outside of North America involving third parties

that suffer loss as a result of invocation of the *Act*.

b. *Federal Policy for Emergencies / Departmental Planning Responsibilities for Emergency Preparedness* (1995) [16, 10]

The *Federal Policy for Emergencies*, originally approved by Cabinet in 1980, was substantially updated in 1995 to provide additional guidance to Ministers and Departments. Among other things, the Policy:

- States the overall aim of emergency preparedness within the federal government, and the principles upon which emergency preparedness is based in Canada;
- Introduces the concept of a cooperative national approach to emergency preparedness (interdepartmental, intergovernmental, etc.), and highlights the federal government's place within that cooperative community
- Defines the concepts of **Lead Federal Minister/Department**;
- Details each federal department's responsibilities for the development of emergency plans for specific types of civil emergencies; and
- Provides specific Ministerial accountability and direct linkage to the provisions of the *Emergency Preparedness Act*, and to departmental responsibilities with respect to "national emergencies" as defined in the *Emergencies Act*.

The *Policy* specifies that Health Canada is the designated Lead Federal Department responsible for developing and maintaining civil emergency plans for coordinating the federal response to the offsite impacts of nuclear emergencies that may endanger public health and safety.

c. *Government Emergency Book* (1996) [11]

The *Government Emergency Book* provides a bridge between the objectives of the *Federal Policy for Emergencies* and the implementation documents containing detailed arrangements for a response (e.g., plans and procedures). Its purpose is to provide a conceptual framework to guide and coordinate the planning and response of the Government of Canada in relation to emergencies, and to provide operational guidance for those emergencies that may require federal Cabinet involvement. It identifies actions that would need to be considered for implementation in response to a developing or existing emergency, either domestic or international. It is also intended to be used as the foundation for the preparation of related Departmental Emergency Books, plans and arrangements.

The *Government Emergency Book* extends the requirement for individual departmental emergency planning responsibilities into cooperative functional groupings called **emergency functions** which are applicable to public welfare emergencies, including nuclear emergencies. It assigns responsibilities for emergency functions to **primary** and **supporting departments or agencies** within emergency functions.

d. *National Support Plan* [12]

The *National Support Planning Framework* provides a generic emergency management structure and concept of operations for the coordination of federal activities and the provision of national support to provinces and territories, and to the United States, during an emergency

of significant impact or complexity not otherwise covered under existing emergency plans or arrangements. In particular, the document describes the coordination concept for federal assistance to provinces. The document also details **emergency support functions** and the corresponding primary department or agency for each. The federal support arrangements to provinces contained in the FNEP were based in part on the *National Support Plan*.

- e. *National Emergency Arrangements for Public Information* (1993) [13]

The *National Emergency Arrangements for Public Information* provides a policy and procedural framework for interdepartmental and intergovernmental coordination of public communications in emergencies. Public information strategies for the FNEP will need to be consistent with the framework presented in the *National Emergency Arrangements for Public Information*.

- f. *National Counter-Terrorism Plan* (1993) [17]

The *National Counter-Terrorism Plan*, led by the Solicitor General for Canada, is the basis for the national response to a terrorist threat on Canadian soil. In the event of a terrorist act involving radiological or nuclear devices, the FNEP would support the *National Counter-Terrorism Plan* in order to provide technical and operational advice on potential radiological impacts and protective measures.

- g. *Canada-United States Joint Radiological Emergency Response Plan* (1996) [19]

The *Canada-United States Joint Radiological Emergency Response Plan* focuses on emergency response measures of a radiological nature rather than generic civil emergency measures. It is the basis for cooperative measures to deal with peacetime radiological events involving Canada, the United States, or both countries. Cooperative measures contained in the FNEP are consistent with the Joint Plan.

- h. *Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency* (1986) [44]

Canada has signed and ratified this international assistance agreement which was developed under the auspices of the International Atomic Energy Agency. The purpose of the agreement is to provide for cooperation between signatories to facilitate prompt assistance in the event of a nuclear accident or radiological emergency in order to minimize its consequences and to protect life, property and the environment from the effects of radioactive releases. The agreement sets out how assistance is requested, provided, directed, controlled and terminated.

- i. *Convention on Early Notification of a Nuclear Accident* (1987) [43]

Canada has signed and ratified this international **notification** agreement which was developed under the auspices of the International Atomic Energy Agency. The *Convention on Early Notification of a Nuclear Accident* defines when and how the International Atomic Energy Agency should be notified of a nuclear emergency with potential trans-boundary consequences, and when and how the International Atomic Energy Agency would notify the signatories of a nuclear emergency which is of international interest.

2 PLANNING BASIS

The planning basis describes the nature of the hazards associated with nuclear emergencies, the role of federal organizations in responding to these hazards, the types of nuclear or radiological emergency events for which the FNEP may be used, and the principles and needs that are relevant to the FNEP in planning and preparing to respond to such events.

2.1 NATURE OF THE HAZARD

The main hazard associated with a nuclear or radiological emergency is the potential or actual release of radioactive material into the environment, and the health effects that may result from exposure and widespread radioactive contamination. These hazards may be either short-term or long-term. Short-term hazards may occur in the early phase of a nuclear emergency, and require timely and effective measures to mitigate their impact. These may include exposures arising directly from radioactive material released into the air or water, or deposited on the ground. Long-term hazards include those that continue to exist for extended periods, and may include protracted contamination of food, water and property. Short-term and long-term societal and economic impacts may also be expected.

2.2 NATURE OF THE RESPONSE AND ROLE OF FEDERAL ORGANIZATIONS

Emergency response typically requires special **interventions** to mitigate the impacts of the expected short-term and long-term hazards. In this context, such interventions include all actions and provisions beyond normal procedures that are undertaken to manage the emergency, including all emergency organization structures, response actions, communications and public information and directives.

In the event of a nuclear emergency in Canada or affecting Canadians, federal departments and agencies will be called upon to respond, and support affected provinces, in those areas relevant to their mandate. The extent and focus of federal involvement will depend on the scale and nature of the emergency situation, the level of support required by the affected province(s), and the nature of the interventions required.

2.3 SCALE AND NATURE OF POTENTIAL EVENTS

Subject to the limitations listed in Section 1.5, the FNEP applies to accidents or emergencies occurring at licensed nuclear facilities in Canada or abroad, involving **nuclear powered vessels** or vessels containing nuclear materials in Canadian waters, or other serious radiological threats that will or could impact Canada or Canadians abroad.

2.3.1 An event at a nuclear facility in Canada or in the United States along the Canada/United States border⁷

Although the probability of an emergency at a licensed nuclear facility resulting in a large emission of radioactive material is very low, its impact could be serious. Past events such as 1979 Three Mile Island and 1986 Chernobyl accidents provide reasonable bounds for determining an appropriate planning basis.

For each nuclear generating station in Canada, in addition to the on-site emergency plan which is under

⁷ For example, the Enrico Fermi nuclear facility is located approximately 40 km southwest of Detroit, State of Michigan, U.S.A., near the Canada/U.S.A. border.

the responsibility of the owner/operator, an off-site nuclear emergency plan involving both municipal and provincial levels must be in place. The latter should detail how to implement **urgent protective actions** in the **emergency planning zones** near a licensed nuclear facility (e.g., **access control, sheltering, evacuation**, administering **thyroid blocking agent**), and ingestion control measures for a larger **ingestion exposure emergency planning zone** (e.g., **food controls** on locally produced food, closing local drinking water supplies, quarantine of farm animals).

Provinces which could most likely be affected by a nuclear emergency at a licensed nuclear facility are Ontario, Quebec, New Brunswick and, to a lesser extent, Nova Scotia (from the Point Lepreau Station, in New Brunswick), and British Columbia (from the Washington Nuclear Plant, in Washington State, U.S.A.). The current range of emergency planning zones in use by various jurisdictions are contained in the relevant provincial planning documents (see Provincial References, Appendix 2).

2.3.2 An event involving vessels visiting Canada or in transit through Canadian waters

This category includes events involving nuclear powered vessels, or vessels carrying fissionable or radioactive material, visiting Canada or in transit through Canadian waters. Naval reactors have considerably lower power ratings than nuclear generating stations and contain less radioactive material. Furthermore, nuclear powered vessels operate at low or zero power while along side in a Canadian naval port. As a result, a serious accident involving a nuclear powered vessel could result in similar but less extensive effects than from an emergency at a nuclear facility. For planning purposes, National Defence uses 1-5 km as an emergency planning zone for urgent protective actions around naval bases which are ports of call for nuclear powered vessels. An ingestion exposure emergency planning zone is not considered essential. However, should an accident happen, food and soil sampling and analysis may be required to ensure the safety of the population living in the immediate vicinity of the accident site. Nuclear powered vessels visit ports in Nova Scotia (Halifax) and British Columbia (Esquimalt and Nanoose).

At present, no vessels are authorized to carry significant quantities of fissionable substances from irradiated fuel as cargo through Canadian waters. However, future shipments of this nature are a possibility.

For events of this nature, the FNEP, or portions thereof, may be implemented on the specific request of a federal department or agency leading the response to these types of events.

2.3.3 An event involving a nuclear facility in the southern United States or in a foreign country

As the 1986 Chernobyl accident demonstrated, the effect on Canada of a nuclear emergency at a reactor station distant from Canada is limited. Small quantities of radioactive material may reach Canada. Although radioactive materials could be detectable, they would not likely pose a significant threat to public health and safety, property or the environment in Canada from direct exposure to fallout. The focus of the response would likely be on:

1. Controlling food imported from areas near the accident;
2. Assessing impacts on Canadians living or travelling near the accident site;
3. Assessing impacts in Canada and informing the public; and
4. Coordinating the response or assistance to requests from either a foreign power or an international agency.

Events involving United States nuclear generating stations along the Canada/United States border are

covered in Section 2.3.1 above.

2.3.4 Other serious radiological events

Examples of other serious radiological events include malevolent acts involving improvised nuclear or radiation dispersal devices, or use of conventional explosives on facilities known to use or store radioactive sources; or the re-entry of a nuclear powered satellite, such as the 1978 crash of COSMOS 954 in the Northwest Territories.

The coordinated response to a potential or actual release of radioactive material resulting from other serious radiological events would be essentially the same whether it resulted from an accidental or deliberate act. For fixed facilities and materials in transit, the emergency response can be planned in more detail. However, planning for other events is complicated by variances in the magnitude of the threat, location of the source, degree of destruction of supporting infrastructures, or by rapidly evolving situations.

The FNEP, or specific portions thereof, may be implemented in support of a province or a federal department/agency leading the federal response to these and other events requiring measures to protect public health and safety from sudden uncontrolled releases of radioactive materials in the environment.

In the event of sabotage or a terrorist threat involving or leading to the release or potential release of radioactive material, the federal government response would be coordinated under the auspices of the *National Counter-Terrorism Plan* [17] led by the Solicitor General for Canada. The Solicitor General's department may request activation of parts of the FNEP National Support Structure to provide technical and operational advice on potential radiological impacts and protective measures.

2.4 PLANNING PRINCIPLES

In accordance with the scale and nature of the event, a nuclear emergency could result in the widespread, trans-boundary distribution of radioactive material, with consequences which would implicate multiple jurisdictions, departments/agencies and orders of government. Federal and provincial departments/agencies have therefore agreed that the following planning principles are directly relevant to the FNEP:

First Principle: The responsibility to deal with emergencies is placed first on the organization responsible for the facility, then on successive orders of government as the resources, expertise, or mandates of each are required or affected.

Second Principle: A nuclear emergency will require a coordinated federal and provincial response. Involvement by government emergency management organizations in the response to the off-site consequences of a nuclear emergency should be carried out in accordance with, and respect of, the authorities and jurisdictions of each order of government, and in accordance with relevant federal and provincial agreements.

Third Principle: An effective response will require federal and provincial cooperation in the planning, preparedness and response phases. Support from one order of government to another must be provided while retaining operational control at that level of government having jurisdictional authority.

Fourth Principle: The FNEP is intended to complement existing and future provincial nuclear emergency plans or all-hazard contingency plans. These plans should be complementary, and

reflect respective provincial and federal roles and capabilities for nuclear emergency planning, preparedness and response.

Fifth Principle: The FNEP is intended to complement and to facilitate implementation of Canada's international commitments and agreements relevant to nuclear emergencies.

Sixth Principle: Since each individual department/agency is normally responsible for the implementation of its own emergency plans, the FNEP does not explicitly discuss individual departmental plans.

2.5 PLANNING NEEDS

The nuclear emergency planning and preparedness authorities of all orders of government should plan and prepare to respond in accordance with the planning needs listed below. These include the need to:

1. Receive prompt and accurate information on all aspects of the event, its impacts, and response actions;
2. Provide timely and accurate information to the appropriate government departments and agencies, international organizations, the media and the public;
3. Mobilize a wide range of resources, including logistics, scientific and communication resources to prevent and mitigate the consequences; and
4. Implement timely and accurate measures in order to protect public health and safety, property and the environment.

3 NATIONAL SUPPORT STRUCTURE

The National Support Structure provides overall coordination of the federal response during a nuclear emergency. It allows for information sharing and implementation of coordinated actions by the federal departments and agencies involved in the response. The National Support Structure is established as an additional operations centre to those normally activated by individual departments and agencies to deal with emergencies affecting their mandate. It does not replace, but is rather supported by, these individual departmental emergency operations centres. Activation of the National Support Structure may occur either prior to or following implementation of the FNEP. However, FNEP implementation requires federal organizations to coordinate their departmental emergency operations, procedures, and response actions through the National Support Structure.

