New Nouveau
Brunswick
CANADA

Point Lepreau Nuclear Off-Site Emergency Plan

New Brunswick Department of Justice and Public Safety
New Brunswick Emergency Measures Organization (NBEMO)
30 November 2023

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FOREWORD

The Point Lepreau Nuclear Generating Station (PLNGS) has operated safely and efficiently for over 40 years. Since its construction, the emergency program at the PLNGS has been governed by two principal plans:

a. the *On-Site Plan* – this document is specific to New Brunswick Power, and details procedures to be followed by plant staff involving an emergency confined to the facility, and not posing a danger to the public; and

b. the *Off-Site Plan* – this is a Government of New Brunswick (GNB) document, held by the New Brunswick Emergency Measures Organization (NBEMO). This plan details procedures to be followed for an emergency at the PLNGS which would pose danger to the public, and thus would require a coordinated multi-agency response. This plan would require response activities from many GNB departments, as well as external supporting agencies.

While the risk to life or the environment from an accidental major release of radionuclides, or other industrial accident, is remote, it is in the interest of the public to be prepared to respond, by having in place effective emergency plans to deal with such events.

The *Point Lepreau Nuclear Off-Site Emergency Plan* contains the basic information, detailed responsibilities, and immediate actions required to safeguard the public and the environment. It contains the specific responses which will be carried out by various agencies to deal with the emergency.

The *Point Lepreau Nuclear Off-Site Emergency Plan* will be reviewed and revised every two years to reflect changes in technology and assigned emergency management responsibilities.

This plan will be implemented on the authority of the Director of the New Brunswick Emergency Measures Organization.

Kyle Leavitt

Director

New Brunswick Emergency Measures Organization

INTRODUCTION

The Point Lepreau Nuclear Generating Station (PLNGS) is a 680 MW CANDU pressurized heavy water reactor (PHWR), designed by Atomic Energy of Canada Limited (AECL). CANDU stands for CANada Deuterium Uranium. The pressurized heavy water reactor uses natural uranium as its fuel source. PLNGS was the first CANDU-6 in Canada and abroad to be licensed for operation on 21 July 1982 and began commercial operation on 1 February 1983.

PLNGS is the only nuclear facility in Atlantic Canada. PLNGS plays an integral role in helping NB Power achieve its mandate of providing electricity to the province of New Brunswick safely, reliably and at a reasonable cost.

In emergency situations in New Brunswick, whether man-made or created by natural phenomena, response is provided for in the *Provincial Emergency Measures Plan (Provincial All-Hazards Plan)*.

Initially, operations are conducted by the Provincial Emergency Action Committee (PEAC), located at the headquarters of the New Brunswick Emergency Measures Organization, supported by the Regional Emergency Action Committee (REAC), located in Saint John and St George.

Under the NB Emergency Measures Act, municipalities are responsible for establishing their own emergency response plan but can call upon the REAC or PEAC for support when their own resources are not equal to the demands of the situation.

For a Radiation Emergency at the Point Lepreau Nuclear Generating Station the response is initiated immediately at the Provincial level. This response is outlined in the Point Lepreau Nuclear Off-Site Emergency Plan.

The *Point Lepreau Nuclear Off-Site Emergency Plan* contains essential operational information, prepared by various government departments and agencies co-ordinated by the New Brunswick Emergency Measures Organization (NBEMO) describing the actions to fulfill a whole of government response in the unlikely event such as a radiation emergency at the PLNGS.

The Canadian Standards Association *(CSA Z1600-17 (R2022) standard)* has been used for simplicity and to enable members of the Nuclear Control Group to familiarize themselves quickly with the requirements of their department’s role, function, and those of other member agencies.

While each government department and agency are required to perform its emergency duties independently, the Nuclear Control Group coordinates, under the direction of the Director, NBEMO. It is therefore imperative that information regarding individual agency activities be reported to the Nuclear Control Group so that problem areas can be anticipated, and remedial measures undertaken.

Government departments and agencies must inform NBEMO of any necessary amendments to the contents of *the Point Lepreau Nuclear Off-Site Emergency Plan*.

Emergency Action Levels are the basis for PLNGS to conduct an assessment to determine the Classification.

PLNGS Standard Operating Procedures define the following Classifications:

- Radiation Alert.
- Site Area Radiation Emergency; and
- General Radiation Emergency.

Alert – An alert is the threat or occurrence of an abnormal, undesired event that:

- Involves a localized hazard that can be confined and controlled by station staff.
- Involves a known or unknown situation potentially leading to a decrease in the level of protection for the public or on-site persons.
- May require an increase in the state of readiness of the emergency response organization and may require off-site response.

Emergency - An emergency is an abnormal event that necessitates prompt actions to mitigate adverse consequences. Emergencies include situations for which prompt action is warranted to respond to a perceived hazard or threat and:

- involves a general hazard that may not be confined and controlled by station staff.
- involves a known or unknown situation potentially leading to a significant decrease in the level of protection for the public or on-site persons.
- requires an increase in the state of readiness of the emergency response organization and will likely require off-site response.

Security Levels – *see Part 2, Operational Information, Section 2.18, Security Events*

Because of the nature of the hazards presented by radioactive material, this plan establishes a Nuclear Control Group, hereafter known as the Control Group.

The Control Group comprises all the members of the PEAC and representatives of those other agencies with expertise or a role in a nuclear emergency response. The Control Group will assume the control and direction of emergency operations in the event of a radiation emergency at the PLNGS, where there may be danger to the public.
On the occurrence of an Alert or Emergency, the PLNGS Duty Shift Supervisor is the first person in authority to know of it, and must decide what, or if any, emergency action is to be taken or outside assistance to be notified or requested.

If outside assistance is needed, the Duty Shift Supervisor will immediately call for it under the terms agreed to by the assisting agency and will take other appropriate action in accordance with the On-Site Emergency Plan (e.g., firefighting assistance from Saint John).

The Duty Shift Supervisor at PLNGS is responsible to initiate notification of off-site authorities, whenever there is an actual or perceived threat to public safety.

DISTRIBUTION LIST

Deputy Minister Justice and Public Safety
Assistant Deputy Minister Justice and Public Safety
Executive Director Security and Emergencies Division
Director New Brunswick Emergency Measures Organization (NBEMO)
Director of the Office of the Provincial Security Advisor (OPSA)
Members of the Provincial Emergency Action Committee (PEAC)
Members of the Nuclear Control Group
Nova Scotia Emergency Management Office
Maine Emergency Management Agency (MEMA)
NB Power Headquarters (Corporate)
NB Power Point Lepreau Nuclear Generating Station (PLNGS) Emergency Preparedness Staff
Health Canada (HC)
Canadian Nuclear Safety Commission (CNSC)
International Emergency Management Group (IEMG)
Gateway Operations
Other Stakeholders

RECORD OF AMENDMENTS

Amendment No.	Amendment Date	Amended By	Date Issued
001	29 August 2017	R. Shepard & B. Whelan	30 August 2017
002	26 September 2017	R. Shepard & B. Whelan	30 August 2017
003	29 January 2018	R. Shepard & B. Whelan	30 August 2018
004	6 April 2018	R. Shepard	30 August 2018
005	13 June 2018	R. Shepard	30 August 2018
006	1 August 2018	R. Shepard & B. Whelan	30 August 2018
007	24 August 2018	R. Shepard & B. Whelan	30 August 2018
008	24 October 2018	R. Shepard	30 August 2019
009	2 May 2019	R. Shepard	30 August 2019
010	12 July 2019	R. Shepard & B. Whelan	30 August 2019
011	20 July 2019	R. Shepard	30 August 2019
012	23 August 2019	R. Shepard	30 August 2019
013	21 February 2020	R. Shepard	30 June 2021
014	3 July 2020	R. Shepard	30 June 2021
015	14 September 2020	R Shepard	30 June 2021
016	19 January 2021	R Shepard	30 June 2021
017	18 May 2021	R Shepard	30 June 2021
018	10 June 2021	R Shepard	30 June 2021
019	22 July 2022	R Shepard	29 September 2023
020	16 September 2022	R Shepard	29 September 2023
021	30 November 2022	R Shepard	29 September 2023
022	14 December 2022	R Shepard	29 September 2023
023	3 February 2023	R Shepard	29 September 2023
024	28 April 2023	R Shepard	29 September 2023
025	28 July 2023	R Shepard	29 September 2023
026	8 September 2023	R Shepard	29 September 2023
027	14 November 2023	R Shepard & A Burgoyne	30 November 2023
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1 EMERGENCY MANAGEMENT SYSTEM

1.1 GENERAL INFORMATION

1.1.1 Emergency situations, at times may generate confusion with respect to roles and responsibilities and jurisdictions. By means of the following *Point Lepreau Nuclear Off-site Emergency Plan*, needless duplication of effort or waste of resources will be eliminated. The plan was developed using the Incident Command System and was refined with the *CSA Z1600-17 (R2022)* Emergency and Continuity Management Program.

1.2 OBJECTIVE

1.2.1 The *Point Lepreau Nuclear Off-site Emergency Plan* establishes the requirements for an adequate level of preparedness and response for a radiation emergency at the Point Lepreau Nuclear Generating Station.

The application of these requirements is also intended to mitigate the consequences of a radiation emergency if such an emergency arises despite all efforts made to prevent it.

1.3 SCOPE

1.3.1 The *Point Lepreau Nuclear Off-site Emergency Plan* delineates the responsibilities of, and immediate action to be taken by, various agencies in the event of an emergency at the Point Lepreau Nuclear Generating Station, in which Off-Site Emergency Response is necessary.

The Director of the New Brunswick Emergency Measures Organization (NBEMO) is the authority to deviate from the *Point Lepreau Nuclear Off-site Emergency Plan*, if required.

1.4 STRUCTURE

1.4.1 The *Point Lepreau Nuclear Off-site Emergency Plan* is divided into three colour coded parts:

- Part 1: Emergency Management System.
- Part 2: Operational Information; and
- Part 3: Provincial Departments & Agencies Roles and Responsibilities.

1.5 GOALS OF EMERGENCY PREPAREDNESS AND RESPONSE

1.5.1 The goal of emergency preparedness is to ensure that an adequate capability is in place within the operating organization and at local, regional, provincial, and national levels for an effective response in a nuclear or radiological emergency. This capability relates to an integrated set of infrastructural elements that include but are not limited to authority and responsibilities; organization and staffing; coordination; plans and procedures; tools, equipment, and facilities; training, drills, and exercises; and a quality management system.

Note: *IAEA General Safety Requirements GSR Part 7, Introduction, Goals of Emergency Preparedness and Response, Section 3, page 6-7*.

In a nuclear or radiological emergency, the goals of emergency response are:

- To regain control of the situation and to mitigate consequences.
- To save lives.
- To avoid or to minimize severe deterministic effects (see definition Section 1.57.21).
- To render first aid, to provide critical medical treatment and to manage the treatment of radiation injuries.
- To reduce the risk of stochastic effects (see definition Section 1.57.113.)
- To keep the public informed and to maintain public trust.
- To mitigate, to the extent practicable, non-radiological consequences.
- To protect, to the extent practicable, property and the environment; and
- To prepare, to the extent practicable, for the resumption of normal social and economic activity.

1.6 AREAS OF INFLUENCE AND INTEREST

1.6.1 Area of Interest

It is necessary to define the provincial areas of influence and interest, within the New Brunswick security and emergency management spectrum. The Area of Influence is tied to jurisdiction and the commitment of resources to influence outcomes.

The Area of Interest is defined by geography, connectivity, and time. The Area of Interest is further defined by actual or potential events, which may impact the province.

As defined:

- The Province of New Brunswick's Area of Influence is the physical area, within the Government of New Brunswick's legislative and constitutional jurisdiction, where it can directly influence activities or events through security or consequence management, commitment or coordination of resources, and information operations. It can be visualized as a three-dimensional condition that evolves with the nature of events or activities, including those occurring within its Area of Interest. It is possible that the Area of Influence may coincide with, and therefore overlap amongst, various jurisdictions. This is assessed by the Government of New Brunswick through constant awareness and coordination and therefore, unity of effort is essential. Within the Area of Influence, ownership of assets or operational/local jurisdiction is acknowledged and respected but ultimately remains subordinate to their application towards a common purpose.
- The Province of New Brunswick's Area of Interest is the three-dimensional space, defined in geographic terms, e.g., land, air, and water, within which the government identifies and monitors factors, including potential security and safety threats, which may adversely affect the safety of its citizens. The Government of New Brunswick must decide how broad a view it should have, in both time and space, to determine whether other events or activities may have an impact on its current and future security and safety environment. The Area of Interest will overlap those of other jurisdictions. Therefore, coordination is required to ensure unity of effort. The scope of this wider view is not limited by the reach of Government of New

Brunswick's existing security, intelligence, law enforcement or other resources, and depends upon the location, events and activities that may affect its interests. Where the Province of New Brunswick's Area of Interest extends beyond its collection and/or monitoring ability, it must integrate intelligence and information sharing mechanisms with other government jurisdictions and agencies; law enforcement and intelligence agencies; and public and private sector critical infrastructure owners/operators.

- In defining the Area of Interest there is the added dynamic of time. While an emerging threat might still be outside the Provincial Area of Influence (i.e., storms, interdicted aircraft threats, ships at sea, etc.), the potential that they may impact New Brunswick denotes that they have entered our Area of Interest. The attendant actions would usually constitute the Warning Phase of an emergency, and serve as a trigger for mitigation, response, and recovery strategies; and
- Thus, the Province of New Brunswick must determine how far beyond those limits to look, in time and space, for information, intelligence and warning.

1.7 PHASES OF AN EMERGENCY OPERATION

1.7.1 An emergency will normally graduate through four distinct phases. They are:

- Warning Phase: consists of actions taken to counter and curtail the effects of the incident. These include alerting the public, local, regional, and provincial authorities, and preparing resources.
- Impact Phase: refers to the event itself.
- Response Phase: which may overlap the Impact Phase covers the period during which the emergency is brought under control; and
- Recovery Phase: is the clean-up period, used to return the affected communities to normal.

1.8 PROVINCIAL EMERGENCY MANAGEMENT SYSTEM

1.8.1 The *Point Lepreau Nuclear Off-site Emergency Plan* establishes criteria for the provincial emergency management system of on-site and off-site organizations to address the unlikely event of a radiation emergency at the Point Lepreau Nuclear Generating Station.

Provincial Emergency Management System includes:

- *New Brunswick Emergency Measures Act*.
- *Provincial Emergency Measures Plan (Provincial All Hazards Plan*).
- *Mactaquac Generating Station Emergency Measures Plan.*
- *Point Lepreau Nuclear Off-site Emergency Plan*.
- Coordination of Federal / Provincial Government Training and Exercises Program; and
- Review and Coordinate Cross Jurisdiction Programs, Plans and Procedures.

The *Point Lepreau Nuclear Off-site Emergency Plan* addresses a whole of government response to the unlikely event of a radiation emergency at the Point Lepreau Nuclear Generating Station.

The approach taken is aimed at the protection of health and safety, property, and the environment. The radiological impact requires specific planning outside of the inter-dependencies of multiple provincial departments and agency's role and responsibilities identified in the *Provincial Emergency Measures Plan*.

The provincial emergency management *system* follows the pillars of emergency management: prevention, mitigation, preparedness, response, and recovery.

1.9 LEVELS OF RESPONSIBILITY

1.9.1 The Provincial level of emergency management falls into a graduating system of increased responsibility, areas of influence and interest that are based on the different levels of government authority in the Province of New Brunswick as follows:

- Individual – Individuals are responsible for themselves and their immediate family and includes household and neighborhood preparations such as the 72Hrs - Get Prepared
- Municipal/Local Authority Response – Municipal level resources managed by local Mayors and Councils, and Regional District Managers (RDMs).
- Regional – Regional level resources coordinated by the NBEMO Regional Emergency Management Coordinators (REMC) and Regional Emergency Action Committee (REAC).
- Provincial – Government of New Brunswick resources managed by the Department of Justice and Public Safety DJPS NBEMO; and
- National – Government of Canada resources managed by Public Safety Canada.

Note: For a Radiation Emergency the response is initiated immediately at the Provincial level. In the specific case of PLNGS, the province takes full responsibility in the management of the emergency response.

1.10 LEVELS OF RESPONSE

1.10.1 A graduated response will focus efforts to ensure the lives and welfare and property of citizens, and the environment are at the forefront of response actions. As such, the following levels of response will be used:

- Individual Response – Assist municipal and local authorities in identifying the emergency.
- Municipal or Local Authority Response – Municipal authorities are responsible for dealing with the emergency. Rural District Managers **(RDMs)** will monitor, and if required, seek support from the **(REMC)**.
- Regional Response - When the capacity of the local authority is exceeded, or is likely to be exceeded, a regional response is activated and involves support provided from the neighboring municipalities through formal or informal mutual aid arrangements and from regional resources through the **(REMC)**.
- Provincial Response - When a regional response is insufficient, the REMC will request assistance from the PEAC; and

- Federal / National Response - If additional response is required, federal support and assistance will be arranged by the PEAC.

Note: For a Radiation Emergency the response is initiated immediately at the Provincial level.

1.11 AUTHORITY – THE *EMERGENCY MEASURES ACT*

1.11.1 The *Emergency Measures Act* assented to on June 28, 1978, *Chapter E-7.1*, is the key piece of legislation upon which the *Emergency Measures Plan* (sometimes referred to as *Provincial All Hazards Plan*) is based.

It provides definitions, identifies the Minister of the Department of Justice and Public Safety (JPS) as responsible for the NB administration of the Act, establishes the New Brunswick Emergency Measures Organization (NBEMO), provides guidelines and responsibility for emergency planning, and outlines the procedures for declaring States of Emergency, Disaster Relief Fund and Liability for Damages.

Regulation 84-7 under the *Emergency Measures Act (O.C. 84-29*) filed on January 23, 1984, details planning responsibilities for provincial government departments and agencies. Current regulation incorporates amendments consolidated to February 2023.

In accordance with the *Emergency Measures Act*, the Minister of the Department of Justice and Public Safety is responsible for emergency declarations, executive coordination, and the exercising of assigned executive powers.

The Minister advises the Premier and Executive Council on emergency management and security matters, and coordinates the assistance provided by:

- Department of Justice and Public Safety, Deputy Minister.
- Police, Fire and Emergency Services Division, Assistant Deputy Minister.
- Provincial Security Advisor; and
- Director Emergency Measures Organization.

The Minister shall coordinate emergency measures plans within the province and may delegate powers vested in him by or under the *Emergency Measures Act*. Subject to the approval of the Lieutenant-Governor in Council, the Minister may:

- Enter into agreements with the Government of Canada (GOC), the government of a province or territory of Canada or the government of a state of the United States of America, or an agent of any of them, with respect to emergency measures plans.
- Enter into agreements with the GOC and the Workplace Health, Safety and Compensation Commission for the administration and payment of compensation benefits to persons engaged in training or carrying out duties related to a state of emergency or a state of local emergency: and
- Acquire by purchase or lease of real and personal property for the purposes of administering the NBEMO.

1.11.2 The Minister may:

- Divide the Province into districts and sub-districts for the purposes of the *Emergency Measures Act*.
- Establish procedures for the prompt and efficient implementation of emergency measures plans; and
- Require any person to develop emergency measures plans in conjunction with the Emergency Measures Organization to remedy or alleviate any hazard to persons, property or the environment that is or that may be created:
    - By a condition that exists or may exist on that person's property.
    - By that person's use of property.
    - An operation in which that person is or may be engaged; or
    - By a process that a person is or may be utilizing.

For additional information see: *Emergency Measures Act*

1.12 STATES OF EMERGENCY

1.12.1 The Minister of the Department of Justice and Public Safety may at any time, when satisfied that an emergency exists or may exist, declare a state of emergency in respect to all or any area of the province for a maximum of 14 days. The mayor of a municipality may, under similar circumstances, declare a **State of Local Emergency (SOLE)** in respect of that municipality or part of that community for a maximum of 7 days.

When a state of emergency or a state of local emergency has been declared under this Act, the Minister or the municipality shall immediately cause the details of the declaration to be communicated or published by those means that the Minister or municipality considers the most likely to make the contents of the declaration known to the civil population of the area affected.

1.12.2 On a state of emergency being declared in respect to the Province or an area of the Province, or on a state of local emergency being declared in respect to a municipality or an area of a municipality, the Minister may, during the state of emergency, in respect of the Province or an area of the Province, or the municipality may, during the state of local emergency, in respect of the municipality or an area of the municipality, as the case may be, do everything necessary for the protection of property, the environment and the health or safety of persons therein, including:

- To cause an emergency measures plan to be implemented.
- To acquire or utilize or cause the acquisition or utilization of any personal property by confiscation or by any means considered necessary.
- To authorize or require any person to render the aid that the person is competent to provide.
- To control or prohibit travel to or from any area or on any road, street, or highway.
- To provide for the maintenance and restoration of essential facilities, the distribution of essential supplies and the maintenance and coordination of emergency medical, social, and other essential services.

- To cause the evacuation of persons and the removal of livestock and personal property threatened by a disaster or emergency and decide for the adequate care and protection of them.
- To authorize any person properly identified as authorized by the Minister, by the Emergency Measures Organization or by the municipal emergency measures organization to enter into any building or on any land without warrant.
- To cause the demolition or removal of any building, structure, tree, or crop if the demolition or removal is necessary or advisable for the purposes of reaching the scene of a disaster, of attempting to forestall its occurrence or of combatting its progress.
- To procure or fix prices for food, clothing, fuel, equipment, medical or other essential supplies and the use of property, services, resources, or equipment; and
- To order the assistance, with or without renumeration, of persons needed to carry out the provisions mentioned in this section.

1.13 PROVINCIAL EMERGENCY COMMUNICATIONS

1.13.1 Emergency Communications consist of delivering operational messages within the context of Emergency Operations Centers, responding agencies and site management utilizing various technical means of communications. It also describes communicating public information, instructions, updates and if necessary, emergency declarations to the public.

- Operational Communications: Many routine communications will be done using the most efficient means available, with due regard to maintaining records of decisions and actions taken. Often this will consist of e-mails which can be filed for later retrieval. Depending on the nature of the emergency or immediacy of the communication, other means may be required:

    - **Trunked Mobile Radio (TMR)**, allow all agencies to communicate verbally via a mutual aid channel designated by **Provincial Mobile Communications Center (PMCC).** Such a channel should be requested by the initial responding agency and maintained for the duration of the event, with additional channels designated as necessary. All communication on this system should be recorded by PMCC.

    - **Amateur Radio Emergency Service (ARES)**, also known as “ham” radio. When all other forms of communication are unavailable, EOCs may call upon this service for short or long-distance message transmission. Ham operators are trained to record transmission logs and message content.

    - Software such as, EVERBRIDGE, WebEOC (JUVARE) and others may be used to connect EOCs to simultaneously exchange information such as event logs, imagery, and detailed maps. When available, these should be linked to ensure maximum awareness between various agencies contributing to the response. Data must be captured and recorded at scheduled intervals and during significant events; and

    - Telephone: traditional land lines and cellular communications remain the most popular method of rapidly connecting two individuals. When used for

teleconferencing, large groups can be briefed simultaneously. Vulnerabilities include downed lines or cell towers, loss of voice quality, restriction of information sharing and poor record keeping.

1.13.2 Public Information: Communicating information to the public in a clear and timely manner is a crucial element of managing an incident. Consideration should be given during the warning phase, if possible. Informing the public of registration and warming centers, evacuation plans, and recovery operations will greatly assist in reducing anxiety. Many methods may be utilized.

- ALERT READY is the national system to be used by a provincial authority in cases of serious threat to life and safety. It employs interruptions to the public broadcasting systems on radio and television. Eventually, it may also have the capability to target specific cell towers for customized messaging. This includes mobile device alerting.

- Everbridge Notification System - In 2009, NB-EMO improved the capacity and functionality of the Lepreau Warning system which can alert officials, responder organizations and all residents of the 20-km contingency planning zone in a few minutes. Residents themselves determine their alerting methods and can select any combination of home phone, mobile phone, office phone, fax, e-mail, or text message. NB-EMO uses this system regularly for internal purposes and conducts annual live tests for Lepreau area residents. Notification tests are preceded by a variety of public awareness activities (news release, letter to residents, newspaper ads and radio interviews). Everbridge is the primary means of alerting residents inside the Detailed Contingency Planning Zone of an emergency at the Point Lepreau Nuclear Generating Station.

- Public messaging via social media is the most widespread and effective means of distributing information as it increases coverage as recipients share with friends. Various media such as e-mail, Twitter, Facebook, and others should be used. To achieve maximum efficiency, a single source of verified information should be utilized to avoid conflicts. Frequent and timely updates must be maintained to prevent disinformation.

- Media conferences by persons in authority. Care in avoiding impromptu statements and the selection of a known and credible person of authority in the affected community is recommended.

Posting written directives at warming shelters, municipal and public offices in addition to pre-advising citizens of where and how to seek information during emergencies will go a long way to ensuring smooth communications during an incident.

The **Joint Information Center (JIC)** is located at the PEOC to assist in common messaging and coordination of all information to the public, as well as access to the **Nuclear Control Group (NCG).**

1.14 EMERGENCY PLANNING ZONES

1.14.1 Emergency Planning Zones

The area in which implementation of operational and protective actions are or might be required during a nuclear emergency, to protect public health, safety, and the environment.

For the purposes of emergency planning, four zones are defined:

The **Automatic Action Zone** is the area surrounding the plant out to 4 km that should be evacuated promptly in the event of an imminent release.

The **Detailed Planning Zone** is the area surrounding the plant out to 20 km; protective actions in this area should be based on radiation survey results and plant conditions.

The **Contingency Planning Zone** is the remaining area outside the plant to 50 km.

Note: Contingency planning and arrangements in the contingency planning zone would be less detailed and have less specificity than the plans in the detailed planning zone.

Source: Adapted from IAEA EPR-NPP Public Protective Actions.

The **Ingestion Planning Zone (IPZ)** extends out to 57 kms or further, if necessary.

1.14.2 Off-site Emergency Planning Zones

IAEA Planning Zones	NBEMO Warden Zones	Health Canada / CSA Planning Zones
Precautionary Action Zone (PAZ)	Warden Zones 1, 2 and at sea 1	4 km Automatic Action Zone (AAZ)
Urgent Protective Action Zone (UPZ)	Warden Zones 3, 4, 5, 6, 7a,7b, 7c, 8, 9, 10, 11, 12, 13 and at sea 1 and 2	20 km Detailed Planning Zone (DPZ)
Extended Planning Distance (EPD)	Warden Zones 14 and 15	50 km Contingency Planning Zone (CPZ)
Ingestion and Commodities Planning Distance (ICPD)	57 km Ingestion Planning Zone	57 km Ingestion Planning Zone (IPZ)

Figure 1.14.3

Population: Census data from 2021

The City of Saint John is 38 kms East of PLNGS with a population for Saint John proper is approximately 75,000 and for the greater Saint John area of 132,000 (includes Rothsay and Quispamsis past 50 kms).

The Town of St. George is 29 kms West of PLNGS with a population of 1543.

The population from 20 – 30 km is estimated to be 3,300, not including AAZ and DPZ.

The population from 20 – 50 km (CPZ) is estimated to be 100,000, including AAZ and DPZ.

1.14.4 Distances

PLNGS to the Off-site Emergency Operations Center **(OEOC)** – 29 kms West Northwest.

PLNGS to Western Access Control Point (farthest or western edge of the warden zones) – 23 kms West Northwest.

PLNGS to the Intersection of Highway 1 and Route 760 West of PLNGS – 31 kms.

PLNGS to Route 785 North of Lake Utopia – 30 kms.

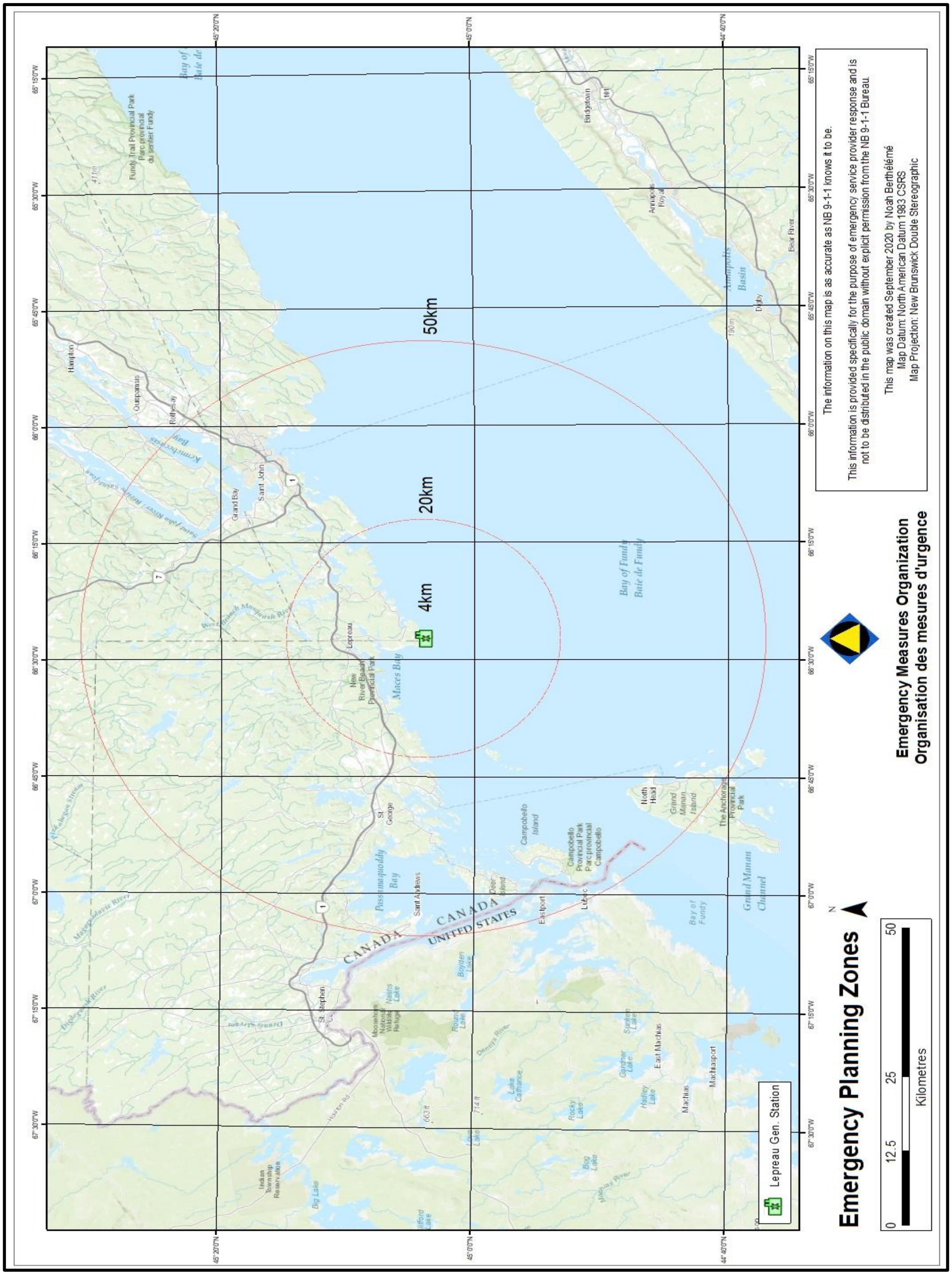
PLNGS to Eastern Access Control Point (farthest or eastern edge of the warden zones) – 21 kms Northeast.

PLNGS to the Intersection of Highway 7 and Highway 1 East of PLNGS – 30 kms.

PLNGS to the Saint John Regional Hospital – 41 kms.

PLNGS to Nova Scotia – 63 kms.

PLNGS to the State of Maine – 44 kms.



Emergency Planning Zones
Emergency Measures Organization
Organisation des mesures d'urgence
50km
20km
4km
Lepreau Gen. Station
0
12.5
25
50
Kilometres
The information on this map is as accurate as NB 9-1-1 knows it to be.
This information is provided specifically for the purpose of emergency service provider response and is not to be distributed in the public domain without explicit permission from the NB 9-1-1 Bureau.
This map was created September 2020 by Noah Berthélémé
Map Datum: North American Datum 1983 CSRS
Map Projection: New Brunswick Double Stereographic
Bay of Fundy
Baie de Fundy
CANADA
UNITED STATES

Figure 1.14.5

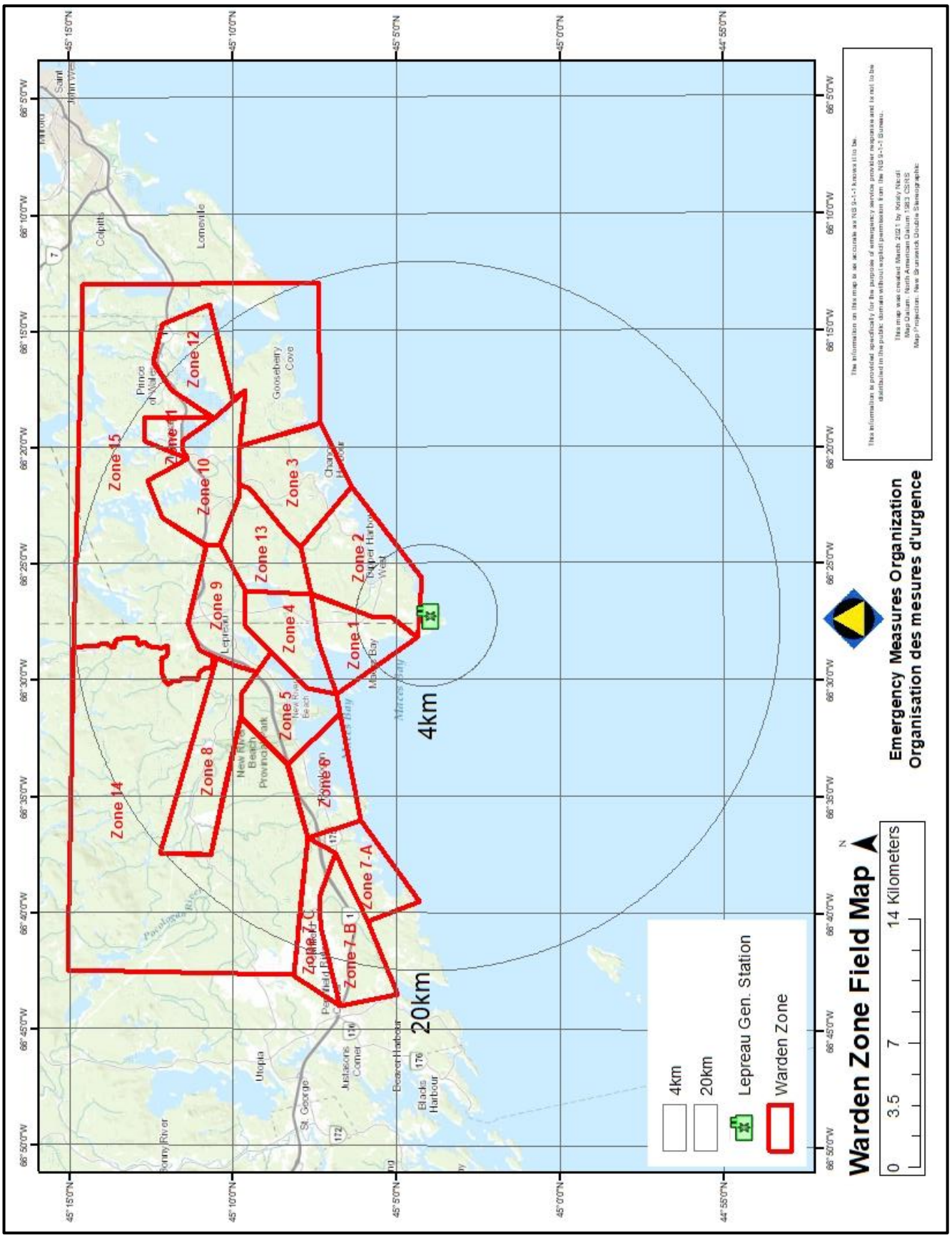

Warden Zone Field Map
Emergency Measures Organization
Organisation des mesures d'urgence
Zone 1
Zone 2
Zone 3
Zone 4
Zone 5
Zone 6
Zone 7-A
Zone 7-B
Zone 7-C
Zone 8
Zone 9
Zone 10
Zone 11
Zone 12
Zone 13
Zone 14
Zone 15
4km
20km
Lepreau Gen. Station
Warden Zone
0 3.5 7 14 Kilometers
N

Figure 1.14.6

1.15 REFERENCE PUBLICATIONS

1.15.1 The *Point Lepreau Nuclear Off-site Emergency Plan* (30 November 2023) refers to the following references:

- Province of New Brunswick *Emergency Measures Plan – All Hazards Plan* (June 2017).
- Province of New Brunswick Regional Emergency Response Plan (December 2016).
- Province of New Brunswick Department of Justice and Public Security and Emergency Services Division New Brunswick Emergency Measures Organization (NBEMO) *All Hazards Risk Assessment **(AHRA)** (December 2022).*
- Province of New Brunswick Department of Justice and Public Safety, Public Security and Emergency Services Division New Brunswick Emergency Measures Organization (NBEMO), Warden Service Procedures Manual dated April 2022.
- Province of New Brunswick Department of Justice and Public Safety, Public Security and Emergency Services Division New Brunswick Emergency Measures Organization (NBEMO), Monitoring and Decontamination Center **(MDC)** Procedures Manual dated April 2022.
- *IAEA Safety Standards, Preparedness and Response for a Nuclear or Radiological Emergency, GSR Part 7 (2015).*
- *IAEA Safety Standards, Arrangements for Preparedness for a Nuclear or Radiological Emergency, GS-G-2.1 (2007).*
- *IAEA Safety Standards, Arrangements for the Termination of a Nuclear or Radiological Emergency, GSG-11 (2018).*
- *CSA N1600:21 General Requirements for Nuclear Emergency Management Programs (2021).*
- *National Environmental Monitoring Strategy Guidance for Radiological / Nuclear Situations (2023)*
- *Provincial Security Event Management Plan* **(PSEMP)** (2012).
- NBEMO / NB Power Mass Decontamination Planning Basis (ISR 2012).
- PLNGS Technical Planning Basis (21 December 2021).
- *Health Canada Generic Criteria and Operational Intervention Levels for Nuclear Emergency Planning and Response* (HC May 2018).
- Health Canada, *Guidance on Planning for Recovery Following a Nuclear or Radiological Emergency (2020)*
- *Federal Nuclear Emergency Plan (HC January 2014).*
- *Federal Nuclear Emergency Plan, New Brunswick Annex (HC)* June 2021.
- Department of Health Emergency Preparedness and Response Branch, *Provincial Health Nuclear Emergency Plan for the Point Lepreau Nuclear Generating Station* dated May 2021.
- *Provincial Health Planning for a Nuclear Emergency at Point Lepreau Nuclear Generating Station, Management of Decedents Contaminated with Radioactive Material, Appendix 9* dated March 2017: and
- *Personal Protective Equipment **(PPE)** Protocol and Procedure Guideline for First Responders, First Receivers and Emergency Workers in a Nuclear Emergency at Point Lepreau Nuclear Generating Station* dated 13 May 2021.

1.16 NEW BRUNSWICK DEPARTMENT OF JUSTICE AND PUBLIC SAFETY EMERGENCY MEASURES ORGANIZATION (NBEMO)

1.16.1 The Provincial Emergency Operation Center (PEOC) is located at the Victoria Health Center, 65 Brunswick Street, Fredericton, New Brunswick. The "whole of government" response to an emergency is co-ordinated from this facility.

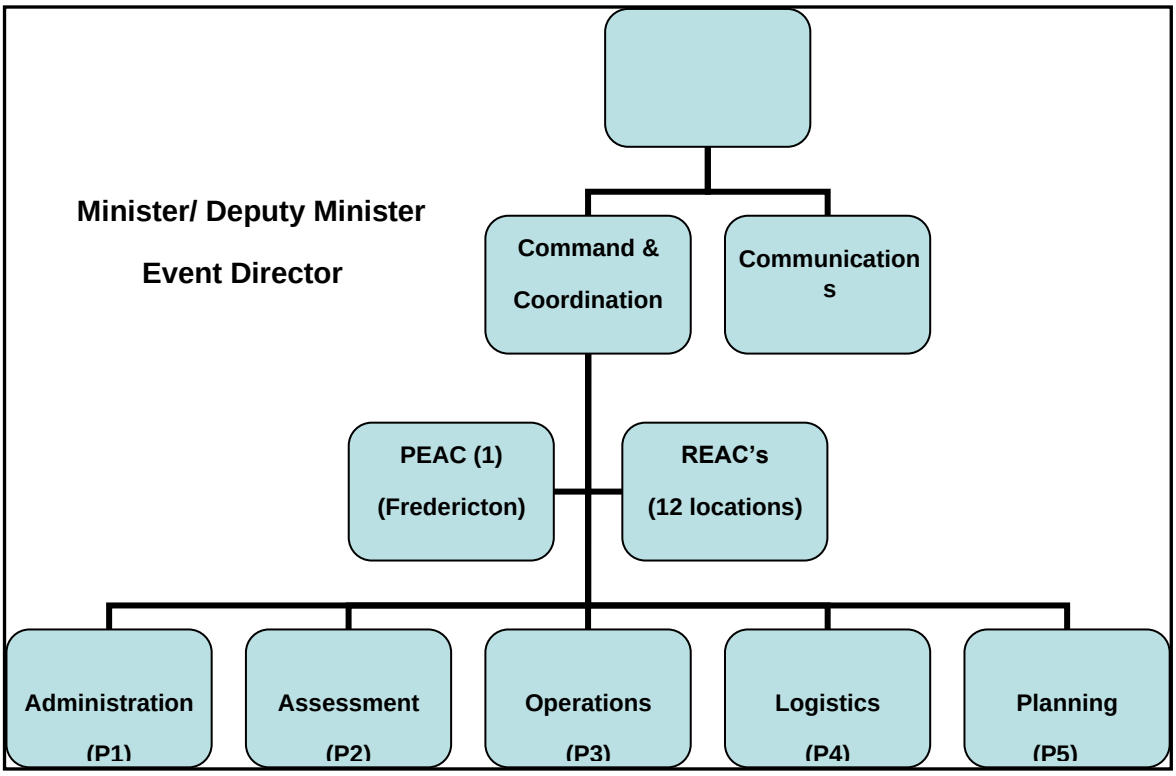


Figure 1.16.1

PEAC – Provincial Emergency Action Committee

REAC – Regional Emergency Action Committee

1.16.1 Responsibilities of Staff

Executive Group

The Executive Group consists of the Minister/Deputy Minister of The Department of Justice and Public Safety and invited officials from partner agencies involved in the response.

Command Group

The Command Group is responsible for the direction and control of operations. The Chairperson of the Provincial Emergency Action Committee is normally the Director or Operations Manager of NBEMO, and the Event Director is also (designated). The PEOC Manager is normally the Operations Manager from NBEMO, who is responsible for staff coordination. For operations

involving multiple mandates or jurisdictions, a Command Group may be established, consisting of senior (command) officials from the primary agencies involved.

Communications Group

The Communications Group is responsible for emergency public information and the coordination of public communications with other levels of government and partner agencies. The Communications Group is chaired by a Senior Communications Officer and consists of staff from the Department of Justice and Public Safety, other government departments as needed and the Executive Council Communications Staff.

Provincial Emergency Action Committee (PEAC)

The Committee is comprised of departmental representatives, adjusted to meet a given emergency with Federal and private sector representatives as appropriate.

Regional Emergency Action Committees (REAC)

The province is divided into twelve regions, each with their own Regional Emergency Action Committee (REAC) and Regional Emergency Operations Center (REOC). The province has twelve (12) Regional Emergency Management Coordinators (REMC's) who are responsible for supporting and assisting in an emergency.

Depending on the nature of the emergency, one or more REOC's could be activated to support local governments, local service districts and Municipalities to coordinate a regional level response.

1.16.2 NBEMO PEOC Action Checklist: NBEMO Member - First to Arrive at the Provincial Emergency Operations Center (PEOC)

The Duty Officer may not be the first to arrive at the operations center. The First-To-Arrive will assist the Duty Officer by undertaking the following tasks:

- Start and maintain an operations log, detailing all communications, significant events and actions taken.
- Using telephone xxx-xxx-xxxx, contact the PLNGS Shift Supervisor at xxx-xxx-xxxx or xxx-xxx-xxxx.
- Initiate start-up / set-up of the operations center.
- On verification of the classification from the Shift Supervisor at Point Lepreau of a Site Area Radiation Emergency or a General Radiation Emergency the EVERBRIDGE notification must be sent to all residents inside the 20 km Emergency Planning Zone using the Warden Zone established groups informing all residents of the emergency at the PLNGS.
- NBEMO shall ensure that within 30 min of activation, the public alerting systems or processes initiate a public alert to practically 100% of persons within the automatic action zone, detailed planning zone, and beyond the detailed planning zone.
- Note: The term "practically 100%" means that the public alert can be heard or received by everyone in the alerting area unless exceptional circumstances provide an impediment.

- On arrival of the Director NBEMO or Operations Manager - brief him/her on the situation.
- If the Director decides to activate the PEAC, instruct EMO Ops Staff to activate PEAC under Menu “G”, Nuclear Control Group under Menu N. Personally contact appropriate external agencies; refer to Menu “I” and the applicable tab to the Operations Manual.
- If the Director decides to alert EMO operations and administration staff to activate, be prepared to receive the results of the activation, and decide to contact those persons missed on the initial attempt; and
- If the call is received during office hours, the Operations Officer will inform the Director and EMO Staff, then contact the Shift Supervisor again to obtain and record further details of the incident and local weather conditions.

1.17 NBEMO CONCEPT OF OPERATIONS

1.17.1 When the Director of NBEMO decides that the situation warrants, the Nuclear Control Group will be alerted through Menu G and N, along with the REAC’s in Saint John and St. George (*Menu F – See menu contact list at 1.19.1*).

As in other emergency response situations, the Senior Operations Officer will allocate operational duties to NBEMO Staff and will supervise the operations of the PEOC.

Action Check Lists of operational and administrative duties are to be prepared by the Operations Officer and are always to be available in the PEOC. All NBEMO Staff are to be familiar with and practiced in them.

NBEMO will:

- On receipt of incident information from NB Power (PLNGS), alert the members of the Nuclear Control Group.
- Provide, equipment, and activate the PEOC for the Control Group.
- Prepare Standing Operating Procedures for use within the PEOC.
- Review and co-ordinate all agency plan, operating procedures and actions required under this plan.
- Amend and keep the *Point Lepreau Nuclear Off-site Emergency Plan* current.
- In collaboration of NB Power, arrange seminars and exercises to test operating procedures and provincial departments agency plans.
- Review this plan every two years to ensure the readiness of all departments and agencies concerned with its execution.
- In the event of a nuclear emergency at the PLNGS notify emergency response agencies in Nova Scotia, Prince Edward Island, and the State of Maine; and
- In the event of a nuclear emergency at Point Lepreau notify the Air Traffic Controller in Moncton, the Canadian Coast Guard in Halifax, Maine Emergency Management Agency (MEMA), Regional Medical Officer of Health Saint John, National Insurance Agency of Canada (NIAC) and Health Canada FNEP Duty Officer.

The NBEMO MDC Supervisor will be dispatched immediately with each **Monitoring and Decontamination Center (MDC).** The NBEMO **Command Post (CP)** may be positioned to support deployed assets.

The NBEMO **Off-site Emergency Operations Center (OEOC)** manager will be dispatched to the OEOC, where he will act as NBEMO Off-site Manager to oversee and co-ordinate operations in the area and provide information to the PEOC.

If operations are expected to continue for more than 24 hours, the Senior Operations Officer will ensure that a shift system is instituted.

1.17.2 New Brunswick Nuclear Emergency Management Committee (NEMC)

The New Brunswick Nuclear Emergency Management Committee (NEMC) are responsible for preparedness, planning and exercises in support of the *Point Lepreau Nuclear Off-site Emergency Plan* and to include the conduct of the Monitoring and Decontamination Center's (MDC's) as well as the *Point Lepreau Nuclear Off-site Emergency Plan* Exercise Program.

1.17.3 Roles and Responsibilities

The roles and responsibilities of the New Brunswick Nuclear Emergency Management Committee (NEMC) are:

- to understand, review and update the processes in place to effectively respond to any radiation emergency at the Point Lepreau Nuclear Generating Station, including the:
    - *Point Lepreau Nuclear Off-site Emergency Plan.*
    - *Point Lepreau Nuclear Off-site Emergency Plan Exercise Program.*
    - *Point Lepreau Warden Service Procedures Manual; and*
    - *Monitoring and Decontamination Center Procedures Manual.*
- to assist / provide planned exercise objectives.
- to assist / provide overall exercise guidance.
- to assist / provide the communications plan; and
- to participate / provide follow up to any After Action Reports.

1.17.4 Members

The New Brunswick Nuclear Emergency Management Committee (NEMC) will be comprised of the following:

- NB Power Staff – PLNGS, Point Lepreau.
- NB Power Staff – Corporate, Head Office, Fredericton, NB.
- Department of Justice and Public Safety – NBEMO.
- Department of Justice and Public Safety - Office of Provincial Security Advisor (OPSA).
- Department of Agriculture, Aquaculture and Fisheries (DAAF).
- Department of Environment and Local Government (DELG).
- Department of Justice and Public Safety – Crime Prevention and Policing Standards and Contract Management Branch; RCMP.