The National Support Structure under FNEP encompasses all federal emergency centres, organizations, and federal personnel therein, including:

1. The **National Support Centre** in Ottawa,
2. The **Federal Regional Organization**, which may be co-located in the **provincial emergency operations centre**, and
3. Other supporting sites in Canada or abroad.

Members of the National Support Structure are referred to as **Designated Officials**. Health Canada maintains a list of staff from federal departments and agencies that are Designated Officials in the National Support Structure. Additional information on the membership of the National Support Structure can be obtained from the FNEP Administrative Authority (see page ii).

Most components of the structure are described in general terms in the *National Support Plan* [12]. The manner in which the elements of the structure would be brought into force is described in Section 4: Activation and Implementation.

3.1 NATIONAL SUPPORT CENTRE

The National Support Centre is the operations centre of the federal emergency operating groups. It is established to facilitate information sharing and implementation of coordinated actions between the various federal departments and agencies, and other jurisdictions involved in the response. Activities of the emergency operating groups in the National Support Centre are undertaken by Designated Officials from various federal government departments and agencies brought together into the following five Groups:

1. Executive Group;
2. Coordination and Operations Group;
3. Public Affairs Group;
4. Technical Advisory Group; and
5. Finance and Administration Support Group.

The group structure of the National Support Centre is shown in Figure 1.

The National Support Centre group representatives are supported by staff and capabilities in their “home” department or agency and by one or more **Task Teams**. Such teams would be formed to carry

out specific predefined responsibilities or to implement a specific set of tasks requiring participation or collaboration of multiple federal departments or agencies. Task Teams may be formed by, and report to, any group of the National Support Centre. Groups and possible Task Teams of the National Support Centre are shown in Table 1.

FIGURE 1: Group Structure of the National Support Centre

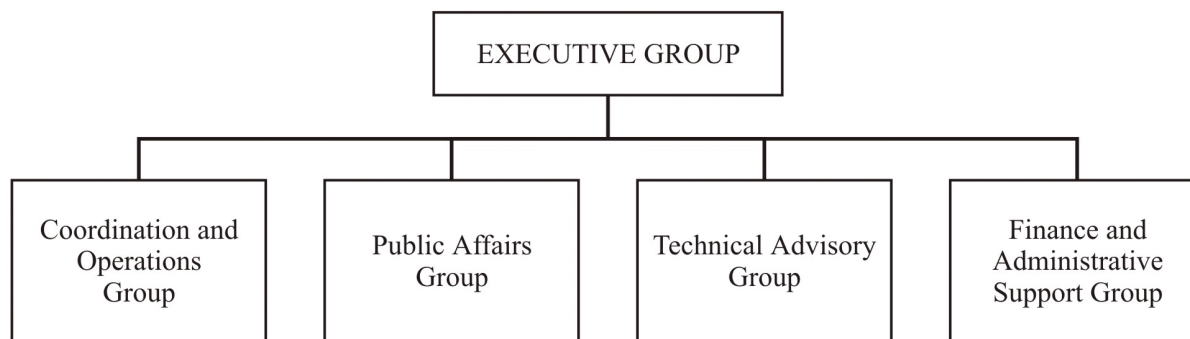


TABLE 1: Possible Task Teams under National Support Centre Groups

NATIONAL SUPPORT CENTRE GROUPS	TASK TEAMS *
EXECUTIVE	- Management - Government/Cabinet Briefings
COORDINATION AND OPERATIONS	- Legal aspects - Liaison - Telecommunications - Transportation and logistics for resources - International assistance - Radiation protection of emergency workers
PUBLIC AFFAIRS	- Public enquiries and rumour control - Media monitoring - Media briefings and conferences
TECHNICAL ADVISORY	- Plume dispersion and dose projections - Environmental monitoring and sampling - Laboratory analysis coordination - Radiological impact assessments

* Formed by a Group when required. Other Tasks Teams may be created during the response to deal with specific aspects of the emergency.

3.2 DESIGNATED OFFICIALS IN THE NATIONAL SUPPORT CENTRE

The National Support Centre is staffed and operated by Designated Officials, described below. Detailed descriptions of the roles and responsibilities assigned to Designated Officials are contained in Appendix 3, and in the relevant FNEP emergency procedures manuals.

National Coordinator:

Under the direction of the Executive Group, the **National Coordinator** is responsible for the overall coordination and management of the federal response.

The National Coordinator is a senior representative who has extensive knowledge of the federal role in nuclear emergencies. The National Coordinator is supported by the National Support Centre Manager, and the Chairs of the four functional National Support Centre Groups (Coordination and Operations, Public Affairs, Technical Advisory, and Finance and Administrative Support). Together, they comprise the Management Team, which oversees the functioning of the National Support Centre.

National Support Centre Manager:

Under the direction of the National Coordinator, the National Support Centre Manager's responsibilities are to provide advice and assistance to the National Coordinator in carrying out his duties, and to manage all staff and processes within the National Support Centre dealing with support functions and liaison.

National Support Centre Group Chairs:

Under the direction of the National Coordinator, the National Support Centre Group Chairs are responsible for managing their designated group. Group Chairs represent their groups on the National Support Centre Management Team.

Departmental Representatives to National Support Centre Groups:

Departmental Representatives represent and liaise with their "home" department or agency. Under the direction of the Group Chairs, Departmental Representatives perform the functional tasks relating to the mandate of the National Support Structure. They must be familiar with the emergency responsibilities, capabilities and procedures of their organization. Departmental Representatives are designated by their department or agency based on their expertise and/or authority with regards to the mandate of their assigned National Support Centre Group, described in the following section.

Liaison Officers:

Liaison Officers provide liaison and coordinate support and offers of assistance between emergency operating groups in the National Support Structure, the provinces, in other countries, or international agencies.

3.3 GROUPS IN THE NATIONAL SUPPORT CENTRE

3.3.1 Executive Group

The Executive Group provides policy review and decision making, authority over the implementation of the FNEP and departmental plans, representation to the Government (Cabinet), strategic assessment,

financial management, and policy conflict resolution. The Executive Group meets periodically, or as required, and is briefed regularly by the National Coordinator on all aspects of the emergency. Responsibilities of the Executive Group include, but are not limited to, the activities listed below. The Executive Group:

1. Responds to the direction of the Federal Prime Minister, the Cabinet or the designated Lead Federal Minister;
2. Recommends implementation of the FNEP and relevant Provincial Annexes to the designated Lead Federal Minister;
3. Formulates a government position on the emergency;
4. Makes major policy decisions;
5. Provides policy guidance and direction to manage the national support effort effectively;
6. Resolves any management problem not able to be resolved by the National Coordinator and the Management Team;
7. Approves Government/Cabinet briefings;
8. Designates the Federal Spokesperson(s);
9. Approves **termination** of FNEP, deactivation of the National Support Structure and transition to recovery phase; and
10. Recommends to the Privy Council Office a Lead Federal Department and Minister for the recovery phase.

The Executive Group is chaired by the Health Canada Deputy Minister or delegate, or by a Senior Executive appointed by the Lead Federal Minister for the response or the Privy Council Office. It is composed of senior representatives from federal departments and agencies having primary responsibilities within the FNEP, and having the authority to make decisions on behalf of their organization, including the commitment of resources. Membership may be augmented by officials from other organizations and governments having resources, capabilities or expertise of relevance to the specific nuclear emergency event.

3.3.2 Coordination and Operations Group

Under the direction of the Executive Group through the National Coordinator, the Coordination and Operations Group coordinates all federal response actions, ensures liaison with provincial and international organizations, provides a forum for the exchange of information amongst all federal departments and agencies, provides advice, options and recommendations to the Executive Group, and directs the implementation of the decisions made by the executive authority. Responsibilities of the Coordination and Operations Group include, but are not limited to, the activities listed below. The Coordination and Operations Group:

1. Serves as a national **reporting** forum on the status of the federal government's activities;
2. Ensures that implementation of individual federal departmental support plans is coordinated and consistent with the current federal strategy and FNEP provisions, that it can be carried out safely, and that it does not conflict with other ongoing federal and provincial operations;
3. Maintains liaison with federal departmental and agency headquarters in the National Capital Region, the provincial emergency operations centre (through the Federal Operations Liaison Officer), and other supporting sites;

4. Ensures that links with federal institutions, non-governmental organizations, foreign governments, international agencies, the private sector (e.g., industry, universities), etc. are established and maintained directly or through the appropriate federal departments and agencies;
5. Maintains communication with the Technical Advisory Group and the Public Affairs Group to receive and provide information on response operations;
6. Develops consolidated situation reports on the basis of reports received from groups of the National Support Centre and federal departments and agencies;
7. Keeps track of consolidated government emergency response expenditures through the Financial and Administrative Support Group;
8. Coordinates, with assistance from the Technical Advisory Group, environmental monitoring, sampling and laboratory analysis;
9. Conducts an assessment of the actual or potential national impacts of the implemented or proposed **protective measures**;
10. In areas of federal jurisdiction or when requested by a province, makes recommendations and coordinates implementation of protective measures;
11. Contacts and coordinates the dispatch of federal, national and international resources in response to requests for, or offers of, assistance from the provincial emergency operations centre or other appropriate authorities;
12. Coordinates, with assistance from the Technical Advisory Group, the implementation of occupational radiation protection programs for federal emergency workers, or in support of provinces;
13. Establishes and maintains a joint emergency telecommunications system; and
14. Proposes transition to recovery and assists the National Coordinator in implementing termination and deactivation activities.

The Coordination and Operations Group is chaired by a senior representative with knowledge of the FNEP, and expertise in nuclear emergency preparedness measures and intervention requirements. The Coordination and Operations Group is composed of officials from organizations having responsibilities within the structure of the FNEP and who have knowledge and authority, or can easily access those with the knowledge and authority, to make operational decisions on behalf of their organizations. Any federal department or agency may be an active member of the Coordination and Operations Group, depending on the nature and extent of the emergency.

The Coordination and Operations Group also includes liaison members from the Technical Advisory Group and the Public Affairs Group, who are responsible for bilateral liaison between the Coordination and Operations Group and their home group, identifying issues and providing advice to the Group which may involve federal operations.

3.3.3 Public Affairs Group

Under the direction of the Executive Group through the National Coordinator, the Public Affairs Group serves as the central federal coordination point for the gathering, generation, coordination with provincial counterparts and distribution of federal information concerning the emergency for the public and the media.

When the **provincial information centre** is activated in response to an emergency in or near that

province, the Public Affairs Group works in close collaboration with members of the Federal Regional Organization at that centre and coordinates public information with federal departments/agencies and provincial authorities.

Responsibilities of the Public Affairs Group include, but are not limited to, the activities listed below. The Public Affairs Group:

1. Develops appropriate communications strategies and responses;
2. Provides information and advice to the elements of the National Support Centre on communications strategies and activities;
3. Identifies potential national public affairs resources required in support of the National Support Centre or a province;
4. Maintains liaison and coordinates with the provincial information centre, through the Federal Public Affairs Liaison Officer;
5. Maintains a link with all federal departmental public information groups, the public inquiries centre (when activated) and other public information officials, as required;
6. Assists the Coordination and Operations Group in preparing Government/Cabinet briefings;
7. Prepares and coordinates the dissemination of information products associated with the implementation of protective measures to the public;
8. Prepares and coordinates media announcements, briefings and conferences at the national level;
9. Supports the Federal Spokesperson(s);
10. Establishes and operates a national media centre;
11. Disseminates public information (including information packages and media announcements) by appropriate means;
12. As required, establishes, arranges for the provision of and maintains a public inquiry hot line, and assesses public information needs and concerns;
13. Establishes, arranges for the provision of and maintains systems for monitoring of national and regional media, monitors and analyses national and regional media, and identifies emerging issues; and
14. As required, establishes and coordinates, Task Teams to carry out specific and well-defined public affairs tasks.

The Public Affairs Group is chaired by a senior communications representative with detailed understanding of government and emergency communications requirements. It is composed of federal public affairs officials from organizations having responsibilities within the structure of the FNEP and in accordance with the framework set out in the *National Emergency Arrangements for Public Information* [13]. The Public Affairs Group may be augmented by officials from other organizations and governments having responsibility for aspects of the specific nuclear emergency event.

3.3.4 Technical Advisory Group

Under the direction of the Executive Group through the National Coordinator, the Technical Advisory Group provides scientific and expert technical advice, guidance and information to the other parts of the National Support Centre and other organizations involved in the management of the emergency situation. Responsibilities of the Technical Advisory Group include, but are not limited to, the activities listed

below. The Technical Advisory Group:

1. Maintains liaison and coordinates with the province technical team through the Federal Technical Liaison Officer;
2. Consolidates and interprets scientific and technical data related to the emergency;
3. Assesses short-range and long-range plume dispersion and dose projections, including long-range ground contamination;
4. Assists the Coordination and Operations Group in coordinating environmental monitoring, sampling and laboratory analysis;
5. Conducts an assessment of the potential and actual radiological impacts of the emergency;
6. As required or as requested by a province, formulates recommendations for protective measures, including: sheltering, thyroid blocking, evacuation, food control, and **relocation**;
7. Identifies potential national and international technical/scientific resources and laboratories from existing inventory;
8. Provides information and guidance required by the Coordination and Operations Group on radiation protection issues for emergency workers;
9. Provides information and guidance required by Public Advisory Group for public affairs functions and media relations, including technical information and assessment of impacts;
10. Coordinates with other organizations to classify the emergency according to the **International Nuclear Event Scale** [45];
11. As required, establishes and coordinates Task Teams to carry out specific and well defined technical tasks; and
12. Assists in termination and deactivation activities.