- Department of Justice and Public Safety – Inspection and Enforcement Branch.
- Department of Justice and Public Safety – Office of the Provincial Fire Marshal.
- NB Department of Health.
- Department of Energy and Resource Development (DERD).
- Social Development – Emergency Social Services.
- Canadian Red Cross.
- Department of Transportation & Infrastructure (DTI).
- Point Lepreau Warden Service.
- Department of Post-Secondary Education, Training and Labour (PETL).
- Department of Education & Early Childhood Development (EECD); and
- Amateur Radio Operators.

Members are obligated to attend and participate where necessary. Others may be invited to attend as required.

1.17.5 Meetings

The New Brunswick Nuclear Emergency Management Committee (NEMC) will meet monthly; however, frequency can be adjusted to meet requirements.

1.18 PUBLIC ALERTING

One of the earliest steps to take in a nuclear or radiological emergency with a potential or actual release of radionuclides to the environment is alerting of the public.

1.18.1 NBEMO has three distinct and mutually supporting methods of alerting the public:

1. Mass Notification System (Everbridge). In 2009, NB-EMO improved the capacity and functionality of the Lepreau Warning system which can alert officials, responder organizations and all residents of the 20-km detailed planning zone in a few minutes. Residents themselves determine their alerting methods and can select any combination of home phone, mobile phone, office phone, fax, e-mail, or text message. NBEMO uses this system regularly for internal purposes and conducts annual live tests for Lepreau area residents. Notification tests are preceded by a variety of public awareness activities (news release, letter to residents, newspaper ads and radio interviews).

Everbridge is the primary means of alerting residents inside the Detailed Planning Zone of an emergency at the Point Lepreau Nuclear Generating Station.

Testing of the Mass Notification System (Everbridge) is scheduled yearly. The test begins with a letter to the residents 2-3 weeks prior to the test date informing the residents of the date, time, and acknowledgement procedures.

Sample Letter

Letter to Residents – Notification Test

Date Click here to enter text.

Dear Resident:

The New Brunswick Emergency Measures Organization (NBEMO) is responsible to protect the public in the event of an off-site emergency at the Point Lepreau Nuclear Generating Station.

In the event of an emergency, residents will be advised of important safety information through the emergency notification system.

On Click here to enter a date.at 10:00 AM, NBEMO will conduct a test of the EVERBRIDGE Notification system in partnership with NB Power/Point Lepreau. We remind all residents to listen to the test message, and to confirm that they have received it.

Receiving messages

- When you see NBEMO / OMU NB xxx-xxx-xxxx or Unknown name xxx-xxx-xxxx on your telephone call display, this means the call is coming from NB-EMO.
- When you answer the phone, you will hear: “The following is a message from the New Brunswick Emergency Measures Organization”, then a computer-generated voice will ask you to hit “1” to listen to the message.
- When you receive an emergency notification message, listen to the entire message.

Confirming receipt of messages

- Listen to the message, and then wait for confirmation instructions: “To confirm receipt of this message, please hit 1.” Or
- If you receive the message on your voice mail or answering machine, the message will include a phone number (xxx-xxx-xxxx) and a confirmation number. Call the number, enter the language (1 for English, 2 for French) and when prompted, enter your confirmation number, and hit the pound (#) key.

Your assistance and co-operation are appreciated. If you have any questions, please call NBEMO toll-free, during normal business hours, at xxx-xxx-xxxx**.**

Director, New Brunswick Emergency Measures Organization

2. National Public Alerting System (NPAS). NPAS is a partnership between federal, provincial, and territorial governments and Pelmorex Inc., the parent company for The Weather Network and Méteo Media. NBEMO uses NPAS to disseminate urgent alerts to broadcasters and Internet based services. The Alert Ready system now in place is a broadcast-interruptive system that enables urgent alerts to go direct to broadcast over AM and FM radio and television stations. This includes mobile devise alerting.

3. Point Lepreau Warden Service. The Warden Service comprises 23 uniformed volunteers who are trained and equipped to assist police. They are drawn from the local community and their local knowledge is invaluable. The Wardens’ tasks include assisting in notification, delivery of Potassium Iodide Tablets (KI), delivery and completion of the Demographic Safety Survey, identifying people requiring help with evacuation, manning check points, or providing radio communications.

1.19 CONTACT LISTS

1.19.1 NBEMO maintains contact lists, termed “Menus”, in a Microsoft Outlook Contacts database. As Menus change constantly, they are only inserted into hard copies of the off-site plan when needed.

Plan holders should insert Menus from Microsoft Outlook Contacts, as follows:

- Menu A - Senior Officials
- Menu B - NBEMO Augmentees
- Menu F - Provincial Emergency Operations Center (PEOC) Staff (Includes REMCs)
- Menu G - Provincial Emergency Action Committee (PEAC)
- Menu I - International Emergency Management Group (IEMG)
- Menu J – Public Safety Answering Points (PSAP)
- Menu N - Nuclear Control Group

1.20 IMMEDIATE EVACUATION OF AUTOMATIC ACTION ZONE (AAZ)

1.20.1 In the unlikely event that the public is at immediate risk, and on verification of a declaration of a General Emergency at PLNGS the EMO Operations Officer or the EMO Duty Officer has the authority to direct the immediate evacuation of Warden Zone 1, Warden Zone 2 and at sea Area 1. This will be done by contacting directly the RCMP Operational Communications Center (OCC) who will contact the West District OIC Operations (St. George); NBEMO will contact the Point Lepreau Warden Service and the Canadian Coast Guard.

Automatic Action Zone: An area around a facility in category I for which emergency arrangements are made at the preparedness stage to effectively take urgent protective actions and other response actions to avoid or to minimize severe deterministic effects.

Goal: The goal for this area is to initiate urgent protective actions and other response actions before any significant release of radioactive material occurs (i.e., precautionary) based on plant conditions (i.e., conditions leading to the classification of a General Emergency).

Main points: Automatic Action Zone (AAZ) boundary needs to be established to minimize evacuation times. Evacuation of the AAZ to areas beyond the Detailed Planning Zone (DPZ) is given priority over evacuation of the Contingency Planning Zone (CPZ).

NBEMO shall ensure that within 30 min of receiving notification of the categorization, the public alerting systems or processes initiate a public alert to practically 100% of persons within the automatic action zone, detailed planning zone, and beyond the detailed planning zone.

Note: The term “practically 100%” means that the public alert can be heard or received by everyone in the alerting area unless exceptional circumstances provide an impediment. *CSA N1600-21 General Requirements for Nuclear Emergency Management Programs.*

Section 7.14.4 Minimum Public Alerting Requirements.

See map below.

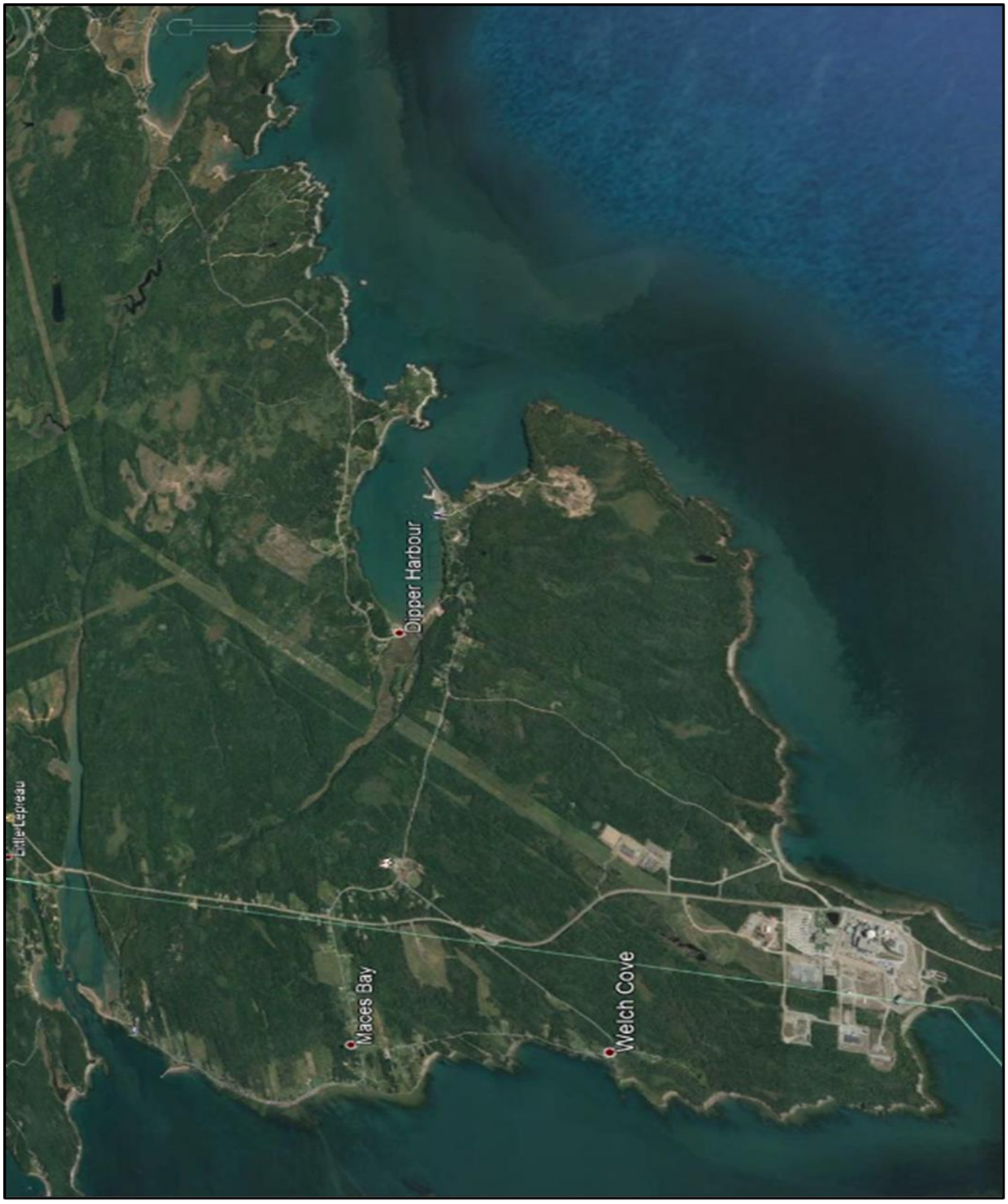


Figure 1.20.2

1.21 PROVINCIAL EMERGENCY OPERATIONS CENTER (PEOC)

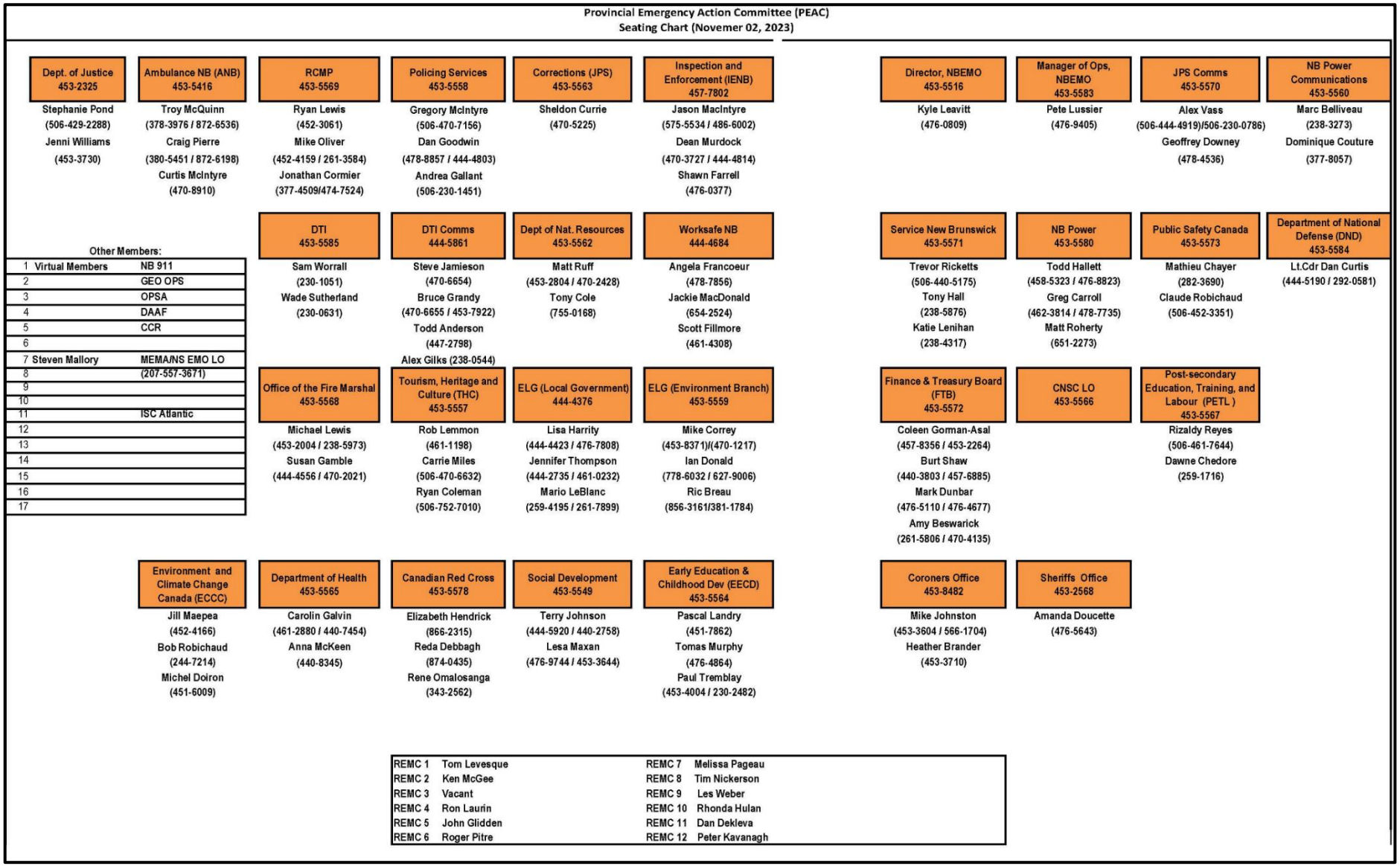


Figure 1.12.1

1.21.2 When a Provincial response is required, the PEAC will be activated accordingly and will report to the Provincial Emergency Operations Center (PEOC). The PEOC contains the necessary working accommodation and communications that enable proper coordination. In addition to the PEOC, departmental operation centers, or other designated facilities may be established to control and direct departmental operations.

1.21.3 Routine Monitoring

Routine monitoring is referred to as the NBEMO Operations level on a day-to-day basis when there is no stated activation level in support of ongoing operations. Staffing is conducted with a minimum of two (2) trained Operations Officers in the PEOC.

PEOC Activation Levels

Activation Levels

The level of response depends on the scope and nature of the situation and the level of threat. At the onset of operations, the Director or designate will determine the level of response necessary, implement the applicable emergency plans, activate operations centers, and notify the PEAC, which may be assembled in person or virtually (MS Teams), in whole or in part, to coordinate the provincial response.

The required notification actions for each of three formal activation levels are as detailed in Part 2, Operational Information*, Section 2.2*, Calling Sequence:

- Level 1 - Enhanced Monitoring
- Level 2 - Partial Activation
- Level 3 - Full Activation

Level 1 – Enhanced Monitoring

When a situation arises with potential to threaten life, health, property or the environment, the Director NBEMO will implement *Enhanced Monitoring*, as detailed below.

NBEMO staff at the PEOC in Fredericton will monitor all actual or potential emergency situations, to ensure that local emergency management and response agencies are alerted and that response measures are effective and adequately supported.

Unless otherwise directed, NBEMO Operations team will:

- Monitor the situation with the NBEMO Operations team coordinating during normal working hours:
    - NBEMO Director
    - Operations Manager
    - Ops Officers
    - REMC(s)
    - Director of Communications

    - Geo Operations Officer
    - Admin Officer
    - NBEMO Duty Officer and REMC (s) will monitor ongoing operations after hours and report to Director and Ops Manager as required.
- Alert appropriate Regional Emergency Management Coordinators (Menu D).
- Alert Provincial Operations Staff (Menu F).
- Alert NBEMO Augmentees (Menu B) (Stand-by if required).
- Alert the Provincial Emergency Action Committee (PEAC) (Menu G).
- Alert the Nuclear Control Group (Menu N) if necessary.
- Release Public Information and advice as necessary.
- Prepare a daily risk assessment or situation report and distribute it to the NBEMO distribution list. (200 plus agencies); and
- Office of the Provincial Security Advisor will assign an Assessment Officer to conduct risk assessment to critical Infrastructure and provide support to operations as required.

Provincial Emergency Action Committee (Menu G) will be alerted by the Everbridge notification system and / or MS Teams (virtually).

PEAC members will:

- Alert their department or agency.
- Be prepared to come to the PEOC on request, should it be activated further or attend virtually.
- Keeps NBEMO advised by emailing ops@gnb.ca of actions being taken or impacts to agencies or departments regarding the event being monitored?
- Keeps NBEMO advised in person or by MS Teams of actions being taken or impacts to agencies or departments regarding the event being monitored?

<u>Level 2 - Partial Activation</u>

When it is deemed necessary for the effective coordination of operational planning, emergency response or emergency public information, the Director NBEMO or designate will:

- Activate the Provincial Emergency Operations Center (PEOC), in accordance with Standing Operating Procedure #1.
- Appoint an operations manager to coordinate operations during normal working hours; the NBEMO Duty Officer may be assigned after hours.
- Appoint a provincial media spokesperson.
- Alert the Provincial Emergency Action Committee (Menu G) via Everbridge or through MS Teams and direct members to:
    - Report to the PEOC or join MS Teams as soon as possible for an operations briefing; if the primary contact is unavailable, to send an alternate; and
    - Be prepared to provide a briefing on their departmental operations.
- Alert the appropriate Regional Emergency Management Coordinators (Menu D), as required direct them to:
    - Activate the Regional Emergency Action Committee (REAC) and direct members to report to the REAC or join MS Teams as soon as possible for an operations briefing; if the primary representative is unavailable, to send an alternate; and

    - Be prepared to provide a consolidated briefing on operations in their region.
- The PEOC will coordinate operations with all levels of government involved in the response and act as the focal point or coordination center for all operational information.
- The Joint Information Center will activate the emergency public information plan and coordinate all public information for the provincial and federal levels of government.
- Liaison Officers will be deployed as necessary to coordinate operations with other EOCs involved in the response.
- Regional Emergency Management Coordinators or Incident Management Teams will be assigned to manage emergency sites outside of municipal jurisdictions as required.

Level 3 - Full Activation

Unless otherwise directed, the Director EMO or designate will manage the operation by the following means:

- The Provincial Emergency Operations Center (PEOC) will coordinate provincial level operations and provide support to local government.
- The Joint Information Center will coordinate all emergency public information for the provincial and federal levels of government.
- Appropriate Regional Emergency Operations Center(s) will coordinate operations at the regional level.
- Liaison Officers will be deployed as necessary to coordinate operations with other EOCs involved in the response.
- Regional Emergency Management Coordinators or Incident Management Teams will be assigned to manage emergency sites outside of municipal jurisdictions as required.

The PEAC will set priorities, assign tasks, and coordinate operations within their respective departments. Undertake such planning as is necessary to coordinate future phases of the operation, such as evacuation or recovery.

1.21.4 Operational Rhythm

The Operational Rhythm is the formal process used in the PEOC to manage information and make decisions. The sequence of activities is as follows:

- Preparation (10-15 minutes):
    - Information Gathering and Assessment.
    - Gather information from contacts.
    - Review logs since last briefing.
    - Conduct assessment.
    - Review main / significant events; and
    - Note progress, outstanding issues, and requirements.

- Business Cycle (PEAC / REAC Briefing) (60 minutes maximum):

    The Director is the PEAC Chairperson and is responsible for the overall Direction of the Operation, supported by the Operations Manager and Manager Plans and

Preparedness who typically assist in conducting the PEAC briefings. Business Cycles are typically held within the first hour of activation initially and twice daily or as required. The briefing is held in an uninterrupted PEOC, no phone calls, and all members participate in the 'report out' by speaking briefly on main points. (Max 2 minutes per agency or department) PEAC members must ensure that they stand speak clearly, and concisely so their points can be relayed to the entire group.

- Planning Section (planning future operations 24-48 hours):
    - Planning Officers and others as required.
    - Draft Incident Action plan for next Operational period.
    - Discuss Incident Action plan with Operations Team; and
    - Brief PEOC.

- Operations Section (Response 1-4 hours):
    - Operations Manager issues direction and orders to subordinates & organizations.
    - Make operational decisions and communicate.
    - Monitor operations account and assign and track tasks.
    - Maintain event operations log.
    - Maintain situational awareness.
    - Provide Geo-Operations support.
    - Liaise with Municipalities, REMCs and responders.
    - Ensure release of public advice and Emergency Public Information; and
    - Bring urgent concerns to Director and Ops Manager immediately.

Other sections may be assembled as necessary or join MS Teams to support the operation, such as Logistics, Assessment, Finance and Administration, Recovery, etc.

- Business Cycle Products:
    - Briefings.
    - Assessments of the situation.
    - Response objectives & priorities.
    - Planning requirements (24 - 48 hr horizon).
    - Operational priorities for the next 1-4 hours.
    - Executive management direction.
    - Situation reports (internal and external).
    - Media statements.
    - Incident Action Plans.
    - Logistics/Administrative arrangements; and
    - Instructions.

1.21.5 The Operational Components of the PEOC are:

- The Director of NBEMO, who is Chairperson of the PEAC.
- A communications staff under the direction of a Communications Officer. The Communications Officer is normally provided by Department of Justice and Public Safety and coordinates with the Executive Council Office.
- The Manager of the Provincial EOC, who is the NBEMO Operations Manager.
- The members of the Committee, as adjusted to meet a given emergency.

- An administrative staff (P1) - The Administrative Staff consist of administrative support staff drawn principally from the Department of Department of Public Safety. Duties include the following:
    - Provide administrative support.
    - Monitor operations e-mail account.
    - Maintain the operational log and documents.
    - Arrange for the provision of stationery items and office equipment, including photocopiers, faxes, and printers.
    - Distribute correspondence.
    - Arrange for meals and breaks.
    - Assist with security when required.
    - Track financial issues; and
    - Arrange for the cleaning of the Provincial EOC and adjoining offices.

- An assessment staff (P2) that provides analysis of the situation, conduct risk and threat assessments, and to advise on the security implications of an emergency. This function is performed by the staff of the **Office of The Provincial Security Advisor (OPSA).**
- An operations staff (P3) supervised by the NBEMO Operations Manager. The Operations Staff coordinates response activities and information management within government and with other intervening organizations. Operations staff will:
    - Coordinate staff activity.
    - Manage telecommunications.
    - Bring important developments (significant events) to the attention of the PEAC.
    - Ensure that initial and follow-up action is taken on all requests for information and assistance.
    - Monitor operations e-mail account.
    - Maintain the operations log, maps, and situation boards.
    - Compile daily or periodic situation reports; and
    - Supervise the activity of support staff.

- A logistics staff (P4) coordinates supply and transportation requirements, provide technical advice and support to operations. The Logistics Staff may also be tasked with duties related to damage assessment and recovery; and
- A planning staff (P5) is responsible for planning beyond the current operational period. Tasks include the preparation of decision briefs, operations orders, directives, and contingency plans.

The Provincial EOC is prepared to operate on a 24-hour basis for extended periods as required. If 24-hour operations are anticipated, the staff will be organized in shifts.

1.21.6 PEAC members will:

- In conjunction with the Operations Manager and other departmental staff, coordinate the provincial response.
- Be the primary link between their departments and the PEAC.

- Keep the Operations Manager and the other PEAC members informed about their departments' activities; and
- Inform and advise the Operations Manager of any significant developments reported by field staff.

1.21.7 The operations staff in the PEOC will:

- Coordinate staff activity (including Geomatic support).
- Manage telecommunications.
- Bring important developments to the attention of the PEAC.
- Ensure that initial and follow up action is taken on all requests for information and assistance.
- Maintain the operations log, maps, and situation boards.
- Compile daily or periodic situation reports; and
- Supervise the activities of the support staff.

1.21.8 The administrative staff for the PEOC will:

- Arrange for the provision of clerical support.
- Arrange for the provision of a technology suite (i.e., stationary items and office equipment).
- Arrange for the feeding of the PEOC staff; and
- Arrange for the cleaning of the PEOC and adjoining offices.

1.21.9 Incident Management System / Incident Command System

Within the Provincial EOC, staff activity is organized along functional lines, in accordance with the Incident Management System doctrine. In joint or combined operations, this standard construct facilitates staff coordination with other agencies or headquarters. In 2016 NBEMO officially became the **Authority Having Jurisdiction (AHJ)** for the **Incident Command System (ICS).**

ICS is widely used by the First Responder community throughout the province. As such, it is the management system of choice for most on site emergencies. ICS recognizes that most Emergency Operations Centers in NB operate under a slightly different but compatible management system.

1.22 THE PROVINCIAL EMERGENCY ACTION COMMITTEE (PEAC)

1.22.1 When a substantial Provincial involvement is indicated or when there is a need to coordinate a provincial response, the PEAC will be activated.

The PEAC, chaired by the Director of NBEMO or his/her representative, is comprised of representatives of those provincial departments detailed in Regulation 84-7 under the NBEMO Act. The precise departmental representation in the PEAC will depend on the nature and scope of the event. It may also include federal or other agency representatives as necessary.

The PEAC consists of departmental representatives, who staff the departmental desks in the PEOC. They will provide their department's input to the Committee and will keep their department informed. Those Provincial departments which normally do not provide representatives in the PEAC may be called upon for advice or resources.

The PEAC may be assembled by the Director NBEMO or designate at any time before or during an emergency for:

- Assessing a potential emergency with specific focus towards a response to a Radiation Emergency at PLNGS.
- Preparing or reviewing contingency plans and procedures.
- Considering the deployment of resources and Incident Commanders to an emergency.
- Monitoring operations provide direction to departments, regions, Incident Commanders.
- Providing situation updates and making recommendations to the Director; and
- Referring major problems for resolution to the Director and implementing the direction received.

1.22.2 The PEAC is composed of representatives from the following Departments and Agencies:

- Department of Justice and Public Safety - Emergency Measures Organization, Administrative Services, Fire Marshall's Office, Policing Services, RCMP, Technical Inspection Services Branch, Office of the Provincial Security Advisor (OPSA), Geomatic, and the Executive Council Office (NBEMO representative).
- “J” Division RCMP.
- Department of Agriculture, Aquaculture and Fisheries.
- Attorney General.
- Department of Education and Early Childhood Development.
- Department of Energy and Resource Development.
- Department of the Environment and Local Government.
- Executive Council Office.
- Treasury Board.
- Department of Health.
- Department of Human Resources.
- Department of Post-Secondary Education, Training and Labour.
- Social Development – Families and Children & Seniors and Long-Term Care.
- Service New Brunswick.
- New Brunswick Power Corporate.
- Department of Tourism, Heritage, and Culture.
- Department of Transportation and Infrastructure.
- Environment and Climate Change Canada.
- Regional Director, Public Safety Canada.
- Liaison Officer, Canadian Armed Forces.
- Non-Governmental Organizations – Red Cross; and
- Representatives of other agencies and industry as necessary. – Bell Aliant, etc.…

1.23 REQUESTS FOR ASSISTANCE (RFA)

1.23.1 When it is anticipated that prompt access to resources of other jurisdictions may be required, mutual aid agreements should be established and included in the Provincial All-Hazards plan. These can include cross border arrangements with adjacent provinces and the State of Maine.

Special arrangements have been made with the federal Department of Employment and Social Development Canada for access to additional or specialist human resources. These types of requests should normally be forwarded through the Department of Post-Secondary Education, Training and Labour.

Requests for Canadian Forces assistance will be directed to NBEMO who will deal through the Regional Director, Public Safety Canada (PS-C) to Joint Task Force Atlantic through the Chief of Defence Staff and the Canadian Joint Operations Center (See Annex F). Requests for assistance from other Government of Canada departments will be directed to NBEMO for coordination and submission to the Regional Director PS-C.

Volunteer assistance at the provincial level, specifically, volunteer agency support will be coordinated by the department responsible for the provision of such assistance (Health, Red Cross, etc.…).

1.24 NUCLEAR CONTROL GROUP (NCG) RESPONSIBILITIES

1.24.1 The NCG will assume control, direction, and co-ordination of emergency off-site activities when circumstances require, under the direction and control of the Head of the Nuclear Control Group, the Director of NBEMO.

1.25 NCG CONCEPT OF OPERATIONS

1.25.1 The NCG is an expanded version of the PEAC, members of which are summoned to the NBEMO PEOC as and when their departments may be required to provide support in emergency response operations. *See Notification Procedures – Calling*

On being alerted by NBEMO, and before going to the PEOC, each member will notify those in his/her agency who may be required to respond. After being briefed, the member will then issue instructions to them. Operational instructions on the protective actions to be taken for the safety and welfare of residents of any affected area will be given by the Director on the advice of, and after consultation with, members of the NCG.

Operational information will be collected, collated, and disseminated by NBEMO staff. Situation reports will be circulated periodically to all members for their information. Verbal briefings will also occur as required. Significant events will be brought to the attention of the operations staff who will then display for all to see.

In the unlikely case of a General Emergency where a release of radioactive material occurs without warning, which warrants a prompt evacuation, the NBEMO Duty Officer can direct an immediate evacuation of the Automatic Action Zone which is Warden Zone 1 (Maces Bay) and Warden Zone 2 (Dipper Harbour). See Section 1.20 Immediate evacuation of the AAZ.

Communications between NCG members and their field staff will be established under each agency's own arrangement. These will be supplemented by emergency communications set up by NBEMO, which is also responsible for message reception, internal distribution, and dispatch.

The telephones with unlisted numbers in the Control and Operations room will enable members to make outgoing calls without being distracted by incoming calls, which will be handled by the Communications Centre. Members may inform their Deputy Ministers of their unlisted number, but care must be taken to ensure that the number is not widely known lest incoming calls divert attention from operations.

1.26 NCG COMPOSITION

1.26.1 Having regard for the many and complex activities required in an "emergency" response, it is necessary that the NCG includes representatives of all agencies which may be needed. It is not envisaged that the entire group would be required to assemble except in the gravest emergency. Those needed to deal with a situation will be summoned to the PEOC while others would be placed on "Stand By" or "On Call" as the situation demands.

The Head of the NCG is the Director of NBEMO, who has sole decision-making authority. Other members are advisors.

1.27 NCG ALERTING AND ASSEMBLY

1.27.1 Those members of the NCG alerted by NBEMO will assemble at NBEMO PEOC. In non-radiation emergencies, only those members of the Control Group whose departments may be required to provide resources will be summoned to the PEOC.

In radiation emergencies, all NCG members would be required.

1.28 NCG RESPONSIBILITIES FOR CONTACT LIST

1.28.1 NCG member organizations are required to:

- appoint one primary and two alternate representatives to the NCG.
- provide contact information to the Emergency Measures Organization; and
- Participate in alerting test to confirm contact lists/menus.

The Emergency Measures Organization is required to:

- maintain an alerting system for the NCG; and
- conduct periodic tests of the alerting system.

1.29 NCG FUNCTIONS

1.29.1 N**CG will:**

- assemble at the PEOC when alerted by NBEMO.
- obtain information on the reported emergency, and on what actions have already been taken.
- assume control, direction, and co-ordination of emergency activities to whatever extent necessary.
- authorize the publication of information, warnings, and advice to the public and the Government of New Brunswick.
- advise the Minister of Justice and Public Safety on the requirement for a formal declaration of an emergency in accordance with the NB *Emergency Measures Act*.
- direct NBEMO to inform Emergency Response Agencies in Nova Scotia, Prince Edward Island, and the State of Maine; and
- take any other actions considered necessary.

1.30 NCG FEDERAL AGENCIES

1.30.1 Public Safety Canada (PS-C) will provide a federal liaison officer to the NCG, to advise on federal resources and to obtain such resources as may be required. The PS-C Regional representative will keep the Federal Government informed.

Health Canada (HC) will provide a **liaison officer(s) (LO)** to the NCG to facilitate communication and coordination with the **Federal Nuclear Emergency Plan Technical Assessment Group (FNEP TAG)**. HC FNEP Technical Liaison Officer (FTLO)

The Canadian Nuclear Safety Commission (CNSC) will provide a liaison officer(s) to the NCG to advise on aspects of the incident within CNSC jurisdiction and to assist the NCG in any way possible.

The **Canadian Meteorological Service of Environment and Climate Change Canada (ECCC)** will provide a meteorologist to the NCG to assist in providing weather information and to plot the trajectory of any plume containing radioactive material.

Participating federal agencies will provide the names and applicable contact information for their headquarters, designated representatives, and their alternates. NBEMO will maintain the contact information in appropriate notification lists. Provincial agencies will prepare plans, containing essential operational information, for inclusion in this plan. These plans will contain alerting and assembly instructions, places of assembly, Standing Operating Procedures, and contact information of response personnel.

1.31 NCG REPRESENTATION / MEMBERS

1.31.1 The NCG comprises the departments and agencies listed below, in some cases, departments have different representatives for different functions:

- Department of Justice and Public Safety - Emergency Measures Organization, Administrative Services, Fire Marshall's Office, Policing Services, RCMP, Technical Inspection Services Branch, OPSA, Geomatic, and the Executive Council Office (NBEMO communication representative).
- "J" Division RCMP.
- Department of Agriculture, Aquaculture and Fisheries.
- Canadian Nuclear Safety Commission (CNSC).
- Attorney General.
- Department of Education and Early Childhood Development.
- Department of Energy and Resource Development.
- Department of the Environment and Local Government.
- Executive Council Office.
- Treasury Board.
- Department of Health - Office of the Chief Medical Officer of Health and Office of Mental Health Services, Office of Public Health, and Radiation Specialist.
- Department of Human Resources.
- Department of Post-Secondary Education, Training and Labour.
- Social Development – Families and Children & Seniors and Long-Term Care.
- Service New Brunswick.
- New Brunswick Power, Corporate Management, PLNGS Emergency Preparedness Staff, Health Physics and NBP Public Affairs.
- Department of Tourism, Heritage, and Culture.
- Department of Transportation and Infrastructure.
- Department of Transportation and Infrastructure –communications (TMR).
- Environment and Climate Change Canada.
- Regional Director, Public Safety Canada.
- Liaison Officer, Canadian Armed Forces.
- Health Canada FNEP Technical Assessment Group (FNEP TAG) Liaison Officer.
- Non-Governmental Organizations – Red Cross, etc.…
- Maine Emergency Management Agency (MEMA) Liaison Officer; and
- Representatives of other agencies and industry as necessary. – Bell Aliant, etc.…

The New Brunswick Technical Advisory Group (NB TAG) is comprised of members of the NCG whose responsibility is to advise the Director of NBEMO on when to take Emergency Protective Actions (Countermeasures), and what emergency protective action to take.

1.32 NCG COMMUNICATIONS

1.32.1 NCG are supported by the Executive Council Office (ECO) who is responsible for the following:

- Public Enquiry Center will be established by ECO to answer queries from the public; and
- Joint Information Center (JIC) to handle operational information will be established and supervised by ECO which is also responsible for staff training and message processing.

1.33 NCG ADMINISTRATION

1.33.1 Administrative support for the NCG and NBEMO Headquarters will be co-ordinated and supervised by the P1 – Administration Chief of the NBEMO staff.

1.34 NEW BRUNSWICK TECHNICAL ADVISORY GROUP (NB TAG)

1.34.1 The primary mission of the Technical Advisory Group is to assess the off-site impacts of the event, evaluate the need for protective actions and recommend appropriate countermeasures to the NCG.

The secondary mission is to assess the broader societal impacts, including risks to commerce, critical infrastructure, the continuity of essential services and public confidence.

The PLNGS off-site nuclear emergency plan is a keystone document and should be referred to during a radiation emergency.

Figure 1.34.2

1.35 NB TAG MANAGEMENT

1.35.1 The Director of the Office of the Provincial Security Advisor will coordinate the activities of the Technical Advisory Group and conduct regular business cycles. During a radiation emergency, the Senior Assessment Officer within the Situation Room should be a New Brunswick Power health physicist, or a comparably qualified public health official. Primary and alternate contacts for NB Power health physics staff are found in Menu G of the NBEMO Everbridge Contacts Directory, as well as the OPSA Sentinel contact list (under TAG Contacts).

The NBEMO Director (responsible for off-site nuclear emergencies) will assign enough staff (operations officers; admin support; geo-techs) to support the OPSA NB TAG. An EMO officer will manage the PEOC business cycle, while the Situation Room Manager will manage the NBTAG (Situation Room) business cycle. NB TAG experts will assess radiological impacts and potential health consequences and make appropriate recommendations which are thereafter briefed to the Control Group.

1.36 NB TAG RESPONSIBILITIES

1.36.1 The NB TAG is responsible to assess the off-site impacts of the radiological event, evaluate the need for protective actions, and recommend appropriate countermeasures to the Nuclear Control Group. This must be accomplished within the first two to three hours. Once public safety and public health issues have been addressed, the NB TAG will also consider medium and longer-term implications of the event, including effects on commerce, critical infrastructure, and essential services.

1.37 NB TAG COMPOSITION

1.37.1 NB TAG Members include:

- NB Chief Medical Officer of Health and/or Medical Officer of Health.
- NB Provincial Radiation Medical Advisor or alternate.
- NB Power Health Physicist(s).
- Environment and Climate Change Canada (ECCC) representative.
- Federal Nuclear Emergency Plan (FNEP) Technical Assessment Group (TAG) Liaison Officer (LO) - (FTLO)(s).
- Geomatics.
- OPSA – Director, Office of the Provincial Security Advisor.
- OPSA – Operations & Planning.
- OPSA Administration
- OPSA - Critical Infrastructure Manager.
- OPSA - Security & Risk Manager.
- OPSA Security & Risk Analyst (LO).
- RCMP.
- CNSC; and
- Others, as required.

1.37.2 Roles and Responsibilities

Member	Role	Responsibility
Chief Medical Officer of Health and/or Medical Officer of Health	NB Health are the lead on the New Brunswick Technical Advisory Group (NB TAG)	• Serve as spokesperson regarding public health issues, working closely with the Provincial Radiation Medical Advisor. • Provide recommendations and guidance regarding air, water, and food quality with respect to human health hazards. • Provide public health guidance and advice regarding nuclear emergency response; and • Order quarantine or special burial arrangements, as required. • Serve as the authority to direct the public to take Potassium Iodine Tablets (KI Pills)
Provincial Radiation Medical Advisor or alternate	NB Health senior radiation specialist on the New Brunswick Technical Advisory Group (TAG).	• Provide advice on Generic Criteria and Operational Intervention Levels for Nuclear Emergency Planning and Response.
NB Power Health Physicist(s) NB Power Health Physicist(s)		NB Power Health Physicist(s) is responsible to: • Chair the Ingestion Pathway Control Group. • Make recommendations on restricted areas and protective actions (contaminated areas requiring restricted access) to the Director OPSA. • Make recommendations on surveying and sampling to be conducted, develop a Survey grouping and task matrix and a Sampling grouping and task matrix. • Coordinate with Health Canada to make recommendations to the Director OPSA on stopping or removing protective actions currently in place; and • Make the recommendation for termination of the emergency to the Director OPSA.
Environment and Climate Change Canada (ECCC)	ECCC is responsible to forecast daily weather conditions.	• Responsible to forecast daily weather conditions.

		• Provide weather watches and warnings. • Provide detailed meteorological information on request.
Federal Nuclear Emergency Plan (FNEP) Technical Assessment Group (TAG) Liaison Officer (LO) - (FTLO)(s)	The FNEP TAG links into the overall provincial, responses through the FNEP TAG Liaison Officer (FTLO). The FTLOs are embedded, as required, in the respective Provincial Emergency Operations Center (PEOC) and provide the necessary interface between these bodies and the FNEP TAG.	One or more FTLO(s) may, upon request or as appropriate, be dispatched to a PEOC to manage the linkages between that PEOC and the FNEP TAG for an effective response. • Interface the FNEP TAG with the key IMS functions of the PEOC. • Facilitate information exchange between the FNEP TAG and the PEOC. • Provide scientific or technical support in coordination with the FNEP TAG, • Situational Awareness and Information Management group or reach back for support that requires a more comprehensive analysis or response. • Provide guidance in the most appropriate/efficient method of formulating requests to and from the FNEP TAG. • Deliver any requests or relevant information from the NB TAG; and • Advise, or instruct, on the proper interpretation or use of FNEP TAG products and tools. • In the Province of New Brunswick, FTLOs primarily link the scientific activities of the FNEP TAG with those of the NB TAG. • FTLOs located in the NB TAG are responsible for liaising with internal and external stakeholders, including (but not limited to): o Other provincial and federal members of the NB TAG. o FNEP TAG management. o Field Team Commander(s) of the federal radiological task team(s). o The Nuclear Control Group. o The Emergency Public Information Service of the Executive Council Office (ECO); and o Make recommendations on surveying and sampling to be conducted, develop a Survey grouping and task matrix and a Sampling grouping and task matrix.

Geomatics	Providing specialized geomatics products.	• Gather, store, process, model, analyze, and deliver spatially referenced or location information. • Provide mapping, remote sensing (often called earth observation) and geographic information processing, often called geographic information systems (or GIS) data.
OPSA – Director of the Office of the Provincial Security Advisor	Chair of all OPSA operations. Lead the business cycle.	• Lead the NB TAG Business Cycle in accordance with the NBEMO Operational Rhythm. • Authority to activate OPSA for any emergency NB TAG. • Approve Executive Brief prior to release to the Director NBEMO. • Relay protective action recommendations from the NB TAG to the Director NBEMO. • Responsible to the ADM Justice & Public Safety on all security and radiological / nuclear emergency management events. • Advise the Silver and Gold levels in accordance with the Governance structure on security and radiological / nuclear emergency management events. • Set the appropriate activation level for OPSA. • Issue directions to OPSA staff during activation. • Ensure business continuity is achievable. • When required, determine the necessity to evacuate / relocate the Situation Room to an alternate location. • Advise all relevant departments on the location of the Situation Room to confirm connectivity. • Provide a list of the NB TAG members to the Director NBEMO, update as required.
OPSA – Operations & Planning	On behalf of the Director OPSA, manage day-to-day operations. Assigned as the lead planner for all future, contingency, or branch plans.	• Maintain contact information for NB TAG members • Establish NB TAG on MS Teams and determine members who will attend in the situation room, in person / virtual.

		• Report to OPSA Director. Establish the Operational Rhythm within the Situation Room. • Manage the Situation Room during the absence of the OPSA Director. • Draft Executive Brief. • Scheduling and staffing the situation room for long-term events.
OPSA Administration		• Open and activate the Situation Room. • Start and maintain an OPSA log. • Monitor OPSA email account. • Ensure OPSA phone line is redirected to the Situation Room.
OPSA - Critical Infrastructure Manager	Responsible to the Director OPSA on all critical infrastructure sectors that may affect the province	• Examine information from closed / open sources. Provide brief to Director OPSA. • Detail all communications, significant events and actions taken. • Issue CI Advisories / Alerts • Commence a Security Event Report (SER), or Situation Report (SITREP). • Upon direction, share SER with partners and wider GNB audience. • Commence Contingency Planning Matrix (CPM). • Share updates and SITREPs with appropriate GNB stakeholders
OPSA - Security & Risk Manager	Responsible to the Director OPSA on all matters related to security and risk that may impact the province	• Examine information from closed / open sources. Provide brief to Director OPSA. • Detail all communications, significant events and actions taken. • Draft Security Event Report • Provide support to the event OPSA Director & NBEMO Director • Assist Security and Risk Analyst in developing drafts or other products, as required.
OPSA – Security and Risk Analyst	LO to NBEMO	• Attend the PEOC (NBEMO) Business Cycle • Provide details from OPSA Business cycle during the NBEMO Business cycle
RCMP	Provide advice on policing matters, to include security,	• Advise on traffic management, traffic. • conditions, and traffic flow.

	traffic management and evacuations.	• Mange access control points to restricted. • areas. • Lead agency in an evacuation. • Participate in Security events / operations.
CNSC	Nuclear regulator for Nuclear Power plants in Canada.	• Provide guidance on regulations for Nuclear. • Power plants, specifically REG DOC 2.10.1

1.38 NB TAG PROTECTION STRATEGY

1.38.1 What should a Protection Strategy include?

National Reference Level: The level of dose which it is not appropriate to allow exposure to occur and below which optimization of protection and safety would continue to be implemented.

Generic Criteria: Levels for the projected dose, or the dose that has been received, at which protective actions and other response actions are to be taken. Generic criteria cannot be used directly in the response.

Operational Criteria: Criteria that can be used directly in the response (measurable and observable).

Justified and Optimized set of Emergency Response Actions: A protection strategy describes what needs to be done and how it will get done, in accordance with the principles of justification and optimization, to achieve the goals of a nuclear emergency response, in consideration of all the risks, constraints, and other factors that will need to be managed.

Other factors to be considered:

- The principle of justification refers to actions that achieve a positive net benefit; and
- The principle of optimization refers to actions that keep doses as low as reasonably achievable, economic, social, and environmental factors being considered.

NBEMO shall ensure that a protection strategy is implemented safely and effectively in an emergency response to a radiation emergency through the implementation of emergency arrangements, including but not limited to:

- Promptly taking urgent protective actions and other response actions to avoid or to minimize severe deterministic effects, if possible, based on observed conditions and before any exposure occurs.
- Taking early protective actions and other response actions to reduce the risk of stochastic effects.
- Providing for registration, health screening and longer-term medical follow-up, as appropriate.
- Taking actions to protect emergency workers.

- Taking actions to mitigate non-radiological consequences.
- Assessing the effectiveness of the actions taken and adjusting them as appropriate based on prevailing conditions and available information.
- Revising the protection strategy as necessary and its further implementation; and
- Discontinuing protective actions and other response actions when they are no longer justified.

1.38.2

There are specific protective actions to be taken in the event of a nuclear emergency. Emergency protective actions are based on international and national guidance, in the form of Generic Criteria and Operational Intervention Levels.

Protective Actions are actions (countermeasures) that must be taken promptly, within hours, to be effective. These include:

- sheltering in place.
- iodine thyroid blocking (KI Tablets).
- evacuation; and
- temporary relocation.

Protective actions are implemented to prevent deterministic effects and to minimize stochastic effects. Protective actions have an inherent “cost” in terms of social, psychosocial, and economic disruption.

1.38.3 Overlap of Protective Actions

<table>
<tr><th>Potential Exposure Pathways</th><th colspan="3"></th><th>Protective Actions</th></tr>
<tr><td>1 – external radiation from plume</td><td rowspan="3">Based on plant conditions and dose projection models</td><td></td><td></td><td>- Sheltering
- Evacuation
- Control of access</td></tr>
<tr><td>2 – Inhalation of radioactivity in the plume</td><td></td><td></td><td>- Sheltering
- Stable Iodine
- Evacuation
- Control of access</td></tr>
<tr><td>3 – Contamination of skin and clothes</td><td>Based upon actual measurements</td><td></td><td>- Sheltering
- Evacuation
- Decontamination of persons</td></tr>
</table>

4 – External radiation from ground deposition			**Based on actual measurements and sampling**	- Evacuation - Temporary Relocation - Decontamination of land and property
5 – Inhalation of resuspended radioactivity				- Relocation - Resettlement - Decontamination of land and property
6 – Ingestion of contaminated food and water				- Food and Water Controls

Precautionary Urgent Protective Actions – taken before or shortly after a release

Urgent Protective Actions – taken usually within hours to a day

Early Protective Actions – taken within days to weeks

Deterministic Effects – A radiation induced health effect for which generally a threshold level of dose exists above which the severity of the effect is greater for a higher dose.

- Such an effect is described as a severe deterministic effect if it is fatal or life threatening or results in a permanent injury that reduces quality of life; and
- The level of the threshold dose is characteristic of the health effect but may also depend, to a limited extent, on the exposed individual. Examples of deterministic effects include erythema, damage to the hemopoietin system and acute radiation syndrome (radiation sickness). Deterministic effects are also referred to as 'harmful tissue reactions.

Stochastic Effects - A radiation induced health effect, the probability of occurrence of which is greater for a higher radiation dose and the severity of which (if it occurs) is independent of dose.

- Stochastic effects may be somatic effects or hereditary effects, and generally occur without a threshold level of dose. Examples include solid cancers and leukemia.
- Protective actions that limit the exposure to levels that are below the deterministic thresholds prevent deterministic effects. In this case, the benefit of implementing a protective action almost always outweighs the cost associated with the protective action.

See also Part 2, Operational Information, Section 2.5, Protection of Emergency Workers

1.38.4 Generic Criteria and Operational Intervention Levels (OIL)

Generic criteria and OILs are tools to support planning and implementation. Generic criteria are expressed as dose levels over a specified time interval which, when exceeded, signal that protective actions and associated response actions, such as notification, are warranted. OILs are used post-release to prompt the implementation of protective actions based on monitoring results.