The Technical Advisory Group is chaired by an expert in radiation monitoring and assessment. It is composed of federal technical specialists from organizations having responsibilities within the structure of the FNEP and who have expertise in the evaluation of the impact of a nuclear emergency.

3.3.5 Finance and Administrative Support Group

Under the direction of the National Coordinator, the Finance and Administrative Support Group provides financial, secretarial, logistic and communications support to the National Support Centre.

Responsibilities of the Finance and Administrative Support Group include, but are not limited to, the activities listed below. The Finance and Administrative Support Group:

1. Provides financial advice and management of all emergency expenditures, loans, financial claims and assistance accounts, including the preparation of Treasury Board reports and submissions;
2. Provides administrative support to all National Support Centre groups and components, including clerical support, telephone and fax services, printing services and mail services;
3. Manages the logistics of the National Support Centre, including security and catering services; and
4. Receives, logs and distributes reports, including situation reports, media announcements and technical assessment statements for the National Support Centre.

The Finance and Administrative Support Group is chaired by and composed of personnel from

departments and agencies involved in the FNEP response.

3.4 FEDERAL REGIONAL ORGANIZATION AND REGIONAL DESIGNATED OFFICIALS

The National Support Structure is represented in the affected Province by the Federal Regional Organization. Every province has its own unique emergency management structure and requirements for federal support in the event of a nuclear emergency in that province. The detailed structure of the Federal Regional Organization varies therefore from one province to the next. Federal departments and agencies may be represented in the provincial emergency management organization activated when the Province's nuclear emergency plan is implemented. Prior to implementation of FNEP or a Provincial Annex, these federal officials in the region would report and coordinate their activities through their home offices.

The Federal Regional Organization consists of the designated positions described below. Unless otherwise indicated in a Provincial Annex of FNEP, designated officials of the Federal Regional Organization will normally be located at the provincial emergency operations centre. A Federal Regional Organization will include:

1. A **Federal Coordination Officer**;
2. At least one **Federal Liaison Officer** for each of the provincial Operations, Public Information, and Technical Assessment groups; and
3. All other federal regional representatives directly involved in providing support to the province, or carrying out response actions coordinated under the FNEP.

Detailed descriptions of the roles and responsibilities assigned to regional Designated Officials are contained in Appendix 3, and in the relevant FNEP emergency procedures manuals.

3.4.1 Federal Coordination Officer

Under the functional direction of the National Coordinator, the Federal Coordination Officer provides the principle liaison with the National Support Centre, and coordinates support between the provincial emergency operations centre, Federal Liaison Officers and the National Support Centre.

The Federal Coordination Officer is a senior federal representative from a regional office who is able to promptly go to the provincial emergency operations centre, and who has authority for determining actions, including the commitment of federal regional resources. The Federal Coordination Officer is not expected to provide radiation protection advice.

Unless otherwise specified, the Regional Directors of the Office of Critical Infrastructure Protection and Emergency Preparedness are the predesignated interim Federal Coordination Officers until such time as they are replaced by an official designated by Health Canada or the Lead Federal Minister for the response.

3.4.2 Federal Liaison Officers

Under the direction of the Federal Coordination Officer, the Federal Liaison Officers for each of the provincial operations, public information, and technical assessment groups or their equivalents will provide liaison and coordinate support between the provincial emergency operations centre and the appropriate group of the National Support Centre. Detailed activities of the Federal Liaison Officers are

provided in Appendix 3.

Liaison Officers are individuals selected for the knowledge and expertise most relevant to the subject and functions of their assigned group. They may be predesignated staff from any of the departments and agencies involved in the FNEP. The Federal Liaison Officers may be assisted in carrying out their duties by other members of the Federal Regional Organization with appropriate knowledge and expertise.

The Federal Operations Liaison Officer is the Regional Director, Office of Critical Infrastructure Protection and Emergency Preparedness.

3.4.3 Other Members of the Federal Regional Organization

The Federal Regional Organization will comprise federal specialists from the region, augmented as required by personnel from other regions or from headquarters. The size, composition and role of this team will be dictated by the location, nature and magnitude of the emergency. These specialists will go to the provincial emergency operations centre, to the provincial information centre, or other sites where they would provide federal support to provincial groups. They may also gather at a federal regional emergency operations centre, along with provincial liaison officers, where they will ensure the coordination of federal actions in the region.

3.5 LIAISON OFFICIALS FROM NEIGHBOURING COUNTRIES FOR EVENTS IN CANADA

In the event of a nuclear emergency in Canada which may have impacts on the United States, or for which United States resources may be required for the response, one or more federal officials from the United States may be dispatched to positions within the National Support Structure under the provisions of the *Canada-United States Joint Radiological Emergency Response Plan* [19] to carry out liaison or support activities.

Liaison officials from other neighbouring countries (France for St. Pierre et Miquelon; Denmark for Greenland) may also be sent to the National Support Centre in order to provide direct liaison with organizations in their home countries.

3.6 DESIGNATED LIAISON OFFICIALS FOR EVENTS ABROAD

In the event of a nuclear emergency occurring abroad, one or more federal officials may be designated to carry out liaison or support activities in the country where the event has occurred. These officials will need to register with and liaise with the local Canadian Mission. The local Canadian Mission may be asked through the Department of Foreign Affairs and International Trade to provide interim staff to carry out these functions until replaced by designated staff of the National Support Centre.

Mechanisms for the exchange and distribution of information between Canada and another country will follow existing channels established by the Department of Foreign Affairs and International Trade or under applicable international arrangements until such time as specific arrangements are established between the National Support Centre in Canada and the emergency management organization in the country where the emergency has occurred. Information destined for Canadians living or travelling in the "host" country will be provided to the Department of Foreign Affairs and International Trade member at the National Support Centre for subsequent distribution.

4 ACTIVATION AND IMPLEMENTATION

4.1 INITIAL REPORT AND ASSESSMENT

When an emergency event occurs at a licensed nuclear facility⁸, the **Provincial Emergency Measures Organization** and the Canadian Nuclear Safety Commission should normally be the first government agencies to receive the initial report. For a nuclear emergency occurring in a foreign country, Health Canada, Canadian Nuclear Safety Commission, Environment Canada, Department of Foreign Affairs and International Trade, the Office of Critical Infrastructure Protection and Emergency Preparedness, or other federal department/agency may be the first to be notified through their partners or under arrangements with international organizations. For other serious radiological events, individual federal or provincial organizations may be notified through their partners, through arrangements with international organizations or through some other defined notification arrangements.

Once informed of a nuclear emergency, a federal department/agency or a Provincial Emergency Measures Organization must notify Health Canada's 24-hr FNEP emergency number within two hours of the initial report. Health Canada will notify all other federal partners involved in this plan that a nuclear emergency has occurred and that follow-up actions are required. Health Canada will also directly notify Designated Officials in the National Support Centre and Federal Regional Organization. Upon activation, these officials will promptly notify their home department or agency, and proceed to the designated emergency operations centre location.

4.2 ACTIVATION OF THE NATIONAL SUPPORT STRUCTURE

Authority to activate the National Support Structure rests with the National Coordinator or delegated authority. The staff and organizations listed below will be informed that all or parts of the structure are activated at a specific time and location (e.g., Health Canada's emergency operations centre, Office of Critical Infrastructure Protection and Emergency Preparedness headquarters facilities or at an alternate emergency operations centre):

1. Designated Officials of the National Support Centre and the Federal Regional Organization;
2. The Privy Council Office and official points of Contact listed under FNEP;
3. Federal institutions and non-governmental organizations, as appropriate;
4. Provincial Emergency Measures Organizations concerned; and
5. The Government Emergency Operations Coordination Centre (GEOCC).

Each federal department and agency will be responsible for notifying its regional offices. As soon as the National Support Centre is operational, foreign governments and international organizations will be advised, as necessary. Specific activation procedures are included in the FNEP emergency procedures manuals.

Subject to the specific nature and extent of the emergency, federal actions may involve only one department or agency, with no obvious impacts on other operations, or may require coordination with other departments or agencies. It is incumbent on these federal departments or agencies to inform and coordinate their activities with the National Support Centre and the Federal Regional Organization through their Designated Officials.

⁸ As defined in the Canadian *Nuclear Safety and Control Act* [3]

4.2.1 Activation Level of the National Support Structure

The activation level of the National Support Structure will depend on factors such as nature, magnitude and location of the event, on the real or potential impacts on Canadians, and on the degree of federal involvement required. The activation levels are:

1. **MONITORING**: Some Designated Officials of the National Support Centre are placed on duty to monitor the situation. Most emergency personnel will operate from their normal work offices or from their departmental emergency operations centre, in accordance with their departmental plans. Federal Liaison Officers and technical specialists from the Federal Regional Organization may be activated in accordance with the appropriate provincial nuclear emergency plans or Provincial Annex of the FNEP.
2. **PARTIAL ACTIVATION**: Some Designated Officials of the National Support Structure are activated and informed to gather in the appropriate emergency centres. The National Coordinator will regularly reassess the situation to determine if full activation of the National Support Structure is required.
3. **FULL ACTIVATION**: All Designated Officials of the National Support Structure are activated and informed to gather in the appropriate emergency centres. Relevant emergency plans, procedures, and emergency centres of federal departments and agencies are implemented and liaisons established with the National Support Centre and Regional emergency centres. Operations by single federal departments or agencies, within their normal mandate, that are initiated prior to full activation will have to be coordinated with the National Support Centre.

Large-scale assistance operations to the province will normally take place under Full Activation. The specific federal-provincial interface and links between the emergency management organizations of both orders of government under Full Activation are described in detail in the relevant Provincial Annex and illustrated in a general fashion in Figure 2.

4.2.2 Links with the Canadian Nuclear Safety Commission

When a nuclear emergency occurs in Canada at a licensed nuclear facility, the Canadian Nuclear Safety Commission (CNSC) is notified by the affected facility, and may be represented at the provincial emergency management organization. Upon activation of the National Support Structure, the following links between the National Support Centre and the CNSC are established under the FNEP, depending on the activation level:

MONITORING: The National Coordinator, or delegated authority, maintains contact with the CNSC emergency operations centre through the CNSC Coordinator Off-Site Liaison.

PARTIAL or FULL ACTIVATION: A CNSC Technical Officer will join the Technical Advisory Group in the National Support Centre to liaise with the CNSC emergency operations centre and the CNSC staff in the provincial technical group. A CNSC official will join the Public Affairs Group in the National Support Centre to liaise with the CNSC Coordinator of Public Information. Subject to the needs of the CNSC and the Public Affairs Group, the CNSC media centre may be made available for interim use by the Public Affairs Group until an alternate location is established and operating.

4.3 IMPLEMENTATION OF THE FEDERAL NUCLEAR EMERGENCY PLAN

Implementation of the FNEP is defined as bringing into force the provisions of this plan as the basis for coordination of actions and related expenditures at the federal level in response to a nuclear emergency. Implementation establishes the emergency operating groups of the National Support Centre as the overall operational authorities for the federal response, and requires individual federal departments and agencies to coordinate their response actions through the National Support Structure. Authority for the implementation of the FNEP must be given by the Minister of Health (or alternate Lead Minister as designated by the Privy Council Office), the Prime Minister of Canada or Cabinet. The implementation of relevant departmental emergency plans and procedures remains under the control of the individual departments or agencies.

Subject to the specific circumstances of the emergency, the decision to implement the FNEP will be made either concurrently with or following activation of the National Support Structure. Based on factors such as the nature, magnitude and location of the event, and the real or potential impacts on Canadians, the National Coordinator may consult with other relevant authorities concerning the requirement to implement all or portions of the FNEP. These consultations may require activation of all or portions of the National Support Structure prior to deciding on implementation of the FNEP.

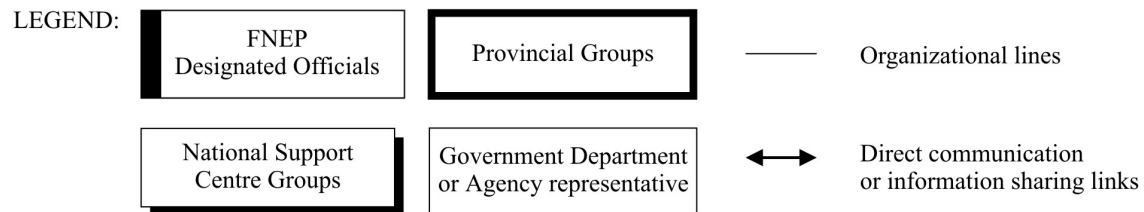
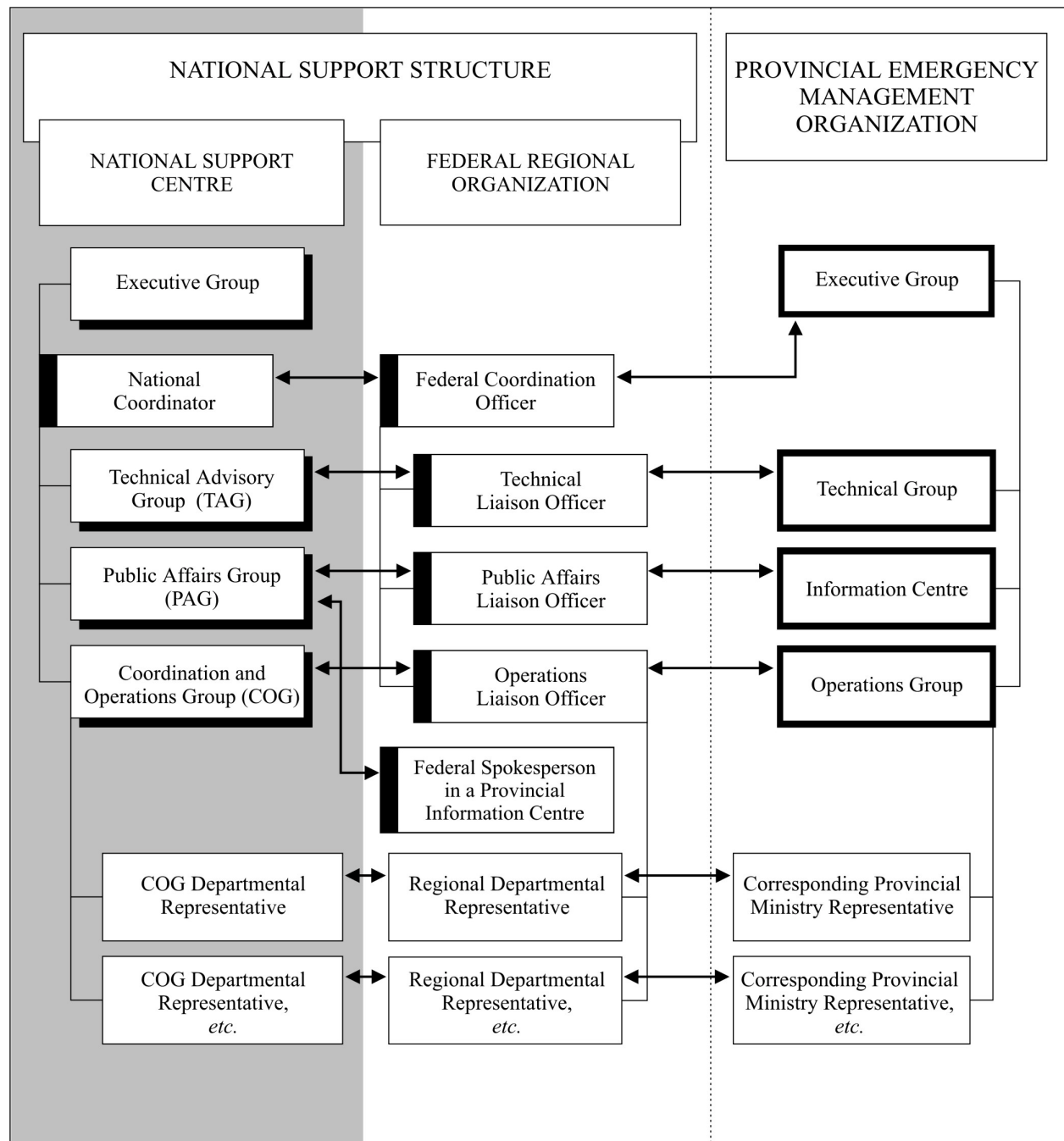
If the National Support Structure is not already activated, the National Coordinator will set its activation level. The National Coordinator will notify FNEP departments and agencies, and members of the National Support Structure that the FNEP *Master Plan*, and a Provincial Annex when applicable, have been implemented.

The National Coordinator will ensure that the Provincial Emergency Measures Organization(s) and federal departments and agencies concerned are informed of the decision to implement or not implement the FNEP.

4.3.1 Implementation of a Provincial Annex

Implementation of the FNEP *Master Plan* does not automatically implement a Provincial Annex. Normally, a Provincial Annex will be implemented following consultations and agreement between the National Coordinator, provincial authorities and federal regional officials as described in the appropriate Annex. Once a Provincial Annex is implemented, the FNEP *Master Plan* will be implemented automatically.

FIGURE 2: Example of a generic interface between Provincial and Federal organizations



Note: Agencies and communications links are examples only and are not meant to represent actual arrangements

5 CONCEPT OF OPERATIONS

The concept of operations describes the transition from non-emergency conditions to emergency operations in a manner and time frame that is consistent with the expected roles and responsibilities of the federal organization. It also provides the framework for operations and generic functions of the National Support Structure. The concept of operations is similar for all types of FNEP emergencies, although the extent of involvement of the National Support Structure, and of individual departments and agencies, will depend on the nature, magnitude and location of the event.

The occurrence of a nuclear emergency will lead to a sequence of response actions focussed on managing the incident and mitigating its effects (the responsibility of the site operator), and protecting the public against actual or potential effects of the incident (the responsibility of the site operator, and governments through the respective emergency planning and preparedness authorities). The following activities will be undertaken by the respective orders of government in accordance with their plans:

1. Local governments will manage and conduct emergency operations within their boundaries;
2. The provincial government will establish a provincial emergency centre(s) to coordinate provincial actions in accordance with their respective nuclear or “all-hazards” emergency response plans;
3. Provinces outside the affected area may choose to activate their support centres as required;
4. The Federal Government will conduct emergency operations, coordinated through the National Support Structure, which are within the federal mandate, and will provide, at the request of the provincial government, national support services and resources. The specific organization and activities undertaken under the FNEP will vary depending on the location, source, and magnitude of the nuclear emergency. The National Support Structure will be activated at a level appropriate to the required federal response, and will conduct emergency operations based on the concept of operations outlined below⁹.

5.1 GENERIC OPERATIONAL FRAMEWORK

The transition from normal conditions to emergency operations is undertaken as described in Section 4: Activation and Implementation.

Individual departments/agencies may have activated their own emergency plans prior to official notification from Health Canada and activation of the National Support Structure. Upon notification, these departments/agencies will coordinate their actions with the National Support Structure through their Designated Officials in the National Support Centre.

Departments and agencies who have critical operational, information gathering or assessment responsibilities, or predefined roles in the provincial emergency management organization due to their mandate, must ensure effective coordination between their departmental emergency operations centre and the National Support Centre.

Expected generic functions of the National Support Structure for nuclear emergencies are discussed below. Operations in specific emergency events will be based on these functions, although modifications

⁹ Operational details for emergency response will be contained in supporting documentation to the FNEP, such as site/scenario-specific Parts, emergency procedures manuals, and technical guidelines.

may be expected depending on the details of the emergency scenario. Details of departmental responsibilities and contributions to these functions include, but are not limited to, those identified in Appendix 5.

5.2 A NUCLEAR EMERGENCY IN CANADA OR IN THE UNITED STATES ALONG THE CANADA/UNITED STATES BORDER

Nuclear emergencies occurring in Canada, or in the United States adjacent to the Canada/United States border, could require the implementation of emergency plans by affected provinces, and the application of urgent protective actions (i.e., sheltering, thyroid blocking, evacuation, local livestock and food controls). Longer-term impacts and mitigative strategies could also be expected.

The FNEP recognizes the primary responsibility of provinces for protecting civilian populations, property and the environment within their borders. Annexes to the FNEP have been developed with specific provinces in order to describe the links between the National Support Structure and the corresponding provincial emergency management organization that would be established in accordance with existing provincial nuclear emergency plans. Some federal departments may already be involved in the response prior to activation of the National Support Structure through their links with the affected facility or the provincial emergency management organization.

For these types of emergencies, the federal government response will focus on providing coordinated support to the provincial emergency management organization, and on activities within federal jurisdiction.

5.2.1 Management

The national response will be managed by the National Support Structure as described in Section 3, with overall coordination exercised by the National Support Centre. Coordination between the National Support Centre and the provincial emergency operations centre will be maintained through the Federal Regional Organization. The emphasis of the response will be on supporting affected provinces in all required areas, assessing and mitigating impacts on areas of federal jurisdiction, assessing and mitigating long-term impacts and liaising with foreign governments and international agencies, including the International Atomic Energy Agency in accordance with the *Convention on Early Notification of a Nuclear Accident* [43].

Liaison officials from neighbouring countries may be dispatched to the National Support Structure under joint arrangements to provide coordination with agencies in their home country. For emergencies in the United States, Canadian liaison officials may be dispatched to an emergency operations centre in the United States under the provisions of the *Canada-United States Joint Radiological Emergency Response Plan* [19] to provide coordination with the National Support Structure (see also Section 5.5).

5.2.2 National Coordination and Operations

In accordance with the activities outlined in Section 3.3.2, the Coordination and Operations Group will develop the interdepartmental strategy for federal operations, coordinate the overall federal response, and coordinate the provision of national and international resources to the province and to the federal regional offices. Regional resources will be coordinated by the Federal Regional Organization (Section 5.2.3).

In consultation with the Technical Advisory Group, the Coordination and Operations Group will conduct

a general assessment of the actual or potential impacts of response measures on federal operations and on the nation.

For complex or sustained operations requiring the participation of several federal departments or agencies, Task Team(s) may be established. The Coordination and Operations Group (for national operations) and the Federal Operations Liaison Officer (for regional operations) will keep each other informed of respective activities and requirements.

5.2.3 Local Coordination and Operations

The Federal Coordination Officer and the Federal Liaison Officers will join the provincial emergency management organization, in accordance with the activities listed in Section 3.4, Appendix 3 and the appropriate Provincial Annex. Lines of communication between the provincial emergency operations centre and the National Support Centre will normally be through the Federal Coordination Officer and the Federal Liaison Officers.

Provincial requests for resources or other kinds of assistance should be directed to the appropriate Federal Liaison Officer or the Federal Coordination Officer who will identify the potential sources in the province and contact the appropriate federal regional office(s). If the resources are not available locally, the Federal Liaison Officer will forward the request to the appropriate group in the National Support Centre. The appropriate National Support Centre group will identify the potential national or international resources available and inform the Coordination and Operations Group who will make contact, request the assistance and facilitate its provision.

The Federal Operations Liaison Officer will coordinate all operations by federal regional personnel in the province, including the provision of resources from the region in support to the province, and will maintain liaison with the Coordination and Operations Group in the National Support Centre for all operational aspects of the emergency. As much as possible, federal regional resources will be employed before national resources are called upon, except in accordance with prearranged plans or specific requests for assistance. Departmental representatives in the affected region should keep the Federal Operations Liaison Officer, their own headquarters, regional offices and their representative on the Coordination and Operations Group of the National Support Centre informed of their response activities.

5.2.4 Protection of Emergency Workers

For off-site operations by federal teams in support of provincial resources, radiation protection support should be provided by provincial authorities. When working in support of provincial resources, federal personnel will be subject to the same criteria for dose limits and radiation protection as provincial personnel. Where no provincial criteria exist, federal personnel will be subject to criteria for dose and contamination levels as stipulated by federal government authorities: Canadian Nuclear Safety Commission for on-site response and Health Canada for off-site response. If a province requests federal support in radiation protection, the Technical Advisory Group will help the Coordination and Operations Group identify additional resources required.

5.2.5 Interventions on Federal Lands

Protective actions may be required on federal lands such as parks or aboriginal lands. In such cases, the implementation of protective measures is carried out in accordance with local and provincial plans, and is normally coordinated by the province. Regional headquarters of federal departments or agencies likely to be affected by such measures will be kept informed by the Federal Regional Organization. If required,

federal regional headquarters will implement protective measures in coordination with the province.

In the event of a nuclear emergency originating at a federal facility (e.g., Atomic Energy of Canada Ltd, National Defence) the federal department or agency who owns or operates the facility is responsible for all on-site interventions and will coordinate off-site activities with municipal, provincial and federal officials.

5.2.6 Assessment of the Hazards and the Impacts

In accordance with the activities outlined in Section 3.3.4, the Technical Advisory Group will conduct a national assessment of the actual or potential radiological hazards and impacts of the emergency situation in general, and specifically on federal operations. The Technical Advisory Group will obtain information from the Federal Technical Liaison Officer, and from federal departments and agencies involved in specific aspects of the emergency (See Appendix 5).

The degree of federal technical assistance required will depend on the level of assessment performed by the provincial technical group and on technical resources available in the province. In some cases, federal assistance may be limited to interpreting the results of the technical assessment performed by the province. In others, the Technical Advisory Group may be required to perform a full assessment of the radiological impact of the event, and may need to recommend protective actions.

Unless specifically requested or required for federal purposes, the Technical Advisory Group will not normally repeat local impact assessments performed by the provincial technical group. At a minimum, the Technical Advisory Group will carry out medium-range and long-range plume dispersion and dose projections; however, it may be asked by the province to evaluate potential short-range radiological impacts of the event.

The Federal Technical Liaison Officer, the Coordination and Operations Group and the Public Affairs Group will be promptly informed of the results of any assessment by the Technical Advisory Group.

5.2.7 Protective Action Recommendations

Decisions regarding protective actions, including criteria for recommending certain protective actions, are normally within provincial jurisdictions. In the event of a provincial request for federal recommendations concerning the implementation of protective actions, or where required, federal guidelines for urgent protective measures, such as evacuation and sheltering, will be used. Protective action recommendations for the food supply will be based on Health Canada's guidelines for the control of radioactively contaminated food and water [14, 15].