1.38.5 Dose-related terminology

For the purposes of talking about radiation protection, international organizations have adopted a vocabulary for different kinds of dose and dose quantities. These have been designed by the International Commission on Radiological Protection (ICRP) and the International Commission on Radiation Units & Measurements (ICRU) to precisely communicate information required to interpret dose values in each context. A brief overview of the terms used in this document is provided below.

Protection quantities relate radiation exposure to the risk of impacts on human health. The following protection quantities are used in this document:

- equivalent dose when the exposure and the risk relate to a specific organ or tissue; and
- effective dose when the exposure and risk relate to the whole body.

Most of the generic criteria are expressed as effective dose (E) and equivalent dose to the fetus (Hfetus); the exception is Iodine Thyroid Blocking (ITB), which is expressed as equivalent dose to the thyroid (Hthyroid).

The units in this document are **millisieverts (mSv)**.

To relate measurements from instruments to protection quantities, the following operational dose quantities are used:

- ambient dose equivalent, for environmental monitoring; and
- personal dose equivalent, for individual monitoring.

The generic criterion for off-site emergency workers is personal dose equivalent (Hp(10)) and the units are mSv. OILs 1-4 are expressed as ambient dose equivalent (H*(10)) rates with units micro sieverts per hour (μSv/h).

When using protection quantities for exposure planning and decision-making, the following terms are used (based on ICRP 2009):

- projected dose is the effective or equivalent dose that would be expected to be received if protective actions were not taken.
- averted dose is the effective or equivalent dose that can be avoided by the implementation of protective actions; and
- residual dose is the effective dose that is expected to be received because of the decisions made regarding protective actions in other words; the residual dose is the projected dose minus the averted dose. The timeframe used to calculate residual dose

from the emergency should correspond to the period for which the reference level applies.

1.38.6 Reference Level

The reference level is the level of residual dose above which it is generally judged to be inappropriate to plan to allow exposures to occur. For comparison against the reference level, residual dose should be calculated as the effective dose (or the equivalent dose to the fetus) remaining after the implementation of an optimized protection strategy, considering all exposure pathways (ICRP 2007).

It is prudent to set the reference level for an emergency higher than for more controlled exposure situations because there are risks associated with taking protective actions and these may be higher than the incremental risk associated with a higher residual dose.

For off-site nuclear emergency planning, a reference level should be established and then protection strategies developed to keep total doses to all affected people below it. During an emergency, the reference level is a tool to help gauge the effectiveness of the protection measures being implemented and signal the need to adjust. If it appears that residual dose to some groups of people could exceed the reference level, authorities should take additional actions to reduce exposure.

ICRP 109 (2009) recommends setting reference levels for emergencies between 20 and 100 mSv, acute or annual dose, depending on the type of emergency. Severe deterministic injuries do not occur at these levels and there is no epidemiological evidence to suggest increased risk of other tissue reactions or stochastic effects, like cancer, at doses below about 100 mSv (ICRP 2007) The values for generic criteria and OILs presented in this document are appropriate for emergencies where authorities have established a reference level towards the upper end of this range, based on annual effective dose, in order to be inclusive of all categories of emergency addressed by the FNEP, including severe accidents.

1.38.7 Generic Criteria Triggers

Generic criteria are triggers within protection strategies that help authorities identify when, where, and to what extent arrangements for protective actions should be planned (in advance of an emergency) and implemented (during an emergency). They are determined during the planning stage, when planners have time to think through all possible contributors to dose and the incidental impacts of acting to limit them. Once established, generic criteria facilitate decision-making: if the level for an action is exceeded, implementation of that action should be considered a priority as it will almost definitely do better than harm. In advance of an emergency, generic criteria are used to characterize the extent to which arrangements for protective actions might be required. For example, by comparing projected doses from postulated accident scenarios to the generic criteria for stable iodine thyroid blocking (ITB), evacuation, temporary relocation and ingestion controls, emergency planners can better understand the likelihood that these protective actions will be required. This supports the delineation of emergency planning zones and the corresponding arrangements within them.

During the early stages of an emergency, after urgent protective actions have been implemented but before measurements are available, generic criteria for exposure control can be compared to projected dose to confirm, for example, that the pre-determined arrangements to protect populations are enough for the scenario that is unfolding.

Throughout the emergency, generic criteria for medical management and for off-site emergency workers doses are used to identify situations where intervention is required to manage or mitigate risks to individuals.

It is recognized that, even with thoughtful planning, authorities may require flexibility to manage the risks posed by unforeseen hazards in an emergency. In these cases, generic criteria may need to be revised so that protection can be optimized in a different way to respond to the specific demands of an emergency. The changes, along with the reasons for the change, should be communicated to the public quickly and transparently.

The generic criteria recommended by Health Canada should keep total residual doses for all affected populations and individuals well below the upper limit of the reference level for the emergency (100 mSv).

1.38.8 Recommended reference levels

The ICRP's recommended reference levels are presented as "bands" or ranges of doses for different types of situations. The bands provide flexibility for the decision maker to decide on an appropriate level of exposure, while considering other non-radiological considerations specific to each situation. Reference levels are expressed in millisieverts (mSv – acute or per year) and in terms of residual dose – the dose received after any protective actions have been implemented.

Type of situation

20–100 mSv

Emergency situations, where events with uncertain consequences require urgent protective actions such a sheltering and evacuation to minimize the impacts of possible radiation exposures.

1–20 mSv

Existing situations, where radioactivity is already present in the environment at the time actions are taken to reduce radiation exposures. If doses are optimized below this reference level, it is safe to live in the contaminated area.

Reference levels in the emergency response phase

20-100 mSv

The 20–100 mSv reference-level bands is recommended for emergency situations. Urgent protective actions such as potassium iodide pill ingestion, sheltering and evacuation – implemented according to dose-based guidelines called "intervention levels" – may be needed during this phase to manage radiation exposures. In Canada, plans for implementing these types of actions already exist at the federal level, and at the provincial and municipal levels where nuclear power plants operate. For more information on intervention levels and protective

actions implemented during the emergency response phase, consult the CNSC fact sheet Managing public doses during a nuclear emergency.

1.38.9 Reference levels in the post-accident transition phase

The 1–20 mSv reference-level band is recommended for existing situations, including the post-accident recovery phase. Any radioactive contamination of the environment resulting from the nuclear accident has already occurred when actions may need to be implemented to reduce radiation exposure. Actions during this phase could include decontamination of the environment, waste management and the return of the population following an evacuation or long-term relocation.

1.38.10 Functions of Protective Actions - (Protection Strategy)

For ease of reference in this document, Health Canada occasionally refers to groups of protective actions by their function in a protection strategy. These groupings are explained in Table 1.

Table 1. Protective actions grouped by function and response objectives.

Function	Response Objective	Protective actions
Exposure Control	To preclude severe deterministic injuries, and to reduce the risk of stochastic effects to populations living in contaminated or potentially contaminated areas.	• Stable iodine thyroid blocking. • Evacuation. • Sheltering; and • Temporary relocation.
Ingestion Control	To reduce the risk of stochastic effects to consumers of food and water that may be contaminated.	Restriction of distribution and ingestion of potentially contaminated drinking water, milk, and other foods.
Population Monitoring and Medical Management	To identify individuals who may require intervention to reduce internal and/or external contamination, and to identify individuals who require treatment of radiation injuries or medical follow-up because of exposure	• Personal decontamination. • Internal contamination assessment; and • Medical follow-up.
Off-Site Emergency Workers	To reduce the risk of stochastic effects to off-site workers.	Restriction of activities for individual workers.

1.39 NB TAG OPERATIONAL INTERVENTION LEVELS (OILS)

1.39.1 OILs are values that support decision-making post-release by quickly relating discrete measurements of contamination to generic criteria, thereby identifying the need for or confirming the adequacy of protective actions.

The OILs presented in this section should ensure that doses do not exceed the generic criteria recommended by this document. Measurements should be made in accordance with the details and timeframes provided in Table below and using properly calibrated equipment that is fit for purpose.

OIL values and associated monitoring conditions. (Reference Health Canada - Generic Criteria and Operational Intervention Levels for Nuclear Emergency Planning and Response 2018)

OIL#	Protective Action	Measurement details	Level	Timeframe for action, relative to release (IAEA 2013)
Exposure Control				
1_{γ}	Evacuation	Gamma dose rate (H*(10)), 1m from the ground	1000 µSv/h	Complete within a day
2_{γ}	Temporary relocation	Gamma dose rate (H*(10)), 1m from the ground, measured within 10 days of reactor shutdown	100 µSv/h	Initiate after evacuation
		Gamma dose rate (H*(10)), 1m from the ground, measured more than 10 days after reactor shutdown.	>25 µSv/h	
Ingestion Control				

OIL#	Protective Action	Measurement details	Level	Timeframe for action, relative to release (IAEA 2013)
3_{γ}	Restriction of distribution and ingestion of potentially contaminated drinking water, milk, and other food	Gamma dose rate (H*(10)) at 1m from the ground	1 μSv/h	Implement with Exposure Control and extend within days
5_{α}	Confirm ingestion controls (with lab measurements)	Gross alpha activity	See Table 4	Initiate within a week to a month, depending on importance of local food and drinking water to the community.
5_{β}		Gross beta activity	See Table 4	
6		Activity concentrations for specific radionuclides	See Table 12	
Population Monitoring and Medical Management				
4_{γ}	Personal decontamination and/or medical follow-up	Skin measurement at 10 cm from the hands and the face	1 μSv/h	Implement concurrently with Exposure Control

Figure 1.39.2

The default values for OILs 1γ and 2γ in Table 3 were derived specifically for an emergency involving a severe release of radioactive material from a nuclear reactor or its spent fuel (IAEA 2017). For other types of emergencies, the default values for urgent actions (evacuation, food, and water restrictions) should be sufficiently protective for most scenarios involving gamma-emitting radionuclides and so can be adopted directly if necessary. However, OIL2γ (10 or more days after shut-down) may not be appropriate and so should be re-assessed, as soon as time allows, based on the isotopic composition of the source term. See Appendix E for further discussion.

If default OILs are not used, the responsible emergency response authority should be prepared to promptly assess the requirement to deviate from the generic guidance and the impacts of doing so.

See Section 2.16 Generic Criteria and Operation Intervention Levels, for more details.

1.40 NB TAG METHODS OF ASSESSMENT

1.40.1 Short Term (24-48 hours)

There are various methods available, but it must be emphasized to all concerned that the initial assessment (first hour), and follow-on assessments (two to three hours), must be expedient to provide timely advice to the Control Group about urgent actions necessary to protect the public. Urgent protective actions are / can include KI prophylaxis, sheltering in place (as a temporary measure), and evacuation.

1.40.2 Longer Term (> 48 hours)

Detailed analysis, including air, soil, and water sampling, can be undertaken once people are safe and the situation is more clearly understood. More detailed assessments supported by national and international agencies will inform issues such as food and water controls, actual deposition and dispersion of radionuclides, field decay rates, and estimates of time required for safe return. Health Canada's ARGOS system is a suite of tools used for more detailed radiological analysis, consequence prediction, assess longer term consequences, and to assist recovery planning.

1.41 NB TAG RECOMMENDATIONS

1.41.1 The key deliverables within the first few hours are recommendations to the Nuclear Control Group on immediate and subsequent protective actions for the public, covering the following:

- stability of the situation at the station (Point Lepreau Nuclear Generating Station (PLNGS)) (stable, improving; deteriorating).
- radiation risk, in perspective (dose rate for unprotected individuals, outdoors).
- associated immediate and long-term public health risks.
- recommended actions and dose to be averted by those actions.
- basis for the recommendations (information sources; decision criteria); and
- overall assessment of the public health impact of the event (not significant; significant; serious).

1.42 NB TAG TASKS

1.42.1 The TAG has the following four tasks, which are to be completed within the first 12 hours: In each case, the TAG will assess the available information, make recommendations to the Nuclear Control Group, and be prepared to explain the basis for the recommendations.

Task		Based On	Timeframe
1	Initial Radiological Assessment	based on plant status	one hour
2	Detailed Radiological Assessment	based on field survey data	one to two hours

3	Follow-on Radiological Assessment	based on further field survey data and analysis	six to twelve hours
4	All-Hazards Risk Assessment	based on OPSA assessment process	six to twelve hours

1.42.2 Task 1 - Initial Assessment (based on plant status):

- Initial recommendations for protective actions will be made within 30 minutes of emergency classification.
- The initial recommendation will normally come from the Station Shift Supervisor, based on plant conditions and the following factors:
    - the dose rate at the boundary fence or anywhere else that can be defined.
    - the exact LOCAL time of the accident.
    - the nature of the accident (what happened) details on any radionuclide releases and exactly when were they released and from what location in the plant.
    - the duration of the release(s); and
    - the wind direction and speed at the time of the release and did it change?
- NBEMO should make decisions on and order the implementation of urgent protective actions within 15 minutes of the receipt of recommendations from the Station.

1.42.3 Task 2 - Detailed Assessment (based on field survey data):

- The magnitude of the off-site risk is correctly assessed based on the available information. Initial ambient dose rate measurements within affected area(s) are made and assessed within two hours of the classification of the emergency.
- The hazard assessment considers:
    - the plant diagnostics and likelihood of fuel failure.
    - monitored releases.
    - unmonitored releases.
    - field survey data.
    - air sampling results.
    - Meteorology; and
    - Affected areas or potentially affected areas are promptly determined.
- The Control Group is kept informed of the situation, including periodic updates of:
    - protective action recommendations.
    - projected plume trajectory.
    - off-site ambient gamma measurements above 0.01 mSv/h.
    - Expertise and advice are provided to NBEMO/Nuclear Control Group when requested.
    - The Control Group adjusts urgent protective measures, as information becomes available; and
    - The magnitude of the off-site risk is correctly assessed based on available information and in accordance Generic Criteria and Operational Intervention Levels.

1.42.4 Task 3 - Follow-on Assessment (based on further field survey data and analysis):

- Ambient dose rate measurements within affected area(s) are updated on a regular basis.
- The conditions, which downgrade or terminate the emergency are properly assessed.
- The operational intervention levels below which protective action instructions can be lifted are clearly stipulated.
- When determining that an emergency is to be terminated, ensure that the Nuclear Control Group correctly assesses the following:
    - that conditions are under control and are stable.
    - that measurements are below operational intervention levels for lifting protective action instructions.
- That public concern is properly managed; and
- That downgrading the emergency will not have an adverse effect on the management of consequences.
- Protective action(s) are rescinded at the appropriate time(s).

(See Part 1, Section 1.51, Terminating the Emergency and Part 2, Section 2.13, Transition Phase - Steps)

1.42.5 Task 4 – All-Hazards Risk Assessment

The Department of Public Safety leads this process, using an all-hazards risk assessment methodology.

This process can proceed concurrently with the tasks above but cannot be allowed to distract the NB TAG from the primary mission of assessing the short-term radiological consequences and making recommendations about urgent protective actions.

1.43 NB TAG FLOW OF TECHNICAL DATA

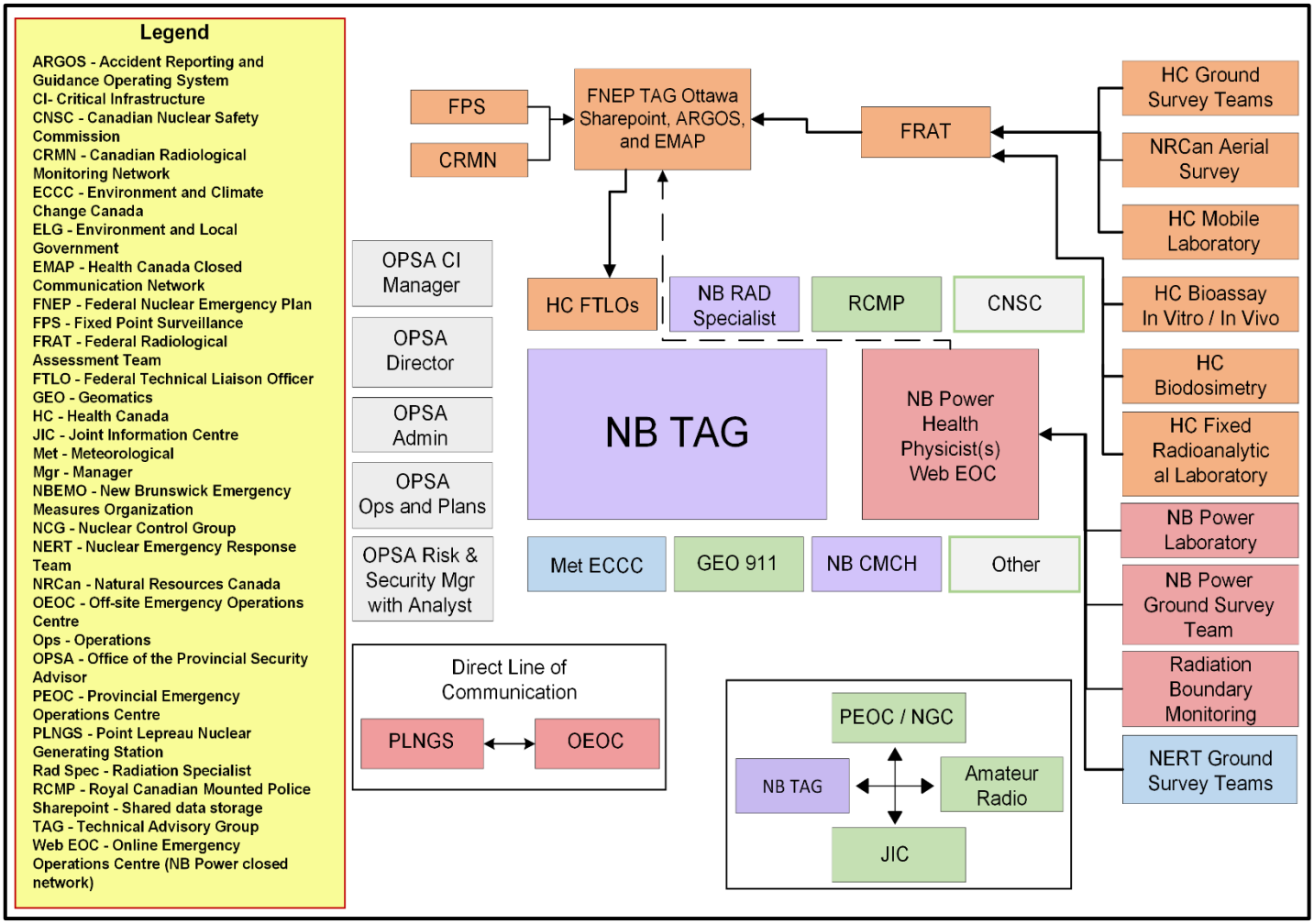


Figure 1.43.1

1.44 OFF-SITE EMERGENCY OPERATIONS CENTER (OEOC)

1.44.1 Location of the OEOC:

3 Magaguadavic Drive,
St. George, New Brunswick
E5C 3H7

1.44.2 Assurance Monitoring

In New Brunswick we establish multiple assurance monitoring sites to reassure the public they are not contaminated and to illuminate the stress on the hospital system (worried well).

The locations of the assurance monitoring sites are listed in the Point Lepreau Off-site Emergency Plan, Part 1, Emergency Management System, Section 1.46, Off-Site Emergency Operations Center Staff Positions and Duties.

1.45 OEOC ALERTING AND ASSEMBLY

1.45.1 The PLNGS Shift Supervisor (SS) / Incident Commander (IC) are responsible to notify offsite authorities promptly during three categories of radiation contingencies: Radiation Alert, Site Area Radiation Emergency, and General Radiation Emergency.

On the classification of each radiation event classification the OEOC staff from PLNGS assembles at the OEOC under the control of the OEOC Coordinator.

On the classification of a Site Area Radiation Emergency and General Radiation Emergency the OEOC staff from NBEMO, RCMP and the Warden Service assembles at the OEOC under the control of the OEOC Manager from NBEMO.

Note: On the classification of a Radiation Alert, NBEMO, RCMP and the Warden Service do not assemble at the OEOC.

When the SS/IC is made aware of an event involving radiation, he/she declares an Alert or Emergency based on criteria and conditions for Radiation Event Classification.

PLNGS Definitions:

Alert – An alert is the threat or occurrence of an abnormal, undesired event that:

- Involves a localized hazard that can be confined and controlled by station staff.
- Involves a known or unknown situation potentially leading to a decrease in the level of protection for the public or on-site persons.
- May require an increase in the state of readiness of the emergency response organization and may require off-site response.

Emergency - An emergency is an abnormal event that necessitates prompt actions to mitigate adverse consequences. Emergencies include situations for which prompt action is warranted to respond to a perceived hazard or threat and:

- involves a general hazard that may not be confined and controlled by station staff.
- involves a known or unknown situation potentially leading to a significant decrease in the level of protection for the public or on-site persons.
- requires an increase in the state of readiness of the emergency response organization and will likely require off-site response.

The purpose of the alert classification is to assure that resources are readily available for the response if the situation becomes more serious, or to perform confirmatory radiation monitoring, if required, and provide off-site AHJ current information on reactor facility status and parameters.

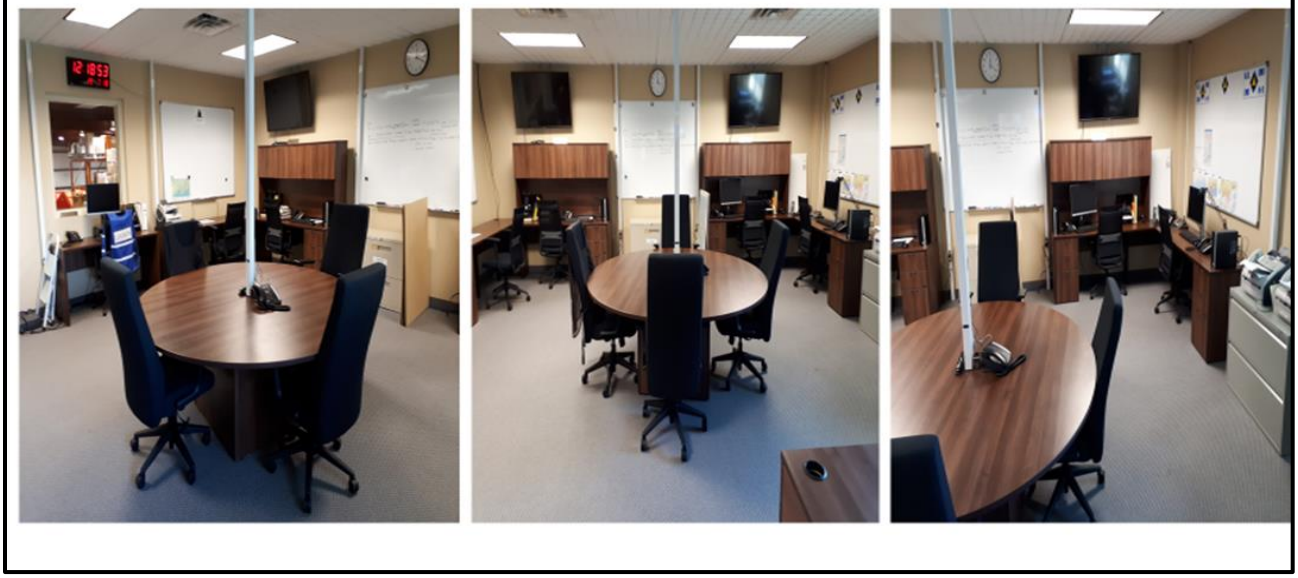
If Emergency conditions exist, the event is further categorized as a Site Area Radiation Emergency or General Radiation Emergency.

The **International Atomic Energy Agency (IAEA)** distinguishes between the two emergency categories as follows:

General Emergency—an emergency that warrants taking precautionary urgent protective actions, urgent protective actions, and early protective actions and other response actions on the site and off the site. Upon declaration of this emergency class, appropriate actions shall promptly be taken, based on the available information relating to the emergency, to mitigate the consequences of the emergency on the site and to protect people on the site and off the site.

Site Area Emergency—an emergency that warrants taking protective actions and other response actions on the site and near the site. Upon declaration of this emergency class, actions shall promptly be taken: (i) to mitigate the consequences of the emergency on the site and to protect people on the site; (ii) to increase the readiness to take protective actions and other response actions off the site if this becomes necessary based on observable conditions, reliable assessments and/or results of monitoring; and (iii) to conduct off-site monitoring, sampling, and analysis.

1.46 OEOC STAFF POSITIONS AND DUTIES



Staff Position	Duties
OEOC Coordinator xxx-xxx-xxxx	• to contact and establish the OEOC Team and to direct the OEOC Team in the evaluation of the magnitude and extent of the radiation fields following a release of radioactivity from PLNGS, • to direct the radiation survey teams and keep NBEMO and Incident Command Staff informed of radiation conditions outside the station, during the initial phase of the event, the coordinator's point of contact will be the PLNGS Duty Shift Supervisor (SS) / Incident Commander (IC), • once the Incident Command Post (STOIC Classroom 1) has been activated, the point of contact becomes the PLNGS Safety Officer, and • once the OEOC has been staffed, assign personnel to specific duties, such as: • OEOC Assistant, Liaison, Radio, ASR, Contamination Control, Survey Teams, Assistants at Roadblocks, Monitoring Teams at Reception Center, Ports, Hospitals and MDC locations.
OEOC Assistant xxx-xxx-xxxx	• member is the second-in-command at the OEOC and is under the general guidance of the OEOC Coordinator, • for directing the survey teams and compiling results, • for the rotation, rest, and feeding of the survey crews, and • to assist the OEOC Coordinator in other tasks, as required.
Radio Operator xxx-xxx-xxxx	• to provide communications during a radiation emergency, and • to provide local communications during normal operations.

Survey Teams	To determine radiation levels following a release of airborne activity from the Point Lepreau Nuclear Generating Station (PLNGS) to the environment.
Liaison xxx-xxx-xxxx	• for directing activities outside the OEOC Coordinator's area at the OEOC, • for controlling the issue of emergency equipment from the OEOC storeroom, • for monitoring the activities of other agencies at the OEOC, and • for controlling access to the OEOC Coordinator's area.
OEOC Field Support Team	• *to check personnel for contamination on entry to the OEOC* • *Decontaminate personnel, as required,* • *for controlling the issue of emergency equipment from the OEOC storeroom.* • *To issue TLDs to all personnel.* • supports each MDC Support Team, Port Monitoring Team, Hospital Monitoring Team, and Reception Center Monitoring Teams. • to provide Radiation Protection Qualified staff to each of the Monitoring and Decontamination Center (East and West – 6 per location). • to provide a Radiation Protection Qualified staff with a portable portal monitor to Blacks Harbour and to the Port of Saint John (1 team – 2 pers to each location). • to provide a Radiation Protection Qualified staff with a portable portal monitor to the Saint John Regional Hospital and the Charlotte County Hospital (1 team – 2 pers to each Hospital). • to provide Radiation Protection Qualified staff to selected Worried-well Field Radiation Monitoring Sites under control of the REOC's (1 team – 2 pers to each alternate assurance monitoring location). • to provide Radiation Protection Qualified staff to selected Worried-well Field Radiation Monitoring Sites located after checkpoint 2 at the Saint John Regional Hospital Parking Area near UNBSJ (1 team – 2 pers to this assurance monitoring location). • to provide a Radiation Protection Qualified staff with a portable portal monitor to each Reception Center identified by the Red Cross (1 team – 2 pers to each Reception Center), and • to follow radiation protection guidelines as detailed in their pre-deployment briefing from the OEOC Liaison Officer.

NBEMO OEOC Manager xxx-xxx-xxxx	• for the coordination of all off-site emergency operations in the 20 km Emergency Planning Zone to include access control measures, alerting the public, and when necessary, the orderly evacuation of residents. • to assist and advise the supported organization (PLNGS) on matters concerning joint support. • to establish and maintain a communications link with NBEMO, MDC, Warden Service, RCMP; and • to establish and maintain a communications link to the Director of the Nuclear Control Group. (Director NBEMO)
RCMP xxx-xxx-xxxx	• to coordinate with the District Commander / OPS NCO West District to ensure that roadblocks are set up to secure the affected area. • if an evacuation of the Point Lepreau area is ordered, to coordinate the traffic control points to be established to control the flow of evacuees; and • to provide direction to the evacuating public and if necessary, to the incoming traffic as to conditions and any restrictions that may exist.
Ham Radio Operator xxx-xxx-xxxx	To establish and maintain communications with NBEMO, and the Monitoring and Decontamination Center, when activated
Warden Service Chief Warden	• to alert, when directed to do so, residents and non-residents to listen to radio or television stations for further instructions. • to record and report where any resident has not been alerted or requires special assistance. • to assist the RCMP in controlling traffic when directed to do so. • to act as guides and radio communicators for buses assigned to pick up and transport evacuees; and • to continue to pass information to residents as required.

Figure 1.46.1

1.47 WARDEN SERVICE

1.47.1 The Point Lepreau Warden Service is under the direct control of the Director of the New Brunswick Emergency Measures Organization (NBEMO). The Director will appoint an OEOC Manager from the NBEMO staff to oversee the Warden Service.

The Warden Service is a community based; volunteer organization designed to alert the public within an area approximately 20 km in radius from the Point Lepreau Nuclear Generating Station in the event of an off-site emergency. The Wardens use their private vehicles, equipped with Trunk Mobile Radios (TMRs). They provide coverage of the area 24 hours a day, 365 days a year.

The Warden Service is sanctioned by the New Brunswick Emergency Measures Organization (NBEMO).

1.47.2 The role of the Warden Service is to be prepared to alert the public of an emergency at the Point Lepreau Nuclear Generating Station assist the RCMP with evacuations and assist the RCMP with manning of the traffic control points.

Outside of operations the Warden Service conduct door to door delivery of Iodide Thyroid Blocking tablets to every occupied dwelling and they deliver the Demographic Public Safety Survey to every household in the 20 km Detailed Planning Zone.

1.47.3 The Warden Service is composed of a Chief Warden, a Deputy Chief Warden and up to 23 Wardens. Daily, the Chief or Deputy Chief and 12 Wardens are on call.

Employment and training are the responsibility of the Director of NBEMO. Day-to-day duty assignment and system checks are the responsibility of the Chief Warden.

1.47.4 Seventeen Warden Zones have been established within the 20-km radius. These zones are based on total road distance and population density parameters that permit coverage within 45 minutes.

Un-inhabited Zones

There are within the 20-km radius three warden zones, called Zones 13, 14 and 15, consisting mainly of camps and other temporary residences (hunting camps). The Department of Energy and Resource Development is responsible for alerting and evacuating these three zones.

1.47.5 Concept of Operations

The initial warning of an emergency which will involve the Warden System will come from the NBEMO Operations Officer or the NBEMO Duty Officer. This warning will be sent through the Everbridge Notification System which is the primary notification system to alert the public of an emergency at PLNGS.

The Chief Warden will alert the Deputy Chief Warden and the 20 wardens will take any other action he deems appropriate in the circumstances to ensure an effective response by the Warden Service.

Wardens can also be alerted using TMR Radios. On being alerted Wardens will establish communications with the Chief Warden. They will prepare themselves and their vehicles to assume their responsibilities and await further instructions.

The Chief Warden, once he has completed the alerting procedure, will contact the Provincial Emergency Operations Center (PEOC) in Fredericton to be briefed on the situation. With minimum delay the Chief Warden and the Deputy Chief Warden will move to the Point Lepreau Off-Site Emergency Operations Center (OEOC).

Once located in the OEOC the Chief Warden will establish communications with the PEOC and the Wardens. He will also liaise with the RCMP, Department of Energy and Resource Development and the NB Power representatives at the OEOC. The Chief Warden will keep the OEOC informed of the state of readiness of the Wardens.

On arrival of the NBEMO OEOC Manager the Chief Warden then reports to the OEOC Manager in location.

1.47.6 When an evacuation is ordered, the OEOC Manager will place the Chief Warden and the Wardens of the evacuating zones under control of the RCMP NCO-in-charge of coordinating the evacuation.

Under RCMP direction, assisted by the Chief Warden, the Wardens will assist in notifying residents of the requirement to evacuate. They will ensure that each family knows what routes to follow, where to report for registration and where to be checked for radioactive contamination. They will ensure that departing residents place the fluorescent evacuation stickers in windows where they can be easily seen from the road.

They will assist in determining what residents need transportation, including ambulances and specially equipped vehicles. They will help residents requiring transportation assemble for pickup and they will help guide drivers to the pickup points.

They will check that the designated zones are in fact evacuated, while keeping their Chief Warden informed of progress. On completion the Wardens will report immediately to the Chief Warden for further assignment.

The Deputy Chief Warden and the other Wardens which remained under control of the OEOC Manager could be assigned to other tasks or placed under control of the Chief Warden to work for the RCMP.

The Warden Service roles and responsibilities are laid out in the Warden Service Procedures Manual.

See Section 2.8, Warden Services – Point Lepreau Warden Zones.

1.48 AMATEUR RADIO

1.48.1 General

The amateur radio service provides supplementary communication ability in the event normal communication become overloaded or inoperable. Qualified amateur radio operators are licensed by Industry Canada after testing in accordance with the Radio communications Act (Canada). Operators use equipment that is frequency-agile and have the training, experience, and ability to establish wireless point-to-point communications.

1.48.2 Specific

The role of the amateur radio coordinator is to ensure that a back-up communications ability is always in place should the need arise. Amateur radio operators are assigned as required and available at the OEOC and at any appropriate satellite locations (EOCs, shelters, hospitals, or other sites). Operators can also assist with standard communications methods if the need arises.

Operators have NB access to twenty-five (25) VHF and UHF repeaters placed throughout the province through agreement with EMO, DTI, and the International Repeater Group (IRG). These radio repeaters provide wide-area zone coverage, and can link to any location in the province, or to repeaters in Nova Scotia and Prince Edward Island. Overlapping coverage of sites and back-up power provides a great degree of redundancy.

If the IRG system becomes totally inoperative, amateur radio operators can establish alternate communications given the higher power and frequency agility they are licensed to use by Industry Canada. The OEOC is equipped with infrastructure to connect to the IRG system, and to allow deployment of antennae that can reach thousands of miles should the need arise.

The IRG has over one hundred members throughout the region who regularly take part in emergency exercises, and many have certification in ICS, NBEMO courses and similar training in addition to their own experience in electronics and communications systems.

1.49 MONITORING AND DECONTAMINATION CENTER (MDC)

1.49.1 The MDC procedure manual discusses the foundation and a recommended procedure for mass decontamination. Mass decontamination is a multi-stage, resource intensive process. The concepts in this manual can be implemented quickly by a wide range of organizations and represents a resource intensive, practical, and efficient method of mass decontamination.

There is no perfect solution to mass decontamination and no single process or method can account for all variables (e.g., hazard, time, and number of evacuees, environmental conditions, and resources). This section is intended to identify a simple, consistent mass decontamination process that could be applied with reasonable effectiveness to an emergency / release at the Point Lepreau Nuclear Generating Station (PLNGS).

In other words, to use the fastest approach that will cause the least amount of harm and do the best for most of the people.

1.49.2 With enough warning, it is possible to evacuate the entire EPZ prior to any impacts of a radioactive plume being encountered. This ideal scenario cannot be assumed. It is therefore necessary to establish a rapidly deployable decontamination capability to address the needs of all evacuees.

If an accidental airborne release of radioactive material occurs from PLNGS, three main pathways exist for a person to receive a radiation dose during the release period:

- External exposure to the released plume.
- External exposure from any radioactive material deposited on the ground from the plume; and
- Inhalation of radioactive material from the plume.

After the release stops and the plume dissipates, external exposure from deposited materials and ingestion of materials through the food chain represent the main pathways for a person to receive a radiation dose. Another possible source of exposure would be from inhalation of materials if the ground deposition is re-suspended into the air.

1.49.3 It is important to distinguish between direct exposure to radiation and exposure through radiological contamination. A person exposed to a medical X-ray receives direct radiation, but the body is not radioactively contaminated.

Radioactive contamination occurs when radioactive particles are deposited on a person’s skin and absorbed through the skin or by inhalation or ingestion.

This type of mass decontamination requires a slightly different approach than the individual, technical and equipment decontamination applied during typical HAZMAT incidents.

1.49.4 Decontamination refers to means that reduce the hazard of contaminant. There are two basic methods of decontamination, physical removal, and neutralization. Physical removal involves mechanical actions with techniques such as gentle friction with a soft cloth or sponge, blotting, and washing. Neutralization involves methods and/or materials to chemically change the harmful effects of the contaminant.

The focus of mass decontamination in this scenario is only on the physical removal of the contaminant. Radionuclides cannot be neutralized.

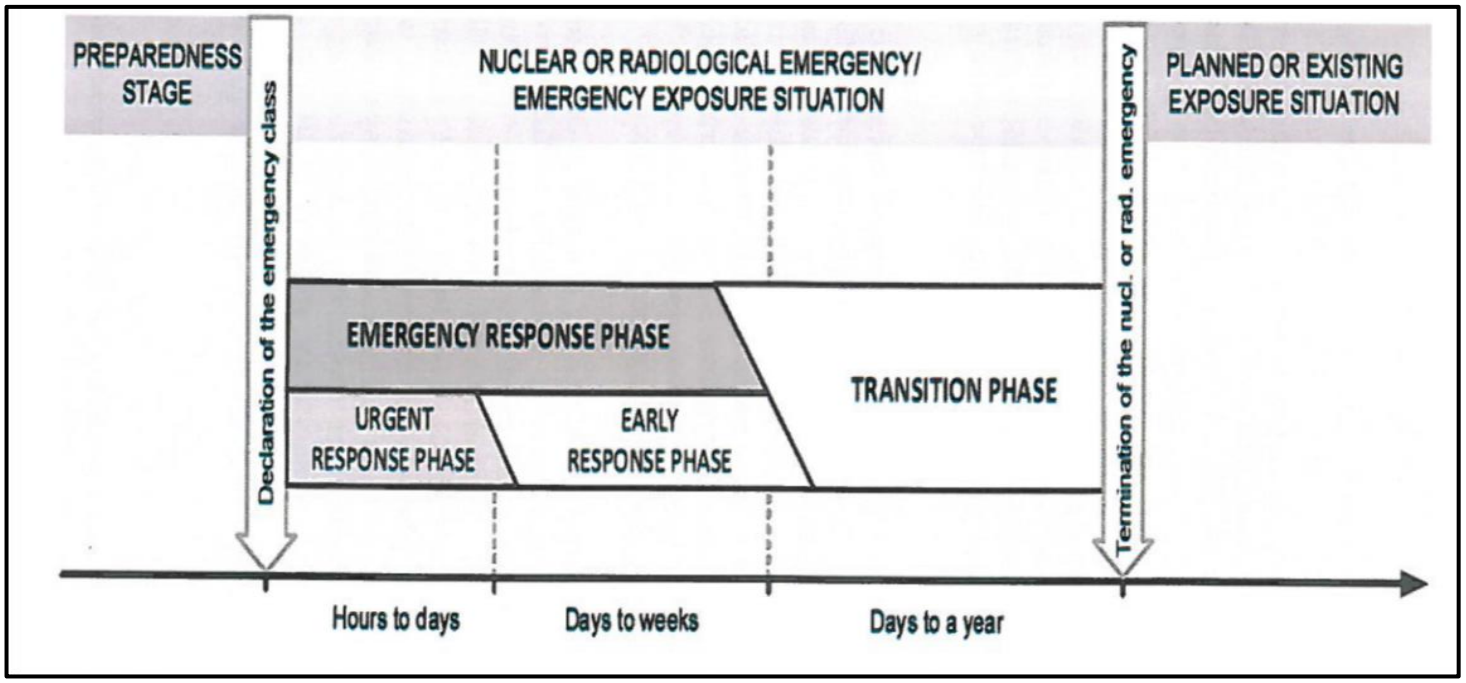
1.49.5 The three most important reasons for decontaminating exposed evacuees are:

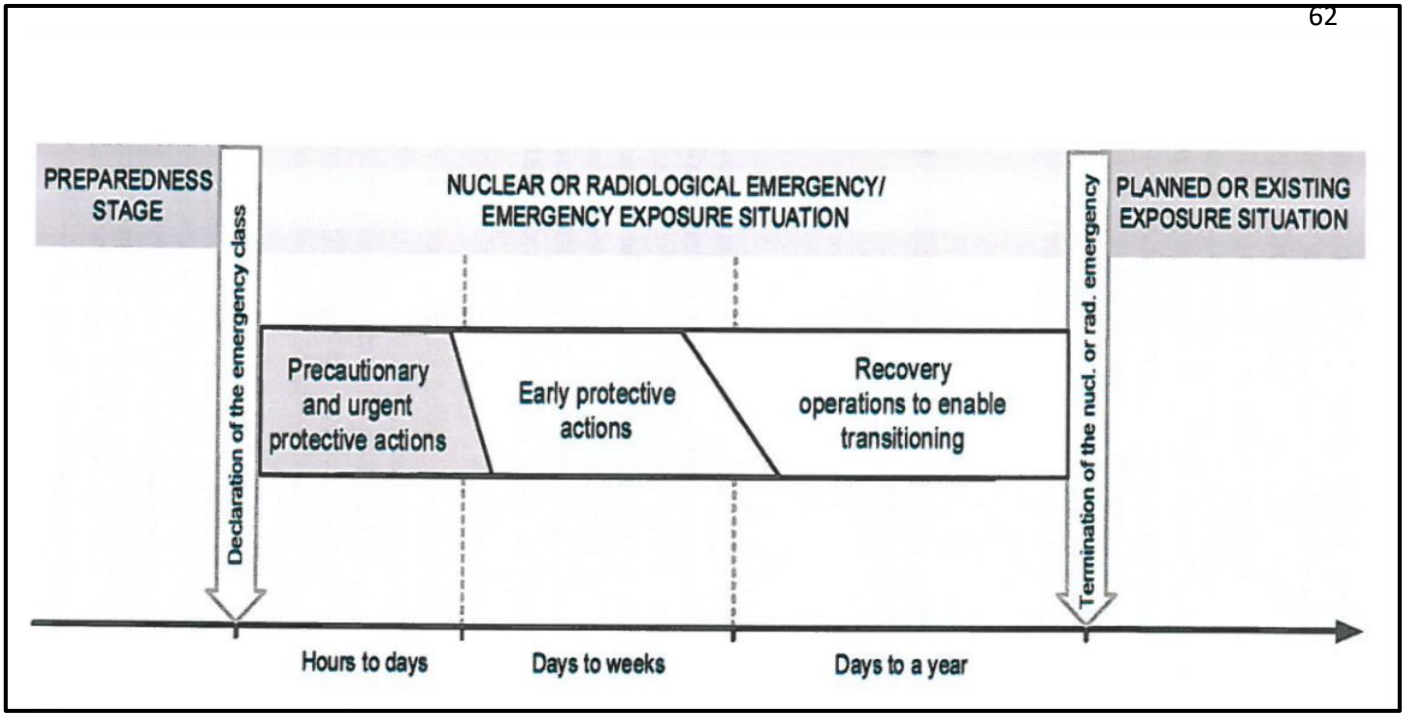
- Removing the particulate from the evacuee's skin and clothing, thus reducing further exposure and physical effects.
- Protecting emergency responders, medical personnel, and others from secondary transfer exposures; and
- Preventing evacuees from spreading contaminate over additional areas.

The Monitoring and Decontamination procedures manual identify the roles and responsibilities as well as the concept of operation.

See Section 2.9, MDC Concept of Operations.

1.50 TRANSITION PHASE (RECOVERY) - INTRODUCTION





Figures 1.50.1

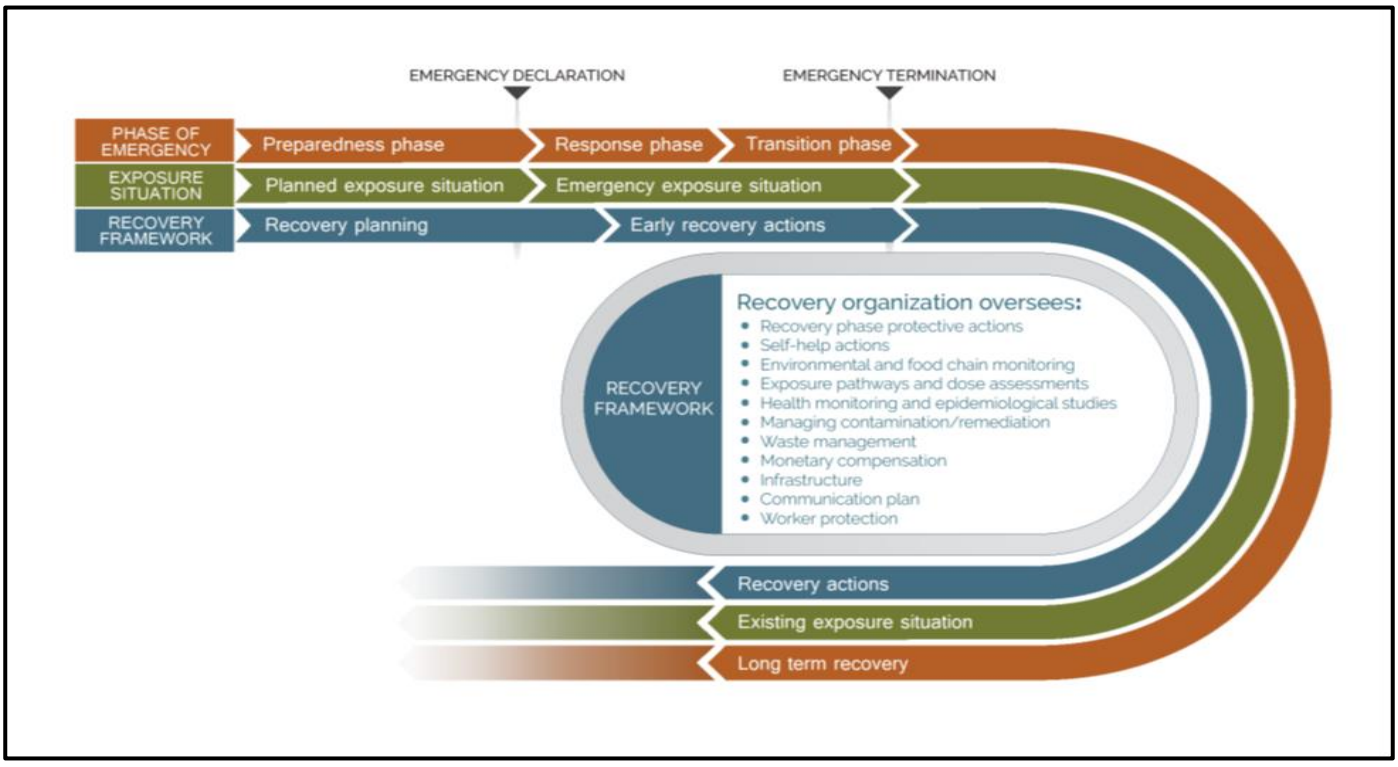


Figure 1.50.2

Planned exposure situations involve the planned operation of a source (e.g., the operation of nuclear reactors) or planned activities that result in an exposure from a source (e.g., disposal of radioactive waste). The annual dose limit for members of the public is 1 millisievert (mSv) in a planned exposure situation.

Emergency exposure situations arise because of an accident, a malicious act or other unexpected event, and require prompt action to avoid or to reduce adverse consequences. The ICRP recommends a reference level between 20-100 mSv for emergency exposure situations.

Existing exposure situations already exist when a decision on control must be taken, including prolonged exposure situations after emergencies. These situations include exposure to natural background, exposure due to residual radioactive material that derive from past practices that were never subject to regulatory control, and exposure due to the residual radioactive material deriving from a nuclear emergency. The ICRP recommends a reference level between 1-20 mSv for existing exposure situations.

Delineated Areas are areas that cannot be inhabited and where social and economic activity cannot be resumed should be delineated and access controlled. Information about delineated areas and measures should be clearly communicated. Delineation of an area as inadequate for inhabitation should not constitute an obstacle to terminating the emergency.

1.50.3 Emergency Response Phase

Primary focus on public protection and bringing the situation under control.

Urgent Response Phase

The period, within the emergency response phase, from the detection of conditions warranting emergency response actions (e.g., evacuation, iodine thyroid blocking, sheltering) that must be taken promptly to be effective until the completion of all such actions. Duration: hours to days.

Precautionary and Urgent Protective Actions:

- Evacuations
- Shelter in Place
- ITB (KI Tablets)
- Access Control

<u>Early Response Phase</u>

The period, within the emergency response phase, from which a radiological situation is already characterized sufficiently well that a need for taking early protective actions and other response actions (e.g., relocation) can be identified, until the completion of all such actions. Duration: days to weeks.

<u>Early Protective Actions:</u>

- Evacuations
- Relocation
- Access Control
- Decontamination of Persons
- Food and Water Restrictions

<u>Transition Phase</u>

Activities to prepare for the resumption of normal social and economic activity.

Recovery Operations to enable transitioning to either a planned exposure situation or an existing exposure situation.

The period after the emergency response phase when the situation is under control, detailed characterization of the radiological situation has been carried out and activities are planned and implemented to enable the emergency to be declared terminated. Duration: Days to a year.

Protective Actions:

- Evacuations Temporary
- Relocation
- Resettlement
- Decontamination of land and Property
- Food and Water Restrictions

1.50.4 Arrangements for the Transition Phase

The criteria to transition from the Emergency Response Phase to the Transition phase would be established provided the following three requirements are met.