5.2.8 Radiological Monitoring and Sampling

Monitoring and sampling of agricultural products, food, soil, water, etc., will normally be coordinated by the province, with federal involvement and support as appropriate. Aerial monitoring to determine the extent and magnitude of ground contamination or to track a plume may be conducted in response to a provincial request or to a request by the Technical Advisory Group. All post-processing data collected by the aerial survey team will be provided directly to the province and the Technical Advisory Group.

5.2.9 Public Information

The Public Affairs Group in the National Support Centre will carry out its functions as specified in Section 3.3.3.

Provincial information centres will be the main source of public and media information on aspects of emergency operations and protective measures. The federal position will be presented by the Federal Spokesperson, who will be a designated senior official from Health Canada, or as designated by the Executive Group. Information on the site conditions will be issued by the affected facility or the Canadian Nuclear Safety Commission.

In addition to the Federal Spokesperson, other federal public affairs staff will be dispatched to the provincial information centre when the latter is activated. Under the direction of the Federal Public Affairs Liaison Officer, staff will work in close cooperation with the provincial information group, in accordance with the Provincial Annexes, to coordinate information to the media and the public. The Federal Regional Spokespersons will take part in joint media conferences, will maintain liaison with the Public Affairs Group in the National Support Centre and will provide information to the media on federal operations and assistance in the province.

5.3 A NUCLEAR EMERGENCY INVOLVING VESSELS VISITING CANADA OR IN TRANSIT THROUGH CANADIAN WATERS

A serious accident involving a nuclear powered vessel could result in similar but less extensive effects than from an emergency at a nuclear facility. However, events involving nuclear powered vessels or vessels carrying fissionable or radioactive material in Canadian waters could require the implementation of emergency plans by affected provinces, and the application of urgent protective actions. As such, the concept of operations for this category of emergencies is similar to that discussed in the previous section, although the scale of operations may be less. Operational variances are discussed below.

5.3.1 Event involving a nuclear powered vessel in Canada

For a nuclear emergency involving a military nuclear powered vessel visiting one of the three authorized Canadian ports (Halifax, N.S.; Esquimalt and Nanoose, B.C.), National Defence, which is responsible for such visits, becomes the primary department on-site for:

1. Management of the response and the public affairs related to the technical aspects of the incident;
2. Protection of personnel on the Canadian Forces Base;
3. Provision of personnel and resources for operations in the emergency planning zone;
4. Gathering of technical data, and assessment of the consequences in the close range;
5. Formulation of recommendations to municipal and provincial officials for the protection of the local population; and
6. Liaison with local civilian authorities.

Civil authorities are responsible for managing the consequences of the accident off-base, and the related public affairs aspects. For any nuclear emergency leading to the declaration by National Defence of a General Emergency in accordance with their departmental plan, Health Canada will be notified. Upon request by National Defence or the province, the FNEP may be implemented to provide any additional

support required. In the event of FNEP implementation for these types of emergencies, National Defence or Fisheries and Oceans Canada are expected to be more heavily involved in the National Support Structure.

5.3.2 Event involving a civilian vessel visiting or in transit through Canadian territorial waters

In the event of a mishap involving a civilian (non-military) vessel visiting or in transit through Canadian territorial waters, or in international waters off Canada's shores, the federal government response would be coordinated under the lead of the Canadian Coast Guard, Fisheries and Oceans Canada. If the situation involves actual or potential exposure to radiation or the release of radioactive materials, the Canadian Coast Guard may request the National Coordinator to implement the FNEP (or parts thereof), to provide technical and scientific support and to provide advice on protective measures.

5.4 A NUCLEAR EMERGENCY IN THE SOUTHERN UNITED STATES OR IN A FOREIGN COUNTRY

A nuclear emergency which occurs in the southern United States or in a foreign country is unlikely to require urgent protective actions in Canada or restriction of food grown in Canada. For this situation, the main focus of the federal response will be on the assessment of the radiological impact and protection of Canadians living or travelling abroad near the event site, on the control of food and material imports into Canada from areas affected by the emergency, on the assessment of impacts in Canada, on coordination of assistance to the affected country, and on public information. For this type of event, the Department of Foreign Affairs and International Trade is expected to be more heavily involved in the National Support Structure. Unless a province is significantly affected, implementation of a Provincial Annex would be unlikely.

5.4.1 Management

The national response will be managed by the National Support Centre activated at a level appropriate to the emergency, with emphasis on technical assessment (Technical Advisory Group) and public information (Public Affairs Group). Provincial authorities will be invited to send senior representative(s) to the National Support Centre to maintain liaison with the federal organization, in accordance with the Provincial Annexes to the FNEP.

Canadian liaison officials may be dispatched to an emergency operations centre in the United States under the provisions of the *Canada-United States Joint Radiological Emergency Response Plan* [19] to provide coordination with the National Support Centre (see also Section 5.5).

5.4.2 Operations

Federal operations will involve primarily environmental monitoring, control of imported food and material and implementation of measures for Canadians abroad or returning to Canada from the affected region. The Coordination and Operations Group will be responsible for developing an interdepartmental strategy for support to the affected country.

The Coordination and Operations Group will coordinate the distribution of all pertinent information to appropriate federal department and agency headquarters, to the provincial authorities and to relevant Canadian missions. Individual federal departments and agencies will ensure that all regional offices receive copies of relevant information. Regional offices will liaise and coordinate as required with their provincial counterparts.

5.4.3 Technical Assessment

The Technical Advisory Group will establish links with the International Atomic Energy Agency, pertinent United States agencies, and other appropriate agencies in the affected country in order to obtain technical information on the event. The Technical Advisory Group will obtain long-range plume tracking data, and will project the impact on Canada. If Canadian territory is affected by the plume, the Technical Advisory Group will assess the data from the national radioactivity monitoring network. Results of the assessment will be provided to the Coordination and Operations Group and the Public Affairs Group. The Coordination and Operations Group will ensure distribution of relevant information to federal departments, agencies and to the provinces. If required, the Technical Advisory Group may establish technical links with a province or a limited number of provinces which are particularly affected.

5.4.4 Public Information

The authoritative source of public and media information will be established by the National Support Centre. There will be a Federal Spokesperson, who will be a designated senior official from Health Canada, or as designated by the Executive Group. Public Affairs Group will support the Federal Spokesperson by coordinating all public information and will establish and operate media monitoring, briefing and public inquiry centres. The Department of Foreign Affairs and International Trade will be responsible for assisting the Public Affairs Group in disseminating and customizing the information products for out-of-country Canadians and relevant Canadian missions.

5.5 OTHER SERIOUS RADIOLOGICAL EVENTS

In the event of sabotage or a terrorist threat involving the release or potential release of radioactive material, the federal government response would be coordinated under the auspices of the *National Counter-Terrorism Plan* [17] led by the Solicitor General for Canada. The Solicitor General's department may request activation of parts of the FNEP National Support Structure to provide technical and operational advice on potential radiological impacts and protective measures.

For other serious events resulting in the uncontrolled release of radioactive materials, all or specific parts of the National Support Structure may be implemented by the National Coordinator, or on the request of the federal department designated to lead the federal response to the event. Subject to the nature and location of these situations, the federal response structure would likely be modelled after the structures already described herein or in accordance with the *National Support Plan* [12].

5.6 COORDINATION WITH THE UNITED STATES

In the event of a nuclear emergency in North America, the federal response will be consistent with the *Canada-United States Joint Radiological Emergency Response Plan* [19]. The *Joint Radiological Emergency Response Plan* may be implemented if assistance between the federal government of Canada and the United States is requested or if a coordinated response is necessary. Requests for, and offers of, assistance in responding to a nuclear emergency will be coordinated by the National Support Centre.

Many adjoining municipalities, provinces, states, and federal departments and agencies on both sides of the border have established early notification, mutual aid agreements, or joint response plans that could apply to a nuclear emergency situation. Some of these existing documents provide for representation in the provincial/state or federal emergency operations centres by officials from the neighbouring country.

Where existing bilateral agreements (Provincial/State or others) permit direct communication, provision

of mutual aid, or liaison between organizations in Canada and United States, provincial authorities will ensure that Health Canada and the Department of Foreign Affairs and International Trade are kept informed of consultations with their United States counterparts. Organizations in direct contact will ensure that consultations, commitments, or decisions taken do not exceed the scope of the relevant agreement(s).

5.7 INTERNATIONAL LIAISON AND REQUEST FOR ASSISTANCE

International liaison and assistance arrangements are described in International Atomic Energy Agency Conventions. Notification, subsequent information and data exchange will follow procedures described in the *Convention on Early Notification of a Nuclear Accident* [43]. Assistance from or to a foreign government or an international organization will be requested, provided, directed, controlled and terminated in accordance with the *Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency* [44]. Prior to activation of the National Support Structure, Health Canada, the Canadian Nuclear Safety Commission and Department of Foreign Affairs and International Trade will be responsible for ensuring that links with international organizations are established and maintained in accordance with the requirements the previously listed Conventions. These links will be transferred to the National Support Centre when it is activated and operational.

6 TERMINATION AND TRANSITION TO RECOVERY

In the aftermath of a nuclear emergency, recovery activities may be required. A transition to the recovery phase may be adopted after initiating conditions of the emergency have stabilized and immediate actions to protect public health and safety have been completed.

6.1 TERMINATION OF THE FNEP

When the focus of activities shifts from emergency response to recovery activities, the National Coordinator for FNEP will recommend termination of FNEP, deactivation of the National Support Structure and transition to the recovery phase.

The Executive Group, in consultation with the Privy Council Office, will approve termination of FNEP and the transition to recovery by:

1. Designating a Lead Federal Minister for Recovery and a National Recovery Coordinator; and
2. Approving the time frame for hand-over from the National Coordinator for FNEP to a National Recovery Coordinator.

The National Recovery Coordinator will be responsible for identifying federal recovery priorities in consultation with provinces, and for assembling and coordinating a National Recovery Support Organization to implement the federal recovery activities. The National Recovery Support Organization may contain elements of the National Support Structure.

The transition to recovery and hand-over to the National Recovery Coordinator will trigger termination of the FNEP and closure of the response phase.

6.2 TRANSITION TO THE RECOVERY PHASE

Responsibility for recovery is largely within provincial jurisdiction. The *Government Emergency Book* [11] states that federal departments and agencies are responsible for developing Business Resumption Plans.

Federal involvement or support to provinces during the recovery phase will include, but is not limited to, the following activities:

1. Environmental decontamination and radioactive waste disposal operations;
2. Monitoring of contaminated areas and assessment of medium and long-term health hazards;
3. Non-radiological recovery operations;
4. Implementation and administration of federal post-disaster financial assistance programs under the *Nuclear Liability Act* [5]; and
5. Public information related to all of the above activities.

7 DEPARTMENTAL RESPONSIBILITIES FOR NUCLEAR EMERGENCY PLANNING, PREPAREDNESS AND RESPONSE

7.1 EMERGENCY PLANNING AND PREPAREDNESS

In order to achieve and maintain an adequate level of preparedness for nuclear emergencies, all federal departments and agencies involved, either as primary or supporting organization both in headquarters and regions, must:

1. Participate in intra- and interdepartmental emergency preparedness committees as needed;
2. Develop and maintain appropriate departmental or agency plans and procedures to carry out their roles and responsibilities as described in the FNEP, and identify and maintain the infrastructures and capabilities needed to implement them;
3. Maintain human resources adequately trained and equipped to carry out their plans and procedures;
4. Participate in exercises to ensure that these resources work and are kept up-to-date; and
5. Participate in studies or research aimed at developing any necessary standards or guidelines, and to keep abreast of improvements in technologies and capabilities relevant to emergencies.

7.1.1 Nuclear Emergency Preparedness Committees

The Health Canada planning organization for the FNEP is supported by three nuclear emergency preparedness advisory committees:

1. A federal interdepartmental committee;
2. A federal-provincial committee; and
3. A Canada-United States working group.

Health Canada provides the chair and secretariat for these committees. The titles and mandates of these committees are described in Table 2.

TABLE 2: Nuclear emergency preparedness committees

Committee	Mandate
Interdepartmental Committee on Nuclear Emergency Preparedness	To provide advice and assistance to the National Coordinator in the areas of nuclear emergency preparedness programs, response standards, emergency assistance, exercises and other related issues.
Federal-Provincial Coordinating Committee on Nuclear Emergency Preparedness	To provide advice and assistance to the National Coordinator for coordination of nuclear emergency preparedness and response arrangements with the provinces and territories.
Canada/United States Working Group on Radiological Emergency Preparedness	To arrange, facilitate and coordinate arrangements for mutual assistance/cooperation between Canadian and U.S. federal agencies with cross-border interest in nuclear emergencies.

Federal departments/agencies and Provincial Emergency Measures Organizations will participate as required in the relevant committees to ensure that

- all interdepartmental and interjurisdictional planning and preparedness issues and activities relevant to nuclear emergencies are adequately coordinated, and
- any concerns raised are considered and resolved.

7.1.2 Plans and Procedures

In accordance with Ministerial responsibilities under the *Emergency Preparedness Act* [2] and the *Federal Policy for Emergencies* [16], federal departments and agencies are responsible for developing and maintaining their own emergency management policies, plans and procedures.

Federal departments and agencies must develop and maintain procedures, related to the FNEP, to:

1. Notify their own headquarters and regional staff that a nuclear emergency has occurred;
2. Carry out the roles and responsibilities under the emergency functions and emergency support functions assigned to them in the *Government Emergency Book* [11], the *National Support Plan* [12] (see Appendix 4) and the **nuclear emergency functions** identified in the *Federal Nuclear Emergency Plan* (Appendix 5);
3. Participate in and support the National Support Structure, operate their own emergency operations centre as appropriate, and establish communications links and protocols required to exchange information between them; and
4. Coordinate delivery of their emergency actions with the activated portions of the National Support Structure, their headquarters, their regional offices, and their provincial counterparts, as applicable.

Federal departments and agencies are responsible for ensuring, in consultation with Health Canada, that their departmental plans and procedures are prepared in accordance with the pertinent aspects of FNEP, other emergency planning documents, and applicable international conventions.

Health Canada is responsible for developing and maintaining appropriate written agreements, joint plans, operating manuals, procedures or other documents required to implement the FNEP that are not the responsibility of any other department or agency.

7.1.3 Infrastructure and Capabilities

Each federal department and agency is responsible for ensuring that resources are available to meet its response requirements in the context of the FNEP. This includes, but is not limited to:

1. Organizing and maintaining communication capabilities, facilities infrastructure (e.g., emergency operations centres), support staff and rosters needed to implement their departmental plan and to fulfil the responsibilities referenced in the FNEP;
2. Providing departmental facilities, laboratories, equipment and any other resources needed to carry out their roles and responsibilities and support the National Support Structure in dealing with a nuclear emergency; and
3. Activating any departmental or national emergency response systems required (e.g., the Food and Agriculture Emergency Response System of Agriculture and Agri-Food Canada [6]).

7.1.4 Identification and Training of Designated Officials

Based on the elements listed above and the implementing requirements of the FNEP, federal departments and agencies are responsible for:

1. Identifying and designating suitable personnel and alternates from their organization for staffing various positions identified in the FNEP National Support Structure, in their own emergency plans, and in relevant provincial emergency plans; and
2. Ensuring that all Designated Officials receive minimal training and regular refreshers on applicable plans and procedures, and participate in regular drills and exercises of the FNEP.

Federal employees that would need to respond in the field in an active or support role, could be required to enter contaminated areas, or could come in contact with objects or samples containing radioactivity should receive a detailed course and subsequent annual refreshers on radiation protection and occupational safety.

Departments and agencies should consider training non-governmental organizations who have a response role in their departmental emergency plans.

All federal departments and agencies involved in the FNEP will provide advice and assistance to Health Canada for the development and conduct of training related to the FNEP.

7.1.5 Exercises

Health Canada, in consultation with the members of appropriate emergency preparedness committees, will plan periodic exercises of the FNEP National Support Structure.

Communication and activation drills of all Designated Officials should be conducted at least semi-annually. An exercise of a major component of the National Support Structure should be held every year. A full test of the FNEP should be held every 2-3 years in conjunction with a full provincial or international nuclear emergency exercise. Exercises can take various forms (paper, study, tabletop, telecommunication and full-field exercises), and may be combined with other non-radiological exercises.

All federal departments and agencies involved in the FNEP will provide advice and assistance to Health Canada for the development and conduct of exercises of the FNEP or parts thereof, and will endeavour to participate in these exercises.

For training purposes, members of the Federal Regional Organization who have a role in the provincial emergency management organization will endeavour to participate in exercises organized by the province.

Health Canada will ensure that exercises of the FNEP National Support Structure are evaluated, that an exercise evaluation report is produced within a reasonable time, and that appropriate follow-up actions are undertaken. Participating government departments/agencies are responsible for evaluating their own exercise objectives.

7.1.6 Study and Research

Federal departments and agencies will promote, coordinate, advise and assist primary departments and agencies, as appropriate, in studies and research dealing with all aspects of nuclear emergency functions identified, but not necessarily limited to, those in Appendix 5. Federal departments and agencies will also assist in the development of standards, methods and protocols to ensure the compatibility of:

1. Radioactivity release modelling, plume dispersion and dose projections;
2. Field sampling and measurement;
3. Aerial gamma measurement;
4. Laboratory sample analysis and reporting of results;
5. Data compilation and validation, quality control/quality assurance, and data management; and
6. Personnel dosimetry and emergency worker protection.

7.2 EMERGENCY RESPONSE

All federal departments and agencies called upon to respond to a nuclear emergency, either as primary or supporting organization both in headquarters and in the regions, must :

1. Fulfil their emergency management responsibilities listed under the emergency functions in the *Government Emergency Book* [11] (see Appendix 4);
2. Fulfil their responsibilities listed under the emergency support functions in the *National Support Plan* [12] (see Appendix 4); and
3. Fulfil their responsibilities listed under the nuclear emergency functions identified, but not necessarily limited to, those in the FNEP (see Appendix 5).

As stated previously, the National Support Structure provides overall coordination of the federal response during a nuclear emergency. It does not replace, but is rather supported by, individual departmental emergency operations centres. All departments and agencies establish and maintain their emergency operations centres as required, in order to respond to emergencies affecting their mandate. In addition, all departments and agencies identified in this Plan must provide staff, resources and support for activation and operation of the National Support Structure. FNEP implementation requires federal organizations to coordinate their departmental emergency operations, procedures, and response actions through the National Support Structure.

7.3 REVIEWS AND UPDATES

The *Federal Nuclear Emergency Plan* is a “living document” that will undergo minor revisions, regular updates and modifications necessary to reflect changes and evolving mandates of the federal and provincial organizations involved.

The FNEP will be reviewed and revised at least once every five years, preferably following a full exercise of the plan. Requests for changes to the FNEP or to procedures related to it must be submitted in writing to the Administrative Authority (see page ii). Minor revisions or updates of information contained in the FNEP should be provided to the Administrative Authority as required. All changes to departmental procedures, strategies, mandate or points of contact affecting the FNEP must be provided to the Administrative Authority within 30 days of the changes taking effect. All major changes to the FNEP will be reviewed and discussed by members of the Interdepartmental Committee on Nuclear Emergency Preparedness.

APPENDIX 1: DEFINITIONS

Terms and expressions used throughout this document are defined as follows:

Access control: The process of restricting access into the affected zone to emergency workers and other permitted individuals only.

Activation: Usually the first phase of the response to a nuclear emergency, which consists of bringing together members of the National Support Structure.

Designated Officials: Federal personnel designated by their department or agency to either represent their organization or to serve in a supporting role within the National Support Structure.

Emergency function: General subject area which groups actions that may be taken by a primary and a number of supporting departments or agencies in the preparedness phase or in the response phase of an emergency.

Emergency management organization: An organization, activated when a nuclear plan or “all-hazards” emergency plan is implemented, which is responsible for coordinating the response to a nuclear emergency.

Emergency planning zone: A defined zone around a nuclear facility for which detailed planning and preparations are made in advance to ensure that appropriate protective measures can be applied in a timely and accurate manner. These include the ingestion and plume exposure emergency planning zones.

Emergency support function: General subject area which groups actions that may be taken by a primary department or agency and where the focus is exclusively on providing support to provinces in the response phase of an emergency.

Emergency worker: Persons performing emergency services who are required to remain in, or to enter, offsite areas affected or likely to be affected by radiation from an accident, and for whom special safety arrangements are required. They may include police, firefighters, ambulance and emergency social services workers, and other essential services.

Evacuation: The rapid removal of people from an area to avoid or reduce high-level, short-term exposure to a hazard.

Federal Coordination Officer: The senior official designated by Health Canada or the Lead Federal Minister for the response, to provide liaison and coordinate support between the provincial emergency operations centre and the National Support Centre.

Federal Liaison Officers: The federal officials who are responsible for ensuring liaison between a provincial group (e.g., coordination group, information group, technical group), the corresponding group in the National Support Centre, and federal regional resources.

Federal Regional Organization: The component of the National Support Structure composed of all federal regional representatives located in the affected province(s) and directly involved in providing support to the province or carrying out response actions in a province.

Food Control: Measures taken to prevent the consumption of foodstuffs that have been radioactively contaminated above acceptable levels as a result of a nuclear emergency, including the supply of uncontaminated foodstuffs.

Implementation of the FNEP: Bringing into force the provisions of the *Federal Nuclear Emergency Plan* as the basis for coordination of actions and related expenditures at the federal level in response to a nuclear emergency

Ingestion exposure emergency planning zone: A defined zone around a nuclear facility for which detailed planning and preparations are made in advance to ensure that appropriate measures against exposure from ingestion of radioactive material can be applied in a timely and accurate manner.

International Nuclear Event Scale (INES): A scale to promptly and consistently communicate to the public the safety significance of reported events at nuclear installations. Develop jointly by jointly by the International Atomic Energy Agency and the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development.

Intervention: Any action or provision beyond normal procedures undertaken to manage the emergency and mitigate its impacts, including all emergency organization structures, response actions, communications and public information and directives.

Lead Federal Minister/Department: The federal Minister and Department designated by the Prime Minister of Canada, or as indicated in the *Federal Policy for Emergencies* [16], to prepare arrangements and coordinate national activities to provide support to a province, and to coordinate the activities of the federal departments and agencies involved. For nuclear emergencies, the designated Lead Federal Department is Health Canada.

National Coordinator: A senior federal official designated by Health Canada responsible for implementing the *Federal Nuclear Emergency Plan* and overseeing activities of the National Support Structure during the response phase of a nuclear emergency.

National Support Structure: The organization which is responsible for coordinating the federal response to a nuclear emergency. It may be activated either prior to or following implementation of the *Federal Nuclear Emergency Plan*.

National Support Centre: The operations centre of the federal emergency operating groups located in the National Capital Region and established to coordinate national support to the affected provinces and activities under federal jurisdiction. It is operated by the Lead Federal Department, and is a component of the National Support Structure.

Notification: A punctual action by which a specific individual or an organization is formally informed of a critical decision or action. An example would be a notification that the *Federal Nuclear Emergency Plan* has been implemented. It should not be confused with **reporting** which has specific and separate meaning.

Nuclear emergency: Any event which has led or could lead to a radiological threat to public health and safety, property, and or the environment.

Nuclear emergency function: Subject area which groups actions specifically related to a nuclear emergency that may be taken by primary and/or supporting departments or agencies in the response phase

of a nuclear emergency.

Nuclear facility: A nuclear reactor, sub-critical nuclear reactor, research reactor, or plant for the separation, processing, reprocessing or fabrication of fissionable substances from irradiated fuel. It also includes all land, buildings and equipment that are connected or associated with these reactors or plants.

Nuclear powered vessel: A marine vessel whose main propulsion system is driven by a nuclear reactor.

Off-site: The area outside the boundary of a nuclear facility. The municipal, provincial and federal levels of government are responsible for off-site emergency planning, preparedness and response.

On-site: The area inside the boundary of a nuclear facility, also called the exclusion area. The operators of nuclear facilities are responsible for on-site emergency planning, preparedness and response.

Plume: A cloud of airborne radioactive material that is transported from a nuclear or radiological source in the direction of the prevailing wind.

Plume exposure emergency planning zone: A defined zone around a nuclear facility for which detailed planning and preparations are made in advance to ensure that appropriate measures against exposure to a radioactive plume (such as sheltering and evacuation) can be applied in a timely and accurate manner.

Protective measure: Measure taken to reduce radiation doses which could be incurred by the population or emergency workers during a nuclear emergency. Sometimes called countermeasure or protective action.

Provincial Emergency Measures Organization: The organization which is responsible for off-site emergency planning, preparedness and response in a specific province.

Provincial emergency operations centre: In the province directly affected by the emergency, a centre operated by a provincial emergency management organization which coordinates the emergency operations at the provincial level.

Provincial information centre: In the province directly affected by the emergency, a centre operated by a provincial emergency management organization which handles the provision of emergency information to the media and the public.

Primary department or agency: A federal institution assigned primary responsibility to manage and coordinate one or more emergency functions.

Recovery phase: The phase during which activities focus on restoration of quality of life, social systems, economies, community infrastructures, and the environment. This phase may last up to several years after the emergency.

Relocation: A non-urgent removal or continued exclusion of people from contaminated areas to avoid chronic radiation exposure.

Reporting: Term referring to the act of informing a specific authority of a given event or situation in accordance with specific regulatory requirements or equivalent criteria.

Response phase: The phase during which activities focus on saving human life, on treating the injured,

contaminated and overexposed persons, and on preventing and minimizing further health effects and other forms of impacts. This phase may last from a few hours to several weeks after the commencement of the emergency and would be followed by a recovery phase, as necessary.

Sheltering: The use of a structure for protection from an airborne plume and/or deposited materials. The structure can attenuate radiation from radioactive materials deposited on the ground and reduce exposure to airborne plumes.

Supporting department or agency: A federal institution designated to assist a specific primary department or agency in the delivery of one or more emergency functions. In a nuclear emergency, this includes federal departments and agencies which have resources or expertise which may become necessary to support the government response, or which may need information regarding the emergency in order to carry out their own departmental responsibilities.

Task Team: A group of specialists from more than one department/agency who work closely together during the response phase in order to carry out a very specific task (e.g., dose prediction). A Task Team reports to a specific group of the National Support Centre (i.e., Coordination and Operations Group, Public Affairs Group or Technical Advisory Group).