- the release from the Point Lepreau Nuclear Generating Station has ended.
- there is no further chance of another release; and
- the Point Lepreau Nuclear Generating Station is in a stable state.

Note: These criteria are aligned with the PLNGS for de-escalating the emergency level from General Radiation Emergency to a Site Area Radiation Emergency.

With the transition phase the emergency still exists but the urgency now is focused on deliberate planning. The planning is defined as characterization: establishing staging areas; defining the contaminating area; deploying aerial surveys, deploying ground surveys; conducting sampling; conduct re-entry; plan for adjusting restricted areas; and plan for the return of evacuees.

The Transition Phase includes all the activities required to bring the communities back to normalcy as quickly as possible. Some activities include identifying the land / sea area possibly contaminated, activating the New Brunswick Radiological Ingestion Pathway Monitoring Plan, collecting samples, performing laboratory analysis of the samples, providing long term housing, calculating exposures from various pathways (milk, water, food), allocating resources, disseminating information to the public, providing Health and human services, and comparing exposures with Protective Action Guides.

The **Ingestion Pathway Monitoring** or **IPMP** will be directed by an Ingestion Pathway Control Group comprising of representatives from NB Power Health Physics, the Department of Agriculture, Aquaculture and Fisheries, Environment and Local Government, Health, the Department of Energy and Resource Development and others as required. The *Point Lepreau Nuclear Off-site Emergency Plan* will provide the framework for the collection and analysis of samples.

If a significant radioactive release endangers New Brunswick, the IPMP will be activated by the Director of NBEMO.

As a function of The Department Justice and Public Safety, NBEMO requires an Ingestion Pathway Monitoring Plan to minimize radiological ingestion hazards in the event of a major release of radioactive materials. This is part of the Transition Phase.

The Emergency Planning Zone (EPZ) around PLNGS is a pre-determined area surrounding PLNGS where planning is undertaken to assure that prompt and effective actions can be taken to protect the public in the event of a radiation emergency. The EPZ is established out to approximately 50 kilometers.

The Plume Exposure Pathway is an undetermined area around PLNGS. When radioactive material is released because of an accident or emergency, it may move through the air as a plume (cloud) of gas or particles or be deposited on the ground or other surfaces. People and animals may be exposed to radiation though inhalation or submersion in a radioactive plume, or by being near radioactive material deposited by the plume on the ground or other surfaces. These are examples of the plume exposure pathway.

The Ingestion Pathway is a 57-kilometer radius around PLNGS and includes the EPZ. When radioactive material from a plume, or a liquid or solid spill, falls on crops, produce, or on surface water supplies, the potential exists for this radiation to be taken into the body through eating or drinking these radiological contaminated foodstuffs and drinking water. These are examples of the ingestion exposure pathway.

We can limit or prevent plume exposure by moving people away from or out of the plume through the process of evacuation. Ingestion pathway exposure is best avoided or limited by preventing the ingestion of radiological contaminated material from occurring. Once radioactive material is ingested it may be very difficult to expel from the body. The data collection, analysis, and decision-making processes for avoiding or limiting radioactive exposure from the ingestion pathway should be understood at all levels of government to ensure a coordinated and effective response.

1.50.5 The immediate concern in a radiation emergency is to prevent or limit people from direct exposure to high levels of radiation contained in the plume. Ingestion exposure protection can wait until more hazardous emergencies or radiation conditions are abated. Since response activities to limit or reduce plume or direct radiation exposure may involve complicated or multi-faceted response actions such as public evacuation, taking Potassium Iodide (KI), and /or instructing the public to shelter-in-place. Most ingestion pathway response activities are usually not considered until after the release of radiation has been terminated.

The only exception to this concept is the public instruction advising farmers to bring livestock in from pasture to a covered location and provide them with protected feed and water. Some protective actions that are undertaken during the actual plume or release phase of the emergency are effective in dealing with both plume exposure issues and ingestion pathway issues. For example, the evacuation of people from an Emergency Planning Zone because of plume or deposition concerns will limit that population from drinking contaminated water or eating contaminated garden produce in those areas.

Decision makers must consider the overall response activities that are or have been undertaken when planning and implementing ingestion pathway protective actions. Following the termination of a release of radioactive materials to the environment, the province will determine whether deposited materials are at levels which could necessitate the temporary relocation of the public in certain areas, or the determination may be to allow evacuees from certain areas to return home and resume normal activities.

Concurrently, the province will identify those geographic areas where protective actions for food and water will have to be implemented. Many of the radiological determinations can be analyzed simultaneously using sampling teams taking air and ground radiological surveys, but in a large-scale event, such as a release from PLNGS, the resources of the federal government would be required to provide deposition mapping.

The assistance from Natural Resources Canada to provide an overflight capability utilizing fixed and rotary wing aircraft with sophisticated detection and mapping capabilities would be requested. These aircraft surveys would then be followed by ground surveys and sampling in very specific locations.

Some ingestion pathway protective actions can be taken before the analysis is performed, and perhaps even before a release occurs. An example is the previously cited action of placing milk animals and other livestock on stored feed, providing a protected water supply and shelter, or putting restrictions on consumption of surface water supplies.

Once the ingestion pathways are identified, provincial and federal officials will consider various protective actions that may be taken to prevent or reduce ingestion. The ingestion pathway includes the milk pathway, water pathway, or other food pathways.

See Part, 2.13 Operational Information, Section 2.13 - Transition Phase - Steps, for more details.

1.50.6 Factors considered prior to protective action decision making include:

- Protective actions that are feasible and their consequences are justified and optimized.
- Relative proportion and importance of any suspected contaminated food in the diet.
- Availability of substitute foods or stored feed.
- Relative contribution of other foods to the total dose; and
- Time and effort required to implement the protective action.

1.50.7 Protective Actions that might be taken, depending on circumstances, include:

- Placing milk animals and other livestock on stored feed, protected water, and placing them under shelter.
- Quarantining or disposing of contaminated produce and food.
- Restrict drinking contaminated water.
- Prevent contaminated food from coming to market; and
- Prevent consumption of game food or fish.

1.51 TERMINATING THE EMERGENCY

1.51.1 Arrangements for the Termination of a Nuclear or Radiological Emergency would be covered in detail during the Transition Phase. Termination identifies the move from an Emergency Exposure Situation to either a Planned Exposure Situation or an Existing Exposure Situation.

See Part 2, Operational Information, Section 2.13 - Transition Phase, for more details.

1.52 PLAN AUDITS / REVIEW / UPDATES

1.52.1 The NBEMO training and exercise program has a built-in yearly review of the *Point Lepreau Nuclear Off-site Emergency Plan*. An annual review of the plan is conducted to ensure contact information remains valid. In addition, the plan will undergo a rewrite if the standard operating procedures are deemed to have significantly changed.

The review includes distribution to all members of the Provincial Emergency Action Committee (PEAC) early in the year (Jan-Feb) where they have at least 30 days to review and provide recommendations and observations for updates. The updated plan would be distributed between August and September yearly.

1.53 NBEMO TRAINING AND EXERCISE PROGRAM

1.53.1 Training and Exercise Program

The NBEMO training and exercise program is risk-based and includes a cycle, mix, and range of exercise activities of varying degrees of complexity and interaction. The training and exercise program include:

- The training and exercise program are risk-based and reviewed annually to see if the risks and hazards of the organization have changed.
- The training and exercise program are part of the Preparedness function of our Emergency Management Program. It supports the prevention of, mitigation of, response to, and recovery from, an emergency.
- The training and exercise program are a multi-year exercise plan, a five-year training and exercise program.
- The NBEMO training and exercise program notes the requirements of our exercise program and includes an exercise schedule that is updated annually.
- The training and exercise program ‘s multi-year exercise plan is a cycle of activity with increasing levels of complexity using discussion based and operations-based exercises.
- In the training and exercise program, all tabletop exercises, drills, functional exercises, and full-scale exercises are evaluated so you can see if they have achieved your identified goals and to measure performance.
- In the training and exercise program, an After-Action Report (AAR) is prepared following every tabletop exercise, drill, functional exercise, or full-scale exercise; and

- In the training and exercise program for full-scale exercises, a Corrective Action Plan (CAP) is developed, and implemented, to address the findings and recommendations that you identified in the After-Action Report (AAR).

Exercises are an essential component of an emergency program and have three main functions:

- **Validation** - To validate plans, protocols, and procedures and demonstrate resolve to prepare for emergencies.
- **Training** - To develop staff competencies, to give staff practice in carrying out their roles in the plans, and to assess and improve performance.; and
- **Testing** - To test well-established procedures and reveal gaps that may exist.

1.53.2 Definition of an Exercise:

An exercise is a simulated emergency, in which members of various agencies perform the tasks that would be expected of them in a real emergency.

There are two basic types of exercises:

- Discussion-based; and
- Operations-based.

1.53.3 Discussions-based Exercises familiarize participants with current plans, policies, agreements, and procedures, or may be used to develop new plans, policies, agreements, and procedures.

Types of Discussion-based exercises include:

- Seminar: A seminar is an informal discussion, designed to orient participants to new or updated plans, policies, or procedures (e.g., to review a new Evacuation Standard Operating Procedure);
- Workshop: A workshop resembles a seminar, but is used to build specific products, such as a draft plan or policy (e.g., to develop a Multi-Year Training and Exercise Plan); and
- Tabletop Exercise (TTX): A tabletop exercise involves key personnel discussing simulated scenarios in an informal setting. A TTX can be used to assess plans, policies, and procedures.

1.53.4 Operations-based Exercises are used to validate plans, policies, agreements, and procedures, clarify roles and responsibilities, and identify resource gaps in an operational environment.

Types of Operations-based exercises include:

Drill: A drill is a coordinated, supervised activity usually used to test a single, specific operation or function (e.g., a fire department conducts a decontamination drill).

Functional Exercise (FE): A functional exercise examines and/or validates the coordination command, and control between various multi-agency coordination centers (e.g., an emergency

operation center). A functional exercise does not involve any "boots on the ground" (i.e., first responders or emergency officials responding to an incident in real time); and

Full-Scale Exercises (FSE): A full-scale exercise is a multi-agency, multi-jurisdictional, multi-disciplinary exercise involving functional (e.g., emergency operation centers) and "boots on the ground" response (e.g., mass decontaminating with mock victims).

1.54 PUBLIC AWARENESS AND EDUCATION

1.54.1 Communications activities for the nuclear preparedness program are built on a longstanding partnership among NBEMO and NB Power. NB Power speaks to matters inside the fence; NBEMO typically speaks to issues outside the fence. Executive Council Office (ECO) plays a coordination role. ECO provides editorial services, web services, translation services, media monitoring services and media relations. ECO ensures that communications strategies, plans, and activities are integrated, so that public messaging is timely, relevant, accurate and consistent.

NBEMO is responsible for developing and presenting public advice while ECO is responsible for production and dissemination. Strategies, plans, and product are developed jointly with input from other intervening organizations. ECO staffs are embedded in the Provincial Emergency Operations Center where they provide direct support to operations. This arrangement is well exercised during flood season, hurricane season and during several incidents every year. This arrangement was stringently exercised during Exercise Synergy Challenge in 2018 and 2021, to excellent effect.

NBEMO has recently conducted a door-to-door campaign to update household information for our Demographic Safety Database. Concurrently, we have refreshed our Potassium Iodide inventory and redistributed pills and instructions to all residences within 20 km of the station. Our Warden Service provides a visible presence in the community and assists in disseminating safety information to the public.

NB Power actively engages the local population. NB Power distributes a newsletter titled “From the Point” which keeps residents informed about activities at and around the station.

Station staff participates in community activities and work closely with local emergency responders and the RCMP. For all exercises of the off-site plan, we work closely with partners to keep residents informed about our activities, through letters, news releases and advertisements, our web presence and social media, and the Point Lepreau Warden Service.

1.55 WASTE MANAGEMENT

1.55.1 In New Brunswick the management of radiation contaminated waste is the responsibility of PLNGS.

In New Brunswick we break down the waste management requirements; Hospital, Field and on site (On –Site is a PLNGS Responsibility).

Hospitals – Waste Management

Within the hospital setting, the management of waste will be outlined in the internal plan for SJRH and guided by PLGS radiation protection qualified staff. The SJRH decontamination system (located in the ambulance bay), has the capacity to decontaminate 9 to 18 people before the cistern capturing wastewater would need to be emptied. Given that measures have been put in place to redirect evacuees that bypass MDCs away from the hospital, the SJRH is not expected to require mass decontamination capability; as such, it is not expected that emptying the cistern capturing wastewater from decontamination will be required during the response. In any case, wastewater produced during decontamination will need to be captured and handled as hazardous material. If decontamination capability must be suspended to properly dispose of cistern wastewater, outage time will be minimized by having a wastewater removal service on standby for rapid response and by temporarily capturing wastewater in an alternate receptacle.

1.55.2 Field – Waste Management

The capturing of the contaminated water at the MDC and further storage of the contaminated water is a must and is the responsibility of PLNGS.As part of the disrobing in the MDC evacuees on exit of the Disrobing area are directed to deposit their Red Contaminated Clothing Bag into the Tri-walls provided.

The Department of Environment and Local Government also have a responsibility under the environmental management plan; DELG Regulations and General Information: The regulations for the loading, handling, and transportation of radioactive materials are through the Packaging and Transport of Nuclear Substances Regulations and the Transport of Dangerous Goods Regulations. For exportation or importation of radioactive materials, the International Atomic Energy Agency Regulation for the Safe Transport of Radioactive Material is followed.

Radioactive wastes are categorized by contact gamma measurements:

Type 1	Less than 2 mSv/h
Type 2	2 mSv/h to 125 mSv/h
Type 3	Greater than 125 mSv/h

Type 1 wastes are currently exempt from the hazardous waste classification, although this material still requires special handling.

The Industrial Processes Section, Department of Environment and Local Government (DELG) issues Approvals to Operate to Hazardous Waste Carriers that pick up or drop off hazardous waste in the province of New Brunswick under the Water Quality Regulation. Any service provider planning to transport radioactive waste materials (Type 2 and 3) must be approved.

DELG manages hazardous waste generators by issuing a Hazardous Waste Generator Number to any industrial, institutional, or public site generating hazardous waste. This does not include household hazardous waste. Only approved carriers may collect the waste off the site, and they can only collect the waste if the location has a valid Generator Number. A completed Generator Registration form must be submitted to the DELG to receive a Generator Number.

Lepreau Nuclear Generating Station Hazardous Waste Generator Number - NB**005001**

Emergency decontamination sites would require the issuance of individual Hazardous Waste Generator Numbers by the Industrial Processes Section.

During normal operations, radioactive wastes are managed through the Lepreau Generating Station Disposal of Waste Procedures. All radioactive wastes are categorized, packaged, and stored according to the Procedures. All wastes remain in long -term storage on-site except for some low level (Type 1) wastes (gloves, coveralls, and cleaning materials). These wastes are transported to Oak Ridge, Tennessee, for incineration. The ash, which is still radioactive, is returned to the Lepreau Generating Station for long-term storage.

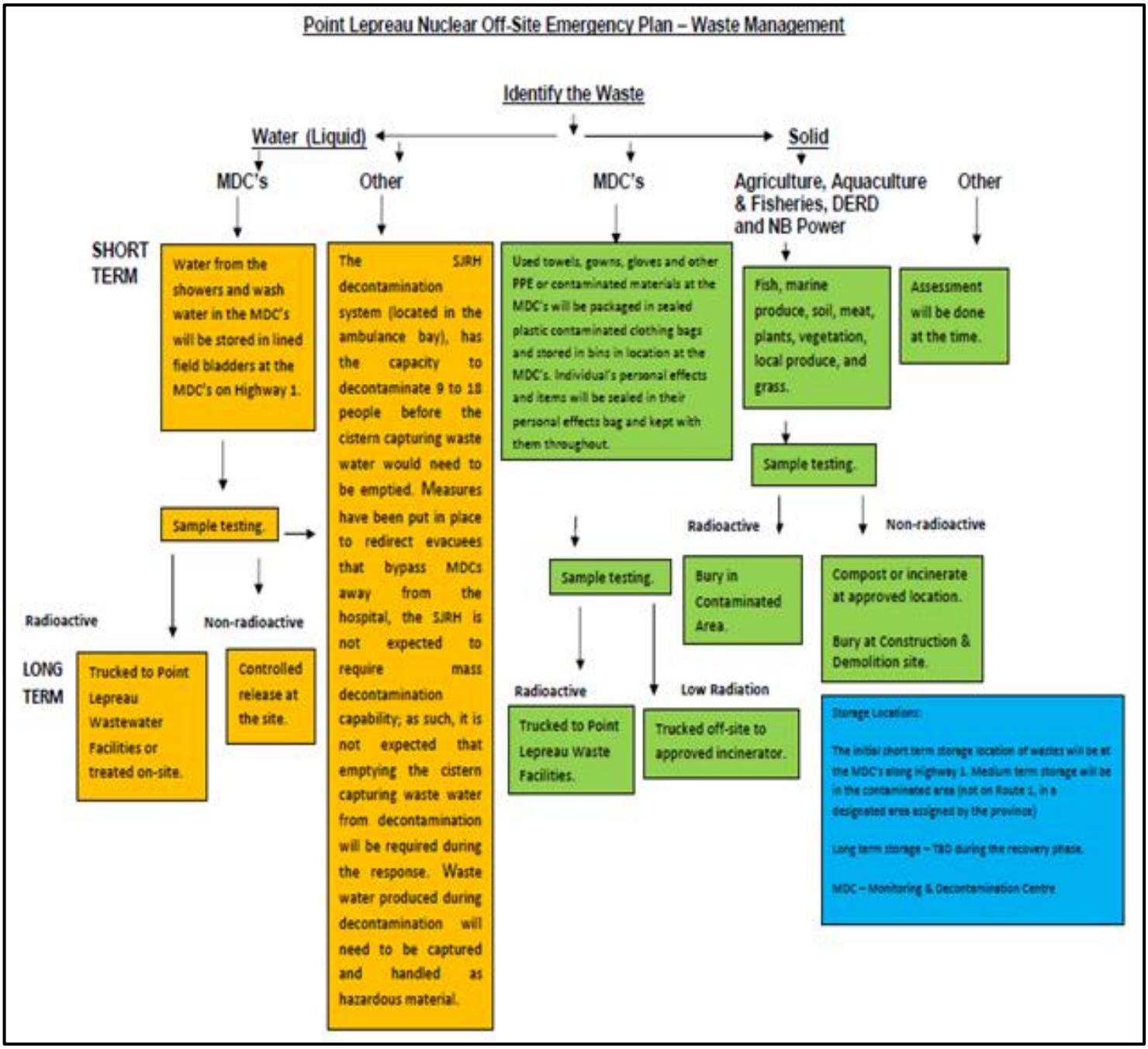


Figure 1.55.3

1.56 MANAGEMENT SYSTEM

1.56.1 In New Brunswick, NBEMO maintain, review and update emergency plans, procedures and other arrangements and incorporate good practices and points to improve from operating experience (such as in the response to emergencies) and emergency exercises.

NBEMO with NB Power (PLNGS) ensures the availability and reliability of all supplies, equipment, communication systems and facilities, plans, procedures, and other arrangements necessary to perform functions in a nuclear or radiological emergency. NBEMO with NB Power (PLNGS) ensure arrangements for inventories, resupply, tests, and calibrations, to ensure that these are continuously available and are functional for use in a nuclear or radiological emergency.

Quality controls are captured in the New Brunswick Department of Justice and Public Safety, New Brunswick Emergency Measures Organization (NBEMO), Quality Management System for Emergency Preparedness and Response (EPR) document.

Quality Management System is reviewed quarterly at the NB Nuclear Emergency Management Committee (NEMC) meetings.

1.57 GLOSSARY

1.57.1 Absorbed Dose: A dose quantity that describes the radiation energy imparted to matter.

1.57.2 Access Control: A system put into place to limit or prevent the movement of individuals into and out of the affected area.

1.57.3 Accident Management: The taking of a set of actions during the evolution of an accident to prevent the escalation of the accident, to mitigate the consequences of the accident, and to achieve a long-term, safe, and stable state after the accident.

1.57.4 Affected Facilities: Onsite locations in duress and the components, the affected facility/unit(s) and their components that control, contain, and cool nuclear substances and prevent the release of nuclear substances.

1.57.5 ALARA: An optimization tool in radiation protection used to keep individual, workplace and public dose limits As Low as Reasonably Achievable (ALARA), social and economic factors being taken into account.

1.57.6 Alert: Alert – An alert is the threat or occurrence of an abnormal, undesired event that:

- Involves a localized hazard that can be confined and controlled by station staff.
- Involves a known or unknown situation potentially leading to a decrease in the level of protection for the public or on-site persons.
- May require an increase in the state of readiness of the emergency response organization and may require off-site response.

1.57.7 Authority Having Jurisdiction (AHJ): Those organizations having statutory responsibility for the regulation and licensing of reactor facilities, and/or the protection of public health, safety, and the environment.

1.57.8 Automatic Action Zone (AAZ): A pre-designated area immediately surrounding a reactor facility where pre-planned protective actions would be implemented by default based on reactor facility conditions with the aim of preventing or reducing the potential for severe deterministic effects.

1.57.9 Background Radiation: Radiation arising from man's natural environment including cosmic rays and radiation occurring from the natural radioactive elements.

1.57.10 Back-out dose limit: The pre-determined dose limit that should prompt responders to physically retreat from an area and to then assess the situation.

1.57.11 Beyond Design Basis Accident (BDBA): An accident less frequent than a design basis accident. For a reactor facility, a beyond design basis accident might or might not involve fuel degradation. Severe accidents are a subset of BDBAs.

1.57.12 Casualty: One who is injured or killed in an accident. Any person, group, thing, etc…, that is harmed or destroyed because of some act or event.

1.57.13 Collective Dose: The average dose received by members of a population during an exposure period multiplied by the number of individuals in that population.

1.57.14 Community of Interest: A person, group, community, or organization that is directly affected by a nuclear emergency.

1.57.15 Contingency Planning Zone: The Off-Site Emergency Planning Zone where a pre-designated area surrounding a reactor facility, beyond the detailed planning zone, where contingency planning and arrangements are made in advance, so that during a nuclear emergency protective action can be extended beyond the detailed planning zone as required to reduce potential for exposure.

Note: Contingency planning and arrangements in the contingency planning zone would be less detailed and have less specificity than the plans in the detailed planning zone.

Source: Adapted from IAEA EPR-NPP Public Protective Actions.

1.57.16 Controller: A person who, during an emergency drill or exercise, provides data and messages to the emergency responders, for example, to ensure that the sequence of events is unfolding as per the scenario.

1.57.17 Decontamination: The removal or reduction of radioactive contamination on an individual by methods such as removal of contaminated clothing, showering, etc.

1.57.18 Delineated Areas: Areas that cannot be inhabited and where social and economic activity cannot be resumed should be delineated and access controlled. Information about delineated areas and measures should be clearly communicated. Delineation of an area as inadequate for inhabitation should not constitute an obstacle to terminating the emergency.

1.57.19 Design-Basis Accident: Design-basis accidents (DBAs) are accident conditions for which a reactor facility is designed, according to established design criteria (the design basis), and for which damage to the fuel and the release of radioactive material are kept to a minimum.

1.57.20 Detailed Planning Zone: A pre-designated area surrounding a reactor facility, incorporating the Automatic Action Zone, where pre-planned protective actions are implemented

as needed based on reactor facility conditions, dose modelling, and environmental monitoring, with the aim of preventing or reducing the occurrence of stochastic effects.

1.57.21 Deterministic Effects: Radiation-induced health effects including changes to cells and tissues that are certain to occur in an individual exposed to a radiation dose greater than some threshold dose, with a severity that increases with increasing dose. Now referred to as tissue reactions.

1.57.22 Dose Management: Includes administrative controls to limit doses, monitor doses and record doses received by off-site emergency workers while fulfilling their duties related to nuclear emergency response.

1.57.23 Dosimeter: A device that is worn or carried by an individual for measuring his or her exposure to radiation.

1.57.24 Drill: A supervised instruction or training opportunity intended to test, develop, maintain, and practice the skills required in an emergency activity.

1.57.25 Early Protective Action: A protective action in the event of a nuclear or radiological emergency that can be implemented within days to weeks and still be effective. The most common early protective actions are relocation and longer-term restriction of the consumption of food potentially affected by contamination.

1.57.26 Effective Dose: Calculated as the product of the equivalent dose in a tissue and the tissue weighting factor, summed for all tissues and organs in the human body that are sensitive to the induction of stochastic effects. Typically used to represent whole body dose.

1.57.27 Emergency: An emergency is an abnormal event that necessitates prompt actions to mitigate adverse consequences. Emergencies include situations for which prompt action is warranted to respond to a perceived hazard or threat and:

- involves a general hazard that may not be confined and controlled by station staff.
- involves a known or unknown situation potentially leading to a significant decrease in the level of protection for the public or on-site persons.
- requires an increase in the state of readiness of the emergency response organization and will likely require off-site response.

1.57.28 Emergency Action Level: Pre-determined criteria related to on-site conditions (e.g., plant parameters) which provide the basis for the emergency class.

1.57.29 Emergency Exposure Situation: A situation of exposure that arises because of an accident, a malicious act or other unexpected event and requires prompt action to avoid or reduce adverse consequences.

1.57.30 Emergency Management: An ongoing process to prevent; mitigate; prepare for; respond to; and recover from a nuclear emergency.

1.57.31 Emergency Plan: A description of the objectives, policy, and concept of operations for the response to an emergency and of the structure, authorities, and responsibilities for a systematic, coordinated, and effective response. The emergency plan serves as the basis for the development of other plans, procedures, and checklists.

1.57.32 Emergency Planning Zone (EPZ): The area in which implementation of operational and protective actions are or might be required during a nuclear emergency, to protect public health, safety, and the environment.

1.57.33 Emergency Response: The integrated set of equipment, procedures, and personnel necessary to provide the capability for performing a specified function or task required to prevent, mitigate, or control the effects of an accidental release.

1.57.34 Emergency Support Function: General subject area described in the Federal Emergency Response Plan which group actions that may be taken by a primary department or agency and where the focus is on providing support in a sector to provinces or territories in the response phase of an emergency.

1.57.35 Emergency Worker: A person having specified duties as a worker in response to an emergency.

Emergency workers can include the following:

- Nuclear emergency workers required to remain in, or to enter, areas affected or likely to be affected by radiation from a nuclear emergency, and for whom special safety arrangements are required.
- Emergency workers required to provide response outside the affected areas; and
- Helpers who are registered with an authorized responding organization.
- This does not include nuclear energy workers.
- Emergency workers can include police, firefighters, ambulance and emergency social services workers, and other essential services.

1.57.36 Emergency Worker Center: A facility set up to monitor and control radiation exposure of emergency workers.

1.57.37 Employer: A person or organization with recognized responsibilities, commitments, and duties towards a worker in the employment of a person or organization by a mutually agreed relationship.

1.54.38 Equivalent Dose: A measure of radiation dose to a specific tissue, considering the relative biological effectiveness of the type of ionizing radiation and calculated by multiplying the absorbed dose to the organ with the radiation weighting factor.

1.57.39 Evacuation: A directed protective action for the controlled displacement of the population from an area which has been or might become contaminated by radioactive substances to avoid exposure.

1.57.40 Evaluator: A person who observes and records emergency responder's actions, or an organization's plans, facilities, and equipment to assess performance against pre-established criteria during drills and exercises.

1.57.41 Exercise: A simulation of emergency events designed to test the integrated performance of one or more organizations during an emergency scenario to validate capabilities, plans, processes, policies, procedures, and training.

1.57.42 Existing Exposure Situation: An existing exposure situation is a situation of exposure that already exists when a decision on the need for control needs to be taken. Existing exposure

situations include exposure to natural background radiation that is amenable to control; exposure due to residual radioactive material that derives from past practices that were never subject to regulatory control; and exposure due to residual radioactive material deriving from a nuclear or radiological emergency after an emergency has been declared to be ended.

1.57.43 Fatality: A disaster resulting in death, a death resulting from such occurrence.

1.57.44 Federal Coordination Center: As defined in the FERP, is the focal point for the Federal-regional coordination in support of the province during response.

1.57.45 Field Teams: Off-site emergency workers whose primary responsibility includes the measurement of radioactive contamination in the environment following a release.

1.57.46 (FNEP) Technical Assessment Group (TAG): A multi-departmental group composed of technical experts from designated FNEP Federal government institutions and is chaired by a senior technical expert.

1.57.47 Food (or ingestion) Control: Measures taken to prevent the consumption of, or contamination of the food chain, from, feed and foodstuffs that may have been radioactively contaminated above acceptable levels because of a nuclear emergency.

1.57.48 Generic Criteria: Dose levels at which protective actions should be taken.

1.57.49 General Emergency: General emergency at facilities in category I or II for an emergency that warrants taking precautionary urgent protective actions, urgent protective actions, and early protective actions and other response actions on the site and off the site. Upon declaration of this emergency class, appropriate actions shall promptly be taken, based on the available information relating to the emergency, to mitigate the consequences of the emergency on the site and to protect people on the site and off the site.

1.57.50 Government Operations Center (GOC): The federal government operations center administered by Public Safety Canada is intended to host designated officials required to fill positions in the Federal Emergency Response Management System in the National Capital Region. The GOC is established to coordinate national support to the affected provinces and activities under federal jurisdiction.

1.57.51 Helpers: Members of the public who willingly and voluntarily help in response to a nuclear or radiological emergency.

1.57.52 Inadvertent Ingestion: Unintentional ingestion of radionuclides because of eating, drinking, or smoking with contamination on the hands.

1.57.53 Incident Command System (ICS): A standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.

1.57.54 Indigenous peoples: Includes the First Nations, Inuit, and Métis people of Canada.

1.57.55 Ingestion Control Protective Action Strategy: The Protective Action Strategy which includes restriction of distribution and ingestion of potentially contaminated drinking water, milk

and other foods and beverages. The purpose of this Protective Action Strategy is to take actions to reduce doses from ingestion of contaminated foodstuffs.

1.57.56 Ingestion Exposure Pathway: This is approximately an 80-kilometer radius around PLNGS and includes the EPZ. When radioactive material from a plume, or a liquid or solid spill, falls on crops, produce, or on surface water supplies, the potential exists for this radiation to be taken into the body through eating or drinking these radiological contaminated foodstuffs and drinking water. These are examples of the ingestion exposure pathway.

1.57.57 Ingestion Planning Zone: A pre-designated area surrounding a reactor facility where plans or arrangements are made to:

- protect the food chain.
- protect drinking water supplies.
- restrict consumption and distribution of potentially contaminated produce, wild-grown products, milk from grazing animals, rainwater, animal feed; and
- Note: Wild-grown products can include mushrooms and game.
- restrict distribution of non-food commodities until further assessments are performed.

1.57.58 Internal Contamination Assessment: The identification and quantification of internal contamination in a person.

1.57.59 Intervention Level: A radiation dose above which a specific protective action is generally justified.

1.57.60 Joint Information Center (JIC): The facility used as the central point for dissemination of information by the province and licensee representatives to the news media. This facility is located offsite and is the only location which allows media access to authorized spokespersons during an emergency.

1.57.61 Liaison Officers: Federal officials who are assigned and responsible for ensuring liaison between two or more groups either in the Federal Emergency Response Management System, the corresponding Provincial or Regional structures.

1.57.62 Longer Term Protective Action: A protective action that is not an urgent protective action. Such protective actions are likely to be prolonged over weeks, months, or years. These include measures such as relocation, resettlement, agricultural countermeasures, and remedial actions.

1.57.63 Medical Follow-Up: The process of registration and documentation of individuals' exposures and intakes, treatment of internal contamination if appropriate and future follow-up to detect and effectively treat radiation induced health effects.

1.57.64 Mitigation: Measures aimed at eliminating, reducing, or controlling the adverse effects of an activity, substance, equipment, or facility.

1.57.65 Monitoring: The measurement of radiation levels, usually with a portable survey instrument.

1.57.66 Notification: A punctual action by which a specific individual or an organization is formally informed of a critical event, decision, or action.

1.57.67 Nuclear Emergency: An abnormal situation at a reactor facility that could increase the risk of harm due to ionizing radiation to the health and safety of persons, property, the environment, or national security.

1.57.68 Nuclear Facility: A nuclear reactor, subcritical 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.

1.57.69 Nuclear facility perimeter: A geographical area that contains the authorized facility, and within which the management of the authorized facility may directly initiate emergency actions. This is typically the area within the security fence or other designated property marker.

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

1.57.71 Off-Site Emergency Planning Zones: Zones developed in the preparedness stage, based on where the Generic Criteria will likely be exceeded and where plans and arrangements to implement protective actions should be developed in advance of a nuclear emergency.

1.57.72 Off-Site Emergency Worker: A person having specified duties as a worker in response to a nuclear emergency, is required to remain in or enter areas affected or likely to be affected by radiation from an accident, might be exposed while performing their duties, and for whom special safety arrangements are required. This may include police officers, firefighters, medical personnel, drivers and crews of evacuation vehicles and field teams.

1.57.73 Off-Site Emergency Workers Protective Action Strategy: The Protective Action Strategy which includes dose management for off-site emergency workers. The purpose of this protective action strategy is to ensure that exposures received by off-site emergency workers are minimized to the extent possible and do not exceed limits where health effects would be expected.

1.57.74 On-site: The area inside the property boundary, or fence line, of a nuclear facility. The operators of a nuclear facility are responsible for on-site emergency planning, preparedness, and response.

1.57.75 Operational Intervention Level (OIL): A calculated or derived quantity that corresponds to a Generic Criteria and above which a specific protective action is generally justified.

- OILs are typically expressed in terms of dose rates or of activity of radioactive material released, time integrated air concentrations, ground or surface concentrations, or activity concentrations of radionuclides in environmental, food, or water samples.
- An OIL is a type of action level that can be used immediately by default and directly (without further assessment) to determine the appropriate protective actions and other response actions because of an environmental measurement.
- Source: Adapted from IAEA EPR-NPP Public Protective Actions.

- Environmental measurements, measurements of contamination levels among affected populations and/or laboratory measurements can be directly compared to the OILs.

1.57.76 Optimization of Protection: One of the principles of protection recommended by the ICRP. The process for determining what level of protection and safety makes exposures, and the probability and magnitude of potential exposures, as low as reasonably achievable, economic, and societal factors being considered (ICRP, 2007).

1.57.77 Permanent Resettlement: Permanent relocation of the population to a new location if their home environments are contaminated above acceptable limits and decontamination efforts are not able to restore them to habitable conditions.

1.57.78 Personal Protective Equipment: Clothing or other specialized equipment provided to an off-site emergency worker to prevent or reduce their exposure to radioactive material.

1.57.79 Planned Exposure Situation: A situation of exposure that arises from the planned operation of a source or from a planned activity that results in an exposure due to a source.

1.57.80 Planning Basis: The identification of hazards that the NEMP must address based on their impact on health and safety, property, and the environment.

1.57.81 Plume Exposure Pathway: An undetermined area around PLNGS. When radioactive material is released because of an accident or emergency, it may move through the air as a plume (cloud) of gas or particles or be deposited on the ground or other surfaces. People and animals may be exposed to radiation though inhalation or submersion in a radioactive plume, or by being near radioactive material deposited by the plume on the ground or other surfaces. These are examples of the plume exposure pathway.

1.57.82 Population Monitoring and Medical Management Protective Action Strategy: The Protective Action Strategy which includes population screening, decontamination, internal contamination assessment and medical follow-up. The purpose of this Protective Action Strategy is to reduce exposures to individuals.

1.57.83 Population Screening: The measurement of dose or internal/external radioactive contamination of individuals within a population.

1.57.84 Potassium Iodide (KI): Substance containing stable iodine used to prevent or reduce the uptake of radioactive iodine (radioiodine) by the thyroid. Typically comes in tablet / pill form for ingestion. KI is an example of a thyroid blocking agent.

1.57.85 Precautionary urgent protective action: A precautionary Urgent Protective Action is an urgent protective action taken before or shortly after a release of radioactive material, or an exposure, based on the prevailing conditions to avoid or to minimize severe deterministic effects.

1.57.86 Projected Dose: The dose that would be expected to be received if planned protective actions were not taken.

1.57.87 Protected Area: A geographic space on-site that is surrounded by a physical barrier with additional physical protection measures to inhibit or deter any unauthorized entry.

1.57.88 Protection Strategy: Describes what needs to be done and how it will get done, in accordance with the principles of justification and optimization, to achieve the goals of a nuclear emergency response, in consideration of all the risks, constraints, and other factors that will need to be managed.

- The principle of justification refers to actions that achieve a positive net benefit.
- The principle of optimization refers to actions that keep doses as low as reasonably achievable, economic, social, and environmental factors being considered; and
- For further guidance, see Health Canada, Generic Criteria and Operational Intervention Levels for Nuclear Emergency Planning and Response.

1.57.89 Protective Action: An action for the purposes of avoiding or reducing doses that might otherwise be received in an emergency exposure situation or an existing exposure situation.

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

1.57.91 Provincial Emergency Operations Center (PEOC): In the province directly affected by the emergency, a center operated by a provincial emergency management organization which coordinates the emergency operations at the provincial level.

1.57.92 Radiation Alert: Alert at facilities in category I, II or III for an event that warrants taking actions to assess and to mitigate the potential consequences at the facility. Upon declaration of this emergency class, actions shall promptly be taken to assess and to mitigate the potential consequences of the event and to increase the readiness of the on-site response organizations.

157.93 Radiological Assurance Monitoring: Actions taken to confirm that radiation levels are safe and fall within background or regulatory limits.

1.57.94 Received Dose: The dose that is incurred after protective actions have been fully implemented (or a decision has been taken not to implement any protective actions).

1.57.95 Recovery Phase (See Transition Phase): The period during which activities focus on restoration of quality of life, social systems, economies, community infrastructures, and the environment. This phase may begin during the response phase and continue for up to several years after the emergency.

1.57.96 Recovery Management Organization (RMO): The function of the RMOs would be to coordinate and oversee the recovery activities. The RMOs should be led by the authority having jurisdiction and include representatives from organizations with the expertise or authority to implement the recovery activities relevant to the situation. Some of the same organizations involved in the response phase would remain active as members of the RMOs, such as environmental monitoring teams responsible for long-term assurance monitoring.

However, since the recovery phase would be focused on a different set of activities and objectives compared to the response phase, the RMOs would include a number of new organizations not previously involved.

1.57.97 Re-entry: The temporary entry by individuals into the restricted zone under controlled conditions.

1.57.98 Reference Level: The level of dose or risk above which it is judged inappropriate to allow exposures to occur, and below which optimization of protection should be implemented. For emergency exposure situations the reference level recommended by the ICRP is 20 mSv – 100 mSv (ICRP, 2007).

157.99 Relocation: A protective action in which individuals are relocated from a restricted zone. Access into and out of the restricted zone is tightly controlled.

1.57.100 Representative Individual: An individual that due to his/her characteristics, habits, and location of residence, is representative of the more highly exposed individuals in the population. May also be referred to as Representative Person (ICRP, 2007).

1.57.101 Resettlement: A protective action in which individuals are relocated from a restricted zone. Access into and out of the restricted zone is tightly controlled.

1.57.102 Residual Dose: The dose expected to be incurred after protective actions have been terminated (or after a decision has been taken not to take protective actions).

1.57.103 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 transition to the recovery phase, if necessary.

1.57.104 Restricted Zone: An area from which populations have been evacuated or relocated. Access to the restricted zone is strictly controlled.

1.57.105 Return: The unrestricted reoccupation of restricted zones by previously relocated populations.

1.57.106 Safety Officer: A safety officer is an officer who looks after the safety aspects of an organization. He or she is responsible for employee health and safety activities, ensuring the workplace is safe, developing and recommending safety measures, monitoring, anticipating, and controlling hazardous and unsafe conditions, initiating, and maintaining co-operation within an organization on health and safety matters.

1.57.107 Sampling: Collecting specimens of materials (e.g., soil, vegetation, or radioiodine in the air) at field locations.

1.57.108 Stable iodine thyroid blocking: Administration of stable iodine to block the uptake of inhaled or ingested radioiodine's into the thyroid gland.

1.57.109 Sheltering: Something, especially a structure, that provides cover or protection, as from the weather: a shelter for hikers.

1.57.110 Shelter-In-Place: A directed protective action to take immediate refuge in an enclosed structure for protection from an airborne plume, deposited radionuclides, or both. **Notes:**

- Shelter-in-place is a protective action which uses the shielding properties of buildings and their potential for ventilation control to reduce the radiation dose to people inside.

Shelter-in-place has varying degrees of effectiveness depending on the type of building construction.

- Shelter-in-place should typically not extend beyond two days: and
- Shelter-in-place is utilized as a protective action if:
    - there is insufficient time to safely evacuate an area.
    - if the dose projected for an area is so low that evacuation is not required; or
    - the risks of evacuation are higher than shelter-in-place (e.g., severe weather inhibits safe evacuation).

1.57.111 Site Area Radiation Emergency: Site area emergency at facilities in category I or II for an emergency that warrants taking protective actions and other response actions on the site and near the site. Upon declaration of this emergency class, actions shall promptly be taken: (i) to mitigate the consequences of the emergency on the site and to protect people on the site; (ii) to increase the readiness to take protective actions and other response actions off the site if this becomes necessary based on observable conditions, reliable assessments and/or results of monitoring; and (iii) to conduct off-site monitoring, sampling, and analysis.

1.57.112 Stay Times: The calculated maximum amount of time a worker can stay exposed to a measured dose rate in an affected area without surpassing a specified dose level.

1.57.113 Stochastic Effects: Radiation-induced health effects, such as cancer and heritable diseases, which are associated with a statistical risk and where no threshold has been established. The probability of occurrence is proportional to the dose (the higher the dose the higher the probability of occurrence) but the severity of the effect is independent of dose.

1.57.114 Strategy: A plan of action or policy designed to achieve a major or overall aim. Strategy is what we can do. Strategy is important because the resources available to achieve goals are usually limited. Strategy generally involves setting goals and mobilizing resources to execute the actions.

1.57.115 Survey Meter: A portable instrument used to detect and measure ionizing radiation.

1.57.116 Technical Advisory Group (TAG): A group of scientific and technical subject matter experts who perform the scientific/technical activities in an emergency management organization.

1.57.117 Temporary Relocation: The non-urgent removal or extended exclusion of people from a contaminated area to avoid chronic exposure, for a finite period (up to a year or two if eventual return is foreseeable).

1.57.118 Thyroid Blocking Agent: Stable iodine taken to block the uptake of radioiodine; KI is a thyroid blocking agent.

1.57.119 Tissue Reactions: Radiation-induced health effects including changes to cells and tissues that are certain to occur in an individual exposed to a radiation dose greater than some threshold dose, with a severity that increases with increasing dose. This term is preferred to the previous term, deterministic effect, as it is now understood that both early and late tissue reactions may be modified and are not necessarily deterministic in nature (ICRP, 2012a).

1.57.120 Traffic Control: All activities accomplished for facilitating the evacuation of the public in vehicles along specific routes.

1.57.121 Turn-Back Limits: Limits in terms of ambient dose rate developed in advance of a nuclear emergency which represent the level at which an off-site emergency worker should automatically leave the area. Development of turn-back limits should take into consideration the type of work to be performed by the off-site emergency worker.

1.57.122 Urgent and Early Protective Action Strategy: A protective action in the event of a nuclear or radiological emergency which must be taken promptly (usually within hours to a day) to be effective, and the effectiveness of which will be markedly reduced if it is delayed.

1.57.123 Urgent Protective Action: Actions that must be taken promptly to be effective, and the effectiveness of which will be markedly reduced if delayed. They include evacuation, sheltering, and administration of thyroid blocking agent, and other measures, as appropriate. Urgent protective actions include iodine thyroid blocking, evacuation, short term sheltering, actions to reduce inadvertent ingestion, decontamination of individuals and prevention of ingestion of food, milk or drinking water possibly with contamination.

157.124 Vulnerable Population: A community of interest, which includes members of the public who have additional needs before, during, and after a nuclear emergency.

- Vulnerable populations can include, but are not limited to, individuals needing assistance related to:
    - maintaining independence.
    - communication.
    - transportation.
    - supervision; or
    - medical care.
- Individuals in need of planning provisions or additional assistance could include those who:
    - have disabilities.
    - are from diverse cultures.
    - have limited to no proficiency in the local official language.
    - are transportation disadvantaged.
    - members of the public that are most vulnerable to radiation exposure (i.e., pregnant women and children).

1.58 ACRONYMS AND ABBREVIATIONS

1.58.1	**AHJ**	Authority having Jurisdiction
1.58.2	**ALARA**	As Low as Reasonably Achievable
1.58.3	**ANB**	Ambulance New Brunswick
1.58.4	**ARGOS**	Accident Reporting and Guidance Operational System
1.58.5	**ASR**	Administrative Support Representative
1.58.6	**BCP**	Business Continuity Plan

1.58.7	**BDBA**	Beyond Design Base Accident
1.58.8	**BDBR**	Beyond Design Base Release
1.58.9	**CANDU**	Canada Deuterium Uranium
1.58.10	**CCG**	Canadian Coast Guard
1.58.11	**CCH**	Charlotte County Hospital
1.58.12	**CISM**	Critical Incident Stress Management
1.58.13	**CMOH**	Chief Medical Officer of Health
1.58.14	**CNSC**	Canadian Nuclear Safety Commission
1.58.15	**CONOPS**	Concept of Operations
1.58.16	**CP**	Command Post
1.58.17	**CPEP**	Community Planning & Environmental Protection
1.58.18	**CROPs**	Criminal Operations
1.58.19	**CSA**	Canadian Standards Association
1.58.20	**CSCFTS**	Corporate Services, Community Funding and Technical Service
1.58.21	**DAAF**	Department of Agriculture Aquaculture & Fisheries
1.58.22	**DBR**	Design Base Release
1.58.23	**DEL**	Derived Emission Limits
1.58.24	**DELG**	Department of Environment and Local Government
1.58.25	**DERD**	Department of Energy and Resource Development
1.58.26	**DFO**	Department Fisheries and Oceans
1.58.27	**DH**	Department of Health
1.58.28	**DHW**	Department of Health and Wellness
1.58.29	**DND**	Department of National Defense
1.58.30	**DNR**	Department of Natural Resources
1.58.31	**DPS**	Department of Public Safety
1.58.32	**DTI**	Department of Transportation and Infrastructure
1.58.33	**EAL**	Emergency Action Level
1.58.34	**EC**	Environment Canada

1.58.35	**ECO**	Executive Council Office
1.58.36	**ECFV**	Emergency Containment Filtered Vent
1.58.37	**ED**	Emergency Department
1.58.38	**EECD**	Education & Early Childhood Development
1.58.39	**EG**	Executive Group
1.58.40	**ELG**	Environment and Local Government
1.58.41	**EMC**	Executive Management Committee
1.58.42	**EME**	Emergency Mitigating Equipment
1.58.43	**EMO**	Emergency Measures Organization
1.58.44	**EMP**	Emergency Management Plan
1.58.45	**EOC**	Emergency Operations Center
1.58.46	**EPI**	Emergency Public Information
1.58.47	**EPWG**	Emergency Preparedness Working Group
1.58.48	**EPZ**	Emergency Planning Zone
1.58.49	**ERS1**	NB Power Emergency Radio System #1
1.58.50	**ERS2**	NB Power Emergency Radio System #2
1.58.51	**ERT**	Emergency Response Team
1.58.52	**FCG**	Federal Coordination Group
1.58.53	**FCSC**	Federal Coordination Steering Committee
1.58.54	**FERP**	Federal Emergency Response Plan
1.58.55	**FNEP**	Federal Nuclear Emergency Plan
1.58.56	**GNB**	Government of New Brunswick
1.58.57	**HC**	Health Canada
1.58.58	**HEM**	Health Emergency Management
1.58.59	**HPOC**	Health Portfolio Operations Center
1.58.60	**IAEA**	International Atomic Energy Agency
1.58.61	**IC**	Incident Commander
1.58.62	**ICRP**	International Commission on Radiological Protection

1.58.63	**ICRU**	International Commission on Radiation Units and Measurement
1.58.64	**IP**	Ingestion Pathway
1.58.65	**IPMP**	Ingestion Pathway Monitoring Plan
1.58.66	**IRCS**	Integrated Radio Communications System
1.58.67	**IRG**	International Repeater Group (Network)
1.58.68	**ISR**	International Safety Research
1.58.69	**JIC**	Joint Information Center
1.58.70	**KI**	Iodine Prophylaxis abbreviation
1.58.71	**LPZ**	Longer-term Protective Action Zone
1.58.72	**LWR**	Light Water Reactor
1.58.73	**MAC**	Maximum Acceptable Concentration
1.58.74	**MASAS**	Multi-Agency Situational Awareness System
1.58.75	**MCTS**	Marine Communication and Traffic Services
1.58.76	**MDC**	Monitoring and Decontamination Center
1.58.77	**MOH**	Medical Officer of Health
1.58.78	**MSC**	Meteorological Service of Canada
1.58.79	**mSv**	Milli-Sievert
1.58.80	**NAADS**	National Alert Aggregation & Dissemination System
1.58.81	**NBEMO**	New Brunswick Emergency Measures Organization
1.58.82	**NCG**	Nuclear Control Group
1.58.83	**NEF**	Nuclear Emergency Function
1.58.84	**NERS**	National Emergency Response System
1.58.85	**NIMS**	National Incident Management System
1.58.86	**NOTAM**	Notice to Airman
1.58.87	**NOTMAR**	Notice to Mariners
1.58.88	**NOTSHIPS**	Notice to Ships
1.58.89	**NPP**	Nuclear Power Plant
1.58.90	**NRCan**	Natural Resources Canada

1.58.91	**NRF**	Nuclear Response Force
1.58.92	**OCMOH**	Office of Chief Medical Officer of Health
1.58.93	**OEOC**	Off-site Emergency Operations Center
1.58.94	**OILs**	Operational Intervention Levels
1.58.95	**OSS**	Operational Support Services
1.58.96	**PADs**	Personal Alarming Dosimeters
1.58.97	**PARs**	Passive Autocatalytic Recombines
1.58.98	**PAZ**	Precautionary Action Zone
1.58.99	**PEAC**	Provincial Emergency Action Committee
1.58.100	**PEOC**	Provincial Emergency Operations Center
1.58.101	**PIRs**	Primary Information Requirements
1.58.102	**PLNGS**	Point Lepreau Nuclear Generating Station
1.58.103	**PMCC**	Provincial Mobile Communication Center
1.58.104	**PPE**	Personal Protective Equipment
1.58.105	**PSC**	Public Safety Canada
1.58.106	**RBCA**	Risk Based Corrective Action
1.58.107	**RBSLs**	Risk Based Screening Levels
1.58.108	**REAC**	Regional Emergency Action Committee
1.58.109	**REMC**	Regional Emergency Management Coordinator
1.58.110	**REOC**	Regional Emergency Operations Center
1.58.111	**RMOH**	Regional Medical Officer of Health
1.58.112	**RN**	Radiological / Nuclear
1.58.113	**S3 FAST**	Safety Support System – Field Assessment Survey Tool
1.58.114	**SAIC**	Science Application International Corporation
1.58.115	**SAMG**	Severe Accident Management Guidelines
1.58.116	**SAR**	Severe Accident Release
1.58.117	**SASMS**	Severe Accident Sampling & Monitoring System
1.58.118	**SD**	Social Development
1.58.119	**SJRH**	Saint John Regional Hospital

1.58.120	**SOAP**	Supplementary Office and Auxiliary Personnel
1.58.121	**SOG**	Security Operations Group
1.58.122	**SS**	Shift Supervisor
1.58.123	**SSTLs**	Site-Specific Target Levels
1.58.124	**STOIC**	Simulator Training and Office Interface Complex
1.58.125	**Sv**	Sievert
1.58.126	**TAG**	Technical Advisory Group - Provincial / Technical Assessment Group - Federal
1.58.127	**TLD**	Thermoluminescent Dosimeter
1.58.128	**UNBSJ**	University of New Brunswick Saint John
1.58.129	**UPZ**	Urgent Protective Action Zone
1.58.130	**VPN**	Virtual Private Network
1.58.131	**WHO**	World Health Organization

2 OPERATIONAL INFORMATION

2.1 NOTIFICATION PROCEDURES

2.1.1 General

As briefly described in the introduction, the notification procedures are included in many Point Lepreau Nuclear Generating Station (PLNGS) related Plans and/or **Standard Operating Procedures (SOPs)** and can belong to several partner agencies and/or locations.

As any given event (simulated or real) may span or evolve across several plans, it is critical that standardized communication procedures be established and followed to ensure consistency in all messaging.

The use of standardized notification procedures must be applied to all communications, including Routine Communications Checks, Notification Tests, Exercises and in Real Events between the:

- The Duty Shift Supervisor through the **Contingency Desk Operator (CDO)** at the Point Lepreau (Nuclear) Generating Station (PLNGS).
- The NB Emergency Measures Organization (NBEMO); and
- The Royal Canadian Mounted Police (RCMP) at the **Operational Communications Center (OCC)**.

The Duty Shift Supervisor at PLNGS will notify NBEMO at xxx-xxx-xxxx or xxx-xxx-xxxx directly, or through the after-hours answering service, the **Provincial Mobile Communications Center (PMCC)** at xxx-xxx-xxxx, stating the type of event which has occurred (define the event, including level and classification).

Emergency Action Levels are the basis for PLNGS to conduct an assessment to determine the Classification.

PLNGS Standard Operating Procedures define the following Classifications:

- Radiation Alert.
- Site Area Radiation Emergency; and
- General Radiation Emergency.

PLNGS Standard Operating Procedures define the following Non-Radiation Emergencies:

- Medical Emergency.
- Fire Emergency; and
- HAZMAT Emergency.

2.1.2 Routine (Scheduled) Communications Checks

A regularly scheduled communication check is initiated by the PLNGS staff to NBEMO (once a week).

PLNGS Contact Numbers

Duty Shift Supervisor (Control Room). ---------- xxx-xxx-xxxx

Alternate Contingency Desk Control Room ---------- xxx-xxx-xxxx

Simulator - Exercise Shift Supervisor in Simulated Control Room ---- xxx-xxx-xxxx

2.2 CALLING SEQUENCE

2.2.1 Calling Sequence

Exercise

The Duty Shift Supervisor through the Contingency Desk Operator (CDO) at PLNGS will notify NBEMO at xxx-xxx-xxxx or xxx-xxx-xxxx directly; or through the after-hours answering service PMCC at xxx-xxx-xxxx.

The Duty Shift Supervisor through the Contingency Desk Operator (CDO) will state the following:

- "Exercise – Exercise – Exercise" - This is the through the Contingency Desk Operator (CDO) for the Duty Shift Supervisor with PLNGS exercise (insert exercise name). Please confirm my message by repeating it back to me.
- NBEMO will repeat the message beginning with "Exercise – Exercise – Exercise". In addition, NBEMO will verify the caller's name and contact information.
- NBEMO will hang up and call back the PLNGS exercise shift supervisor at 506-659-6548. NBEMO staff will confirm with "Exercise – Exercise – Exercise", verifies the caller and acknowledges receipt of the message.
- NBEMO Staff: Always begin and end with "Exercise –Exercise- Exercise". Ensure you ask the recipients to repeat your message back to you. Record the receipt and dispatch times for all exercise messages; and
- Notification from PLNGS does not end with the call procedure if the classification is a Site Area Radiation Emergency or a General Radiation Emergency. The following actions must also occur:
- For Site Area Radiation Emergency:
    - NBEMO Operations Staff placed on Level 3 – Full Activation (Point Lepreau Nuclear Off-site Emergency Plan, Part 1 – Emergency Management System, Section 1.21, Provincial Emergency Operation Center (PEOC), Sub-section 1.21, PEOC Activation Levels.)
    - Director NBEMO briefed.
    - NBEMO Communications Officer briefed.
    - Once notified, the Director of NBEMO will deploy the OEOC Manager to the OEOC with the Provincial Nuclear Preparedness Team to prepare for the deployment of the Monitoring and Decontamination Centers on Highway 1.
    - Everbridge Notification sent to the Warden Service advising of the Site Area Radiation Emergency
    - Everbridge Notification sent to all residents and businesses out to 20 kms from PLNGS advising of the Site Area Radiation Emergency and actions to follow.
    - NBEMO notifies RCMP Operational Communications Center at xxx-xxx-xxxx

- NBEMO notifies FNEP Duty Officer (24/7 at xxx-xxx-xxxx)
- NBEMO notifies NB Regional Medical Officer of Health (MOH) in Saint John RMOH SJ - (cell) xxx-xxx-xxxx, (office) xxx-xxx-xxxx or after hours xxx-xxx-xxxx NBEMO notifies **Maine Emergency Management Agency (MEMA)** Duty Officer at 1-207-624-4400 extension 5 and Comm.EOC@maine.gov
- Notify the **Nuclear Insurance Association of Canada (NIAC)**
  401 Bay Street, Suite 1600,
  Toronto, ON M5H 2Y4 Canada
  General Manager, Colleen DeMerchant, t: xxx-xxx-xxxx*, email: colleen@niac.biz*
  or Stephen Ramjist t: xxx-xxx-xxxx
- Change in Activation Level message sent out through Everbridge or Distribution List (Menu's)
- Activation message states action required for PEAC, NB TAG, Nuclear Control Group, or external agencies to participate virtually, in person or a combination. MS Teams invitation will be provided within the activation message.
- NBEMO (through Everbridge or Distribution List (Menu's) notifies the Nuclear Control Group - NBEMO PEAC (Menu G) & Nuclear Control Group (Menu N)
- Nuclear Control Group members notify their parent organizations; and
- NBEMO notifies external agencies (through Everbridge or Distribution List (Menu's))) - Senior Officials (Menu A) and IEMG (Menu I)
- Joint Information Center (JIC) is activated / stood up in the Communications room.
- The New Brunswick Technical Advisory Group is activated / Stood up in the Situation Room
- PEOC Operational Rhythm established.

- **2.2.2 For General Radiation Emergency**

  Same as Site Area Radiation Emergency with the following additions:

  - Change in Classification (Site Area to General Emergency) message sent out (PEOC remains a Level 3 – Full Activation) through Everbridge or Distribution List (Menu's))
  - Activation message states action required for PEAC, NB TAG, Nuclear Control Group, or external agencies to participate virtually, in person or a combination. MS Teams invitation will be provided with the activation message.
  - Everbridge Notification to the Warden Service advising of the General Radiation Emergency
  - Everbridge Notification to all residents and businesses out to 20 kms from PLNGS advising of the General Radiation Emergency and actions to follow.
  - Declaration of State of Emergency (SOE) from Minister of the Department of Justice and Public Safety
  - Everbridge Notification to the Warden Service advising of the Declaration of State of Emergency (SOE)
  - Everbridge Notification to all residents and businesses out to 20 kms from PLNGS advising of the Declaration of State of Emergency (SOE) and actions to follow.

- NBEMO notifies RCMP Operational Communications Center at xxx-xxx-xxxx of the General Radiation Emergency (Triggers TCPs / Roadblocks / Access Control Points)
- Issue Evacuation Planning Instruction
- Prepare / Issue Evacuation Order
- Everbridge Notification to the Warden Service advising of the Evacuation Order
- Everbridge Notification to all residents and businesses out to 20 kms from PLNGS advising of the Evacuation Order and actions to follow.

Note For Exercise Play: Always identify when sending or receiving information by starting and ending your exchange of information with - "Exercise – Exercise – Exercise"

2.2.3 Notification Test

The Duty Shift Supervisor through the **Contingency Desk Operator (CDO)** at PLNGS will notify NBEMO at xxx-xxx-xxxx or xxx-xxx-xxxx directly; or through the after-hours answering service PMCC at xxx-xxx-xxxx.

The Duty Shift Supervisor through the Contingency Desk Operator (CDO) will state the following:

- "This is the Contingency Desk Operator (CDO) for the Duty Shift Supervisor with PLNGS conducting a notification test. Please confirm my message by repeating it back to me".
- NBEMO will repeat the message, verify callers name, and contact information; an
- NBEMO will hang up and call the shift supervisor at xxx-xxx-xxxx or xxx-xxx-xxxx to verify the caller, acknowledge receipt of the message.
- NBEMO - a call from NBEMO to the RCMP Operational Communications Center (OCC) at xxx-xxx-xxxx is required to complete the notification test.

Note: Always ask the recipients to repeat your message back to you when completing a Notification Test. Also, record the receipt and dispatch times for all messages.

2.2.4 Real Event

Classification of a Radiation Event / Emergency from PLNGS

The Duty Shift Supervisor through the Contingency Desk Operator (CDO) at PLNGS will notify NBEMO at xxx-xxx-xxxx or xxx-xxx-xxxx directly; or through the after-hours answering service PMCC at xxx-xxx-xxxx.

The Contingency Desk Operator (CDO) for the Duty Shift Supervisor will state the following:

- "This is Contingency Desk Operator (CDO) for the Duty Shift Supervisor with PLNGS (define event, include level and classification – Radiation Alert – Site Area Radiation Emergency – General Radiation Emergency). Please confirm my message by repeating it back to me".
- NBEMO will repeat the message, verify caller's name, and contact information.
- NBEMO will hang up and call back the Shift Supervisor xxx-xxx-xxxx or xxx-xxx-xxxx, verify the caller and acknowledges receipt of the message.

- NBEMO notification procedures will be initiated.

- **For Radiation Alert Classification:**
    - NBEMO Operations Staff placed on Level 1 - Enhanced Monitoring (Point Lepreau Nuclear Off-site Emergency Plan, Part 1 – Emergency Management System, Section 1.21, Provincial Emergency Operation Center (PEOC), Sub-section 1.21, PEOC Activation Levels.)
    - PEOC is open with operations staff in location.
    - Director NBEMO briefed.
    - NBEMO Communications Officer briefed.
    - Activation message sent out through Everbridge or Distribution List (Menu's)
    - Activation message states no action required for PEAC, NB TAG, Nuclear Control Group, or external agencies.

- **For Site Area Radiation Emergency following a Radiation Alert:**

    - NBEMO Operations Staff placed on Level 3 – Full Activation (Point Lepreau Nuclear Off-site Emergency Plan, Part 1 – Emergency Management System, Section 1.21, Provincial Emergency Operation Center (PEOC), Sub-section 1.21, PEOC Activation Levels.)
    - Director NBEMO briefed.
    - NBEMO Communications Officer briefed.
    - Director of NBEMO will deploy the OEOC Manager to the OEOC with the Provincial Nuclear Preparedness Team to prepare for the deployment of the Monitoring and Decontamination Centers on Highway 1.
    - Everbridge Notification to the Warden Service advising of the Site Area Radiation Emergency
    - Everbridge Notification to all residents and businesses out to 20 kms from PLNGS advising of the Site Area Radiation Emergency and actions to follow.
    - NBEMO notifies RCMP Operational Communications Center at xxx-xxx-xxxx
    - NBEMO notifies FNEP Duty Officer (24/7 at xxx-xxx-xxxx
    - NBEMO notifies NB Regional Medical Officer of Health (MOH) in Saint John; RMOH SJ - (cell) xxx-xxx-xxxx, (office) xxx-xxx-xxxx or after hours xxx-xxx-xxxx NBEMO notifies Maine Emergency Management Agency (MEMA) Duty Officer (24/7 at xxx-xxx-xxxx extension 5 and Comm.EOC@maine.gov
    - Notify the Nuclear Insurance Association of Canada (NIAC),
      401 Bay Street, Suite 1600,
      Toronto, ON M5H 2Y4 Canada
      General Manager, Colleen DeMerchant, t: xxx-xxx-xxxx*, email: colleen@niac.biz or Stephen Ramjist t* xxx-xxx-xxxx
    - Change in Activation Level message sent out through Everbridge or Distribution List (Menu's)
    - Activation message states action required for PEAC, NB TAG, Nuclear Control Group, or external agencies to participate virtually, in person or a combination. MS Teams invitation will be provided within the activation message.
    - NBEMO (through Everbridge or Distribution List (Menu's)) notifies the Nuclear Control Group - NBEMO PEAC (Menu G) & Nuclear Control Group (Menu N).

- Nuclear Control Group members notify their parent organizations; and
- NBEMO notifies external agencies (through Everbridge or Distribution List (Menu's)) - Senior Officials (Menu A) and IEMG (Menu I)
- **Joint Information Center (JIC)** is activated / stood up in the Communications room.
- The New Brunswick Technical Advisory Group is activated / Stood up in the Situation Room
- PEOC Operational Rhythm established.

- **For General Radiation Emergency following a Site Area Radiation Emergency**

  Same as Site Area Radiation Emergency with the following additions:

  - Change in Classification (Site Area to General Emergency) message sent out (PEOC remains a Level 3 – Full Activation) through Everbridge or Distribution List (Menu's)
  - Activation message states action required for PEAC, NB TAG, Nuclear Control Group, or external agencies to participate virtually, in person or a combination. MS Teams invitation will be provided with the activation message.
  - Everbridge Notification to the Warden Service advising of the General Radiation Emergency
  - Everbridge Notification to all residents and businesses out to 20 kms from PLNGS advising of the General Radiation Emergency and actions to follow.
  - Declaration of State of Emergency (SOE) from Minister of the Department of Justice and Public Safety
  - Everbridge Notification to the Warden Service advising of the Declaration of State of Emergency (SOE)
  - Everbridge Notification to all residents and businesses out to 20 kms from PLNGS advising of the Declaration of State of Emergency (SOE) and actions to follow.
  - NBEMO notifies RCMP Operational Communications Center at xxx-xxx-xxxx of the General Radiation Emergency (Triggers TCPs / Roadblocks / Access Control Points)
  - Issue Evacuation Planning Instruction
  - Prepare / Issue Evacuation Order
  - Everbridge Notification to the Warden Service advising of the Evacuation Order
  - Everbridge Notification to all residents and businesses out to 20 kms from PLNGS advising of the Evacuation Order and actions to follow.

- **For General Radiation Emergency following a Radiation Alert with no Site Area Radiation Emergency**

- NBEMO Operations Staff placed on Level 3 – Full Activation (Point Lepreau Nuclear Off-site Emergency Plan, Part 1 – Emergency Management System, Section 1.21, Provincial Emergency Operation Center (PEOC), Sub-section 1.21, PEOC Activation Levels.)

- NBEMO notifies RCMP Operational Communications Center at xxx-xxx-xxxx of the General Radiation Emergency (Triggers TCPs / Roadblocks / Access Control Points)
- Director NBEMO briefed.
- NBEMO Communications Officer briefed.
- Director of NBEMO will deploy the OEOC Manager to the OEOC with the Provincial Nuclear Preparedness Team to prepare for the deployment of the Monitoring and Decontamination Centers on Highway 1.
- Everbridge Notification to all residents and businesses out to 4 kms (AAZ) from PLNGS advising of the General Radiation Emergency and actions to follow:
- If a Prompt Evacuation of the 4 Km Automatic Action Zone (AAZ) is recommended from PLNGS – Evacuation Time Estimates (ETE) states 3 hours and 15 minutes once notified to evacuate Zone 1 and 2 at night.
- Issue Evacuation Planning Instruction - Prompt Evacuation of the 4 Km Automatic Action Zone (AAZ)
- Prepare / Issue Evacuation Order - Prompt Evacuation of the 4 Km Automatic Action Zone (AAZ)
- Everbridge Notification to the Warden Service advising of the General Radiation Emergency with instructions **NOT to deploy** (self-evacuate)
- Everbridge Notification to all residents and businesses out to 20 kms from PLNGS advising of the General Radiation Emergency and actions to follow.
- “Shelter in Place, take Potassium Iodide Tablets (KI Pills) or evacuate.”
- NBEMO notifies FNEP Duty Officer (24/7 at xxx-xxx-xxxx
- NBEMO notifies NB Regional Medical Officer of Health (MOH) in Saint John; RMOH SJ - (cell) 506-650-7837, (office) xxx-xxx-xxxx or after hours xxx-xxx-xxxx.
- NBEMO notifies Maine Emergency Management Agency (MEMA) Duty Officer (24/7 at xxx-xxx-xxxx extension 5 and Comm.EOC@maine.gov
- Notify the Nuclear Insurance Association of Canada (NIAC), 401 Bay Street, Suite 1600, Toronto, ON M5H 2Y4 Canada.
- General Manager, Colleen DeMerchant, t: xxx-xxx-xxxx, email: colleen@niac.biz or Stephen Ramjist t: xxx-xxx-xxxx

Note on Virtual Platforms: All organizations should adopt the best practice of leveraging the use of virtual platforms during response operations. To optimize the use of virtual environments in emergency response, organizations should ensure that staff are trained on the requisite platforms and functionality of its features.

Organizations who intend to utilize breakout rooms to facilitate virtual discussions should ensure that procedures reflect the nuances introduced by working remotely.

When hosting open chatrooms, ensure that there is a mechanism in place that alerts others on how the rooms will be used during operations.

A dedicated staff member should be assigned the responsibility for monitoring the chat regularly to ensure that dialogue can be maintained, and other staff are privy to discussions in between briefings. Alternatives to the breakout rooms can also be explored including separate meeting room links and/or project team channels.

NBEMO Menus - Distribution Lists:

- Menu A – Senior Officials (Select).
- Menu B – NBEMO Augmentees.
- Menu D – Regional Emergency Management Coordinators (REMC's).
- Menu F – Provincial Emergency Operations Center (PEOC) Staff, includes REMC's at Menu D.
- Menu G – Provincial Emergency Action Committee (PEAC).
- Menu I – International Emergency Management Agency (IEMG).
- Menu J – Public Safety Answering Points (PSAP); and
- Menu N – Nuclear Control Group (NCG).

2.2.5 Responsibility to Update Menus and Everbridge Mass Notification

NBEMO Operations are responsible to maintain and update the Menus listed above and ensure the Everbridge Notification system is updated with the current Menu's. NBEMO Nuclear Preparedness are responsible to maintain and update the Warden Service contact lists as well as the contact information for all residents and businesses out to 20 kms from PLNGS and ensure the Everbridge Notification system is updated with the current contact information.

2.2.6 Event Information Update Form

EVENT INFORMATION UPDATE FORM

Date of Report (yyyy-mm-dd):	**Time of Report**:
Declared Event Level	Off-site Protective Actions Recommended

(Yes, or leave blank)		(Yes, or leave blank)			
		Action	4 km AAZ	20 km DPZ	50 km CPZ
Radiation Alert		Administer KI			
Site Area Radiation Emergency		Shelter in place			
General Radiation Emergency		Evacuation			
Severe Accident		Food Controls			

ERO Activation or Notification (Yes or No)		Site Personnel Safety (Yes or No or Unknown)	
Incident Command Staff (STOIC Classroom 1)		Accounting Completed	
Planning Section (STOIC Classroom 6)		Persons Missing	
ERO Relocated to OEOC (ICS & Planning)		Injuries	
Offsite Emergency Operations Centre		Personnel Evacuation Required	
Contingency Support Personnel		Radiation Surveys in Progress	
NBEMO (Duty Officer notified)			
CNSC (Duty Officer notified)			

Meteorological Information			
Wind direction is **from**	degrees	Precipitation (snow, sleet, rain, etc.)	
Wind Speed is:	km/h	Current Weather (clear, overcast, fog, etc.)	

Reactor Information			
Control (Yes or No)		Cool	
SDS1 tripped?		Primary Heat Sink	
SDS2 tripped?		Secondary Heat Sink	
Contain (Yes, No, or Unknown)		ECC Status (HP, MP, LP)	
Containment boxed up?		Fuel Status (Yes, No, or Unknown)	
Containment confirmed?		Fuel Failure	
Dousing Initiated?		Severe Accident Sampling and Monitoring	
Airborne Release in Progress?		Gross Gamma	
Liquid Release in Progress?		Hydrogen (in percent)	
		Radioiodine/Noble Gas	

Procedure(s) In Use (OM, APOP, EOP, SAMG, etc.)

Accident description and trend (improving, stable, deteriorating):
Prepared By: **Verified By SS/IC**:

FAX to the following groups:		Scan to Event Information Update Board on WebEOC
NBEMO	453-5513	Planning Section (Classroom 6)
CNSC	1-613-947-0409	Offsite Emergency Operations Centre (OEOC)
		Incident Command Post (Classroom 1)

Figure 2.2.6

2.3 EMERGENCY PREPAREDNESS CATEGORIES

2.3.1 Category I - Description

Facilities, such as nuclear power plants, for which on-site events (including those not considered in the design) are postulated that could give rise to severe deterministic effects off the site that would warrant precautionary urgent protective actions, urgent protective actions or early protective actions, and other response actions to achieve the goals of emergency response in accordance with international standards, or for which such events have occurred in similar facilities.

PLNGS is a category I facility.

2.3.2 Category V – Description

Areas within emergency planning zones and emergency planning distances in a State for a facility in category I or II located in another State.

New Brunswick considers the provinces of Nova Scotia, Prince Edward Island, Quebec, and the state of Maine in this category and is on distribution for New Brunswick PEOC activation and situation reports to maintain situational awareness during a radiation emergency at PLNGS.

- The province of Nova Scotia is 63 kms South of PLNGS across the Bay of Fundy.
- The province of Prince Edward Island is 252 kms Northeast of PLNGS.
- The province of Quebec is 313 kms Northwest of PLNGS.
- The state of Maine, USA, is 44 kms Southwest of PLNGS.

2.4 PROTECTIVE ACTIONS AND OTHER RESPONSE ACTIONS – PROTECTION STRATEGY

2.4.1 Potassium Iodide Tablets (KI)

Radioactive iodine tends to concentrate in the thyroid gland and can cause early or latent effects such as thyroid cancer. Ingesting stable, non-radioactive iodine, before or immediately after exposure to radioactive iodine saturates the thyroid gland and prevents the absorption of radioactive iodine.

The dose that can be averted by taking stable iodine just before exposure to the release is equal to the projected dose to the thyroid from inhalation without the administration of stable iodine.

Figure 2.4.1

2.4.2 Potassium Iodide Tablet (KI) Inventory

Figure 2.4.1Address	**Quantity in Packs (Pkg) or Tablets**	**Location**	**Expiry Date**	**Totals**
Department of Health Regional Office, 5th Floor. 55 Union Street Saint John, NB E2L 3X1	100 Pkg / 2,000 tablets	Health Protection Lab	**2032**	**2,000** **100 Pkg**
Department of Health 41 King Street St. Stephen, NB E3L 2C1	100 Pkg / 2,000 tablets	Storage Closet by the Back Door	**2032**	**2,000** **100 Pkg**
Campobello Health Center Welshpool, Campobello, NB E0G 3H0	100 Pkg / 2,000 tablets	Treatment Room	**2032**	**2,000** **100 Pkg**
Deer Island Health Center 999, Route 772 Fairhaven, NB E5V 1P2	100 Pkg / 2,000 tablets	Treatment Room	**2032**	**2,000** **100 Pkg**
Grand Manan Hospital PO Box 219, North Head Grand Manan, NB E0G 2M0	100 Pkg / 2,000 tablets	Med Room	**2032**	**2,000** **100 Pkg**
RCMP District 1 St. George 77 Mount Pleasant Road PO Box 1005 St. George, NB E5C 3S9	100 Pkg / 2,000 tablets	Storage Room - on top of cabinet	**2032**	**2,000** **100 Pkg**

Off-Site Emergency Center 3 Magaguadavic Drive, St George, NB, E5C 3H7	100 Pkg / 2,000 tablets	Equipment Room	**2032**	**2,000** **100 Pkg**
Pt. Lepreau Generating Station Box 10, Pt. Lepreau, NB E0G 2H0	200 Pkg / 4,000 tablets	EP Staff	**2032**	**4,000** **200 Pkg**
Charlotte County Hospital 4 Garden Street St. Stephen, NB E3L 2L9	100 Pkg / 2,000 tablets	ER (E-37)	**2032**	**2,000** **100 Pkg**
Fundy Health Center 34 Hospital Street Blacks Harbour, NB E5H 1K2	100 Pkg/ 2,000 tablets	Med Room	**2032**	**2,000** **100 Pkg**
Saint John Regional Hospital 400 University Avenue Saint John, NB E2L 4L2	100 Pkg / ,2000 tablets	Pharmacy Stock Room	**2032**	**2,000** **100 Pkg**
Warden Service, Home Delivery 1574 Homes	1574 Pkg / 31,480 tablets	Every Residence	**2032**	**32,000** **1,600 Pkg**
Fundy Shore School Approximately 65 students / 12 staff	10 Pkg/ 200 tablets	Principal's Office	**2032**	**200** **10 Pkg**
Ridgeview Manor Special Care Home Approximately 10 residents / 3 staff	10 Pkg / 60 tablets	Storage Cabinet	**2032**	**60** **3 Pkg**
MDC East / MDC West (10 packs each)	200 Pkg / 4,000 tablets	PPE Trailer	**2032**	**4,000** **200 Pkg**
Regional Emergency Operations Center (Region 9), St John	1,000 Pkg / 20,000 tablets	REOC	**2032**	**20,000** **1,000 Pkg**
Regional Emergency Operations Center (Region 10), St George	700 Pkg / 14,000 tablets	REOC	**2032**	**14,000** **700 Pkg**
New River Beach Provincial Park 78 New River Beach Road, New River Beach, NB, E5J 1G7	4,760 tablets	Park Office	**2029**	**4760** **238 Pkg**
Warden Service	200 Pkg / 4,000 tablets (20 wardens – 10 pkg each / 200 tablets)	Carried with each warden	**2032**	**5,000** **250 Pkg**

Note: Potassium Iodide Tablets (KI) has been distributed to each residence within 20 kms of the Point Lepreau Nuclear Generating Station as well as businesses, Fundy Shore School, and Ridgeview Manor Special Care Home.

Distribution took place in the summer of 2021. The current supply will expire in April 2032.

The **Chief Medical Officer of Health (CMOH)** or his/her designate in New Brunswick is the authority to direct the public to take Potassium Iodide Tablets.

2.4.3 Sample Letter to Parents Fundy Shore School (Reference Potassium Iodide Tablets (KI))

Date:

Dear Parents of Fundy Shores School:

Earlier in the fall, Principal Click here to enter text. and I had a meeting with Medical Health Officer Dr. Click here to enter text. Dr. Click here to enter text. wants to have a supply of Potassium Iodide tablets available for students at the school in the event of a nuclear accident at Point Lepreau.

Dr. Click here to enter text. has provided us with the following information on the tablets and why he is recommending they be at the school and available for students and staff.

Certain forms of iodine help your thyroid gland work properly. Most people get the iodine they need from foods like iodized salt or fish. The thyroid can store or hold only a certain amount of iodine. In a nuclear radiation emergency (such as in a severe nuclear power plant accident or a nuclear bomb explosion), radioactive iodine may be released into the air and can result in dangerous radioiodine risks in areas up to hundreds of kilometers from the release or burst point.

This material may be breathed or swallowed. It may then enter the thyroid gland and damage it. The damage would probably not show itself for years but can result in disease like thyroid cancer. Children are most likely to have thyroid damage (Sources: *WHO/SDE/PHE/99.6 and The Effects of nuclear weapons, US Department of Defense, 1977*).

If you take **RadBlock**, Potassium Iodide tablets, it will fill up your thyroid gland with stable (non-radioactive) iodine and block or reduce the chance that dangerous radioactive iodine will enter your thyroid gland.

The tablets are only available in solid form; they are scored and can be easily broken. They can be crushed and put in milk, jello, pudding etc. Dr. Click here to enter text feels the pill is an appropriate size for elementary students to swallow. Dr. Click here to enter text, as Medical Health Officer, would direct Principals when to administer the tablets to students and staff.

We are asking parents to complete the permission form attached and return to the school. If you have any questions, please contact the principal Click here to enter text.

Yours truly,

_____

Name

Superintendent

2.4.4 Parent Permission Form (Reference RadBlock Potassium Iodide Tablets Tablets)

I have read the attached letter about the use of Potassium Iodide tablets at Fundy Shores in the event of a nuclear accident at Point Lepreau. The use of the tablets would be at the direction of Dr. Click here to enter text. Chief Medical Health Officer.

☐ I give consent for my son/daughter to be given a "KI" tablet.

☐ I do not give consent for my son/daughter to be given a "KI" tablet.

Date: Click here to enter text.

Name: Click here to enter text. (print)

Signature: _____

2.4.5 Sheltering in Place

Sheltering in place is recommended when the radiation release is predicted to be of a short duration (e.g., less than 6 hours). Sheltering in place for as much as 24 hours may be recommended by the Nuclear Control Group / TAG to allow time to organize an evacuation. KI should be administered in conjunction with the shelter in place order or if evacuation is to be carried out through a radioactive plume.

Sheltering is relatively easy to implement, but it may not be possible to extend it for long periods of time. Sheltering will provide some protection against exposure via all the major exposure pathways during the early phase of a nuclear or radiological emergency. Sheltering 'in place' can also be used whenever individuals in a potential area of risk are instructed to 'go inside and shut the windows and doors and listen to the radio or television for further instructions' while further assessments of preparations for evacuation are being made. Sheltering can also be used whenever conditions make evacuation dangerous (e.g., in severe weather conditions).

The effectiveness of sheltering varies greatly, depending on the characteristics of the radioactive release or the sources of the exposure (e.g., a criticality), the construction of the shelter and the exposure pathway. External exposure can be reduced by a factor of ten by sheltering in a large structure, while a lightweight building provides little protection from external gamma radiation. Estimating the protection provided against inhalation of radioactive material in the plume by sheltering is very complex. For a short release, most buildings will reduce inhalation doses by a factor of two or three. However, the reductions in the inhalation doses resulting from long releases typically decrease rapidly after a few hours as the concentrations of radioactive material in the structure increase. After passage of the plume, the inhalation doses in most structures could even be greater than those outside if some of the contamination from the plume is trapped in the shelter. Consequently, it should be recommended that normal shelters be ventilated (aired out) after a major release has terminated.

Because of the great variability of building structures, shelters can be considered as belonging to one of three categories, as shown below.

Predetermined shelter locations should be provided with a means of determining whether radiation levels are acceptable (e.g., measuring instruments and criteria for judging the results) and arrangements for meeting human needs.

Shelter Types and Uses:

Type	Description	Uses and Recommendations
Normal	Typical European or North American (Canada) homes and their basements.	May not provide adequate protection (e.g., from a major airborne plume close to facility in threat Category 1) should be used in the event of a major release if evacuation is impossible (e.g., in a severe storm) or when preparing to evacuate.
Substantial	Inside halls of large multi-story buildings or large masonry structures away from walls or windows. Estimated protection factor of 10 from external and inhalation dose.	May provide adequate protection for short periods. Can be used as urgent protection for up to a day. However, the effectiveness should be assessed by means of monitoring and users should be provided with instructions on application.
Special	Designed to provide a reduction by a factor of more than 100 in inhalation doses.	Provides adequate protection. Should be used as the primary urgent protective measure for the design period of the shelter.

Figure 2.4.5

The distances within which shelter is ineffective in reducing the risk of severe deterministic effects should be based on site specific analysis; however, for the most severe emergencies postulated for nuclear power plants, shelter in a typical frame house of the type found in Canada is projected to provide inadequate protection within about the first 3 km from the site of the emergency.

Note: reference; CSA N1600-21 General Requirements for Nuclear Emergency Management Programs, Section 7.6.4.3, Shelter in Place, page 55.

Sheltering involves keeping members of the population indoors, closing all ventilation and blocking all air paths into the dwellings to reduce radiation exposure from cloud shine, ground shine and inhalation. In addition to protecting the population, sheltering allows better and more effective communication with the affected population.

Once a shelter in place is called, residents are expected to immediately go indoors, bring all children and pets with them, and to close and lock windows and doors. All ways in which outside materials may enter the shelter area should be eliminated, including closure of fireplace dampers, shutting off ventilation or climate control systems, and prepare an area for pets to eliminate waste that does not require allowing them outside. After an announcement that the shelter in place is over, residents would be directed to evacuate or go outside and open all doors and windows to ventilate their home or business.

2.4.6 Evacuation

An evacuation is the prompt removal of the population from the affected area. It is generally the most effective protective action against major airborne releases of radioactivity.

Timely evacuation can prevent exposures via all possible exposure pathways and removes individuals from the proximity of the emergency so that they are no longer an immediate concern for response officials. Numerous evacuations have been carried out in response to emergencies involving natural, chemical, and radiological hazards and terrorist activities.

Studies of these evacuations show that the risks of the evacuation itself for the normal population were smaller than those due to normal travel under similar weather conditions. However, evacuation may be more dangerous for special groups in the population, such as hospital patients, if it is not prepared for adequately. The following should be considered in preparing for evacuation.

Criteria and decision making:

- Evacuation time estimates.
- Notification to the public.
- Established evacuation routes and traffic control.
- Access control and protection of property.
- Arrangements for special population groups and facilities.
- Consideration of farm animals and pets; and
- Provisions for meeting the human needs of evacuees.

See map below.

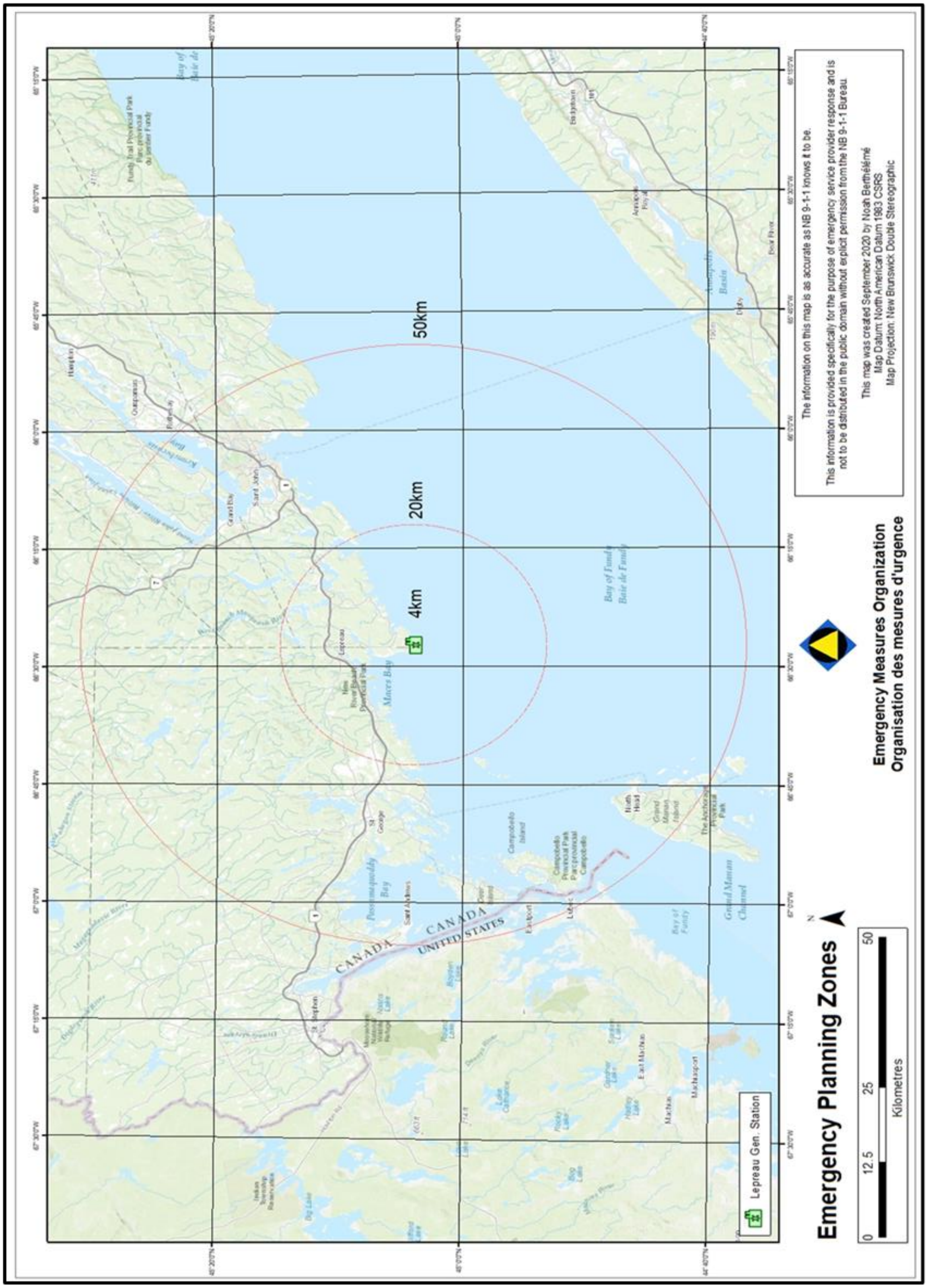

Emergency Planning Zones
Lepreau Gen. Station
4km
20km
50km
0
12.5
25
50
Kilometres
Emergency Measures Organization
Organisation des mesures d'urgence
The information on this map is as accurate as NB 9-1-1 knows it to be.
This information is provided specifically for the purpose of emergency service provider response and is not to be distributed in the public domain without explicit permission from the NB 9-1-1 Bureau.
This map was created September 2020 by Noah Berthélémé
Map Datum: North American Datum 1983 CSRS
Map Projection: New Brunswick Double Stereographic
Bay of Fundy
Baie de Fundy
CANADA
UNITED STATES

Figure 2.4.7

2.4.8 Temporary Relocation and Resettlement

Temporary relocation is used when there is a need to keep the population out of the affected area for a period exceedingly approximately seven days but not more than a few months. This measure requires that mass care facilities be provided to the affected population. It is expected that the temporarily relocated population will be able to return to their homes.

Resettlement is permanent. It is adopted when the dose to the affected population over a lifetime would exceed a certain criterion. However, decisions in that later stage rely on a detailed analysis of the consequences, land use and exposure pathways. They are also strongly influenced by social and political factors. Considerably more time is available for making those decisions than the time allowed for urgent protective action recommendations.

2.4.9 Protective Action

An action for the purposes of avoiding or reducing doses that might otherwise be received in an emergency exposure situation or an existing exposure situation.

Precautionary / Urgent and Early Protective Actions:

Precautionary / Urgent Protective Action - A precautionary urgent protective action is an urgent protective action taken before or shortly after a release of radioactive material, or an exposure, based on the prevailing conditions to avoid or to minimize severe deterministic effects.

Urgent Protective Action - A protective action in the event of a nuclear or radiological emergency which must be taken promptly **(usually within hours to a day)** to be effective, and the effectiveness of which will be markedly reduced if it is delayed.

Early Protective Action - A protective action in the event of a nuclear or radiological emergency that can be implemented within **days to weeks** and still be effective.

- The most common early protective actions are relocation and longer-term restriction of the consumption of food potentially affected by contamination.
- Urgent protective actions include iodine thyroid blocking, evacuation, short term sheltering, actions to reduce inadvertent ingestion, decontamination of individuals and prevention of ingestion of food, milk or drinking water possibly with contamination.

Sheltering; evacuation; prevention of inadvertent ingestion; restrictions on food, milk and drinking water and restrictions on the food chain and water supply; restrictions on commodities other than food; contamination control; decontamination; registration; reassurance of the public. Temporary relocation; prevention of inadvertent ingestion; restrictions on food, milk and drinking water and restrictions on the food chain and water supply; restrictions on commodities other than food; contamination control; decontamination; registration; reassurance of the public.

Health screening based on equivalent doses to specific radiosensitive organs (as a basis for longer term medical follow-up), registration, counselling. Counselling to allow informed decisions to be made in individual circumstances for taking protective actions and other response actions to reduce the risk of stochastic effects from the ingestion of food, milk and drinking water and from the use of other commodities in a nuclear or radiological emergency.

Restrict consumption, distribution and sale of non-essential food, milk and drinking water and restrict the use and distribution of other commodities.

Replace essential food, milk and drinking water as soon as possible or relocate the people affected if replacements are not available. Estimate the doses of those who might have consumed food, milk and drinking water or used other commodities to determine whether this may have resulted in doses warranting medical attention.

2.5 PROTECTION OF EMERGENCY WORKERS – PROTECTION STRATEGY

2.5.1 Protection of Emergency Workers and Helpers

Procedures are in place to protect emergency workers and to protect helpers in response to a radiation emergency at the Point Lepreau Nuclear Generating Station (PLNGS).

Definitions:

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

Off-site Emergency Worker - A person having specified duties as a worker in response to a nuclear emergency, is required to remain in or enter areas affected or likely to be affected by radiation from an accident, might be exposed while performing their duties, and for whom special safety arrangements are required. This may include police officers, firefighters, medical personnel, drivers and crews of evacuation vehicles and field teams (OEOC Staff and MDC Staff).

Employer – A person or organization with recognized responsibilities, commitments, and duties towards a worker in the employment of a person or organization by a mutually agreed relationship.

Helpers – Members of the public who willingly and voluntarily help in response to a nuclear or radiological emergency.

2.5.2 Off-Site Emergency Workers Protection Strategy

The Protection Strategy which includes dose management for off-site emergency workers. The purpose of this protection strategy is to ensure that exposures received by off-site emergency workers are minimized to the extent possible and do not exceed limits where health effects would be expected.

In New Brunswick all provincial emergency workers fall under the Point Lepreau Nuclear Generating Station’s Radiation Protection Program.

The Point Lepreau Nuclear Generating Station provide for the protection of emergency workers by means of training to include radiation 101, participation in drills, participation in training events and exercises. We monitor and control dose received management to include: issuing

dosimetry, recording dose received, provision of equipment (providing all radiation detection equipment with qualified operators) and iodine thyroid blocking (provided to all residents out to 20 kms from the utility as well as emergency workers), obtaining informed consent and medical actions and psychological counselling (coordinated with provincial Health Authority and the Point Lepreau Nuclear Generating Station), as appropriate.

Emergency workers in New Brunswick are identified (registered) as part of their training and employment.

Emergency Workers employed on the Monitoring and Decontamination Centers receive detailed training on MDC concept of operations, specific training on operating procedures and equipment.

All emergency workers on reporting to the MDC or the Off-site Emergency Operations Center (OEOC) are registered, issued dosimetry, issued Personal Protective Equipment (PPE) and thyroid blocking iodine. They are briefed on the risks.

Other locations where emergency workers are employed are the multiple assurance monitoring sites established in locations such as reception centers, ports or harbours, hospital access points and hospitals.

2.5.3 Training and PPE

NBEMO as well as all the provincial departments and agencies together assess the anticipated hazardous conditions and understand the shared responsibilities in the response at all levels. The needs have been identified and arrangements have been put in place for training designated emergency workers (MDC staff from provincial departments and agencies, OEOC staff – warden service, RCMP, NBEMO OEOC Coordinator, Amateur Radio operators).

2.54 Personal Protective Equipment (PPE)

PPE has been sized, respirators have been fit tested, PPE issued to MDC workers. Qualified radiation protection workers from the Point Lepreau Nuclear Generating Station accompany each portable portal monitor and each hand-held frisker or radiation detection piece of equipment. Iodine Thyroid Blocking and TLDs are issued to each emergency worker on registration.

In New Brunswick we ensure that arrangements are in place for the protection of emergency workers and protection of helpers in an emergency for the range of anticipated hazardous conditions in which they might have to perform response functions. These arrangements include:

- Training those emergency workers designated as such in advance.
- Providing emergency workers not designated in advance and helpers in an emergency immediately before the conduct of their specified duties with instructions on how to perform the duties under emergency conditions (‘just in time’ training).
- Managing, controlling, and recording the doses received.
- Provision of appropriate specialized protective equipment and monitoring equipment.
- Provision of iodine thyroid blocking, as appropriate, if exposure due to radioactive iodine is possible.

- Obtaining informed consent to perform specified duties, when appropriate; and
- Medical examination longer terms medical actions and psychological counselling, as appropriate.

2.5.5 Framework for Protection of Emergency Workers and Helpers

In New Brunswick we ensure that arrangements are in place for managing, controlling, and recording dose received by emergency workers and helpers. We obtain informed consent by emergency workers for specific tasks and provide medical support to emergency workers when needed.

Generic Criteria for the Off-Site Emergency Workers Protection Strategy

Protective Action Strategy	Protective actions	Dose classification	Emergency dose limit
Off-site Emergency Workers Protective Action Strategy	Dose management	Effective	50 mSv over the duration of the response

The Generic Criteria for the Off-Site Emergency Workers Protection Strategy are specified in terms of projected dose.

2.5.6 Framework for Protection of Emergency Workers and Helpers

The operating organization (PLNGS) and response organizations (NB Provincial Departments and Agencies) shall ensure that emergency workers who undertake emergency response actions do not receive doses above the effective dose of 50 mSv; that they have been clearly and comprehensively informed in advance of associated health risks as well as of available protective measures; and that they are, to the extent possible, trained in the actions that they might be required to take.

Training for designated emergency workers is a requirement in the planning for a response to a radiation emergency. Providing Personal Protective Equipment (PPE), providing **Thyroid Blocking Iodine and monitoring equipment (TLD)** is essential to all designated emergency workers.

Emergency workers not designated as such in advance shall not be the first emergency workers chosen for taking actions that could result in their doses exceeding the guidance values of dose for lifesaving actions, as given in Appendix I. Helpers in an emergency shall not be allowed to take actions that could result in their receiving doses more than an effective dose of 50 mSv.

2.5.7 Fitness for Duty

Fit for duty means able to perform the duties of the job in a safe, secure, productive, and effective manner.

Fitness-for-duty means that an individual is in a physical, mental, and emotional state that enables the employee to perform the essential tasks of his or her work assignment. This fitness ensures the work is completed in a manner that does NOT threaten the safety or health of oneself, co-workers, property, or the public at large.

Fit for Duty also enables an employer to place an applicant in a job where they can succeed. If employers are aware of an applicant's physical capabilities and limitations, they can accommodate the applicant's needs.