Termination: The process of terminating the provisions under the *Federal Nuclear Emergency Plan* at the end of the emergency response phase, and transition to the recovery phase.

Thyroid blocking agent: A substance which prevents or reduces the uptake of radioactive iodine by the thyroid. Usually stable potassium iodide (KI) is taken orally for this purpose.

Urgent protective actions: Actions that must be taken promptly in order to be effective, and the effectiveness of which will be markedly reduced if delayed. They include evacuation, sheltering, and administration of thyroid blocking agent.

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APPENDIX 3: DETAILED RESPONSIBILITIES OF DESIGNATED OFFICIALS

Appendix 3 lists the detailed responsibilities of the Designated Officials in the National Support Structure (National Support Centre and Federal Regional Organization). More specific operational instructions are contained in the relevant FNEP emergency procedures manuals.

NATIONAL SUPPORT CENTRE:

National Coordinator

Responsibilities of the National Coordinator include, but are not limited to, the activities listed below. The National Coordinator:

1. Assesses the situation, activates the National Support Structure, and recommends implementation of the FNEP and Provincial Annex;
2. Ensures the overall coordination of activities of the National Support Centre;
3. Ensures that good collaboration and flow of information are taking place between the groups in the National Support Centre and between the National Support Centre and the provinces;
4. Provides advice and direction to the chairs of the Coordination and Operations Group, the Public Affairs Group, the Technical Advisory Group, and the Finance and Administrative Support Group;
5. Provides advice and recommendations to the Executive Group, and refers issues not able to be resolved through consultation with concerned authorities to the Executive Group (e.g., resource allocation);
6. Maintains liaison with the Federal Coordination Officer when present at the provincial emergency operations centre, or with the provincial emergency management organization directing staff;
7. Authorizes media announcements;
8. Recommends termination of FNEP and deactivation of the National Support Structure, and implements activities for the transition to the recovery phase.

National Support Centre Manager

Responsibilities of the National Support Centre Manager include, but may not be limited to, the activities listed below. The National Support Centre Manager:

1. Provides advice and assistance to the National Coordinator on FNEP implementation, procedures and in the carrying out his duties;
2. Identifies the needs and arranges for the provision of staff, facilities and supplies needed to deliver the responsibilities of the National Coordinator;
3. Manages all staff and processes within the National Support Centre dealing with support functions and liaison; and
4. Establishes shifts and hours of operations for the National Support Centre.

National Support Centre Group Chairs

Responsibilities of the National Support Centre Group Chairs include, but may not be limited to, the activities listed below. Group Chairs:

1. Represent their Group on the National Support Centre Management Team;
2. Inform and make recommendations to the Management Team on issues relating to their Group mandate.
3. Inform their Group of actions, decisions and requests from the Management Team;
4. Establish and enforce the Group operating cycle;
5. Determine group priorities and actions; and
6. Determine or approve all products and deliverables;

FEDERAL REGIONAL ORGANIZATION**Federal Coordination Officer**

Responsibilities of the Federal Coordination Officer include, but are not limited to, the activities listed below. The Federal Coordination Officer:

1. Coordinates federal emergency measures in support of the province and oversees federal activities in the region;
2. Facilitates any joint (federal-provincial) policy decision making;
3. Assists the province in meeting its immediate needs and evolving resource requirements;
4. Contacts appropriate federal regional offices to request resources and coordinates with the appropriate Federal Liaison Officer for the deployment of federal regional resources.
5. Maintains liaison between the National Support Centre and the provincial emergency management organization directly or through the Federal Liaison Officers.

Federal Operations Liaison Officer

The Federal Operations Liaison Officer provides liaison and coordinates support between the provincial operations group and the Coordination and Operations Group of the National Support Centre.

Responsibilities of the Federal Operations Liaison Officer include, but are not limited to, the activities below. The Federal Operations Liaison Officer:

1. Coordinates federal operations resources in support of the province;
2. Identifies potential operations resources from federal regional offices requested by the provincial emergency management organization;
3. Transmits to the Coordination and Operations Group requests for support which cannot be met by federal regional resources;
4. Maintains liaison between the provincial operations group and the Coordination and Operations Group;
5. Keeps the Federal Coordination Officer up-to-date on operations issues and activities of federal operations resources in region; and
6. Keeps all relevant federal regional offices informed throughout the emergency.

Federal Public Affairs Liaison Officer

The Federal Public Affairs Liaison Officer provides liaison and coordinates support between the provincial public information group and the Public Affairs Group of the National Support Centre. Responsibilities of the Federal Public Affairs Liaison Officer include, but are not limited to, the activities listed below. The Federal Public Affairs Liaison Officer:

1. Provides advice and support to Federal Regional Spokespersons in media conferences for issues related to the activities of federal regional resources;
2. Coordinates federal public affairs resources in support of the province. Public affairs coordination will be consistent with the *National Emergency Arrangements for Public Information* [13];
3. Identifies potential public affairs resources from federal regional offices requested by the provincial emergency management organization;
4. Transmits to the Public Affairs Group requests for public affairs assistance which cannot be met by federal regional resources;
5. Maintains liaison between the provincial information group and the Public Affairs Group for the coordination of media and public information activities; and
6. Keeps the Federal Coordination Officer up-to-date on issues and activities of the federal public affairs resources in the region.

Federal Technical Liaison Officer

The Federal Technical Liaison Officer provides liaison and coordinates support between the provincial technical group and the Technical Advisory Group of the National Support Centre. Responsibilities of the Federal Technical Liaison Officer include, but are not limited to, the activities listed below. The Federal Technical Liaison Officer:

1. Coordinates technical and scientific federal resources in support of the province;
2. Identifies potential technical and scientific resources from federal regional offices requested by the provincial emergency management organization;
3. Transmits to the Technical Advisory Group requests for technical and scientific assistance which cannot be met by federal regional resources;
4. Maintains liaison between the provincial technical group and the Technical Advisory Group; and
5. Keeps the Federal Coordination Officer up-to-date on issues and activities of the federal technical and scientific resources in region.

Other Members of the Federal Regional Organization

Responsibilities of the members of the Federal Regional Organization include, but are not limited to, the activities listed below. Members of the Federal Regional Organization will:

1. Provide direct support to the province and carry out response actions under the FNEP;
2. Coordinate their activities with their provincial counterparts;
3. Report their activities to the appropriate Federal Liaison Officer, who in turn will brief the Federal Coordination Officer and the appropriate group at the National Support Centre; and

4. Keep their headquarters, their regional offices and their National Support Centre representative(s) informed of the status of their response activities.

APPENDIX 4: LIST OF EMERGENCY FUNCTIONS AND EMERGENCY SUPPORT FUNCTIONS

TABLE A: List of emergency functions from the *Government Emergency Book* [11].

- | | |
|---|--|
| 1. Emergency management | 12. Construction and engineering |
| 2. Public information | 13. Housing and accommodation |
| 3. Internal security | 14. Financial institutions and foreign exchange |
| 4. Health, welfare and public safety | 15. Industrial production |
| 5. Financing of emergency preparations/actions | 16. Meteorological services |
| 6. Transportation | 17. International developments |
| 7. Human resources | 18. National defence |
| 8. Food production, processing and distribution | 19. Continuity of government |
| 9. Fisheries and oceans | 20. Surveillance activities, protection of foreign nationals |
| 10. Telecommunications | 21. Repatriation |
| 11. Energy resources | 22. Emergency supply |

For the complete text of these functions with the preparedness and emergency management responsibilities of primary and supporting departments or agencies, refer to the *Government Emergency Book*, Chapter 4: Annex C - Emergency Functions [11].

TABLE B: List of emergency support functions from the *National Support Plan* [12]

- | | |
|---|--|
| 1. Agriculture and Agri-Food | 9. International |
| 2. Engineering and Construction Resources | 10. Logistics Operations Management System |
| 3. Financial | 11. Meteorology Emergency Support |
| 4. Fisheries and Oceans | 12. Procurement |
| 5. Hazardous Materials | 13. Public Order/Protection of the Public |
| 6. Health and Social Services | 14. Telecommunications |
| 7. Heavy Urban Search and Rescue | 15. Transportation |
| 8. Human Resources | |

For the complete text of these functions and identification of the primary departments or agencies, refer to the *National Support Plan* [12].

APPENDIX 5: NUCLEAR EMERGENCY FUNCTIONS

Because of the inherent technical nature and complexity of nuclear emergencies, the FNEP introduces generic nuclear emergency functions. Nuclear emergency functions are subject areas which group actions specifically related to a nuclear emergency that may be taken in the response phase of the emergency. In accordance with the model in the *Government Emergency Book* [11], responsibilities are assigned to primary and supporting departments or agencies for each nuclear emergency function. Responsibilities listed under those functions are intended to complement, not replace, the all-hazards emergency functions and emergency support functions (see Appendix 4). As roles and responsibilities depend upon the specific mandate of departments and agencies, and the nature of the emergency, functions and assigned departmental responsibilities include, but are not necessarily limited to those identified in this Appendix.

ID # DESCRIPTION

- 1 Provide staff, resources and support for activation and operation of the National Support Structure in support of the FNEP and its Provincial Annexes.
- 2 Participate in maintaining a good flow of information and a coordinated response.
- 3 Establish and maintain liaison with federal institutions, non-governmental organizations, foreign governments, international organizations, the private sector (e.g., industry, universities), etc.
- 4 Gather technical information on the accident.
- 5 Run plume dispersion and dose projection models.
- 6 Conduct and coordinate departmental activities for monitoring and sampling.
- 7 Perform laboratory analysis of food, soil, air filters, dosimeters, etc.
- 8 Provide a capability to the Technical Advisory Group for the evaluation of the radiological hazards and to the Coordination and Operations Group for the evaluation of the national impacts of interventions.
- 9 Provide a capability to Technical Advisory Group for the formulation of recommendations for protective measures.
- 10 Implement protective measures under federal jurisdiction or as requested by a province.
- 11 Provide medical radiation expertise and capabilities for the treatment of contaminated and/or overexposed casualties.
- 12 Provide technical support for the shipment of radioactive material and the disposal of contaminated soil, equipment, etc.
- 13 Provide radiation protection advice, assistance and equipment for federal emergency workers.
- 14 Facilitate the deployment of personnel and equipment for operations in affected areas.
- 15 Provide emergency telecommunications equipment and services for operations in the affected areas.
- 16 Assist in the management of requests/offers for assistance.
- 17 Assist the Public Affairs Group in disseminating and customizing the information products on protective measures to target and specialized audiences.
- 18 Provide support, equipment, technical experts and spokespersons for operation of a media centre.
- 19 Provide available public information packages.
- 20 Propose emergency classification level (International Nuclear Event Scale).
- 21 Provide resources and infrastructure for operation of public inquiries systems.
- 22 Provide resources and infrastructure for monitoring of national and regional media.
- 23 Assist in termination of the FNEP.

Abbreviations Used in Nuclear Emergency Functions

AAFC	Agriculture and Agri-food Canada
AECL	Atomic Energy of Canada Limited
CCRA	Canada Customs and Revenue Agency
CFIA	Canadian Food Inspection Agency
CH	Canadian Heritage
CIC	Citizenship and Immigration Canada
CNSC	Canadian Nuclear Safety Commission
COG	Coordination and Operations Group
DFAIT	Department of Foreign Affairs and International Trade
DND	National Defence
EC	Environment Canada
EOC	Emergency Operations Centre
DFO	Fisheries and Oceans Canada
FNEP	Federal Nuclear Emergency Plan
FRO	Federal Regional Organization
HC	Health Canada
HRDC	Human Resources Development Canada
IAEA	International Atomic Energy Agency
IC	Industry Canada
INAC	Indian and Northern Affairs Canada
INES	International Nuclear Event Scale
LFD	Lead Federal Department
LLRWMO	Low Level Radioactive Waste Management Office
NGO	Non-Governmental Organization
NPV	Nuclear Powered Vessel
NRCan	Natural Resources Canada
NSC	National Support Centre
NSS	National Support Structure
OCIPEP	Office of Critical Infrastructure Protection and Emergency Preparedness
PAG	Public Affairs Group
PCO	Privy Council Office
TAG	Technical Advisory Group
TC	Transport Canada
U.S. DOD	United States Department of Defence
U.S. EPA	United States Environmental Protection Agency
U.S. FEMA	United States Federal Emergency Management Agency
U.S. FRMAC	United States Federal Radiological Monitoring and Assessment Center
U.S. NRC	United States Nuclear Regulatory Commission
WHO	World Health Organization

TABLE A5.1: Nuclear Emergency Functions - Departmental Roles and Responsibilities