2.6 HAZARD ASSESSMENT RADIOLOGICAL / NUCLEAR

Hazard Description	Protective measures taken in situations in which chemical, biological, radiological, or nuclear hazards may be present.		
Possible Effects	Casualties / Danger to public health / Deaths / Evacuation / Shelter in Place		
Immediate Actions (IA)			
PLNGS	Classify the level of the emergency – notify NBEMO.		
NBEMO Actions	Initiate notification procedures for activation, alerting and assembly.		
REMC Actions	Maintain Situational Awareness, Activation REOC		
Regional District Manager (RDM) Actions	Fire Chiefs Report Critical Infrastructure (CI) impacts to RDM who reports to REMC.		
Municipal Actions	Municipal first responders report on CI impacts. Municipality may consider EOC activation. Info REMC.		
Provincial Actions			
The following actions may/may not occur, lead agencies procedures take precedence.			
Incident Command Structure	**Suggested Agencies**	**Possible Actions**	**Remarks**
Command: Incident Commander is responsible for all incidents or event activities. Although other functions may be left unfilled, there will always be an Incident Commander.	• DELG • NB Power • Fire • Police • Ambulance NB • Health • DAAF • Education	• Protective Actions • Issue public warnings • Use of Everbridge / Alert Ready (if applicable) • Activate OEOC • Deploy / Preposition MDC's	• Identify resources at hand. • Identify resources lacking. • Identify resources required. • Mutual Aid request • Assess Regional Assistance
Operations: Responsible for directing the tactical actions to meet incident objectives.			
Plans: Responsible for the collection,			

evaluation, and display of incident information, maintaining status of resources, and preparing the Incident Action Plan and incident-related documentation.	• DTI • Fire Marshal • CNSC • Health Canada	• Evacuation or sheltering in place. • Potassium Iodide Tablets (KI Pills)	• Assess Provincial Assistance • Assess National Assistance
Logistics: Responsible for providing adequate services and support to meet all incident or event needs.			
Finance: Responsible for keeping track of incident-related costs, personnel, and equipment records, and administering procurement contracts associated with the incident or event.			
Additional Instructions: **ICS Forms**			

Figure 2.6.1

2.7 RCMP CONTROL MEASURES

2.7.1 RCMP Traffic Control Points (TCP): It will be the direct responsibilities of the District Commanders for South and West Districts to ensure that Traffic Control Points are set up to alert residents and motorists on route to the affected areas.

In support of a general response, these pre-identified Traffic Control Points will be established at:

- the intersection of Hwy 790, Malcolm Meehan Road, and Hwy 175, Lepreau; and
- the intersection of Hwy 790 and the Malcolm Meehan Road, South Musquash.

These locations will be adjusted if a health hazard exists, or as conditions dictate.

RCMP Members dedicated to Traffic Control Points will fall under the authority and direction of the RCMP LO at the PLNGS OEOC, through the Traffic Control Coordinator.

2.7.2 RCMP Traffic Control Points (TCPs): If an evacuation of the Point Lepreau area is ordered, Traffic Control Points will be established to control the flow of evacuees (the Evacuation Plan can be found at 2.9 within this plan).

In support of an Evacuation Order, these pre-selected Traffic Control Points will be established at:

- Hwy 1, Exit 60, at the Intersection with Hwy 780 & 785 (Pennfield Corner).
- Hwy 1 and Hwy 175 exit 69 at both on ramps.
- Hwy 1, east of the Exit 97 overpass, Musquash.
- Hwy 780 and at the Alex Jack Detour Road, and
- Intersection (TCP) at Woodland Road and Monroe Road.

Prepositioning **(staging)** of equipment and human resources at TCPs may also be ordered in advance of an actual evacuation order.

These TCP locations may be adjusted as conditions change and/or dictate.

RCMP Members dedicated to TCPs will fall under the authority and direction of the RCMP Ops NCO at the PLNGS OEOC, through the Traffic Control Coordinator.

2.7.3 RCMP Evacuation Team & Control Zone Security

The Evacuation Team leader will communicate with the Chief Warden, located at the OEOC, to execute the following:

- Ensure that required evacuation notifications have been given and to identify any specific problems or needs relating to the evacuation.
- Supervise and co-ordinate patrols of the affected area.
- Canvas all dwellings and ensure a complete evacuation of all except essential emergency personnel; and
- Provide for continuing security/patrols of the evacuated area, subject to the nature of the hazard.

2.7.4 RCMP Concept of Operations: The RCMP Concept of Operations for any response in support of the NB Department of Public Safety Point Lepreau Off-Site Emergency Plan is modeled after policies and procedures outlined in the RCMP J Division Mobilization Plan.

This Concept of Operations recognizes that any response in support of the Point Lepreau Off-Site Emergency Plan will evolve in four (4) Stages which are defined as:

- Rapid Response (Stage 1) 0-8 hrs.
- Deliberate Response (Stage 2) 9-24 hrs (may extend to between 2-7 days).
- Sustained Response (Stage 3) 8-30 days: and
- Long-Term Response (Stage 4) Beyond 30 days (if required).

This RCMP Concept of Operations will only address the first three (3) Stages.

Should an event occur, that will require a Long-Term (Stage 4) Response on the part of the RCMP, specific plans or agreements will be required to support the ongoing demands on/for Division resources.

The early identification of, and planning for, a Long-Term Response will be critical in supporting the RCMP's ability to maintain the continued delivery of critical Policing Services throughout "J" Division.

Stage	Actions
RCMP Rapid Response Stage 1 (0-8 hrs)	RCMP Command & Control Team members to the following locations: • RCMP Liaison Officer (LO) at the Point Lepreau Off-Site EOC. • Region 10 REOC (St George). • RCMP - RSC 10 Office - for RSC 10 Business Continuity Tasking. • Region 9 REOC (Saint John) including overseeing collateral traffic control. • RCMP - RSC 9 Office - for RSC 9 Business Continuity Tasking. • Emergency Planning Zone (EPZ) Traffic Control Coordinator. • Evacuation Team Leader; and • RCMP Site Liaison Officer (RCMP LO) for the off-site EOC. General Duty - First Responder Team members to establish: Traffic Control Points at: • Intersection of Hwy 790, Malcolm Meehan Road, and Hwy 175, Lepreau (2 Mbrs, 1 marked PC); and • Intersection of Hwy 790 at Malcolm Meehan Road, South Musquash (2 Mbrs, 1 marked PC). First Responder Team members to be pre-positioned (staged) and prepared to establish: Traffic Control Points at: • Intersection of Hwy 1 @ Exit 60 - Hwy 780/785 (Pennfield Corner): (3 or 4 Mbrs & 2 marked PCs). • Hwy 1- south bound lanes, east of the Exit 97 overpass, Musquash (4 Mbrs & 2 marked PCs); and • Hwy 780 and Alex Jack Detour Road (1 Mbr & 1 marked PC). • Intersection (TCP) at Woodland Road and Monroe Road (1 Mbr & 1 marked PC). Evacuation Control Points at: • Intersection of Hwy 1 at exit 60 - Hwy 780/785 (Pennfield Corner) (2 Members & 1 marked PC – supplemented by 2 Point Lepreau Wardens); and • Hwy 1- northbound lanes, at the Exit 97 overpass, Musquash: (3 Members & 2 marked PCs - supplemented by 2 Point Lepreau Wardens)

	Evacuation/Security Team at: • The OEOC (4 Members & 3 marked PCs – supplemented by 4 Point Lepreau Wardens).
RCMP Deliberate Response - Stage 2 (9-24 hrs)	This stage may be extended to between 2-7 days, if required. The established Command & Control structure will remain in place; and J Division Tactical Troop will backfill the General Duty - First Responder Rapid Response Team members. The Rapid Response Team members will, then, be released to return to their home units
RCMP Sustained Response - Stage 3 (8-30 days)	In the Sustained Response Stage: • The established Command & Control structure will remain in place; and The J Division Tactical Troop will be supplemented by additional J Division resources, and/or resources from outside the Division (per the J Division Mobilization Plan). • Duties of RCMP Members at Roadblocks & Traffic Control Points (TCPs) / Evacuation Control Points: • Prior to establishing roadblocks or Traffic Control Points (TCPs), obtain specific directions and information relating to the nature of the emergency and existing health hazards. This information should be obtained from the RCMP LO or the member representing him/her at the Off-Site EOC. • Refuse access to the EPZ to all but identifiable emergency response personnel / vehicles, NBEMO Staff/Vehicles, or NB Power employees/contractors who are in possession of valid pass issued by NB Power Security through the established Staging Area. • Direct anyone who is not in possession of a valid pass to the NB Power Staging Area. If the Staging Area has not been established, seek advice from NB Power through the Off-Site EOC. • Ensure that a written record is made of all persons and vehicle license plates entering and exiting the EPZ; do not delay emergency vehicles. Wardens could be delegated this task. • Members at roadblocks are to remain in location until relieved, or until authorized to move by the traffic control coordinator or the RCMP LO. • With the assistance of the DPS Peace Officers on site, establish a secure parking area for contaminated or unserviceable evacuee and service vehicles. • Re-direct all in-bound traffic to the NB Power Staging Area and away from the EPZ in a manner as to avoid congestion of the outbound routes. No inbound vehicles are to be parked on the road shoulder; and • Use Personal Protective Equipment (PPE), as directed, including personal dosimeters (available at the PLNGS OEOC or at the MDC). Duties of Point Lepreau Wardens Assisting at Roadblocks & Traffic Control Points (TCPs)/ Evacuation Control Points: • Will maintain a log of all activities and communications. • Confirm the identity of all residents departing the evacuation area and annotate the demographic survey report; accordingly, include the time of departure and destination. • When so directed, dispense KI pills and Instruction cards to departing residents; and • Assist and advise RCMP members regarding local knowledge of residents and the geographical area.

RCMP "J" Division Response Procedures– MDC Support

The Concept of Operations outlined in the Point Lepreau Off-Site Emergency Plan, Policing Services, is established with the following exceptions and assumptions:

Exceptions

The decontamination procedures used will be those defined in the MDC Procedure Manual.

Assumptions

Control Zones:

- The Evacuation Control Zone will consist of three zone Classifications:
    - Hot Zone - The wearing of FULL PPE is required.
    - Warm Zone - The wearing of FULL PPE is required; and
    - Cold Zone - No PPE Required.
- An RCMP response will result in:
    - Fifteen (15) Members assigned duties within the Hot Zone.
    - No Members being assigned duties within the Warm Zone; and
    - Nine (9) Members assigned duties within the Cold Zone.

NB Power / PLNGS Security Staging Area:

- NB Power/PLNGS Security will establish a Staging Area at the limits of the Evacuation Control Zone where ALL Personnel and Equipment destined for the Nuclear Generating Station will be triaged. Note: Triage protocol for the movement of personnel, vehicles, equipment, and goods to/from the Nuclear Generating Station is to be established in joint co-operation with NB Power, NBEMO, and RCMP "J" Division, and included as part of the Point Lepreau Off-Site Emergency Plan; and
- NB Power/PLNGS Security will establish Mass Transportation strategies. For instance, the utilization of school buses is to be employed for the movement of personnel between the Staging Area and the PLNGS to reduce congestion at the Traffic Control Points and MDC.

Traffic Control Point - Hwy 1 @ Exit 112 (Lorneville Industrial Park):

- RCMP will establish a Traffic Control Point on Highway 1 at Exit 112 (Lorneville Industrial Park) and screen all vehicles and personnel arriving.

  Will permit:

All First Responder Teams and Vehicles (Police / Fire / Ambulance) to proceed to the next Traffic Control Point without delay; and

Direct all personnel, vehicles and/or equipment en route to the Nuclear Generating Station to the NB Power/PLNGS Staging Area for triage.

	Will not permit: Unauthorized persons or vehicles beyond this point. • Only after valid passes have been obtained for each person and each vehicle from NB Power/PLNGS Security through the Staging Area will the personnel and vehicles be allowed to proceed to the MDC Traffic Control Point on the east side of Hwy 1 @ Exit 103. MDC Traffic Control Point @ Exit 103 (cold zone): • Only personnel and vehicles with valid passes will be permitted to pass MDC Traffic Control Point and enter the Warm/Hot Zones. Exiting the Hot Zone: • All personnel exiting the Hot Zone must pass through MDC. Note: This includes all those who may have been previously checked prior to arriving at the MDC; and • Vehicles will not be permitted to exit the Hot Zone. Once a vehicle has entered the Hot Zone the vehicle and its equipment/cargo are considered contaminated and must remain within the Hot Zone. Standard Operating Procedures: • The RCMP will establish Standard Operating Procedures (SOPs) for each Roadblock and Traffic Control Point. Collateral Traffic Control Measures: • That RCMP, in conjunction with partner agencies, will be required to establish additional traffic control measures to redirect all traffic flow from Hwy 1 between the intersections of Hwy 7 at Saint John, and Hwy 3 at St. Stephen; and • Collateral traffic control measures are not defined in the Point Lepreau Off-Site Emergency Plan.

Figure 2.7.4

2.8 WARDEN SERVICE - POINT LEPREAU WARDEN ZONES

2.8.1 Introduction

New Brunswick employs a twenty-kilometer Emergency Planning Zone (EPZ), centered on the Point Lepreau Nuclear Generating Station, in southern New Brunswick.

For emergency response purposes, the area is sub-divided as follows:

- Fourteen zones serviced by the Lepreau Warden Service: and
- Three zones' services by the Department of Energy and Resource Development.

2.8.2 Maces Bay – Dipper Harbour Area:

- Zone One – Maces Bay.
- Zone Two – Dipper Harbour.
- Zone Three – Chance Harbour; and
- Zone Four – Little Lepreau.

2.8.3 New River Beach – Pennfield Area:

- Zone Five – New River Beach.
- Zone Six – Pocologan;
- Zone Seven A - Seeleys Cove.
- Zone Seven B – Pennfield South of Highway 175.
- Zone Seven C - Pennfield North of Highway 175; and
- Zone Eight – Old Saint John Road.

2.8.4 Lepreau – Musquash Area:

- Zone Nine – Lepreau.
- Zone Ten – Musquash (South).
- Zone Eleven – Musquash; and
- Zone Twelve – Prince of Wales.

2.8.5 Department of Energy and Resource Development (DERD) Areas:

- Zone Thirteen – Central (Clear Lake and Retreat Lake).
- Zone Fourteen – Western (St. George District); and
- Zone Fifteen – Eastern (Seven Mile Lake, East Branch Reservoir and West Branch Reservoir)

2.8.6 Point Lepreau Warden Zone Map (letter / number reference system, UTM grid lines.):

See map below:

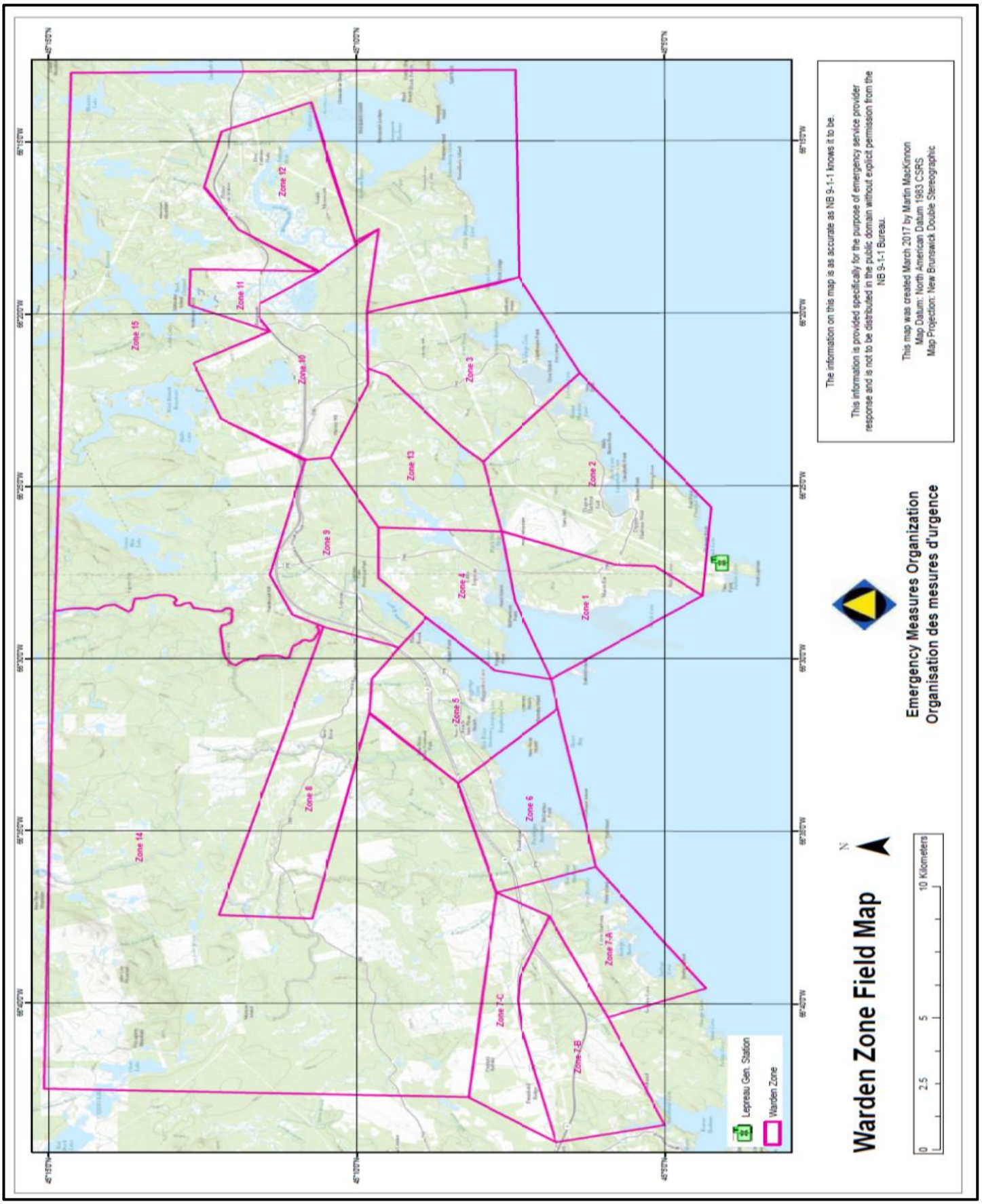

Warden Zone Field Map
Emergency Measures Organization
Organisation des mesures d'urgence
Lepreau Gen. Station
Warden Zone
Zone 1
Zone 2
Zone 3
Zone 4
Zone 5
Zone 6
Zone 7-A
Zone 7-B
Zone 7-C
Zone 8
Zone 9
Zone 10
Zone 11
Zone 12
Zone 13
Zone 14
Zone 15
0
2.5
5
10 Kilometers
N
The information on this map is as accurate as NB 9-1-1 knows it to be.
This information is provided specifically for the purpose of emergency service provider response and is not to be distributed in the public domain without explicit permission from the NB 9-1-1 Bureau.
This map was created March 2017 by Martin MacKinnon
Map Datum: North American Datum 1983 CSRS
Map Projection: New Brunswick Double Stereographic

Figure 2.8.6

2.8.7 Population by Warden Zones: From September 2019 Demographic Public Safety Survey – updated April 2023

Warden ZONE	Adults	Children	Not specified	Total
Zone 1	265	40	61	**366**
Zone 2	164	11	10	**185**
Zone 3	246	45	1	**292**
Zone 4	108	22	1	**131**
Zone 5	102	1	159	**262**
Zone 6	66	10	147	**223**
Zone 7A	150	14	0	**164**
Zone 7B	186	12	47	**245**
Zone 7C	190	36	45	**271**
Zone 8	107	3	3	**113**
Zone 9	149	11	14	**174**
Zone 10	93	11	224	**328**
Zone 11	10	3	262	**275**
Zone 12	77	10	1	**87**
Zone 13	0	0		**0**
Zone 14	0	0		**0**
Zone 15	0	0		**0**
Total	1913	229	775	**3117**
Grand Total		**3117**		
PLNGS	600	0		600
Total	**600**	0		**600**
Grand Total	3717			3717

Shadow Population outer limit, Detailed Planning Zone 20 kms out to 30 kms (Evacuation Time Estimate Section 3.2)

Sector	Population	Evacuating Vehicles
NNE	3	2
NE	504	310
ENE	558	342
W	1718	1056
WNW	502	311
NW	36	22
NNW	11	7
Totals	**3332**	**2050**

Figure 2.8.8

Warden Service Kit: Each Warden carries a warden service kit (bag) which includes the following:

- Warden Service Procedure Manual.
- Warden Service Trunk Mobile Radio (TMR) Contact List.
- 15 copies of updated Demographic Public Safety Survey.
- 10 Iodide Thyroid Blocking Tablet (KI) packets (200 pills).
- 10 Warden Service Expense Claim forms; and
- Current copy of each warden zone data including population and contact information.

New Nouveau Brunswick

Report 09 - Household Pets

Summary for Survey Area

Pet Type	01	02	03	04	05	06	07A	07B	07C	08	09	10	11	12	Total
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bird	2	0	0	0	0	3	0	0	4	2	2	2	2	0	17
Cat	86	40	67	37	43	47	55	68	51	18	40	171	98	27	848
Chicken	0	0	0	0	0	0	6	0	22	0	0	0	0	0	28
Chinchilla	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Dog	116	43	61	33	52	86	36	42	86	30	35	113	54	20	807
Donkey	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Duck	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8
Fish	31	0	23	11	1	2	2	8	2	0	14	93	73	0	260
Frog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Gecko	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Goat	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Goose	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Guinea Pig	3	0	5	1	10	3	0	0	0	0	0	4	0	0	26
Hamster	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Hedgehog	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lizard	0	0	0	0	0	0	0	1	0	0	0	2	1	0	4
Rabbit	4	0	2	1	1	5	0	1	0	0	2	2	1	1	20
Rat	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
Snake	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Turtle	1	0	0	0	0	6	0	0	0	0	0	0	2	0	9

New Nouveau Brunswick

Report 10 - Farm Animals

Summary for Survey Area

Animal	01	02	03	04	05	06	07A	07B	07C	08	09	10	11	12	Total
Bees (Hives)	4	0	0	0	0	2	0	0	49	0	0	2	0	0	57
Cattle - Beef	0	0	0	0	0	2	0	0	0	0	0	0	0	6	8
Cattle - Dairy	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Chicken	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Donkey / Mule	0	0	1	0	0	4	0	0	0	0	0	0	0	0	5
Fowl	64	22	1	0	0	3	6	3	69	0	6	110	11	50	345
Goat	1	0	3	0	0	2	0	0	0	0	0	3	0	0	9
Horse	3	0	0	0	0	15	0	0	0	0	0	3	0	0	21
Pig	0	9	2	0	0	2	0	0	7	0	0	3	0	0	23
Rabbit	2	0	1	0	0	5	0	0	0	0	0	32	0	6	46
Sheep	0	0	3	0	0	2	0	0	0	0	0	0	0	0	5

Figures 2.8.9

2.9 MONITORING AND DECONTAMINATION CENTER (MDC) CONCEPT OF OPERATIONS

2.9.1 Concept of Operations: Decontamination must be conducted as soon as possible to be effective in saving lives, limiting injuries, and reducing the spread of contamination. Responders should use resources that are immediately available and start decontamination as soon as possible.

The mass decontamination will be conducted in 4 stages:

Stage 1: Determine the need to deploy MDCs.

Stage 2: Set up the MDCs to include manning and full resources.

Stage 3: Conduct decontamination of evacuees, as required; and

Stage 4: Prepare for the Transition Phase (Recovery)

2.9.2 Location of the Monitoring and Decontamination Centers

In New Brunswick the Department of Public Safety, New Brunswick Emergency Measures Organization (NBEMO), Nuclear Preparedness Team, deploy the Monitoring and Decontamination Centers (MDCs) on the classification of a site area radiation emergency from PLNGS.

The MDCs are pre-positioned on highway 1 (main highway running East to West through the 20 km EPZ) at the 20-km distance from PLNGS East in Prince of Wales and at the 20 km distance from PLNGS West at Penfield.

2.9.3 Deploying the Monitoring and Decontamination Center

<table>
<tr><th>Stage</th><th>Action</th></tr>
<tr><td>Stage 1</td><td>Determine the need to deploy the Monitoring & Decontamination Center

In the unlikely event that the public is at immediate risk, and on verification of a declaration of a General Emergency at PLNGS the NBEMO Operations Officer or the NBEMO Duty Officer has the authority to direct the immediate evacuation of Warden Zone 1, Warden Zone 2 and at sea Area 1. This will be done by contacting directly the RCMP Operational Communications Center (OCC) who will contact the West District OIC Operations (St. George) and NBEMO will contact the Point Lepreau Warden Service and the Canadian Coast Guard.

The determination to deploy the Monitoring & Decontamination Center and implement Mass Decontamination Concept of Operations will be a decision of the Director of Emergency Measures Organization (EMO). The Monitoring and Decontamination Center (MDC) will be deployed to a forward staging area on a Declaration of a “Site Area Radiation Emergency” from Point Lepreau SS.</td></tr>
<tr><td>Stage 2</td><td>Set up MDCs to include manning and full resources.

This step includes establishing MDC stations and setting up the actual decontamination site for operations. Set up the decontamination line, decontamination shower unit, signage, barriers, or police tape to delineate zones. Post signs directing evacuees on where to go and what to do. Set up shelters with power, heat, and lights, etc.…</td></tr>
<tr><td>Stage 3</td><td>Conduct decontamination of evacuees

Evacuees are evacuated from the hazard area (hot zone) and directed to move to areas depending on medical and decontamination triage status.

Always wear Personal Protective Equipment (PPE) when dealing with loose contaminates. Immediate care of critical injuries takes precedence over care of radiation injuries and radioactive contamination control.

Under normal circumstances, contamination checks are made using a contamination survey / meter. A reading on a contamination meter that is above the background level indicates that a person is contaminated. All contaminated clothing must be removed, bagged, and tagged. If the number of individuals to be checked overwhelms all available resources, the decontamination process may need to be accelerated.

The following process is recommended:

Mass Decontamination Process

<table>
<tr><th>Step</th><th>Actions</th></tr>
<tr><td>Step 1 - Is the Individual Contaminated?</td><td>With a radiation detection meter (Friskers, Sifters, etc), check hands and feet thoroughly and then perform a 10 to 15 second check over the rest of the person.

With a Portal Monitor, have each individual pass through the portal monitor to indicate contaminated or not contaminated.

A radiation detection meter reading that is more than the background level (or, if no contamination meter is available, a</td></tr>
</table>
</td></tr>
</table>

Stage 3		gamma dose rate meter reading greater than 0.5 μSv/h) is an indication of contamination. Note: a gamma dose rate meter is only to be used for decontamination monitoring as a last resort. If Contaminated: move to the decontamination corridor to the Disrobe area and begin decontamination. If Not: the individual may proceed to registration, receive a wrist band (WHITE) and then onward to the staging area.
	Step 2 - If Contaminated	Proceed to the Disrobe area and pick up your initial deluxe decontamination kit (Pre-Decon) at the entrance to the Disrobe area. With your deluxe decontamination kit: proceed inside the Disrobe Tent with your initial deluxe decontamination kit. You will be directed to the male / female entrance.
	Step 3 - Once inside the Disrobe area of the decontamination unit:	Open the Deluxe Decontamination Kit and remove the contents. Open the bags marked Pre-Decon Kit and remove the personal effects bag. Place all your valuables (personal effects, wallet, jewelry, eyewear, hearing aids, prescriptions, etc…) and place in the personal effects bag. Write your name and contents on the bag. Place the yellow snap on ID bracelet on your wrist. Remove all clothing except underwear and place them into the Contaminated Clothing Bag. Put on the White Modesty garment and proceed to the exit of the Disrobe Tent. Once you exit the Disrobe tent the Contaminated Clothing Bag will be collected and stored on location.
	Step 4 - Individuals are checked again to confirm if they are contaminated.	With a radiation detection meter (Friskers, Sifters, etc.), check hands and feet thoroughly and then perform a 10 to 15 second check over the rest of the person. With a Portal Monitor, have each individual pass through the portal monitor to indicate contaminated or not contaminated. If Not Contaminated: the individual may proceed directly to Registration, then to the onward staging area for onward movement. If Contaminated: move to the decontamination shower point to be decontaminated. Shower, then move to the redress area. Dry off using disposable towels from Post Decon Bag located on site. Redress using blue gown and slippers from Post Decon Bag. Exit the Decontamination Center.

Stage 3			If the individual contaminated after removing contaminated clothing, wash / rinse, and redressing? Check skin with a radiation detection meter (Friskers, Sifters, etc…) as described above. If Yes (over a large area): move back to the decontamination corridor to the Shower area for a second run through the decontamination center. If Yes (over a small area): wipe with a damp cloth or wet wipes taking care not to irritate skin (Recheck). If NO: the individual may exit the decontamination line and proceed to the onward staging area.
		Step 5: Is the skin contamination persisting after washing?	Check skin with a radiation detection meter as described above. Any readings that are above the background level indicate contamination. Readings greater than 10 times the background level should be checked with a gamma dose rate meter. A gamma dose rate reading greater than 100 μSv/h 10 cm from the skin could indicate the presence of a highly radioactive particle. This area should be covered with whatever is available and noted. Prompt medical treatment to remove the radioactive particle should be sought. Any information available concerning the radionuclide should also be noted and relayed to hospital staff. If Yes (over a large area): possible internal contamination, escort to the exit of the decontamination corridor where he will be picked up by a second guide in the COLD zone and escorted to Registration; receives a wrist band (Orange) (Send to hospital). If Yes (over a small area): areas should be noted and covered if possible; escort to the exit of the decontamination corridor where he will be picked up by a second guide in the COLD zone and escorted to Registration; receives a wrist band (Orange) (Send to hospital). If No: the individual may exit the decontamination line and proceed directly to Registration where he will receive a wrist band (White) then to the onward staging area.
Stage 4	Prepare for Transition Phase (Recovery) The plan to transition from a nuclear emergency with off-site impacts will need to be flexible in approach and will be influenced by the magnitude of the event. Determining when residents can return home, when access control can be discontinued, and when plant operations can resume will be dependent on technical, health and environmental assessments. Summary The key to successful mass decontamination is to use the fastest approach that will cause the least harm and do the best for most of the evacuees. There is no perfect solution that can account for every variable and ensure rapid, completely effective decontamination of large numbers of evacuees.		

	First you will have to determine the need for mass decontamination; the extent and practicality of performing decontamination triage; the scope of resources needed versus resources available. If the number of individuals to be checked overwhelms all available resources, the decontamination process may need to be accelerated.

Figure 2.9.3

2.9.4 Monitoring and Decontamination Center (MDC) Training

Monitoring and Decontamination operations should be conducted by trained individuals, especially those roles that require the use of PPE. Traditionally, fire/hazmat trained individuals perform response roles where protective equipment is required, supported by appropriately trained fire and emergency medical service individuals. In the case of staffing for a Monitoring and Decontamination Center (MDC) operation, other appropriately trained individuals (e.g., medical staff, radiological safety workers, etc...) may be required to perform tasks; however, PPE training for these individuals must remain current as the risk of being contaminated is high if proper procedures are not observed.

Training MDC staff should include these activities:

- The anticipated magnitude of the radiation incident and how it will affect the population.
- Establishing crowd management operations, including the development of process flow, and the distribution of patient information sheets during decontamination operations.
- Use of equipment to monitor external contamination.
- Identifying and handling special population needs.
- Managing individuals experiencing psychological trauma.
- Contamination control.
- Minimizing individual exposure including the use of PPE; and
- Principles of registry management.

There are considerable training requirements inherent in the employment of a MDC such as basic training, skills maintenance, exercises, and drills, both individually and collectively with partner agencies. For personnel who are expected to fill roles within the MDC during a mass decontamination operation, regular refresher training and exercises ensure that they can perform under pressure. It is recommended that a training matrix be adopted, and that target training dates, and effective trained strength numbers be established to ensure a minimum of trained staff always (e.g., during holidays).

Training records must be maintained to adequately understand the number of trained personnel available and to adequately schedule new training opportunities as individuals change jobs, move from the area, etc.… Multiple training opportunities for each skill set must be made available annually as member availability for training is never 100%. Ensuring that the minimum number of adequately trained individuals is maintained, and that refresher training is conducted on a periodic basis, is a significant task and may require the identification of an individual whose primary duty is that of the MDC Training Officer.

2.10 EVACUATION PLAN- PROTECTION STRATEGY

2.10.1 General

An evacuation is a difficult operation to conduct during an emergency because stress is always heavy and time pressing. Some of the complex factors to consider are the large numbers of agencies involved and limited time available to coordinate their actions. The evacuation plan is designed to provide a framework to start evacuation planning, so that there is enough lead time to prepare for an orderly evacuation.

This evacuation plan has enough flexibility to handle varying circumstances; from an incident involving partial evacuation of the 20 Km area to a complete evacuation, to one with no public evacuation or one with major scale evacuation, and one with adequate preparation time to one with none.

Under ideal circumstances an evacuation in the Point Lepreau area will occur under the guidance of the Control Group, and direct supervision of the RCMP, prior to any public radiation contamination.

In planning for an evacuation, the following factors must be considered:

- Time required to organize an evacuation.
- Coordination.
- Public Information.
- Maintenance of public confidence.
- Evacuation of residents East and West of the Point Lepreau Area, in most circumstances.
- Minimize the spread of radiation contamination; and
- Control of contaminated material and waste.

In the worst scenario, a complete evacuation of the 20 Km zone could involve up to 5000 people, 1400 vehicles and 50 fishing boats.

For more information, please refer to the *Monitoring and Decontamination Center (MDC) Procedure Manual*.

2.10.2 Evacuation Scenarios

The following three scenarios outline the circumstances under which an evacuation would be ordered:

- Planned Evacuation. The Control Group is assembled at the PEOC and as the situation at the Point Lepreau Nuclear Generating Station develops a recommendation from the TAG to the Director of NBEMO. The Director of NBEMO orders an evacuation.
- Immediate Evacuation. The EMO staff is manning the PEOC, prior to assembly of the Control Group, and the situation at the Point Lepreau Nuclear Generating Station deteriorates rapidly. The NBEMO Duty Officer, the Director NBEMO, or designate, orders an evacuation; and

- No Notice. An incident occurs without warning and the Shift Supervisor at the Generating Station informs the NBEMO duty officer that an evacuation is advisable. In this case there would be no time to implement this evacuation plan and the procedure in 210.3 to 2.10.6 would be followed.

Evacuation Time Estimates: An evacuation time estimate study was conducted for NB Power by:

KLD Engineering, P.C.
1601 Veterans Memorial Highway, Suite 340
Islandia, NY 11749

The evacuation time estimate describes the analyses undertaken and the results obtained by a study to develop **Evacuation Time Estimates (ETE)** for the Point Lepreau Nuclear Generating Station (PLNGS) located in Maces Bay in Saint John County, New Brunswick.

This study provides New Brunswick Power (NB Power), the Province of New Brunswick, and the New Brunswick Emergency Measures Organization (NBEMO) with the estimated times to evacuate the emergency planning zones.

KLD Engineering has briefed the NBEMO Operations staff on the use of the evacuation time estimates. Copies of the study are loaded on Operation Staff computers and hard copies are prepositioned on the PEOC operations desk.

2.10.3 Functions

The Department of Department of Public Safety is the lead agency, responsible for conducting a safe orderly evacuation of the affected area. In an evacuation many functions and agencies are involved, which necessitates close and effective coordination. This is difficult to achieve without prior consultation and planning.

The evacuation plan must provide for the following:

Site	Action
Traffic Control Points	• RCMP will ensure that access to the affected area is controlled and that all evacuees pass through the evacuation control system. This responsibility includes those evacuated from hunting camps in Zones 13, 14 and 15. The Point Lepreau Warden Service and DERD can assist with this task. • All evacuees are to be directed to the Monitoring and Decontamination Centers (MDC), if established, and the designated Reception Centers. The Police will be informed of the location of the Reception Centers by the Social Development representatives at the Saint John and St George REOCs. • Monitoring and Decontamination Centers (MDC) If there has been a release of radioactive material, everyone leaving the evacuated area should be monitored. These Monitoring and Decontamination Centers (MDC) would be placed in a suitable location to ensure that all persons are checked. They would be prepared to monitor people, pets, and fishing

	boats. A radiation monitoring capability must be part of all Monitoring and Decontamination Centers; and • The responsibility for monitoring rests with NB Power with assistance from the NBEMO provincial nuclear preparedness team.
Monitoring and Decontamination Centers	• The Office of the Fire Marshal will arrange support from fire departments and Provincial Hazmat resources, as necessary to assist with decontamination, if requested. • Where radiation contamination is detected more than Public Health guidelines, the decontamination process should commence; and • Decontamination of individuals will be carried out following Public Health guidelines. People and personal effects are the priority. Vehicles and boats will only be decontaminated when time and resources permit. Items which cannot be decontaminated must be secured until they can be safely disposed.
Reception Centers	• The Department of Social Development is responsible for establishing and maintaining reception centers. Here registration and identification will be performed. The needs of the evacuees for clothing, feeding, lodging, transportation, and medical assistance will be determined and assistance provided. Reception center staff will also provide information and advice concerning the emergency and its consequences to evacuees. • The Department of Social Development will arrange to feed, clothe, and shelter evacuees. Proposed reception center locations are identified in Section **3.16.8**; and • Closing of reception centers is to be a decision made at the PEOC by the Director of Social Development, in consultation with REAC members and communicated to the REOC by the Director of Social Development.
Disposal Sites	• Disposal sites must be selected in relation to the decontamination centers, with the aim of limiting the spread of contamination and preventing long range environmental problems. These sites must be capable of handling clothing, unwanted personal effects, foodstuffs, and marine catches. Except for fresh food and marine catches, disposal of contaminated material can wait until the situation is stabilized. Maximum use will be made of the designated sites at the Point Lepreau Nuclear Generating Station.
Communications	• As part of its overall responsibility for evacuation, the Department of Public Safety will establish an evacuation radio network. An effective and coordinated evacuation will require good communications. The evacuation control radio net should include RCMP members at roadblocks, traffic control points (if established), operations centers in Saint John, Lepreau and Fredericton and reception centers. The EMO Lepreau radio network and RCMP radio network can be linked for this purpose through the Provincial Mobile Communications Center (PMCC) at xxx-xxx-xxxx. • The Department of Transportation and Infrastructure (DTI) may be tasked to provide radio-equipped vehicles to maintain emergency radio communications between the field and the operational centers. These DTI vehicles, the warden network and amateur radio operators can be used to supplement the existing police resources.

Outline Evacuation Plan	• This outline evacuation plan is a guide for planning an evacuation. A map of the area with traffic control points, access points and roadblocks is available on Google Earth through the Geomatics team located in the PEOC. An Evacuation Time Estimate Study was conducted by KLD Engineering and is available in the PEOC. An Evacuation Time Estimate Checklist was designed to identify what must be done and to determine how long it will take to assist in determining the transportation requirements; and • Radiation monitoring will be done at the roadblocks on highway 790. In addition, two Monitoring and Decontamination Centers will be established at the 20-km radius at Highway 1, one at Prince of Wales and one at Pennfield. The intent is to check people for contamination; vehicles will be parked until decontamination after the emergency. Vehicles will be parked, and passengers will be transferred onto busses. Two marine assurance monitoring stations will be established as required, at selected harbours.
Prince of Wales Evacuation Control Point	• A traffic control / Access Control Point for Prince of Wales will be established; there evacuees will be surveyed and decontaminated as necessary; and • "It will be the decision of the Manager of Emergency Social Services with Social Development in consultation with the Red Cross to provide location of Reception Centers". Reception centers in the Saint John area have already been identified for those evacuees heading East. Nick Nicolle Center, 85 Durham St, Saint John, NB E2K 1V6, Contact: xxx-xxx-xxxx Carleton Community Center, 82 Market Pl, Saint John, NB E2M 1B5 Contact: xxx-xxx-xxxx (Greg Cutler)
Pennfield Evacuation Control Point	• A traffic control / Access Control point for Pennfield Ridge will be established at the junction of Highway One and Route 175. A supplementary traffic control point will be established at the junction of Highway 780 and 778 to control evacuees using the old Saint John Road; and • "It will be the decision of the Manager of Emergency Social Services with Social Development in consultation with the Red Cross to provide location of Reception Centers" Reception centers in the West have already been identified for those evacuees heading West. • Blacks Harbour Arena, 12 Arena Street Blacks Harbour, NB E5H1B5, xxx-xxx-xxxx, • W.C. O'Neill Arena, 24 Reed St, St. Andrews, NB E5B 1A1. xxx-xxx-xxxx
Selected Harbours	• A radiation monitoring post will be sent to selected harbours under the direction of the Wharfinger with assistance from NB Power. They are to be prepared to handle fishing boats, small crew and large ships including their crew and passengers; and • The Department of Agriculture, Aquaculture and Fisheries will arrange for the testing of marine products for contamination and will arrange for disposal, if necessary.

Figure 2.10.4

2.10.5 Note: New River Beach Provincial Park Peak Occupancy Times

Transportation requirements could change drastically during peak summer tourism season at the New River Beach Provincial Park. On the annual Sand Sculpture Competition - date changes every year – upwards of 6,000 people can be at the park.

Aside from the sculptures, there are ~100 campsites and we normally estimate 3 people per camping party so 300 people at full capacity (Most likely Thursday through Sunday, July, and August).

The Park's usual operating season is mid-May to the end of September.

2.10.6 PEAC Evacuation Planning Instruction

Situation: Click here to enter text.

Status of the plant: Click here to enter text.

Summary of Public Safety Bulletins: Click here to enter text.

Locations of Evacuation Control Areas:

- List of traffic control measures in place; and
- Condition of evacuees: possibility of being contaminated, the number who have already left, advice to be given on direction to evacuate, etc.

Forecast of weather: Click here to enter text.

Task: Prepare to evacuate Warden Zones Click here to enter text. at Point Lepreau in Click here to enter text. hours.

<u>Responsibilities</u>

RCMP:

- The lead agency with the responsibility to conduct a safe orderly evacuation.
- Establish communications with all agencies involved in the evacuation.
- Establish two evacuation control areas on Highway 790, one at each of the Lepreau and Musquash access to Highway 1.
- Implement the necessary traffic control measures on Highway 1.
- Be prepared to receive and direct transportation dispatched to the areas being evacuated.
- Ensure the total area has been evacuated; and
- Provide security once the area has been evacuated.

REOC Saint John (8 Castle Street, Saint John):

- Prepare to receive approximately Click here to enter text. evacuees in Click here to enter text. hours.
- Prepare to transport Click here to enter text. people and Click here to enter text. people with special transportation needs; and

- Assist in establishing evacuation controls east of Point Lepreau.

REOC St George (40 Brunswick St, St George):

- Prepare to receive approximately Click here to enter text. evacuees in Click here to enter text. hours.
- Prepare to transport Click here to enter text. people and Click here to enter text. people with special transportation needs; and
- Assist in establishing evacuation controls west of Point Lepreau and at selected Harbours.

Point Lepreau Off-Site Emergency Operations Center:

- Maintain liaison with the plant; and
- Establish a control center for the evacuation.

PEAC Fredericton:

- All aspects of information services, including public safety bulletins.
- Arrange for the disposal of contaminated material.
- Monitor and assist with evacuation planning.

Coordinating Instructions:

- Evacuation will start not before: Click here to enter text. hours.
- Evacuation Control Areas to be in place by: Click here to enter text. hours; and
- Reception Centers to be ready by: Click here to enter text. hours.

Authority to start evacuation on order of the Director NBEMO in Fredericton.

2.10.6 Evacuation Operation Order

Situation: Click here to enter text.

Status of plant: Click here to enter text.

Plume Content: Click here to enter text.

Locations of Evacuation Control Areas: Click here to enter text.

Traffic Control Measures: Click here to enter text.

Evacuees: How and when advice to be given on evacuation, etc. Click here to enter text.

Forecast of weather: Click here to enter text.

Task: To evacuate Warden Zones ____ at Point Lepreau in ____hours.

<u>General</u>

- This evacuation will be conducted under the direction of the RCMP Liaison Officer (LO) (function assigned to the **Operations Non-Commissioned Officer (Ops NCO)** - St George RCMP) operating from the Point Lepreau Off-Site Emergency Center.
- Residents will be evacuated east towards Saint John and west towards St. Stephen, evacuees will be directed to reception centers at Click here to enter text. and Click here to enter text.;
- Boats in the Bay of Fundy will be directed to Click here to enter text. and Click here to enter text.; and
- Monitoring and Decontamination Centers will/will not be established.

Responsibilities

RCMP:

- The lead agency with the responsibility to conduct a safe and orderly evacuation.
- Outline communications plan.
- Detail the location and organization of the evacuation control areas and traffic control measures; and
- Detail how and who will announce that the zones are cleared, and the evacuation control areas can be disbanded.

REAC Saint John:

- "It will be the decision of the Manager of Emergency Social Services with Social Development in consultation with the Red Cross to provide location of Reception Centers."
- The Police will be informed of the location of the Reception Centers by Social Development representatives at the PEOC to the Policing Services representative at the PEOC".
- "Red Cross will report to Social Development at the PEOC when they are set up and ready to operate."
- REMC will be informed from NBEMO Operations.
- Identified locations:
    - Nick Nicolle Center, 85 Durham St, Saint John, NB E2K 1V6, Contact: xxx-xxx-xxxx
    - Capacity: Approx. 380 people
    - Carleton Community Center, 82 Market Pl, Saint John, NB E2M 1B5, Contact: xxx-xxx-xxxx (Greg Cutler) Capacity: 380 people.
- Explain transport plan.

REAC St George:

- "It will be the decision of the Manager of Emergency Social Services with Social Development in consultation with the Red Cross to provide location of Reception Centers."
- The Police will be informed of the location of the Reception Centers by Social Development representatives at the PEOC to the Policing Services representative at the PEOC".

- "Red Cross will report to Social Development at the PEOC when they are set up and ready to operate."
- REMC will be informed from NBEMO Operations.
- Identified locations:
    - Blacks Harbour Arena, 12 Arena Street Blacks harbour, NB E5H1B5, xxx-xxx-xxxx Capacity: 250 people
    - W.C. O'Neill Arena, 24 Reed St, St. Andrews, NB E5B 1A1, xxx-xxx-xxxx Capacity: 400 people
- Explain transport plan; and
- Explain how area Harbours will be organized as a marine evacuation center.

Point Lepreau Off-Site Emergency Operations Center:

- Detail organization of control center for the evacuation.

PEAC (Nuclear Control Group) Fredericton:

- Outline information services plan, including public safety bulletin concerning evacuation; and
- Outline how contaminated material will be decontaminated or disposed.

Timings:

- Evacuation Traffic Control Points to be in Place by: Click here to enter text. hours.
- Reception Centers to be ready by: Click here to enter text. hours.
- Buses and ambulances to be at rendezvous' by Click here to enter text.; and
- Public Safety bulletin advising people to evacuate will be aired at Click here to enter text.

Administration and Logistics:

- Recovery Click here to enter text.
- Outline how vehicles and passengers stranded during evacuation will be handled Click here to enter text.
- Medical/Ambulances Click here to enter text.; and
- Outline how people developing medical problems during the evacuation will be handled.

Registration:

- Outline how evacuees register, including those not going to the reception centers and those from camps in Zone 13, 14 and 15. Click here to enter text.

Accommodations:

- Explain accommodation plan for evacuees. Click here to enter text.

Feeding:

Explain feeding arrangements for evacuees and those involved in arranging evacuation. Click here to enter text.

Control:

- REOC's are to monitor all aspects of the evacuation into their area through the RCMP and keep the PEOC informed.
- Reception centers to report to their REOC's and REOC's report to the PEOC, when they are set up and ready to operate.
- The dispatch of mobile amateur radio operators will be coordinated through the PEOC radio room to ensure frequency coordination and the smooth operation of the radio networks; and
- REOC's should advise the PEOC of any support requirements as soon as possible.

Terminology

REOC – Regional Emergency Operations Center

PEOC – Provincial Emergency Operations Center

NCO I/C – Non-Commissioned Officer in Charge

RCMP – Royal Canadian Mounted Police

Director	Commanding Officer
NBEMO	RCMP J Division

2.11 DEPARTMENT ENVIRONMENT AND LOCAL GOVERNMENT (DELG) C2 EMERGENCY MANAGEMENT PLAN (EMP)

2.11.1 Environment Management Plan – Appendix C2

General: This appendix is specific to the Point Lepreau Nuclear Off-Site Emergency Plan. General information concerning emergency preparedness, prevention and mitigation, response, and recovery is contained in the main body of the Department's Emergency Management Plan (EMP). Together, the EMP and this appendix contain the information required to fulfil the

Department's mandate in relation to a radiation emergency associated with the Point Lepreau Nuclear Generating Station.

2.11.2 DELG Roles and Responsibilities for Emergency Management: Specific responsibilities may be divided into the four components of emergency management, including: Emergency Preparedness, Prevention and Mitigation, Emergency Response, and Recovery. Additional information on roles and responsibilities for each component is presented below.

2.11.3 DELG Emergency Preparedness: Preparedness includes measures taken in advance of an emergency to ensure an effective response and recovery. For the Point Lepreau Nuclear Off-Site Emergency Plan, these measures include:

- Developing and maintaining the Emergency Management Plan Appendix C2 (this appendix).
- Ensuring that staff are aware of and trained in the implementation of the requirements of this appendix.
- Maintaining equipment needed to implement requirements of this appendix; and
- Maintaining lists and databases associated with requirements of this appendix.

Consistent with the ELG Emergency Management Plan, the DELG Emergency Preparedness Working Group (EPWG) is responsible for developing and maintaining this appendix and ensuring that staffs are trained in its use.

Equipment owners are responsible for maintaining the equipment required by this appendix, and program owners are responsible for maintaining any lists or databases associated with their program. General or shared lists (including the Business Continuity Plan and Response Plan) will be maintained by the EPWG.

2.11.4 DELG Prevention and Mitigation: The primary responsibilities associated with prevention and mitigation is under the jurisdiction of the Canadian Nuclear Safety Commission (CNSC) and NB Power. The Department of Environment plays a minimal role in this aspect of Emergency Management for nuclear emergencies at the Point Lepreau Nuclear Generating Station.

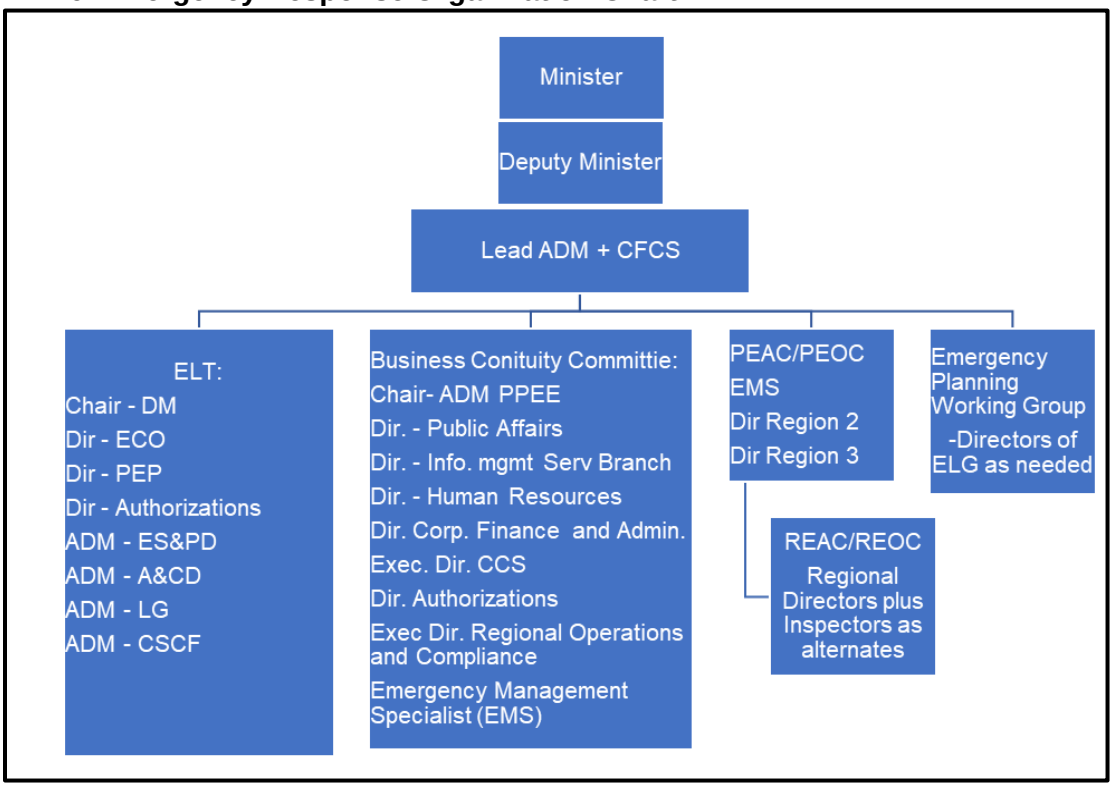
2.11.5 DELG Emergency Response:

The Department of Environment and Local Government has a variety of specific responsibilities for emergency response, as described in Part 2 of this appendix. These responsibilities are generally associated with sampling and providing information on waste management, drinking water supplies, and other areas of departmental expertise.

In the event of a response, the department (at the direction of the deputy minister) will implement the following organizational / management structure, to allow us to effectively carry

out our assigned responsibilities (summarized from the Emergency Management Plan). Full details are available in the main body of the Emergency Management Plan.

2.11.6 Emergency Response Organization Chart:



+ Environmental Protection Division
*** Corporate Services, Community Funding and Performance Excellence Process**
$ Additional members may be added to the Business Continuity Committee depending on the nature of the emergency.

2.11.7 The departmental response will vary based on the nature of the emergency. Details of probable response efforts are presented in the appendices of this document. However, some elements are common to most / all emergencies. Activating the emergency response will trigger the implementation of required business continuity plans and the establishment of an Emergency Operations Center (if required). Support will be available to help staff deal with critical incident stress.

Individuals have been appointed to lead communications, telecommunications, and records management efforts for the department. This work will be done in accordance with the Communications Plan in Section 3.7.5.

2.11.8 DELG Recovery: The Department of Environment has responsibilities in this phase of emergency management on site clean-up and remediation.

2.11.9 DELG Response - If a Response effort is activated, ECC personnel will be assigned as follows:

DELG Response Effort:

Role	Assigned	Contact info (506 area code)		
		Office	Cell	Home
Lead ADM	Christie Ward	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
PEOC	Mike Correy (primary) Ian Donald (secondary) Richard Breau	xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx
REOC Saint John	Patrick Stull (primary) Cathy Dubee (secondary)	xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx
REOC St. Stephen	Patrick Stull (primary) Chris Paquet (secondary)	xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx
Field responders (outside 20 km)	Note: Individuals will be called on by the Control Group as required, with a goal to balance the load across regions. Shawn Prosser - Inspector Mark Bader - RWPO Connor McGinley - Inspector Frank Parent - Inspector Brittany Foreman – Inspector Sara Boyce - Inspector Carl Savoie - Inspector Diana Jenkins - Inspector Alain Cote – Inspector Denis Ouellette- Inspector Anger Dumont - Inspector Nicole Lejeune – Inspector Erin Douthwright - Sampling Rivers	 xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx 	 xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx	 xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx
Central expertise				
Waste Management	Susan Tao Mark Glynn	xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx
Sampling protocols - air	Eric Blanchard Darrell Welles	 xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx	 xxx-xxx-xxxx
Drinking water source	Mallory Gilliss	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Drinking water treatment systems	Sylvie Morton	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Remediation	Mallory Gillis Danny Stymiest	xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx
WAWA	Frederic Paillard	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

IT (computer and cell phone problems)	NBISA – Begin by stating that you're working as part of the Lepreau Emergency Response	xxx-xxx-xxxx		
	After hours - **for urgent calls only -** contact Mike Correy.	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Communications (media requests)	GNB Communications	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Figure 2.11.10

2.11.11 Business Continuity Assignments:

Role	Primary
Chair of Business Continuity Committee	TBD at time of event
Regional Service Delivery (focus on non-Lepreau emergency / spill response and time-sensitive permitting)	Region 4 Inspection staff (designated business continuity): David Peterson Region 3 Inspection staff: Tim Mellon (designated business continuity) All Regions: Regional Directors (Regions 1-3, and 5-6) Regional Engineers Regional Biologists Inspectors: One inspector (designated) per region, and other inspectors not assigned to response
Other areas	As described in DELG Business Continuity Plan (See Emergency Management Plan)

2.11.12 DELG Communications Requests from Media / Public Communications Plan - Inquiries from the public or media:

Any calls received from external agencies (including the public, the media, etc.) are to be forwarded to the GNB spokesperson for response. No information should be given to callers about the situation, except through the GNB spokesperson, to ensure that a consistent message is transmitted.

2.11.13 DELG Sampling Equipment - The following items are required:

- Sampling Container
- Water -> 1L plastic bottle*
- Soil -> 250 ml plastic jar*
- Vegetation/Snow/Ice -> large heavy-duty Ziploc plastic bag
- Glass bottles and jars could be used if plastic is not available.
- Collection tools: Disposable plastic scoop or trowel (for collection of soil, vegetation, snow, or ice) will be sufficient for collecting a sample at most sites. If a more rugged sampling tool (e.g., Metal scrapper) is required to collect the sample due to the hardness of the ground/ice, ensure that it is rinsed with water and dried between each sample to

avoid cross contamination. You must bring rinse water with you for this purpose as the surrounding water may be contaminated.
- Permanent marker
- Large heavy-duty Ziploc plastic bag (min of 2); extra-large size would be convenient for double bagging.
- Disposable gloves – latex or other
- Paper towels

Personal protective equipment such as Tyvek suit, booties, and gloves (if required) will be determined by NB Power staff depending on sampling zone.

2.11.14 DELG Sampling Instructions: If you are not collecting the sample at a pre-determined location, select the sampling location/area based on the guidelines below:

- Surface Water: Choose an area of the water that is not sheltered by trees or biased by land runoff. Take the sample midstream or at least 0.5 to 1.0m from the shoreline of the body of water (if possible). Avoid stirring up sediment. Wearing gloves, dip the 1L plastic bottle on the water surface. If it is a running stream or river, point the bottle upstream. Fill the bottle to the shoulder and cap tightly.
- Soil; Select a sampling location in an undisturbed area away from nearby buildings or trees (if possible). Choose a square of approximately 20 cm by 20 cm to take a representative sample. Wearing gloves use a plastic scoop to sample the top 25mm of soil and place in the 250ml plastic soil jar. Cap tightly.
- Vegetation; Select a sampling location in an undisturbed area away from nearby buildings or trees (if possible). Collect the outer leaves of bushes, the upper tips of tall grasses (in other words any area of the plant which is not covered). Sample an area that provides enough material to fill the bag. Wearing gloves, collect the material using a scoop or with your gloved hand if necessary and place in the large Ziploc plastic bag. Zip the bag shut ensuring a good seal.
- Snow/Ice; Select a sampling location in an undisturbed area away from nearby buildings or trees. Wearing gloves use a plastic scoop to collect surface snow (or scraped ice) to a depth of 25mm over an area sufficiently large enough to densely pack a large heavy-duty Ziploc plastic bag. Zip the bag shut ensuring a good seal.
- Wipe the sampling container (bottle/jar/bag) with a dry paper towel. Label the sampling container using a permanent marker with **sampling location (include GPS coordinates), date, time & sampler's initials.**
- Place the sampling container in a Ziploc plastic bag along with your gloves and scoop. Change gloves between each sample. Use a new Ziploc plastic bag for each sample. Place the bagged sample in a new Ziploc plastic bag each time the sample changes hands.
- Complete the Sample Submission Form and place it with the samples in a cooler. Freezer packs are not needed.
- Deliver the samples to the NB Power Lab in Fredericton; and
- Have the receiving lab representative sign the Sample Submission Form and provide you with a copy for your records.

NB Power Health Physics Lab

420 York St (Chestnut Complex – Building on left-hand side)

Fredericton

Contact xxx-xxx-xxxx *ahead of time to establish time of arrival*

2.11.15 DELG PLNGS Incident Response Sampling Kit: A PLNGS Incident Response Sampling Kit will be available in each ELG Regional office. Extra Supplies will be available through the NB Power Health Physics Lab.

These kits contain equipment to obtain 5 each of water, soil and vegetation samples as follows:

- 5 - 1 L plastic bottles.
- 5 - 250ml plastic jars.
- 5 - Large heavy-duty Ziploc plastic bags.
- 30 - Large heavy-duty Ziploc plastic bags (for double/triple bagging where necessary).
- 30 - Pairs each of small & large sized gloves.
- 10 - Disposable plastic trowels.
- 1 - Metal scraper.
- 1 - Roll of paper towel.
- 1 - Pair of scissors.
- 3 - Sample Submission Forms (for NB Power Health Physics Fredericton Laboratory) *; and
- 1 - DELG Sampling Protocol for Radiological Analysts (for PLNGS Incident Response) *

*The Regional Office staff are responsible for replacing the Sample Submission Forms or Sampling Protocol in the kits should new versions be issued through the NB Power Health Physics Lab.

The Sampler will be responsible for providing the following (not contained in the kits):

- Permanent markers.
- Bottle of tap water (for rinsing metal scraper if used for scraping ice); and
- Personal protective equipment will be determined by NB Power / EMO staff depending on sampling zone.

See sample submission form below:

2.11.16

Sample Submission Form / Formulaire de Soumission d'Échantillons Multiple
For submission of DELG samples to the NB Power Health Physics Laboratory
Located at 420 York Street, Fredericton (ring bell at back door)

Sample Submitted By/ Échantillon présenté par: _____ (print /imprimé)
Phone No. / Téléphone: _____

For In Lab Use/ Réservé au laboratoire:
_____
_____
_____
_____
_____
_____

						For air sampling only			
Lab No./ Numero du laboratoire	Site ID (Location)/ Identification du site	Sample ID/ Identificateur de 'échantillons	Type */ Type *	Date YYYYMMDD / la date AAAAMMJJ	Time HHMM / l'heure HHMM	Sample Period YYYYMMDD		Volume Air Sampled m^3/ Volume d'air échantillonée m^3	Analysis Requested/ Analyse Demandée
						Start Date/Time YYYYMMDD: HHMM	End Date/time YYYYMMDD: HHMM		
									Gamma spec/ Tritium
									Gamma spec/ Tritium
									Gamma spec/ Tritium
									Gamma spec/ Tritium

Chain of Custody / chaîne de traçabilité				Sample Type/Types d'echantillon	
Received From/Reçue à partir	Received By/ Reçue par	Date	Time/l'heure	SW	Surface Water / eau de surface
				GW	Ground Water / eau souterraine
				S	Soil / sol
				V	Vegetation / végétation
				A	Air / air
				O	Other / autre

2.11.17 DELG Geographic Information.

Drinking water supplies:

The Department maintains a database showing locations of public and private drinking water supplies in the area surrounding the Point Lepreau Nuclear Generating Station (to 57 km). This information is maintained in ArcGIS format and a listing of sites can be generated as needed to assist with the response effort.

Please contact Tim Leblanc and Rochelle Baldwin for additional information about public / communal and private (individual) drinking water supplies, respectively.

Potential Sample Locations (Non-Air Sampling)

The location of appropriate sample sites is highly dependent on the nature of the emergency to which we are responding. We have identified many potential sample sites which could be used in the event of a response to assess ambient water quality conditions. It is important to note that additional sites may be added at the request of the Control Group, as the event unfolds. The sites discussed below are intended as a starting point in a flexible and dynamic response effort.

Sites have been included for:

- surface water [ambient surface water monitoring network (rivers) and enhanced baseline sampling program (designated drinking water watersheds)]; and
- other surface water locations (ambient watershed assessments in partnership with NGOs)

A geo-referenced listing of the surface water sites is maintained within the Environment Integrated System (Environment Database) by the Environmental Evaluation and Reporting Branch. During an event, the geographic coordinate locations for sites may be uploaded to the Google Earth by EMO, for use by all response agencies.

2.11.18 DELG Emergency Air Quality Radiological Monitoring Plan & Standard Operating Procedures: The purpose of this document is to provide an ambient air quality monitoring plan and associated standard operating procedures to be used in the event of an emergency or other incident involving a release of radioactive contaminants to the air of the province.

Scope: This document describes methodologies for obtaining, handling, storing, and transporting ambient air quality radiological samples. This plan focuses exclusively on the fixed network of ambient air quality monitoring stations and does not include mobile/handheld air sampling methodologies that may be deployed at the site of a radioactive incident or event. The intent is to provide information about offsite radioactive contamination at a provincial/regional scale.

This plan is intended to have general application with respect to events involving the release of radioactive contaminants.

Responsibilities

The Air Sciences Section, Department of Environment and Local Government (ELG) is responsible for maintaining a state of readiness to implement this plan always.

The Air Sciences Section, in cooperation with ELG regional offices, is responsible for implementing this plan once activated.

Activation, Alert and Assembly

Upon notification from the New Brunswick Emergency Measures Organization (NBEMO) via the Departmental Representative on the Control Group, the Manager of the Air Sciences Section (or alternate per the Contacts section below) will contact and alert staff as required to activate this plan.

Once contacted, air quality personnel will remain on standby or at assigned locations to receive further instruction.

Personnel will activate monitoring equipment, remotely, if possible, at the direction of the Manager, Air Quality Section.

Air quality monitoring equipment will be activated on a priority basis, beginning with monitoring sites located closest to the event.

Personnel are not to deploy to the vicinity of the incident/event unless so directed by the Departmental Representative on the Control Group. Due care will be exercised to avoid unnecessary entry by air quality staff into contaminated areas.

Sampling Plan and Procedures:

- Filter-Based Sampling; and
- Six ELG ambient air quality monitoring stations are to be outfitted always with filter-based particulate sampling equipment for the purposes of radiological monitoring. These six stations are:
    - St. Andrews (Huntsman Marine Science Center).
    - Saint John (Forest Hills).
    - Moncton (Thanet Street).
    - Fredericton (Needham Street).
    - Edmundston (Queen Street); and
    - Bathurst (Rough Waters Drive)

Should a station listed above become unavailable the equipment will be relocated to the nearest operational station.

In addition, one complete set of filter-based sampling gear will be maintained at the ELG air quality laboratory in Fredericton for rapid deployment to any monitoring station or via the mobile monitoring trailer, should the need arise.

Necessary equipment and associated procedures are described below.

- Particulates:
    - Airborne particulates are collected on Gelman Type A glass fiber filters (or equivalent), through which air is drawn via a high-volume sampler. Target sample volume is 2400 m3. This can be achieved via any combination of flow rate and sample period (i.e., 60 L/min for 28 days, up to 1700 L/m for 1 day),

depending on the desired frequency of analysis. If higher than background levels of radiation are expected in the area, a smaller target sample volume may be considered. Sample volume is measured using an inline integrating dry gas meter.

- Each filter will remain in a sealed container prior to its use. Thus, activation of this plan will require a technician to visit each of the 6 stations to open and install filters. When the particulate samplers are operational, filters are removed and replaced following each sample period, sealed (with tape) in a clean petri dish, sealed in a plastic bag, and transported immediately to the NB Power laboratory in Fredericton. An unused filter will also be sealed, labelled, and shipped for analysis as a reference “blank”.
- Care will be taken to prevent cross-contamination of samples. Latex gloves will always be worn, and changed between handling filters (no glove will contact more than one filter);
- Each used filter is labelled with the technician’s name and a sample number (e.g., if it is Mr. Howe's first sample, the dish would be labelled “HOWE #1). A sample submission form (see appendix 1) is also completed and enclosed with the sample, which records the total volume of air sampled and the period over which the sample was drawn. The same information must be included in the technician’s logbook, using the same identification procedure, as well as any notable conditions regarding the taking of the sample, weather conditions, etc.

- Radioiodine
  - Radioiodine samples are collected via Tri ethylene di-amine (TEDA) impregnated activated charcoal cartridges. Cartridges are placed downstream of a particulate filter (as described above) in a metal holder. As with particulate sampling Target sample volume is 2400 m3. This can be achieved via any combination of flow rate and sample period (i.e., 60 L/min for 28 days, up to 1700 L/m for 1 day), depending on the desired frequency of analysis. If higher than background levels of radiation are expected in the area, a smaller target sample volume may be considered. Sample volume is measured using an inline integrating dry gas meter.
  - Each cartridge will remain in a sealed container prior to its use. Thus, activation of this plan will require a technician to visit each of the 6 stations to open and install cartridges.
  - Cartridges are changed monthly and handled (packaged, labelled, and shipped) using the methodology described above for particulates. An unused cartridge will also be sealed, labelled, and shipped for analysis as a reference “blank”.
  - Care will be taken to prevent cross-contamination of samples. Latex gloves will always be worn and changed between handling cartridges (no glove will contact more than one cartridge). Cross contamination between cartridges and particulate filters must also be avoided through changing of gloves between handling of either; or
  - **Note:** Iodine-131 is the major nuclide of interest that could be collected on the charcoal cartridges. NB Power analyses the cartridges in groups of four for 50,000 seconds on a gamma spectrometer. Counts are performed as soon as

possible after collection because of the relatively short-half-life of I-131 (8 days). If radioiodine is detected, then the cartridges are re-analyzed individually for 5000s each. Other fission product radioiodine's, with much shorter half-lives (minutes to hours), decay before they reach the sample location or during the time the sample is being collected.

- Precipitation Sampling
  Precipitation samples collected at New Brunswick's 5 acid precipitation monitoring stations are sent to the RPC laboratory for analysis every 2 weeks. Daily samples are combined into weekly samples for sulphate analysis. Upon activation of this plan a portion of these weekly samples will be provided to the NB Power laboratory for analysis. Samples will be handled and transported to NB Power in accordance with the water sampling procedures and protocols outlined in the DELG emergency offsite monitoring plan for Point Lepreau.

2.11.19 DELG Background Level Assessment and Readiness: The Air Sciences Section, in cooperation with NB Power, will periodically activate filter-based sampling stations for the purposes of establishing background readings at all sites and to ensure that the system is maintained in a state of readiness. A background sample will be taken at each site every 3 years, at minimum.

As acid precipitation samples are taken and submitted continuously to the Department of Environment and Local Government laboratory, the sample collection system is in a constant state of readiness. No further exercises are required. Samples will be periodically provided to NB Power (semi-randomly) for analysis of background levels.

2.11.20 DELG Contacts

Name	Role	Office Telephone	Home/Cell Telephone
Darrell Welles	Manager, Air Sciences Section	xxx-xxx-xxxx	(h) xxx-xxx-xxxx (c) xxx-xxx-xxxx
Eric Blanchard	Air Quality Network Coordinator (Alternate)	xxx-xxx-xxxx	(h) xxx-xxx-xxxx (c) xxx-xxx-xxxx
Mathieu Doucet	Senior Air Quality Technician	xxx-xxx-xxxx	(h) xxx-xxx-xxxx (c) xxx-xxx-xxxx
Shannon Murray	Air Quality Specialist	xxx-xxx-xxxx	(h) xxx-xxx-xxxx (c) xxx-xxx-xxxx

2.11.21 DELG Emergency Radioactive Waste Management Procedures: The purpose of this document is to provide general guidelines for the management of radioactive waste that may be generated off-site from the Lepreau Generating Station in the event of an emergency or other incident involving a release of radioactive contaminants in the province.

2.11.22 DELG Scope: This document describes the general protocol for handling, storing, and transporting radioactive waste that has been generated off-site from the Lepreau Generating Station. This plan focuses on radioactive wastes that may be generated from emergency response activities, including clothing, equipment, wash water etc. that may have been contaminated by radioactivity.

Any wastes contaminated with radioactivity that are generated on-site at the Lepreau Facility during emergency response activities, such as wash water, spills, leaks, fire suppressant foams, etc., are expected to be contained on-site with waste handling and storage to be managed through the Lepreau Generating Station Disposal of Waste Procedures. This plan is intended to have general application with respect to events involving the release of radioactive contaminants.

2.11.23 DELG Responsibilities: The Authorization Branch, Department of Environment and Local Government (DELG), is responsible for administering the Hazardous Waste Management Program within New Brunswick, which involves ensuring proper management and disposal of hazardous wastes.

The management of radioactive materials within Canada is mainly the jurisdiction of the Canadian Nuclear Safety Commission (CNSC). The DELG relies on the expertise of the CNSC but will work cooperatively with this organization during an emergency response situation.

NB Power staff will be responsible for the management of radioactive wastes generated off-site, either at the Lepreau Generating Station itself, or at emergency response sites set up for de-contamination.

2.11.24 DELG Regulations and General Information: The regulations for the loading, handling, and transportation of radioactive materials are through the Packaging and Transport of Nuclear Substances Regulations and the Transport of Dangerous Goods Regulations. For exportation or importation of radioactive materials, the International Atomic Energy Agency Regulation for the Safe Transport of Radioactive Material is followed.

Radioactive wastes are categorized by contact gamma measurements:

Type 1	Less than 2 mSv/h
Type 2	2 mSv/h to 125 mSv/h
Type 3	Greater than 125 mSv/h

Type 1 wastes are currently exempt from the hazardous waste classification, although this material still requires special handling. **

The Authorization Branch, Department of Environment and Local Government (DELG) issues Approvals to Operate to Hazardous Waste Carriers that pick up or drop off hazardous waste in the province of New Brunswick under the Water Quality Regulation. Any service provider planning to transport radioactive waste materials (Type 2 and 3) must be approved.

DELG manages hazardous waste generators by issuing a Hazardous Waste Generator Number to any industrial, institutional, or public site generating hazardous waste. This does not include household hazardous waste. Only approved carriers may collect the waste off the site, and they

can only collect the waste if the location has a valid Generator Number. A completed Generator Registration form must be submitted to the DELG to receive a Generator Number.

Lepreau Generating Station Hazardous Waste Generator Number – **NB005001**

Emergency de-contamination sites would require the issuance of individual Hazardous Waste Generator Numbers by the Authorization Branch.

During normal operations, radioactive wastes are managed through the Lepreau Generating Station Disposal of Waste Procedures. All radioactive wastes are categorized, packaged, and stored according to the Procedures. All wastes remain in long -term storage on-site except for some low level (Type 1) wastes (gloves, coveralls, and cleaning materials). These wastes are transported to Oak Ridge, Tennessee for incineration. The ash, which is still radioactive, is returned to the Lepreau Generating Station for long-term storage.

2.11.25 DELG Waste Management: Wastes generated from emergency response activities, including clothing, equipment, wash water etc. may be contaminated by radioactivity. These wastes must be collected and taken for proper disposal.

- Step 1 Waste Handling Locations – As a first option, all radioactive wastes should be taken to the Lepreau Generating Station to be managed through their normal Waste Management Program.

  NB Power will identify locations for the drop-off and temporary storage of radioactive wastes, which will likely be linked to emergency response / de-contamination sites.

- Step 2 & 3 Radioactive Waste Monitoring, Packaging & Storage – To determine what to do with the waste, it must be tested for radioactivity for categorization. All wastes that are collected should be tested using radioactivity measurement equipment by a qualified technician.

  Based on normal process operations at the Lepreau Generating Station, it is expected that most of the wastes generated from the emergency response activities will be Type 1 radioactive wastes or non-radioactive wastes.

Liquid waste must be stored in leak-proof, closed containers and the storage trailer must have a curb to reduce spillage or leaking outside the containment.

Waste	Radioactivity	Short term	Long term
Non-radioactive	Less than *****	General garbage	Regional Landfill
Type 1	Less than 2 mSv/h	Bag, box and store in trailer. Liquid – leak proof, closed container.	Send for incineration
Type 2	2 mSv/h to 125 mSv/h	***	***
Type 3	Greater than 125 mSv/h	***	***

Figure 2.11.26

Type 2 and 3 wastes will only be handled by NB Power staff. Final disposal will be considered depending on volumes and available storage options.

2.11.27 DELG Notification and Reporting Procedures: NB Power will identify waste handling locations based on their information on contamination levels in the region and submit completed Hazardous Waste Generator Registration forms for each location to the Authorization Branch of the DELG. The Authorization Branch will process the forms as quickly as possible, and a Generator Number will be issued for each location. A registration form and Hazardous Waste Generator Guidelines are included.

NB Power will ensure emergency response personnel are made aware of the waste handling locations and that all radioactive wastes related to emergency response activities are handled accordingly.

Lepreau Generating Station will report to the Authorization Branch on a weekly basis the volumes and types of wastes, including packaging and storage details, that are generated at each location. The weekly report will include the total volume of stored waste at each location. The report will also include any transportation of waste off that location, the name of the carrier, and where the waste was sent.

Upon final closure of any temporary waste management facility, a final summary of all waste collected and removed from the site will be submitted as well as site monitoring details to demonstrate the site is not contaminated.

2.11.28 DELG Waste Management Contacts

Name	Role	Office Telephone	Home/Cell Telephone
Mark Glynn	Manager, Authorizations Branch	xxx-xxx-xxxx	xxx-xxx-xxxx (H) xxx-xxx-xxxx (C)
Sheryl Johnstone	Senior Approvals Engineer (Alternate)	xxx-xxx-xxxx	xxx-xxx-xxxx (H) xxx-xxx-xxxx (C)

2.11.29 DELG Contaminated Sites: The purpose of this document is to provide a standard operating procedure to be used in the event of an emergency or other incident involving a release of radioactive contaminants that may require remediation.

2.11.30 DELG Contamination Management Scope: This document outlines the “Guideline for the Management of Contaminated Sites. This process should be engaged as part of the offsite response. There are seven steps involved in this management process. It is understood that such a release is an unconventional contaminant; however, our role in managing this release should be like conventional releases.

- Step 1: Initial Notification to the DELG.
- Step 2: Environmental Site Assessment.

- Step 3: Remedial Action Plan and/or additional Environmental Site Assessment (Tier II and Tier III.
- Step 4: Review of the Remedial Action Plan.
- Step 5: Remedial Action Plan Implementation; and
- Step 6: Compliance and Monitoring.
- Step 7: Site Closure and Maintenance.

2.11.29 DELG Responsibilities: The Authorizations Branch, Department of Environment and Local Government (ELG), is responsible for maintaining a state of readiness to provide regulatory oversight during the implementation the Contaminated Sites management process.

2.11.30 DELG Guideline for the Management of Contaminated Sites, the seven-step process: It is understood that if such a release occurs and a state of emergency is declared, several resources will become available to both the responsible party as well as involved Provincial Departments.

In an emergency that generates off-site consequences, the Canadian Nuclear Safety Commission (CNSC) emergency organization would be activated both at Ottawa and in Fredericton at the provincial Emergency Operations Center, so CNSC experts would be available to NB-DELG (if the FNEP is activated then further assistance would also be available through other Federal players). CNSC would provide access to experts on risk management of clean up/remediation activities.

The involvement from other agencies is important to note as we engage the management process. Information flow and decision processes may be coming from several agencies; however, the consistent factor in this approach is our 6-step management process. It must be noted that the RBCA (Risk Based Corrective Action) process as outlined is based on a conventional contaminant such as petroleum. Since we are dealing with an unconventional release (radiation), there may be some modifications in the noted process.

The seven steps are as follows:

Step	Action
Step 1	Initial Notification: When contamination is discovered the responsible party (or their Site Professional) must call the Regional Office of the DELG and report the incident to an Inspector. An Inspector may visit the site to evaluate the situation. The Inspector identifies who is responsible for the contamination and will advise the responsible party to clean-up the contamination through the occurrence process or indicate that a remediation file will be opened for the incident. In most cases a Site Professional will need to be hired to manage the contamination on behalf of the responsible party.
Step 2	Environmental Site Assessment (ESA) – Tier I: – A Site Professional trained to use the Atlantic RBCA process plans and conducts an ESA on behalf of the responsible party. Through the completion of an ESA, the Site Professional gathers the necessary technical information and sampling data and identifies the sources of contamination transport and exposure pathways. The levels of contaminates at the site are compared to the appropriate screening criteria, which would be considered Tier I at this point. For many contaminants the screening criteria will be risk-based screening levels (RBSLs) or Environmental Quality Standards (EQSs) found in Atlantic RBCA or if not included, another

	acceptable criteria. If the screening levels are not exceeded and the conditions on the site are not exceptional, no further action may be required.
Step 3	• Remedial Action Plan and/or additional Environmental Site Assessment (Tiers II and III): Where contaminant concentrations on a site are above the screening levels, the Site Professional prepares a remediation action plan to correct the situation and submits it to the Department of Environment and Local Government. • An appropriate remedial action plan sometimes requires a Tier II evaluation, specific to conditions of the site, to correctly identify the best ways to manage and reduce the risks. In a Tier II evaluation, the site professional collects detailed site data. The site-specific information is used to generate Site-specific Target Levels (SSTLs). • Some sites with complex conditions or contaminants benefit from a more extensive evaluation. This is a Tier III approach which goes beyond the Atlantic RBCA process to include detailed site characterization, development of site-specific numerical models and evaluations, and complex fate and transport models. • After the Tier I, II, or III Environmental Site Assessments are completed, the Site Professional develops an appropriate remedial action plan to meet the risk management targets that have been identified and submits it to the Provincial Department of Environment and Local Government.
Step 4	Review of the Remedial Action Plan: The Provincial Department of Environment and Local Government will review the remedial action plan to evaluate if it properly manages identified risks. In certain situations, the Department must approve the remedial action plan before clean-up work can begin (except in emergency situations to allow the commencement of initial clean-up actions to limit the spread of contamination). Those situations are detailed in the Guideline for the Management of Contaminated Sites and include the introduction of active chemical/biological agents or complex or unique sites.
Step 5	Remedial Action Plan Implementation: The Site Professional, on behalf of the responsible party, implements the remedial action plan to remove contamination, limit exposure pathways and institute controls to manage contaminant exposure risk.
Step 6	Compliance Monitoring: Compliance monitoring after the clean-up work is completed is required to confirm that target levels have been achieved and that any contaminant plumes are in a stable to shrinking state.
Step 7	Site Closure and Maintenance: Once the Site Professional and the responsible party determine that the site has been appropriately cleaned-up and monitoring data confirms the results, a Closure Report and Record of Site Condition is submitted to the Department of Environment and Local Government. Sites can be closed unconditional or conditional. The report details the final condition of the site, the type of closure, and any engineering controls and/or land-use restrictions that will be implemented. The Department of Environment and Local Government acknowledges receipt of the Closure Report and Record of Site Condition, which constitutes site closure. The property owner is responsible for maintaining any required engineered controls or land use restrictions. As a final step, any monitoring wells must be property decommissioned according to the DELG Guidelines for the Decommissioning of Groundwater Wells and Boreholes.

Figure 2.11.30

2.11.31 DELG Contact List for Waste Management (All numbers are area code 506 unless otherwise noted).

Control Group Member	Office	Home	Cell
Mike Correy **(Primary) –** Emergency Management Specialist	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Ian Donald **(Secondary) –** Regional Director	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Richard Breau (Alternate) – Regional Director	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Response Staff-Field-Saint John	**Office**	**Home**	**Cell**
Patrick Stull (REAC Primary) – Regional Director	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
David Peterson – Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Cathy Dubee (REAC Alternate) Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Christopher Paquet – (REAC Alternate) Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Tammy Savoie McIntosh – Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Shawn Prosser – Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Mark Bader – Regional Water Planning Officer	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Response Staff-Field-Moncton	**Office**	**Home**	**Cell**
Richard Breau (REAC Primary) - Regional Director	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Mike LeBlanc (REAC Alternate) - Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Tim Melon (REAC Alternate) Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Response Staff-Field-Fredericton	**Office**	**Home**	**Cell**
Chris Dingley – ARD	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Frank Parent – Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Response Staff-Field-Grand Falls	**Office**	**Home**	**Cell**
Richard Keeley (REAC Primary) – Regional Director	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Denis Ouellette (REAC Alternate) – Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Alain Cote – (REAC Alternate) Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Response Staff-Field-Miramichi	**Office**	**Home**	**Cell**
Ian Donald (REAC Primary) – Regional Director	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Carl Savoie (REAC Alternate) – Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Diana Jenkins (REAC Alternate) – Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Response Staff-Field-Bathurst	**Office**	**Home**	**Cell**
Ian Donald (REAC Primary) - Regional Director	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Anger Dumont (REAC Alternate)- Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Nicole Lejeune (REAC Alternate)- Regional Inspector	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

2.12 THE DEMOGRAPHIC PUBLIC SAFETY SURVEY

2.12.1 The Demographic Public Safety Survey is an eighteen-page document containing a variety of questions posed to all residents through the Warden Service which allows NBEMO to produce reports such as:

- Contact list All Residents (Master List).
- Contact list All Residents by Warden Zone.
- List of People by Disability Category.
- List of People Requiring Ambulances (Evacuation).
- List of Household Pets.

- List of Farm Animals.
- Commercial Fishing Activities.
- Annual Seafood Consumption.
- Crop or Farming Activities.
- Transportation Requirements; and
- Method of Water Supply.

NBEMO maintains the Demographic Public Safety Survey database containing detailed information on contact information listed above. The Demographic Public Safety Survey database also includes the listing of who was issued Iodide Thyroid Blocking Tablets (KI pills). The Demographic Public Safety Survey database also includes the listing of who completed a Demographic Public Safety Survey and who refused.

The Demographic Public Safety Survey database is maintained with the assistance of the Warden Service who lives and monitors their assigned warden zone. This includes new arrivals, deaths, new construction etc...

The wardens know the residents, live in the community, participate in town hall meetings, deliver letters for testing the Everbridge Notification System, deliver Iodide Thyroid Blocking Tablets, deliver, and assist residents with completing the Demographic Public Safety Survey, and conduct quarterly meetings of the Warden Service.

2.13 TRANSITION PHASE - STEPS

2.13.1 Transition Phase

Activities to prepare for the resumption of normal social and economic activity.

Recovery Operations to enable transitioning to either a planned exposure situation or an existing exposure situation.

The period after the emergency response phase when the situation is under control, detailed characterization of the radiological situation has been carried out and activities are planned and implemented to enable the emergency to be declared terminated.

Duration: Days to a year

Protective Actions:

Evacuations

Temporary Relocation

Resettlement

Decontamination of land and Property

Food and Water Restrictions

Important Steps - Considerations

- Detailed characterization

- Dose rates and contamination mapped.
- Exposure pathways identified.
- Doses Assessed
- Protective Actions Assigned (Protection Strategy)
- Define priorities for monitoring (Environmental Monitoring Strategy)
- Reassess doses continually.
- Monitoring Strategy developed in the preparedness stage (Monitoring Strategy)

Characterization includes:

1. Collecting Dose rates and mapping the contamination. How do we do that?

- Ground surveys
- Aerial surveys
- NPP Boundary Monitoring Sampling
- Fixed Point Surveillance Network
- Modeling
- Portable or hand-held monitors
- Assurance Monitoring
- Plant Status

<u>Identifying the Exposure pathways</u>

- Potential Exposure Pathways:
  - External radiation from plume
  - Inhalation of radioactivity in the plume
  - Contamination of skin and clothes
  - External radiation from ground deposition
  - Inhalation of resuspended radioactivity
  - Ingestion of contaminated food and water
- Doses Assessed:
  - How can I monitor or make an assessment?
  - Monitoring strategy / Who is providing data?
  - Where is the data being sent?
  - Flow of technical data?
  - Ensuring the data gets to the decision makers.
- Define priorities for monitoring:
  - Grouping your survey and sampling assets
  - Establish your priorities.
  - Task your assets
  - Samples delivered to a lab.
- Monitoring Strategy developed in the preparedness stage (continue to reassess)
  - Environmental Monitoring Strategy
- Protection Strategy - Reassess doses continually.
  - Be prepared to change protective actions.
  - Be prepared to remove / cancel a protective action.

2. Medical follow-up. Arrangements for:

- Registering of people requiring longer term medical follow-up, based on pre-established criteria.
- Longer term medical follow-up for those incurring doses enough to result in radiation induced health effects.
- A program for long-term medical follow-up for the registered individuals has been developed; and
- A strategy for health surveillance of the affected population and for consultation in relation to psychosocial health consequences has been developed.

3. Medical counselling

- For the affected population to deal with the psychosocial health consequences (for transition to existing exposure situation).

4. Protection of emergency workers and helpers

Arrangements for protection of Emergency workers designated from recognized response organizations.
Designate emergency workers who will be engaged in the transition phase to:

- Inform emergency workers of their rights, duties, and responsibilities about occupational radiation protection; and
- Recognize the organizations' responsibilities, commitments, and duties as employers in occupational radiation protection, so that those responsibilities, commitments, and duties can be effectively discharged at the preparedness stage and in the transition phase.

E.g., workers engaged in critical infrastructure repair, conventional waste management.

<u>Helpers – volunteers from the public.</u>

As part of the emergency arrangements, such designated response organizations should determine:

- What type of work helpers are permitted to be engaged in during the transition phase and the type of training the helpers will need to carry out this work safely and effectively.
- A mechanism for the helpers' engagement (e.g., where, and how volunteers from the public may express their interest and willingness to help, how the willingness to help will be documented, what information and instructions the helpers will be provided with, and which organization(s) or tasks they will be assigned to); and
- The process for informing helpers about and training them in their rights, duties, and responsibilities.

5. Radioactive waste management

Radiation emergency may generate waste (radioactive and conventional).

- Criteria for Classification.
- Handling of radioactive waste.
- Storage and/or disposal options.

- High Volume Waste streams.
- Human Resources with necessary skills.
- Human remains and animals.

National framework for radioactive waste management may not necessarily recognize this waste stream.

Authorities may be under pressure (public/political) to treat all waste as radioactive waste thus producing large volumes.

As response progresses radioactive waste management activities will become important and integral part of the overall response.

- Review existing guidelines for safe and effective management of waste and resources.
- Identification and disposal options should not delay decision to terminate the emergency.

6. Consultation with interested parties

Why:

- Increases public trust, credibility, and the societal acceptance.
- Enhances the community resilience to nuclear and radiological emergencies.

When:

- Starts as early as possible during the preparedness stage and continues, as appropriate, during the transition phase.
- May also continue in long term after the termination of the emergency.

7. Authority, Responsibility and Management

Before the termination of the emergency any change or transfer of authority and responsibilities from the emergency response organization to an organization responsible for the long-term recovery operations has been completed.

Sharing of any information and data gathered during the emergency exposure situation relevant for the long-term planning organized among relevant organizations and authorities.

Administrative arrangements, legislative and regulatory provisions are in place, or the corresponding amendments are underway, for the management of the existing exposure situation including provisions for necessary financial, technical, and human resources.

Development of a long-term monitoring strategy has been initiated in relation to residual contamination.

Transfer of authority.

8. Hazard Assessment

New hazard assessment may highlight the need for revised emergency arrangements.

9. Protection of the Public

A protection strategy, as the concept describes in a comprehensive manner what needs to be achieved in response to a nuclear or radiological emergency in all its phases and how this strategy will be achieved through the implementation of a justified and optimized set of protective actions and other response actions.

Protection strategy - Adopting and lifting protective actions.

"Each protective action, in the context of the protection strategy, and the protection strategy itself shall be demonstrated to be justified". **The application of the principle of justification allows the respective authorities to determine:**

"Whether a proposed protective action or remedial action is likely, overall, to be beneficial, i.e., whether the expected benefits to individuals and to society (including the reduction in radiation detriment) from introducing or continuing the protective action or remedial action outweigh the cost of such action and any harm or damage caused by the action."

The optimization of protection and safety should be applied to the protective actions and the protection strategy that have been demonstrated to be justified.

"The process of determining what level of protection and safety would result in the magnitude of individual doses, the number of individuals (workers and members of the public) subject to exposure and the likelihood of exposure being 'as low as reasonably achievable, economic and social factors being taken into account'".

10. Compensation of Victims of Damage

Consideration has been given on compensation of victims of damage resulting from the emergency.

11. Resettlement if Relocation not possible

Relocation is a protective action in which individuals are relocated from a restricted zone. Access into and out of the restricted zone is tightly controlled.

When return is not foreseeable, and relocation is permanent, it is referred to as "resettlement".

12. Discuss and agree, in broad terms, timeframes anticipated to terminate the emergency

Discuss and agree, in broad terms, timeframes anticipated to terminate the emergency for range of postulated nuclear or radiological emergencies in the preparedness stage.

The Director of the New Brunswick Emergency Measures Organization is the authority to order the Termination of the Emergency under the New Brunswick Emergency Act.

13. Conditions for terminating the emergency

The strategy for the transition to the new exposure situation aims to avoid both premature termination and late termination of the emergency.

Examples

Premature termination - inadequate protection of the public, workers including emergency workers, helpers, and patients.

Unnecessarily late termination - evacuated or relocated populations may have settled down in the new environment and they may find it disruptive to move back to the affected areas.

Delineation of areas if not feasible to allow unrestricted use of these areas (areas of evacuation or relocation and/or already imposed restriction continue to be implemented).

For these delineated areas, administrative and other provisions have been put in place to monitor the compliance with the restrictions in place.

Development of a strategy for restoration of infrastructure, workplaces, and public services necessary to support normal living in the affected areas.

Mechanism and means for continued communication and consultation with all interested parties, including local communities, is put in place.

Change or transfer of authority and responsibilities from the emergency response organization to organizations responsible for the long-term recovery operations completed.

Sharing of any information and data gathered during the emergency exposure situation relevant for the long-term planning organized among relevant organizations and authorities.

Administrative arrangements, legislative and regulatory provisions are in place, or the corresponding amendments are underway, for the management of the existing exposure situation including provisions for necessary financial, technical, and human resources.

Development of a long-term monitoring strategy has been initiated in relation to residual contamination.

A program for long-term medical follow-up for the registered individuals has been developed.

A strategy for health surveillance of the affected population and for consultation in relation to psychosocial health consequences has been developed.

No individual dose monitoring of members of the public for radiation protection purposes needed in general.

Consideration has been given on compensation of victims of damage resulting from the emergency.

If exceptional circumstances do not allow to reach the generic criteria for termination of an emergency exposure situation of 20 mSv per year within a reasonable time decision to terminate the emergency may still be taken.

Condition: It must be determined that no further justified and optimized actions are feasible and generic criteria for taking early protective actions are not exceeded.

The Director of the New Brunswick Emergency Measures Organization is the authority to order the Termination of the Emergency under the New Brunswick Emergency Act.

14. Transition Team

- Must identify who is in the transition team.
- Infrastructure available for the transition team.
- Handover to the Transition Team to continue with long-term recovery.

15. Communicating to the public must continue

- The basis for the termination of the emergency.
- The need for adjustments of imposed restrictions.
- Necessary modification in the personal behaviors and habits.
- Need for continuing protective actions in place or new ones.
- Need for continued environmental and source monitoring following the termination to the emergency.
- Health hazards associated with the new exposure situation.

16. Government oversight must be maintained

The government shall make adequate preparations to anticipate, prepare for, respond to and recover from a nuclear or radiological emergency at the operating organization, local, regional and national levels. These preparations shall include adopting legislation and establishing regulations for effectively governing the preparedness and response for a nuclear or radiological emergency at all levels”

In NB this is covered in the *New Brunswick Emergency Measures Act*.

2.13.2 Staging Area

Definition: A staging area is a location where people, vehicles, equipment, or material are assembled before re-entry into the established restricted areas around PLNGS following a release.

Possible Location: In the West established staging areas could be the MDC training facility*, 3 Magaguadavic Drive, St. George, NB* or the REMC Region 10 office, *40 Brunswick Street, St George, NB*.

In the East established staging areas could be at *Coleson Cove, 4077 King William Rd, Saint John, NB*, or the REMC Region 9 office*, 8 Castle Street, Saint John, NB*.

Re-entry: During re-entry, area residents and local workers may be allowed to briefly re-enter the restricted zone under controlled conditions to retrieve property, check on pets, livestock, or complete a shift change on site.

Permission to enter the restricted zones will be obtained from the applicable staging area East or West.

Responsibilities for the Staging Area Staff include:

- Designate contamination control team members to provide necessary briefings and dosimetry, as well as required entry and exit procedures and monitoring.
- Check people in to and out of the restricted zone.
- Authorize entry by verification (radio check, access roster, entry permit, etc.).
- Ensure that people wear prescribed protective clothing, use appropriate dosimetry, and are escorted with a radiation protection staff member from PLNGS.
- Decontaminate people, clothing, equipment, etc. if necessary.
- Ensure that anyone entering the restricted zone receives appropriate dosimetry and protective clothing (to include respiratory protection); and
- Assure that monitoring and if necessary, decontamination is conducted when they leave the affected zone.

2.14 NB INGESTION PATHWAY MONITORING PLAN (IPMP) - ENVIRONMENTAL MONITORING STRATEGY

2.14.1 Introduction: The Ingestion Planning Zone corresponds to the Ingestion and Commodities Planning Distance (ICPD) in IAEA GSR Part 7.

When radioactive material from a plume, or a liquid or solid spill, falls on crops, produce, or on surface water supplies, the potential exists for this radiation to be taken into the body through eating or drinking these radiological contaminated foodstuffs and drinking water. Ingestion pathway exposure is best avoided or limited by preventing the ingestion of radiological contaminated material from occurring. Once radioactive material is ingested it may be very difficult to expel from the body.

The data collection, analysis, and decision-making processes for avoiding or limiting radioactive exposure from the ingestion pathway should be understood at all levels of government to ensure a coordinated and effective response.

New Brunswick requires an IPMP as part of the Environmental Monitoring Strategy to minimize radiological ingestion hazards in the event of a major release of radioactive materials.

The IPMP will be directed by **an Ingestion Pathway Control Group** comprising representatives from the Department of Agriculture, Aquaculture and Fisheries, Environment and Local Government, Health and Department of Energy and Resource Development, NB Power, Health, and **Canadian Food Inspection Agency (CFIA)**, if required. The Point Lepreau Offsite Emergency Plan will provide the framework for the collection and analysis of samples. Wherever possible, existing monitoring sites and sampling locations will be used.

If a significant radioactive release endangers New Brunswick, the IPMP will be placed on standby, or activated by the Director of the NB Emergency Measures Organization (NBEMO).

The IPMP is not specific to accidents at the Point Lepreau Nuclear Generating Station. It may be invoked for any nuclear incident in North America or indeed throughout the world.

2.14.2 Elements of the Ingestion Pathway Monitoring Plan:

The IPMP incorporates the plans and procedures of all participatory agencies. It is designed to ensure that actions are initiated promptly so that effective remedial action can be implemented. To accomplish this, the Environmental Monitoring Strategy outlines:

- Roles and responsibilities of agencies involved.
- How the Environmental Monitoring Strategy will be implemented.
- Sample types, locations, and sampling frequency (IAW the Sampling Matrix).
- Sample collection and delivery procedures.
- Sample analytical facilities, and
- Follow-up procedures.

Upon notification of a nuclear release, the Ingestion Pathway Control Group will implement and manage along with assistance from member departments, NBEMO, NB Power and Health Canada. The chairman of the IPMP will be the Health Physicist from NB Power who sits as a member of the Technical Advisory Group (TAG).

The NB Power Environmental Radiation Monitoring Laboratory at *420 York St, Fredericton* is designated as the principal radio-analytical laboratory. This laboratory will analyze samples of air, water, milk, vegetation, and other produce collected and delivered to it.