ID #	Nuclear Emergency Function	Responsibilities of primary departments and agencies	Responsibilities of supporting departments and agencies
1	Provide staff, resources and support for activation and operation of the NSS in support of the FNEP and its Provincial Annexes.	<p><u>Departments</u> to notify their own staff, headquarters and regional offices, to establish and maintain a departmental EOC, to provide required staff to support the NSC, the provincial emergency management organization and a federal regional EOC, when required.</p> <p><u>HC</u> (for an emergency in Canada or the U.S.A. near the Can-U.S.A. border) to staff the NSC Management Team and provide staff for the FRO.</p> <p><u>DND</u> (for an emergency involving an NPV) to assist the National Coordinator in implementing the FNEP, to chair the OPS, to provide a Federal Spokesperson (for technical aspects of the accident) and the Federal Operations Liaison Officer.</p> <p><u>DFAIT</u> (for an emergency involving a nuclear facility in a foreign country) to chair the OPS.</p> <p><u>OCIPEP</u> to provide the interim Federal Coordination Officer.</p> <p><u>LFD</u> to arrange for the provision of the NSC and identify communications requirements.</p>	<p><u>AAFC, CFIA</u> to provide staff for an ingestion impact assessment Task Team, if required.</p> <p><u>EC</u> to chair the Task Team on plume dispersion and dose projections, if required.</p> <p><u>HC</u> to chair the Task Team on radiation protection for emergency workers, and to chair the Task Team on ingestion impact assessment, if required.</p> <p><u>HRDC</u> to provide support for the provision of NSC.</p> <p><u>OCIPEP</u> to designate the Federal Operations Liaison Officer and assist the National Coordinator in implementing the FNEP.</p> <p><u>PCO</u> to approve designation of the Lead Federal Department for Response, to chair a Task Team on Government/Cabinet briefings, if required.</p> <p><u>TC</u> to chair a Task Team on transportation and logistics, if required.</p> <p><u>LFD</u> to chair the Task Team on public inquiries and rumour control, if required.</p>
2	Participate in maintaining a good flow of information and a coordinated response.	<p><u>Departments</u> to implement their plans and procedures in accordance with the terms contained in the FNEP and Provincial Annexes, to respond to the emergency in consultation with the NSC, to report their activities to the appropriate Federal Liaison Officer and to the NSC, and to coordinate their activities with their provincial counterpart, as necessary.</p>	<p><u>PCO</u> to provide standard Government/Cabinet briefing documents.</p>
3	Establish and maintain liaison with federal institutions, NGOs, foreign governments, international organizations, the private sector (e.g., industry, universities), etc.	<p><u>CNSC</u> for liaison with the Canadian nuclear facility or with foreign regulators (such as U.S. NRC).</p> <p><u>DND</u> for liaison with DND military bases and U.S. DOD.</p> <p><u>DFAIT</u> for liaison with foreign governments, international organizations, Canadian embassies and Ottawa based foreign embassies.</p>	<p><u>CNSC, DND, HC, OCIPEP</u> to provide support, as required, for liaison with international agencies, including advice on existing plans and arrangements.</p> <p><u>HC</u> for liaison with U.S. EPA, U.S. FRMAC, IAEA, and WHO.</p> <p><u>OCIPEP</u> for liaison with U.S. FEMA.</p>
4	Gather technical information on the accident facility or source.	<p><u>AECL</u> (for emergency at Chalk River Laboratories) to gather on-site data.</p> <p><u>CNSC</u> (for emergency involving a nuclear facility in Canada or in U.S.) to gather on-site data from the Canadian nuclear facility or foreign regulators (such as U.S. NRC).</p> <p><u>DND</u> (for emergency involving an NPV) to gather on-site data.</p> <p><u>DFO</u> (for emergency involving a vessel at sea)</p>	<p><u>AECL</u> to gather information on the CANDU system and specialized knowledge arising from AECL research activities (e.g., plutonium handling).</p> <p><u>EC</u> to gather weather data, forecasts and atmospheric dispersion factors.</p> <p><u>NRCAN</u> to assist as required.</p>

ID #	Nuclear Emergency Function	Responsibilities of primary departments and agencies	Responsibilities of supporting departments and agencies
5	Run plume dispersion and dose projection models.	<u>AECL, CNSC, EC, HC</u> to run atmospheric trajectory, dispersion and/or dose projection models if requested by a province or required for federal purposes, and to provide outputs to TAG. <u>DND</u> (for emergency involving an NPV) to run their marine dispersion model.	<u>EC</u> to provide weather data, forecasts, atmospheric dispersion factors and scientific advice on meteorology. <u>DFO</u> to provide oceanographic or hydrographic information related to marine dispersion plumes.
6	Conduct and coordinate departmental activities for monitoring and sampling.	<u>Departments</u> to identify departmental resources available for operations in affected areas, to contact and deploy their national and regional personnel and equipment, and to provide monitoring and sampling data to TAG. <u>AAFC</u> for agricultural food stuff, dairy products and animal feed. <u>CFIA</u> for consumers food and food fish. <u>EC</u> for water, soil and vegetation. <u>HC</u> for environmental radioactivity measurements <u>NRCan</u> to provide remote sensing or other surveying services.	<u>EC</u> to assist in locating the plume trajectory. <u>AECL</u> to provide stand-by personnel and resources for field monitoring. <u>AECL, CNSC</u> to provide emergency personnel and resources for survey and control of contamination and exposure. <u>CNSC</u> to provide field monitoring units. <u>DND</u> (for an emergency involving an NPV) to provide field monitoring units for monitoring outside the emergency planning zone in support of provinces. <u>DND</u> to provide a support capacity for air-lifting all necessary monitoring equipment. <u>LFD</u> to provide an inventory of potential national and international resources for operations. <u>NRCan</u> to provide an inventory of potential aerial monitoring capabilities and resources.
7	Perform laboratory analysis of food, soil, air filters, dosimeters, etc.	<u>HC</u> to provide existing resources and facilities for laboratory analysis.	<u>AECL, CNSC</u> to provide stand-by resources and facilities for laboratory analysis. <u>HC</u> to provide an inventory of laboratories which can perform radiological analysis.
8	Provide a capability to TAG for the evaluation of radiological hazards and to OPS for the evaluation of national impacts of interventions.	<u>AAFC</u> for agricultural lands, facilities, commodities, agricultural food stuff and livestock. <u>CFIA</u> for consumer food products. <u>EC</u> for environmental impacts. <u>DFO</u> for marine transportation over sea routes except in ports and St. Lawrence Seaway. <u>HC</u> for public health and safety issues, including drinking water, consumer food products.	<u>AECL, CNSC, EC, HC</u> to provide support in the analysis of technical data and response trends. <u>NRCan</u> to provide support in the analysis of technical data and response trends, especially for contamination and remediation of contaminated areas through the LLRWMO.
9	Provide a capability to TAG for the formulation of recommendations for protective measures.	<u>Departments</u> for analysis of assessment data and formulation of recommendations for areas within their jurisdiction.	<u>HC</u> for urgent protective actions such as evacuation and sheltering, when requested by a province.

ID #	Nuclear Emergency Function	Responsibilities of primary departments and agencies	Responsibilities of supporting departments and agencies
10	Implement protective measures under federal jurisdiction or as requested by a province	<p><u>Departments</u> to identify departmental resources available for operations in affected areas, to contact and deploy their national and regional personnel and equipment.</p> <p><u>CFIA</u> food consumer foods.</p> <p><u>CH</u> for national heritage sites, national parks and reserves.</p> <p><u>DFO</u> for marine traffic control over sea routes except in ports and St. Lawrence Seaway.</p> <p><u>INAC</u> for aboriginal and arctic lands.</p> <p><u>TC</u> for air traffic control and airports.</p>	<p><u>CCRA</u> to assist in the control of food and goods importation from affected regions.</p> <p><u>DND</u> to provide support for marine traffic control.</p> <p><u>DND</u> (for an emergency involving an NPV) to provide personnel and resources for operations in the Emergency Planning Zone.</p> <p><u>DND</u> (for emergency involving a vessel) to provide emergency personnel and equipment.</p> <p><u>DFO</u> to provide support for marine traffic control in ports and St. Lawrence Seaway.</p> <p><u>LFD</u> to provide an inventory of potential national and international resources for operations.</p>
11	Provide medical radiation expertise and capabilities for the treatment of contaminated and/or overexposed casualties.	<p><u>HC</u> to coordinate the identification of experts and capabilities in Canada and abroad, to provide medical radiation expertise and to provide bioassay, radiobiology and <i>in vivo</i> monitoring services for evaluation of internal doses.</p>	<p><u>AECL</u>, <u>CNSC</u>, <u>DND</u> (for an emergency involving an NPV) to provide technical support, equipment and facilities.</p>
12	Provide technical support for the shipment of radioactive material and the disposal of contaminated soil, equipment, etc.	<p><u>AECL</u> for advice and assistance as required.</p> <p><u>NRCAN</u> for remediation of contaminated areas through the LLRWMO.</p>	<p><u>CNSC</u> to provide technical radiation protection support.</p> <p><u>DND</u> to provide logistics support.</p> <p><u>TC</u> to coordinate logistics support for the removal of contaminated soil and for the selection of transportation means and routes.</p>
13	Provide radiation protection advice, assistance and equipment for federal emergency workers.	<p><u>CNSC</u> to provide radiation protection standards for on-site nuclear energy workers, and technical support and advice on radiation protection.</p> <p><u>HC</u> to provide: radiation protection standards for off-site emergency workers; support in radiation protection issues; dosimeters and emergency supplies of iodine tablets; bioassay, radiobiology and <i>in vivo</i> monitoring services for evaluation of internal doses, and to evaluate cumulative external doses.</p>	<p><u>AECL</u> to provide technical support and advice.</p> <p><u>TC</u> to facilitate the delivery of iodine tablets, and to provide airlift information and advice for delivery of dosimetry and personal protection equipment required by federal emergency workers.</p>
14	Facilitate the deployment of personnel and equipment for operations in affected areas.	<p><u>TC</u> to implement emergency transportation arrangements for movement of personnel and equipment within Canada.</p>	<p><u>CCRA</u> to facilitate the movement across the Canadian border of goods to be used temporarily for a nuclear emergency (e.g., radioactive standards).</p> <p><u>DND</u>, <u>DFO</u> to provide transportation support, as required.</p> <p><u>TC</u> to make arrangements for transportation of radioactive samples across Canada, and to provide information and advice on aviation matters including air transportation resources and operations.</p>

ID #	Nuclear Emergency Function	Responsibilities of primary departments and agencies	Responsibilities of supporting departments and agencies
15	Provide emergency telecommunication equipment and services for operations in the affected area.	<u>IC</u> for coordination and delivery of emergency telecommunications equipment.	<u>Departments</u> to provide advice and assistance to the NSS with respect to their telecommunications requirements. <u>DND, EC, DFO, OCIEPEP, TC</u> to support operations with their existing telecommunications systems and to identify transportation resources required for transport of telecommunications equipment to the site.
16	Assist in the management of requests/offers for assistance.	<u>Departments</u> to formulate requests for assistance, to use and manage resources offered for operations within their mandates, and to provide information on their ability to provide assistance. <u>NRCAN</u> to prepare, in consultation with the Treasury Board Secretariat, submissions concerning provincial requests for disaster financial assistance (under the <i>Nuclear Liability Act</i>).	<u>CNSC, DND, EC, HC, OCIEPEP</u> to provide support, as required, for liaison with international agencies. <u>DFAIT</u> to provide advice and assistance on the handling of offers and requests for assistance from foreign governments taking into account Canada's international commitments.
17	Assist PAG in disseminating and customizing the information products on protective measures to target and specialized audiences.	<u>Departments</u> for audiences within their mandates. <u>DFAIT</u> for Canadians abroad, relevant Canadian missions and Ottawa based foreign embassies.	<u>CNSC, EC, HC</u> to provide assistance. <u>IC</u> to obtain broadcast approvals, and coordinate and activate communications networks, when required. <u>NRCAN</u> to provide assistance in ensuring that communications have considered the risks within a larger context including societal costs of intervention measures. <u>OCIEPEP</u> to assist with the development of messages for use on the emergency broadcasting system (if available).
18	Provide support, equipment, technical experts and spokespersons for operation of a media centre.	<u>Departments</u> to provide spokespersons and support personnel, as required. <u>LFD</u> to identify the media centre. <u>OCIEPEP</u> to provide staff to set up and operate a national media centre.	<u>CNSC</u> (for emergency involving a nuclear facility in Canada) to allow use of the <u>CNSC</u> media centre by the PAG until an alternate location is established and operating. <u>DFAIT</u> to provide operating staff as required for specialized interpreting or translation skills and for contact and liaison with foreign media both in Ottawa and abroad.
19	Provide available public information packages.	<u>Departments</u> to provide available public information material on relevant emergency plans to PAG.	<u>AECL</u> to provide available public information material on radiation and reactors. <u>CNSC</u> to provide available public information material on nuclear safety, radiation and regulatory matters. <u>DND</u> to provide available public information material on NPVs and military nuclear devices. <u>HC</u> to provide material on radiation protection issues and the FNEP.

ID #	Nuclear Emergency Function	Responsibilities of primary departments and agencies	Responsibilities of supporting departments and agencies
20	Propose emergency classification level (INES).	<u>CNSC</u> as required.	
21	Provide resources and infrastructure for operation of public inquiries systems.	<u>HC</u> provide existing public inquiries systems.	<u>Departments</u> to provide information and personnel to staff public inquiries systems.
22	Provide resources and infrastructure for monitoring of national and regional media.		<u>IC</u> to provide technical advice and assistance with respect to the operation of broadcast systems.
23	Assist in termination of the FNEP.	<u>PCO</u> to approve designation of the Lead Federal Minister for Recovery and a National Recovery Coordinator, and to assist the Executive Group and the National Coordinator in making the transition to Recovery.	<u>Departments</u> to provide technical and operational advice on the appropriateness of terminating the FNEP.