Results will be transmitted to the NB TAG for review and follow-up action as appropriate.

2.14.3 Activation Procedure:

If the Point Lepreau Offsite Emergency Plan is activated or placed on standby, or if a release of radioactivity from another source may contaminate parts of New Brunswick, the IPMP will be placed on standby by the Control Group.

The IPMP will be activated on the direction of the Director NBEMO if a significant amount of radioactivity may be deposited in New Brunswick. If possible, the IPMP will be activated in time to collect baseline data.

2.14.4 Staff Notification:

Upon activation, the Control Group will notify all Ingestion Pathway Coordinators (members of Provincial Emergency Action Committee) PEAC, who will in turn notify all other individuals involved in the Plan. Ingestion Pathway Coordinators will be selected by the departments identified in the Plan and a current list maintained by NBEMO.

On activating the IPMP, the Control Group will notify Health Canada and requests those actions agreed under the Plan.

All departments involved with the IPMP will maintain and update internal notification lists, with office and home telephone numbers.

2.14.5 Exercises:

The IPMP, if possible, will be exercised every three years in line with scheduled Synergy Challenge exercises to ensure that all procedures and equipment are operational. During exercises, the plan should be implemented simultaneously in all areas (geographic & departmental) to ensure proper co-ordination.

Exercises will be used to update the Environmental Monitoring Strategy, improve the IPMP and determine background radiation levels at sample locations.

2.14.6 IPMP Responsibilities:

Each agency involved in the IPMP is responsible for appointing staff and for preparing and updating procedures appropriate to their part of the Plan.

2.14.7 The Ingestion Pathway Control Group will:

- Direct operations.
- Select sampling sites and frequencies (in conjunction with Departments).
- Select sites and monitoring periods for thermoluminescent dosimeter (TLD) and airborne radioactivity measurements.
- Review sampling results and decide if additional sampling is required, if frequencies should be changed, or if sampling should be terminated.
- Apply Generic Criteria and Operational Intervention Levels for Nuclear and Emergency Response and recommend protective measures to the Director of the Emergency Measures Organization; and
- The Ingestion Pathway Control Group may specify sampling sites or procedures other than those previously identified.

2.14.8 The Department of Agriculture, Aquaculture and Fisheries will:

- Maintain a farm database, including addresses and production data.
- Identify sampling locations.
- Collect and deliver meat, milk, produce, soil, and grass samples to the NB Power Environmental Radiation Monitoring Laboratory or as otherwise directed.
- Maintain inventories of fishing fleets and ports, commercial fisheries, fish processing plants and fish farms (Federal responsibility); and
- Arrange for the collection of marine produce and delivery to the NB Power Environmental Radiation Monitoring Laboratory or as otherwise directed.

2.14.9 The Department of Environment and Local Government will:

- Set up and operate radio-iodine samplers (using existing air monitoring stations where possible).

- Place environmental TLDs. Maintain a database of public surface water and groundwater supplies, including location, type, treatment, and contacts.
- Maintain a list of accessible stream sampling sites for representative sampling of watersheds; and
- Collect and deliver air, non-residential drinking water, rainwater and plant samples to the NB Power Environmental Radiation Monitoring Laboratory or as otherwise directed.

2.14.10 The Fish and Wildlife Branch of the Department of Energy and Resource Development will:

- Maintain statistics on the distribution and harvesting of wild birds, fish, and animals; and
- Collect samples of wild game and deliver them to the NB Power Environmental Radiation Monitoring Laboratory or as otherwise directed 1.

2.14.11 The Office of the Chief Medical Officer of Health will provide recommendations and guidance in four main areas:

- Air quality.
- Food Quality.
- Water and Soil Quality; and
- Public Health Guidance.

2.14.12 NB Power will:

- Provide training, on request, to all government staff responsible for sample collection.
- If required, provide sampling teams with protective clothing and personal dosimeters.
- Provide DELG with radio-iodine samplers (3) and environmental TLDs.
- Provide Departments with sample containers and carrier solution.
- Collect samples (see 2.16.4).
- Analyze samples delivered to the NB Power Environmental Radiation Monitoring Laboratory.
- Transmit results to IP Control Group (TAG).
- Inform EMO of their capacity to analyze samples; and
- Destroy samples.

2.14.13 The NB Emergency Measures Organization will:

- Ensure this plan is regularly updated.
- Arrange exercises.
- Activate the plan.
- Maintain a list of departmental Ingestion Pathway Coordinators.

- Co-ordinate Federal/Provincial activities.
- Arrange through NB Power for backup radio-analysis as required; and
- Act on the recommendations of the IP Control Group.

2.14.15 Sample locations providing province-wide food and produce monitoring should, where possible:

- Be accessible all year or capable of set up 24 hours' notice; and
- Include as many types of samples as possible.

Air, rain, drinking water and plant sample locations will be selected by the Ingestion Control Group in consultation with NB Power and the Department of Environment and Local Government, milk, dairy products, eggs, meat, fruit and vegetable sample locations and marine product sample locations, in consultation with the Department of Agriculture, Aquaculture and Fisheries.

2.14.16 Samples to be selected:

- Air – particulates and radioiodine's (Health Canada, DELG, and NB Power).
- Drinking Water – Lakes and surface waters, rain waters (DELG).
- Milk – Bulk samples from major processors; (DAAF - Farms in St Stephen, Blissville areas).
- Samples from grazing herds (beef?) (N/A).
- Processed dairy products – as indicated by milk results (DAAF).
- Produce – as indicated by other measurements (DAAF).
- Marine produce – as indicated by other measurements (DAAF).
- Plants – mainly grass and leafy vegetables (DAAF).
- Other than Agriculture - Vegetation (DELG); and
- Ambient radiation – from TLDs (DELG and NB Power).

2.14.17 Existing Sampling Programs:

Where appropriate, sample locations from existing sampling programs will be used, i.e.

- Department of Health well water radiological monitoring program.
- Department of Environment and Local Government programs for:
    - Air particulate monitoring (Saint John, St. Andrews, Moncton, Fredericton, St. Leonard, and Bathurst).
    - Soil sampling.
    - Drinking water surveillance (before and after treatment); and
    - Surface water quality monitoring.
- Department of Agriculture, Aquaculture and Fisheries milk and produce testing programs and marine produce testing programs.
- Department of Energy and Resource Development dead game collection program; and
- Health Canada radiological monitoring program.

2.14.18 Sampling frequencies while the IPMP is activated will be:

- Daily – Department of Environment and Local Government
  - Air filter and iodine samplers.
  - Water samples (rainfall after a rain); and
  - Water samples from water treatment plants.
- Daily – Department of Agriculture, Aquaculture and Fisheries
  - Milk samples (from different sites); and
  - Vegetation samples.
- Other samples as required.

The Department of Agriculture, Aquaculture and Fisheries will sample dairy products, produce and meat samples periodically, depending on preliminary results of the primary daily samples. Sampling frequency will be determined by the IP Control Group in consultation with the Department of Agriculture, Aquaculture and Fisheries.

TLDs will be placed by the Department of Environment and Local Government on activation of the IPMP.

Collection frequency will depend on activity levels, in consultation with NB Power Health Physicist (TAG).

Health Canada radiological monitoring program data will include Canada-wide data from air, water, TLD and milk sampling. These data are normally collected monthly, but results can be made available with a frequency to be agreed upon during the emergency.

2.14.19 Sampling Procedures:

In most cases, detailed sampling procedures will be as described in the appropriate agencies sampling plan or as requested by the IP Control Group.

Some general points to be borne in mind are as follows:

- All samples should be clearly labelled as to type, location, date and time of collection, and name of sampler. (Done using GPS).
- Milk and water samples should be collected in bottles or containers provided by NB Power. These bottles may contain non-radioactive carrier solution and should not be rinsed before use. DELG bottles for water may be used.
- If NB Power bottles are unavailable, any clean bottle of the appropriate size may be used.
- Where possible, water samples should be taken before treatment (raw water) unless otherwise specified.
- Water samples from rivers and streams should be collected at or near the surface to avoid contamination with disturbed sediment.
- Milk held in farm bulk storage tanks or bulk transporters at the time of the incident will normally is free of radioactive contamination. All reasonable precautions should therefore be taken to prevent adulteration with contaminated milk, and it should be collected as soon as possible for processing.

- As dilution is not an acceptable method for controlling the level of radioactivity in food, it will be necessary to sample and test all raw milk supplies at the farm gate before collection. Ideally this should be done with a portable MCS but, if unavailable, it will be necessary that testing be done at NB Power or DOH labs.
- If so, requested by the IP Control Group, the water supply used for livestock should also be tested; and
- To obtain a representative sample for measuring radioactivity in vegetables, fruits, and other produces at least 10 sampling sites (in the field) should be composited at each location.
- With meat, the organs to be sampled will depend on the type of radioactive contamination that has been identified in the release. The IP Control Group will determine which tissues are to be collected, and at which abattoirs.

2.14.20 Sample Size:

Although smaller samples can be successfully and accurately analyzed with longer counting times, preferred sample size is as follows:

- All liquids (water, milk, juices) – 4 liters.
- All solid foods (fish, meat, fresh produce) – 1kg; and
- Soil and animal feeds – 1kg.

2.14.21 Radiological Safety:

The TAG at the Emergency Operations Center will be responsible for the radiological safety of all field staff, based upon radiation dose levels, both predicted and measured, and by personnel dosimetry. To avoid placing sampling teams at risk, the following safety procedures will be observed:

- No sampling will be undertaken when the situation at the accident site remains unstable, or while uncontrolled release of radio-active material is taking place.
- No sampling by government officials will be undertaken without the knowledge and approval of Health Physicist on the TAG.
- No sampling will be undertaken in any area declared unsafe by Health physics; and
- When necessary, all samplers will be issued protective clothing, personal dosimeters, and radiation monitoring equipment under NB Power Radiation Protection qualified staff.

2.14.22 Sample Analysis:

The NB Power Environmental Radiation Monitoring Laboratory located at the Chestnut Building, 420 York Street, Fredericton will be used as the primary radio-analytical laboratory. Samples should be either delivered directly to this laboratory or to local field headquarters where appropriate shipping arrangements will be made.

If the NB Power Radiation Laboratory cannot analyze all emergency samples, other laboratories will be used. An inventory of New Brunswick facilities capable of radio-analysis will be maintained by the Department of Health.

Ambient radioactivity levels will be determined by the NB Power Radiation Laboratory from samples received during IPMP exercises and used as a baseline for any subsequent emergency.

2.14.23 Reporting of Results:

Results from the NB Power Radiation Laboratory and any back-up laboratories will be reported to IP Control Group as soon as possible. Results will also be sent to the IP Control Group, TAG and to Health Canada.

Radio analysis results from federal monitoring programs will be sent by Health Canada to the FTLO with the IP Control Group (TAG).

2.14.24 Analysis of Results and Protective Measures:

The NB TAG will review all sampling results in conjunction with the Health Physics Group at the Emergency Operations Center and/or Health Canada; apply Generic Criteria and Operational Intervention Levels for Nuclear Emergency Planning and Response.

2.14.25 General Information:

The province through the Provincial Technical Advisory Group (TAG) will determine the need for radiological monitoring and ingestion pathway sampling, and if needed, will select, organize, and equip sampling teams.

Sampling teams will be tasked and organized by the NBEMO Manager of Plans and Preparedness using a Grouping and Task Matrix.

The Sampling Teams should include at least two - three people:

- Provincial department representative.
- Radiological specialist, if required.
- Trained individual on sampling techniques to collect and document in accordance with the sampling standard procedures and methods; and
- Driver / transportation to the sampling site and the designated laboratory.

Sampling requirements inside the restricted area can be performed by the survey teams deployed from the **Off-site Emergency Operations Center (OEOC)**.

2.15 NEW BRUNSWICK IPMP MATRIX – ENVIRONMENTAL MONITORING STRATEGY

2.15.1 New Brunswick IPMP Matrix

Since an emergency evolves from response to the transition phase, the decision-making process may become more complex. It will require shifting roles and responsibilities and will likely require the involvement of additional organizations.

As such, the following should be accomplished at the preparedness stage:

- roles and responsibilities for the transition phase should be identified, to the extent practical (IPMP); and
- a mechanism should be established for a formal transfer of responsibilities that will take place during the transition between the response phase and the transition phase (Ingestion Pathway Control Group).

The transition from the response phase (i.e., an emergency exposure situation – IAEA term) through the Transition Phase (recovery) to an existing exposure situation (i.e., an existing exposure situation – IAEA term) is characterized by a change in strategy.

During the response phase, both are mainly driven by urgency, with potentially high levels of exposure and predominantly central decisions.

During the transition phase, strategies are more decentralized, involve less urgency, and focus on improving living conditions and reducing exposures.

2.15.2 Ingestion Planning Zone

The Ingestion Planning Zone is approximately 57-kilometer radius around the Point Lepreau Nuclear Generating Station (PLNGS) and includes the 20 km Detailed Planning Zone (EPZ) and the 50 km Contingency Planning Zone. When radioactive material from a plume, or a liquid or solid spill, falls on crops, produce, or on surface water supplies, the potential exists for this radiation to be taken into the body through eating or drinking these radiological contaminated foodstuffs and drinking water. This distance may in increased based on sampling results and radiation detection surveys.

Ingestion pathway exposure is best avoided or limited by preventing the ingestion of radiological contaminated material from occurring.

2.15.3 Once radioactive material is ingested it may be very difficult to expel from the body. The data collection, analysis, and decision-making processes for avoiding or limiting radioactive exposure from the ingestion pathway should be understood at all levels of government to ensure a coordinated and effective response.

The IPMP incorporates the plans and procedures of all participatory agencies. It is designed to ensure that actions are initiated promptly so that effective remedial action can be implemented.

To accomplish this, the IPMP outlines:

- Roles and responsibilities of the agencies involved.
- How the plan will be implemented.
- Sample types, locations, and sampling frequency.
- Sample collection and delivery procedures.
- Identifies the Sample analytical facility / facilities:
    - The NB Power Environmental Radiation Monitoring Laboratory, Mailing Address: PO Box 2050 Fredericton, NB, Canada, E3B 5G4; and Shipping Address: 420 York Street Fredericton, NB, Canada, E3B 3P7; and
    - The Point Lepreau Nuclear Generating Station Health Physics lab located at the Point Lepreau Nuclear Generating Station.

- Follow-up procedures (data to the New Brunswick Technical Advisory Group (TAG)).

2.15.4 Existing Sampling Programs

NB Power follows a sampling routine in accordance with their Environmental Plan.

The ingestion pathway monitoring plan is an extension of their Environmental Plan.

Where appropriate, sample locations from existing sampling programs will be used, i.e.

- Department of Environment and Local Government programs for:
  - Air particulate monitoring (Saint John, St. Andrews, Moncton, Fredericton, St. Leonard, and Bathurst).
  - Drinking water surveillance (before and after treatment); and
  - Surface water quality monitoring.
- Department of Agriculture, Aquaculture and Fisheries milk and produce testing programs and marine produce testing programs.
- Department of Energy and Resource Development dead game collection program.
- Health Canada radiological monitoring program: Air, rain, drinking water and plant sample locations will be selected by the Ingestion Control Group in consultation with NB Power and the Department of Environment and Local Government; milk, dairy products, eggs, meat, fruit and vegetable sample locations and marine product sample locations, in consultation with the Department of Agriculture, Aquaculture and Fisheries.

See examples below

EXAMPLE

Ground Survey Teams – Priorities, Grouping and Task Matrix

Ground Survey Team Priorities:

1. Areas outside the 20 KM EPZ not under protective actions;
2. Areas inside the 20 km EPZ indicated by NRCan to be higher than other areas nearby (Spiked readings); and
3. Areas directed by the NB TAG to define the perimeter of the ground deposition.

Locations:

OEOC St George – 3 Magaguadavic Drive, St George, NB, E5C 3H7
Gateway Depot Musquash – 3060 Route 790 Musquash, NB, E5J 2G1

	PLNGS Team 1	PLNGS Team 2	PLNGS Team 3	PLNGS Team 4	HC Team 1	HC Team 2	HC Team 3	HC Team 4	HC Team 5
Groupings	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted
Location	OEOC St George	OEOC St George	OEOC St George	OEOC St George	Gateway Depot Musquash	Gateway Depot Musquash	Gateway Depot Musquash	Gateway Depot Musquash	Gateway Depot Musquash
Task: 001 Priority	Priority 3	Priority 2	Priority 2	Priority 3	Priority 1	Priority 1	Priority 1	Priority 2	Priority 2
Time and Location	1025 hours Intersection Detour Road and Route 175	1035 hours Crow Harbour Intersection of Seeleys Cove Road and Crow Harbour Road	1045 hours intersection of Route 780 and Road 6	1015 hours Intersection of Highway 175 and the Highway 1 Overpass	1015 hours Intersection of Roix Road, Utopia and Route 780	1015 hours Intersection of Route 780 and Route 785, Utopia	1015 hours Intersection of Mainline Road, Utopia and Route 785	1015 hours Maces Bay intersection of Welch Cove Road and Maces Bay Road	1015 hours Dipper Harbour intersection of Jocks Road and Route 790
Task: 002 Priority	Priority 3	Priority 2	Priority 2	Priority 3	Priority 1	Priority 1	Priority 1	Priority 2	Priority 2
Time and Location	1055 hours Pennfield Station intersection of Route 175 and Blueberry Lane	1100 hours Seeley's Cove Intersection of Seeley's Cove Road and Paul Road	1105 hours intersection of Route 780 and Alex Jack Detour Road	1040 hours Intersection of Woodland Road and the Highway 1 Overpass	1055 hours Intersection of Eagle Point Road and Route 785, North of Utopia Centre	1045 hours Intersection of Leavitt Cove Road and Route 785, North of Utopia Centre	1045 hours West end Pump House Road North of Lake Utopia Paper off Route 785	1035 hours intersection of Basin Road and Route 790	1050 hours intersection of Campbell Road and Route 790 Campbell's Cove
Task: 003 Priority									
Time and Location									

Figure 2.15.5

EXAMPLE

Sampling Team - Grouping and Task Matrix

Sampling Teams:

1. Environment to sample - Air, soil, and water;
2. DAAF to sample - marine produce and locally produced foodstuff; and
3. DERD to sample - as part of the dead animal collection program; pick up deer, bear and moose.

	Enviro Team 1	Enviro Team 2	Enviro Team 3	Enviro Team 4	DAAF Team 1	DAAF Team 2	DERD Team 1	DERD Team 2	DERD Team 3
Groupings	2-3 member team, vehicle mounted	2-3 member team, vehicle mounted	2-3 member team, vehicle mounted	2-3 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted	2 member team, vehicle mounted
Location									
Task: 001 Time and Location									
Task: 002 Time and Location									
Task: 003 Time and Location									
Task: 004 Time and Location									
Task: 005 Time and Location									

Figure 2.15.6

New Brunswick IPMP Task Matrix - Environmental Monitoring Strategy	
Department, Organization, or Agency	**Role and Responsibility**
	The Nuclear Control Group will: • Direct Environmental Monitoring Strategy operations. • Select sampling sites and frequencies (in conjunction with Provincial Departments). • Select sites and monitoring periods for **thermoluminescent dosimeter (TLD)** and airborne radioactivity measurements. • Review sampling results and decide if additional sampling is required, if frequency should be changed, or if sampling should be terminated. • Apply Generic Criteria and Operational Intervention Levels and recommend protective measures to the Director of the NB Emergency Measures Organization; and • The Nuclear Control Group may specify sampling sites or procedures other than those previously identified. Members: • Department of Health. • Department of Agriculture, Aquaculture and Fisheries (DAAF). • Department of Environment and Local Government (DELG). • Department of Energy and Resource Development (DERD). • New Brunswick Emergency Measures Organization (NBEMO). • New Brunswick Power (NB Power); and • Health Canada (FTLO). The province through the New Brunswick Technical Advisory Group (TAG) will determine the need for radiological The Nuclear Control Group will: • Direct Environmental Monitoring Strategy operations. • Select sampling sites and frequencies (in conjunction with Provincial Departments). • Select sites and monitoring periods for thermoluminescent dosimeter (TLD) and airborne radioactivity measurements. • Review sampling results and decide if additional sampling is required, if frequency should be changed, or if sampling should be terminated. • Apply Generic Criteria and Operational Intervention Levels and recommend protective measures to the Director of the NB Emergency Measures Organization; and • The Nuclear Control Group may specify sampling sites or procedures other than those previously identified. Members: • Department of Health. • Department of Agriculture, Aquaculture and Fisheries (DAAF). • Department of Environment and Local Government (DELG). • Department of Energy and Resource Development (DERD). • New Brunswick Emergency Measures Organization (NBEMO). • New Brunswick Power (NB Power); and • Health Canada (FTLO).

	The province through the New Brunswick Technical Advisory Group (TAG) will determine the need for radiological monitoring and ingestion pathway sampling, and if needed, will select, organize, and equip sampling teams. Sampling teams will be tasked and organized by the NB Power Health Physicist. The Sampling Teams should include at least two - three people: • Provincial department representative. • Radiological specialist, if required. • Trained individual on sampling techniques to collect and document in accordance with the sampling standard procedures and methods; and • Driver / transportation to the sampling site and the designated laboratory.
Department, Organization, or Agency	**Role and Responsibility**
	DAAF will: • Maintain a farm database, including addresses and production data. • Identify sampling locations. • Collect and deliver meat, milk, produce, soil, and grass samples to the NB Power Environmental Radiation Monitoring Laboratory or as otherwise directed. • Maintain inventories of fishing fleets and ports, commercial fisheries, fish processing plants and fish farms (Federal responsibility). • Arrange for the collection of marine produce and delivery to the NB Power Environmental Radiation Monitoring Laboratory or as otherwise directed. • Provide details on livestock (riding horses, ponies, etc.…) if removed from the area prior to a release. • Provide details on accommodated livestock (riding horses, ponies, etc.…), location, and contact information. • Provide details on agriculture production in the Point Lepreau area. • Provide information on farms, stables, commercial fishing or other agriculture, aquaculture and fisheries that would be impacted. • Collect samples of locally produced foodstuff and the delivery of samples to the New Brunswick Power Laboratory (420 York Street Fredericton) for analysis. • Provide a list of statistics on the distribution or harvesting of fish; and • Obtain samples from vessels which may have passed through the plume.
Department, Organization, or Agency	**General Information for Sampling Teams**

	Depending upon the scope and timing of the event – New Brunswick potential commercial fisheries/aquaculture that could be impacted are herring, clams, sea cucumbers, lobster, scallops, and rockweed. Marine aquaculture, freshwater hatcheries and production units, periwinkles, dulse, quahogs, sea urchins, and ground fish. Primary and secondary processing plants, lobster pounds and tank houses. Commercial/recreational divers, crews of vessels/sites, tourism and whale watching. When dealing with Aquaculture there are two companies: • Northern Harvest; and • Cooke Aquaculture. Both are in the area, and both use a rotation crop method within the Emergency Planning Zones at sea. Their vessel whereabouts are always known and are monitored using VHF radio. Lobster fishing has two seasons: • 31 March – 29 June; and • 2nd Tuesday in November – 14 January. There are 176 lobster licenses issued in the region. Each lobster vessel would have 2-4 personnel on board, and they could have as many as 50 vessels in the water on any given day. Harvesting Blueberries - McKay's Blueberries in Pennfield, NB. Harvest between mid-August and mid-September DAAF has many resources at this time that can support collection and delivery of samples.
Department, Organization, or Agency	**Summary of Sampling Capability**
	Questions: **1) In non-emergency times, what does your organization sample?** The St George regional office regularly visits marine salmon cage sites as part of a fish health monitoring program for Infectious Salmon Anemia – not specifically for issues related to food safety or human health. Field staff collects dead and moribund fish and samples. Tissue samples etc. would be prepared using approved techniques for delivery and subsequent analysis by the Research Productivity Council lab in St George/Fredericton. (RPC recently acquired the fish health lab that was owned by PNB and the Department of Agriculture Fisheries and Aquaculture). Field staff also conduct fish health assessments and monitoring of fresh water/hatchery facilities typically in the spring of the year (for determining fish health status prior to movement of (salmon) stock from fresh to saltwater – for grow out.

	Staff would also maintain a log of physical and environmental conditions specific to site visits. If requested this department may also assist with health or stock related problems associated with holding lobsters in tank houses or lobster pounds. Depending upon the season and fishery activity, DAAF compliance officers monitor activity around wharfs, for compliance regulatory/quality issues related to buying and transporting seafood. It is important to reiterate that our sampling will not dictate the wholesomeness of any seafood product for sale or consumption – this responsibility is with other agencies – particularly CFIA. Our program relates to biosecurity and best aquaculture practices. **2) During a Radiation Emergency, what would your organization sample?** Subject to safety clearances for field staff it would be expected that the fish health program would continue. Field staff could be called upon to assist other agencies to collect and deliver samples as required. This sampling could be extended to a wide geographic range and include other species or areas not typically assessed under the regular program – such as animals on the beach, lobster pounds, or product at the plant level. **3) During a Radiation Emergency, would the frequency of sampling change?** Unlikely for normal field operations unless conditions were hazardous. If requested to increase the level of sampling, we would undertake to the best of our ability. **4) Who is responsible for conducting the sampling? (numbers / staff)** The St George Regional office has 3 field biologists/technicians, a veterinarian as well as other staff members that can participate to support sampling on water or land. **5) During a Radiation Emergency, when would you expect to conduct the sampling?** Outside of our regular program, as determined by the Nuclear Control Group (or other lead agency). **6) During a Radiation Emergency, where would you expect to conduct sampling?** The region can help conduct sampling on land or water. Most likely of primary importance would be any sites that are commercially holding or producing. DAAF would take instructions from the Nuclear Control Group. **7) During a Radiation Emergency, are you dependent on another organization to complete sampling tasks?** No, for initial guidance if a method or SOP required. The regional office has a full complement of field staff and resources (boats/vehicles/ etc.) that can deploy quickly if weather and conditions allow.

Department, Organization or Agency	Role and Responsibility
	DELG will: • Set up and operate radio-iodine samplers (using existing air monitoring stations where possible). • Place environmental TLDs on request from NB Power. • Maintain a database of public surface water and groundwater supplies, including location, type, treatment, and contacts. • Maintain a list of accessible stream sampling sites for representative sampling of watersheds. • Collect and deliver air, non-residential drinking water, Rainwater, soil, and plant samples to the NB Power Environmental Radiation Monitoring Laboratory or as otherwise directed; and • Provide a list of locations of public and private drinking water supplies outside the 20 km Emergency Planning Zone.
Department, Organization or Agency	**General Information for Sampling Teams**
	DELG has the environment emergency management plan which lays out the procedures for sampling protocols (non-air parameters) such as surface water, soil vegetation, snow/ice, and they identify potential sampling locations. DELG have a radiological Monitoring Plan that covers an ambient air quality monitoring plan to sample particulates, radioiodine, and precipitation and background level assessment. DELG have a radioactive Waste Management Plan to deal with contaminated waste. Sampling Equipment kits contain sufficient stores to obtain 5 samples of water, soil, and vegetation: • 5 - 1 L plastic bottles. • 5 - 250ml plastic jars. • 5 - Large heavy-duty Ziploc plastic bags. • 30 - Large heavy-duty Ziploc plastic bags (for double / triple bagging where necessary). • 30 - Pairs each of small & large sized gloves. • 10 - Disposal plastic trowels. • 1 - Metal scraper. • 1 - Roll of paper towel. • 1 - Pair of scissors. • 3 - Sample Submission Forms (for NB Power Health Physics Fredericton Laboratory) *; and • 1 -DELG Sampling Protocol for Radiological Analyses (for PLNGS Incident Response) *. *The Regional Office staff are responsible for replacing the Sample Submission Forms or Sampling Protocol in the kits should new versions be issued by the Analytical Services Lab
Department, Organization or Agency	**Summary of Sampling Capability**

	Legally, both the Responsible Party and the DELG have separate responsibilities. However, in this case, NB Power is a corporation and DELG would assist (as indicated in the Off-Site Plan). For sampling directed by the TAG, the request would come from the TAG to the PEAC/PEOC primary. For DELG, that is Mike Correy. For this event, we would have a Team Leader assigned and they would have a back-up staff. Sampling Teams would be created, and work (or rally) stations would be identified. Currently, DELG has twenty-three (23) staff that is trained in emergency response/management. With the normal day-to-day emergencies DELG faces, we require six (6) to remain available for local responses throughout the province. Two (2) staff is team leads, plus one (1) is a Provincial On-Call Inspector (24/7). This leaves us with a maximum of seven (7) teams for sampling, but more likely we would have four (4) teams. Simply put, two (2) team leads plus eight (8) staff (four teams) for all non-air samples. We have a Team Lead for Air plus two (2) to six (6) staff for air sampling for a total of fourteen (14) plus staff. Additionally, we have citizens around the province that assist us in collecting rain waters (should rainwater be required to be sampled). We can also assist in placing TLD's if necessary. **5) During a Radiation Emergency, when would you expect to conduct the sampling?** <u>Day Time</u> This would be directed by the TAG. We would not anticipate sampling all materials at night (due to safety concerns) but can accommodate (this is rare and most likely could be best handled at facilities such as water treatment plants). The sampling time would eventually be dictated by the weakest point, and in this case, that would be the NB Power lab and its capabilities to analyze and operate what and when it can. **6) During a Radiation Emergency, where would you expect to conduct sampling?** Outside of the impacted zones Again, this is directed at the TAG. We do have Air Monitoring stations plus people who collect rainwater as we require throughout the province. We do not expect a request to sample in an impacted area that poses a threat to our health and safety. Typically, we would expect to be asked to sample watersheds and wellfields plus soil and air. **7) During a Radiation Emergency, are you dependent on another organization to complete sampling tasks?** Yes NB Power – supplies guidance, as well as sampling equipment. Other Departments – to conduct their sampling.
Department, Organization, or Agency	**Role and Responsibility**

	The Fish and Wildlife Branch of DERD will: • Maintain statistics on the distribution and harvesting of wild birds, fish, and animals. • Collect samples of wild game and deliver them to the NB Power Environmental Radiation Monitoring Laboratory or as otherwise directed; and • Collect outside the 20 km Emergency Planning Zone.
Department, Organization, or Agency	**Role and Responsibility**
	Deer Season (Bow & Firearm) near end October- November Fowl Season October – December Moose Season end September (Reminder that Moose Season is the last week of September) There are **approximately 1000-1500 hunters on average in warden zones 14 and 15 during these seasons.** There are approximately 500 hunting camps in the area as well. Collect harvest distribution numbers on are deer, bear, and moose, by wildlife management zones. The dead game collection program is just that, and again only applies to the large game, but may be expanded in the case of a radiation emergency, with the approval of the Minister. The only instance where DERD would expand the program to include collecting other species (Fish and Birds). would be in the case of a radiation emergency and with approval of the Minister as these species aren't currently monitored
Department, Organization, or Agency	**Role and Responsibility**

	Questions: **1) In non-emergency times, what does your organization sample?** As part of the dead animal collection program DERD pick up deer, bear, and moose. **2) During a Radiation Emergency, what would your organization sample?** DERD would pick up any animal as part of the dead animal collection program with approval from executive management, work safe NB and the union. **3) During a Radiation Emergency, would the frequency of sampling change?** No, the frequency is dependent on reported dead animals on roadways. May be extended to birds, if requested and approved. **4) Who is responsible for conducting the sampling? (numbers / staff)** DERD would pick up any animal as part of the dead animal collection program. The NB Power Environmental Radiation Monitoring Laboratory is responsible for analyzing the sampling. **5) During a Radiation Emergency, when would you expect to conduct the sampling?** Only after the contaminated areas have been identified and when tasked through the DERD representative in the PEAC. Frequency is dependent on reported dead animals on roadways. **6) During a Radiation Emergency, where would you expect to conduct sampling?** Collect samples only outside the 20 km Emergency Planning Zone. **7) During a Radiation Emergency, are you dependent on another organization to complete sampling tasks?** Collection and delivery will be conducted by DERD however analysis would be conducted by the NB Power Environmental Radiation Monitoring Laboratory.
Department, Organization, or Agency	**Role and Responsibility**
	The Office of the Chief Medical Officer of Health will provide recommendations and guidance in four main areas: air quality; water quality; food quality; and public health guidance.
	Air quality • Assist with health risk assessments related to human health as required; and • Provide Public Health Advisories regarding air quality through the emergency communications organization, as well as through the Public Health Advisories page on the OCMOH website. Food Quality • Assist with health risk assessments related to human health as required. • Provide public health advice about the contamination of foods, their condemnation, embargo and disposal if required.

	• Provide public health advice regarding food related matters in the event of a power outage; and • Inspect community centers used for temporary accommodations to ensure adequate food safety, water quality, washroom requirements and general sanitation. Water and Soil Quality • Assist with health risk assessments related to human health as required. • In conjunction with the Department of the Environment and Local Government, provide consultation and advice to local municipalities where a municipal water supply may be or has been affected; and • Provide public health advice on what to do if water or soil contamination exceeds health guidelines. Public Health Guidance • Provide public health advice to the population and relevant stakeholders. • Provide advice to government departments on public health impacts. • Provide public health guidance to the representatives of response organizations as requested. • Provide advice to the Provincial Nuclear Control Group on all public health matters. • As per the process outlined in the Public Health Plan – Nuclear Off-Site Emergency, the Regional Medical Officer of Health (Saint John region) will review requests from the provincial Nuclear Control Group regarding the distribution of KI pills and provide recommendations on the appropriate dosages. • Provide a printed information brochure published by the Office of the Chief Medical Officer of Health as a resource to support Horizon Mental Health Services and Regional Public Health field roles, for distribution at Reception Centers; and • Provide public health messaging to PEOC Communications and Health Communications such that they may: o ensure that the web site is updated daily with public health and safe zone information. o ensure that Tele-Care 811 receives public health information in advance of being reported to the public. o ensure the public receives pertinent public health information in a timely manner to prevent adverse health effects related to the event; and o respond to all media calls transferred from Tele-Care within 24 hours.
Department, Organization, or Agency	**Role and Responsibility**
	NB Power will: • Provide training, on request, to all government staff responsible for sample collection. • If required, provide sampling teams with protective clothing and personal dosimeters (From OEOC). • Provide DELG with radio-iodine samplers and environmental TLDs. • Provide Provincial Departments with sample containers. • Analyze samples delivered to the NB Power Environmental Radiation Monitoring Laboratory.

- Transmit results to IP Control Group (TAG).
- Inform NBEMO of their capacity to analyze samples; and
- Destroy samples.

NB Health Physicist will:

- Chair the Ingestion Pathway Control Group.
- Make recommendations on restricted areas (contaminated areas requiring restricted access).
- Make recommendations on sampling to be conducted, including developing a sampling plan (Matrix).
- Make recommendations on surveying to be conducted, including developing a surveying plan (Matrix).
- Coordinate with Health Canada to make recommendations on stopping or removing protective actions currently in place; and
- Make the recommendation for termination of the emergency to the Director of NBEMO.
- Termination of the Emergency will be the Director of NBEMO's decision.

NB Power lab will:

- Analyze samples.
- Forward sample data to the provincial TAG; and
- Destroy sample waste, as required.

Department, Organization, or Agency	**General Information for Sampling Teams**

NB Power Environmental Radiation Monitoring Laboratory,
420 York Street
Fredericton, NB, Canada. E3B 3P7

NB Power sample the following during non-emergencies:

Sample Medium		**Typical Frequency**
Airborne Particulates	**Atmospheric**	Monthly (integrated sample)
Airborne Iodines		Monthly (integrated sample)
Water Vapour		Monthly (integrated sample)
Carbon Dioxide		Monthly (integrated sample)
Ambient Gamma Measurements (TLDs)		Quarterly (integrated sample)
Gaseous Effluent Monitor (GEM) Particulates		Weekly Composite (integrated sample)

Sample Medium		**Typical Frequency**
Ambient Gamma Measurements (TLDs)	**Terrestrial Sampling**	Quarterly (integrated sample)
Milk - commercial dairy		Monthly
Milk - dairy farms		Quarterly
Well Water		Semi-annually
Pond, Puddle and Surface Water		Quarterly

	Berries		Weekly in Season
	Garden Vegetables		Weekly in Season
	Vegetation		Monthly
	Soil		Quarterly
	Monitoring Well Water (Near Plant)		Annually
	Precipitation		Monthly (integrated sample)

Sample Medium		Typical Frequency
Seawater	Marine Sampling	Quarterly
Clams		Quarterly When Available
Fish		Quarterly When Available
Lobster		Quarterly When Available
Periwinkles		Monthly When Available
Aquaculture Salmon		Quarterly When Available
Scallops		Quarterly When Available
Crabs		Quarterly When Available
Dulse		Monthly When Available
Other Sea Plants		Quarterly
Sediment		Quarterly
Ambient Gamma Measurements of Intertidal Zone (Ion Chamber)		Quarterly
Liquid Effluent Monitor (LEM) Composite Water		Monthly Composite (integrated sample)

Sample Medium		Typical Frequency
Bore Hole Water	Solid Radioactive Waste Management Facility	Three Times Per Year
Parshall Flume Water		Weekly
Ambient Gamma Measurements (TLDs)		Quarterly (integrated sample)

Sample Medium		Typical Frequency
Ambient Gamma Measurements (TLDs)	Hemlock Knoll Regional Sanitary Landfill	Quarterly (integrated sample)

Department, Organization, or Agency	Summary of Sampling Capability

	Questions: **1) In non-emergency times, what does your organization sample?** See tables listed above. **2) During a Radiation Emergency, what would your organization sample?** NB Power would sample same as listed in the tables above, when available. (Season and weather dependent) **3) During a Radiation Emergency, would the frequency of sampling change?** Yes, the frequency would change. **4) Who is responsible for conducting the sampling? (numbers / staff)** Lab staff from both Fredericton & PLNGS Health Physics labs, NB Power surveyors from the OEOC, and DELG staff. Other provincial agencies will probably assist too. **5) During a Radiation Emergency, when would you expect to conduct the sampling?** It is scenario dependent. Probably after 24 hours, but it could be sooner for critical media (air filters, TLDs, Spruce Lake water etc.) **6) During a Radiation Emergency, where would you expect to conduct sampling?** Initially, in the plume and near key population areas (and Spruce Lake). As the scenario unfolds, the area would be expanded. **7) During a Radiation Emergency, are you dependent on another organization to complete sampling tasks?** Yes. The DELG plays a key role.
Department, Organization, or Agency	**Role and Responsibility**
	NBEMO will: • Ensure this IPMP is regularly updated. • Schedule exercises. • Activate the plan when required. • Maintain a list of departmental Ingestion Pathway Coordinators (Provincial departments). • Co-ordinate Federal / Provincial activities. • Arrange through NB Power for backup radio-analysis as required. • Maintain an updated data base using the Demographic Public Safety Survey; and • Act on the recommendations of the IP Control Group A critical element for successful ingestion pathway exposure operations is public information. The establishment of the Joint Information Center to coordinate the release of information through multiple sources, such as Alert Ready, news releases, news conferences, media briefs, web sites, and social media.

	The Demographic Public Safety Survey is an eighteen-page document containing a variety of questions posed to all residents through the Warden Service which allows NBEMO to produce reports such as: ○ Contact list All Residents (Master List). ○ Contact list All Residents by Warden Zone. ○ List of People by Disability Category. ○ List of People Requiring Ambulances (Evacuation). ○ List of Household Pets. ○ List of Farm Animals. ○ Commercial Fishing Activities. ○ Annual Seafood Consumption. ○ Crop or Farming Activities. ○ Transportation Requirements; and ○ Method of Water Supply. NBEMO maintains the Demographic Public Safety Survey database containing detailed information on contact information listed above. The Demographic Public Safety Survey database also includes the listing of who were issued Iodide Thyroid Blocking Tablets and who refused. The Demographic Public Safety Survey database also includes the listing of who completed a Demographic Public Safety Survey and who refused.

Figure 2.15.7

2.16 GENERIC CRITERIA AND OPERATION INTERVENTION LEVELS

2.16.1 Generic Criteria

The bases for implementing protective actions are the generic criteria. If the generic criterion for an action is exceeded, implementation of that action should be considered a priority. Table 2 identifies the generic criteria recommended by Health Canada. Doses include exposure from all pathways (e.g., external irradiation, ingestion, and inhalation).

TABLE 2. Generic criteria. E is effective dose, Hthyroid is equivalent dose to the thyroid; Hfetus is equivalent dose to the fetus, and Hp(10) is personal dose equivalent at 10mm.

STRATEGY NAME	PROTECTIVE ACTIONS	GENERIC CRITERIA
Exposure Control	Stable iodine thyroid blocking	50 mSv in the first 7 days (*H*thyroid)
	Evacuation	100 mSv in the first 7 days (*E* or *H*fetus)
	Sheltering	10 mSv in 2 days (*E)* *(averted dose)*
	Temporary relocation	100 mSv in the first year (*E*) or 100 mSv for the full period of in utero development (*H*fetus)
Ingestion Control	Restriction of distribution and ingestion of potentially contaminated drinking water, milk, and other foods	3 mSv/y (1 mSv/year for each of the following categories: drinking water, milk and other foods and beverages) (*E*)
Population Monitoring and Medical Management	Population monitoring, internal assessment, and medical follow-up	100 mSv in a month (*E*) or 100 mSv for the full period of in utero development (*H*fetus)
Off-Site Emergency Workers	Restriction of activities for individual workers	50 mSv over the duration of the response (*H*p(10) or *E)*

The generic criteria in Table 2 have been largely adopted from the generic criteria recommended by the IAEA *(IAEA 2015a)*.

2.16.2 Generic criteria for Exposure Control and Ingestion Control

These values describe the projected dose levels at which actions should be taken to protect populations. When developing nuclear emergency plans for scenarios where the location of the radioactive source is known in advance (such as a reactor facility or a port designated for visits by nuclear-powered vessels), the likelihood of exceeding these dose levels should be considered, among other inputs, when delineating emergency planning zones and when

determining non-dosimetric triggers (such as plant conditions) for protective actions. In areas where generic criteria for Exposure Control are likely to be exceeded, special arrangements should be made for populations who may be unable to relocate without assistance and for those who require extra support or accommodation.

The generic criteria for **evacuation** and temporary relocation reflect the relative urgency with which action should be taken to move populations out of areas with the highest potential for exposure—that is, resources should first be directed at helping people to safely relocate from areas where the generic criterion for evacuation will be exceeded and then towards areas where the generic criteria for temporary relocation will be exceeded. Once these actions have been completed, authorities should revise the generic criterion for temporary relocation downward. The default lower limit for the generic criterion for temporary relocation is 20 mSv/y, which is the equivalent of the lower limit for an emergency reference level (*ICRP 2009, IAEA 2012a*). Strategies to manage long-term exposures for affected populations should be developed, in consultation with all stakeholders, as part of the transition to recovery.

Sheltering should be ordered as an interim protective action when the projected dose exceeds the generic criteria for ITB or evacuation, but where prevailing circumstances prevent timely implementation. Because it is a less-disruptive protective action (IAEA 2012b), authorities may order sheltering for up to two days at lower dose levels if it will reduce exposures by at least 10 mSv. More information on scenarios where sheltering may be appropriate is provided in *Section 7*.

Parameters used for dose projections should correspond to the groups at greatest risk (considering, for example, age, sex, and habits) and consider all pathways, but they should not be grossly pessimistic (*ICRP 2009*).

The limitations of the models used to predict the characteristics and dispersal of releases should be recognized, understood, and considered. Dose projections that are generated during an emergency, when accident/event progression may be highly unpredictable, should be used with caution, especially for making decisions to deviate from the planned protection strategy. This is because the high degree of uncertainty compromises the ability to assess whether an action is

2.16.3 Operational Intervention Levels (OILS)

OILs are values that support decision-making post-release by quickly relating discrete measurements of contamination to generic criteria, thereby identifying the need for, or confirming the adequacy of protective actions.

The OILs presented in this section should ensure that doses do not exceed the generic criteria recommended by this document. Measurements should be made in accordance with the details and timeframes provided in Table 3 and using properly calibrated equipment that is fit for purpose.

TABLE 3. **OIL values and associated monitoring conditions.**

OIL #	PROTECTIVE ACTION	MEASUREMENT DETAILS	LEVEL	TIMEFRAME FOR ACTION, RELATIVE TO RELEASE (IAEA 2013)

Exposure Control				
1γ	Evacuation	Gamma dose rate (H*(10)), 1m from the ground	1000 μSv/h	Complete within a day
2γ	Temporary relocation	Gamma dose rate (H*(10)), 1m from the ground, measured within 10 days of reactor shutdown	100 μSv/h	Initiate after evacuation
		Gamma dose rate (H*(10)), 1m from the ground, measured more than 10 days after reactor shutdown	25 μSv/h	
Ingestion Control				
3γ	Restriction of distribution and ingestion of potentially contaminated drinking water, milk and other food	Gamma dose rate (H*(10)) at 1m from the ground	1 μSv/h	Implement with Exposure Control and extend within days
5α	Confirm ingestion controls (with lab measurements)	Gross alpha activity	See Table 4	Initiate within a week to a month, depending on importance of local food and drinking water to the community
5ß		Gross beta activity	See Table 4	
6		Activity concentrations for specific radionuclides	See Table 12	
Population Monitoring and Medical Management				
4γ	Personal decontamination and/or medical follow-up	Skin measurement at 10 cm from the hands and the face	1 μSv/h	Implement concurrently with Exposure Control

Figure 2.16.4

The default values for OILs 1γ and 2γ in Table 3 were derived specifically for an emergency involving a severe release of radioactive material from a nuclear reactor or its spent fuel (IAEA 2017). For other types of emergencies, the default values for urgent actions (evacuation, food,

and water restrictions) should be sufficiently protective for most scenarios involving gamma-emitting radionuclides and so can be adopted directly if necessary. However, OIL2γ (10 or more days after shut-down) may not be appropriate and so should be re-assessed, as soon as time allows, based on the isotopic composition of the source term.

If default OILs are not used, the responsible emergency response authority should be prepared to promptly assess the requirement to deviate from the generic guidance and the impacts of doing so.

In most cases, Health Canada has adopted the IAEA values. Exceptions are explained below.

- Health Canada has not adopted IAEA's OIL7. This OIL is calculated so that food and water can be efficiently screened using measurements of marker radionuclides (Cs-137 and I-131). It is based on the estimated ratios of radionuclides in a release from an accident at a nuclear power plant. Health Canada has not included it in our recommendations because it is not appropriate for all categories of emergency that are addressed in the FNEP. Instead, we have retained and expanded upon the radionuclide-specific activity concentrations presented in Canadian Guidelines for the Restriction of Radioactively Contaminated Food and Water Following a Nuclear Emergency (HC2000). Canadian specific ingestion data was used to inform the OIL calculations (HC 1993; HC 2011; HWC 1976).
- Thyroid monitoring is an essential activity if radioiodine exposure is suspected. However, Health Canada has not adopted IAEA's OIL8 and recommends that thyroid monitoring and dosimetry be carried out, when required, by specialists in internal assessment.

OILs for Exposure Control

OILs 1γ and 2γ are triggers that can be directly compared to common field survey measurements, shortly after a release or other exposure situation has been identified, to enable rapid decisions and rapid actions. The default values are presented in terms of gamma dose rates (H*(10)) measured 1 metre from the ground. If the survey instrument expected to be used in the emergency response does not provide a direct output in H*(10), the default OILs 1γ and 2γ may not be appropriate and new values, in the units displayed by the instrument, should be calculated during the preparedness stage. This will ensure that instrument readings can be quickly compared to OILs during an event and reduce the risk of conversion errors.

When OIL1γ is exceeded, arrangements for safe evacuation and other urgent actions to protect the public, including ITB, ingestion controls, and population monitoring, should be implemented immediately. If it is not possible to initiate safe evacuation immediately (e.g., due to bad weather or damaged infrastructure), the public should be instructed to shelter until they are told otherwise. In some cases, such as critical patients in hospitals or care homes, the risks of being moved quickly may be significantly higher than the risks of exceeding the generic criterion. As much as possible, arrangements should be made in advance to manage these situations. Where prior arrangements have not been made or are inadequate, authorities should make it a priority to identify individuals who require special assistance and to provide it.

The basis for the default OIL2γ identified in Table 3 is the generic criterion for temporary relocation in the early stages of the emergency (100 mSv in the first year following the

accident). Separate OIL2γ values are provided for use at different times after reactor shutdown. The different values consider the expected change in dose rate within the first 10 days compared to afterwards, largely as the short-lived radionuclides decay.
As time progresses and if resources permit, the generic criterion for temporary relocation may be reduced gradually to a lower limit of 20 mSv/y. As the generic criterion is reduced, the value for OIL2γ (> 10 days after shutting down) can be scaled down linearly, so that OIL2γ may eventually drop to 5 µSv/h. All populations in areas where ambient dose rates exceed default OIL2γ should be identified and relocated within a month.

OILs for Ingestion Control

Like OILs 1γ and 2γ, OIL3γ is a trigger that can be directly compared to common field survey measurements, shortly after a release or other exposure situation has been identified. Default OIL3γ is gamma dose rate (H*(10)) measured 1 metre from the ground. The instrument must display dose rate in H*(10) to use the default OIL3γ; if other survey instruments are used, new values, in the units displayed by the instrument, should be calculated during the preparedness stage.

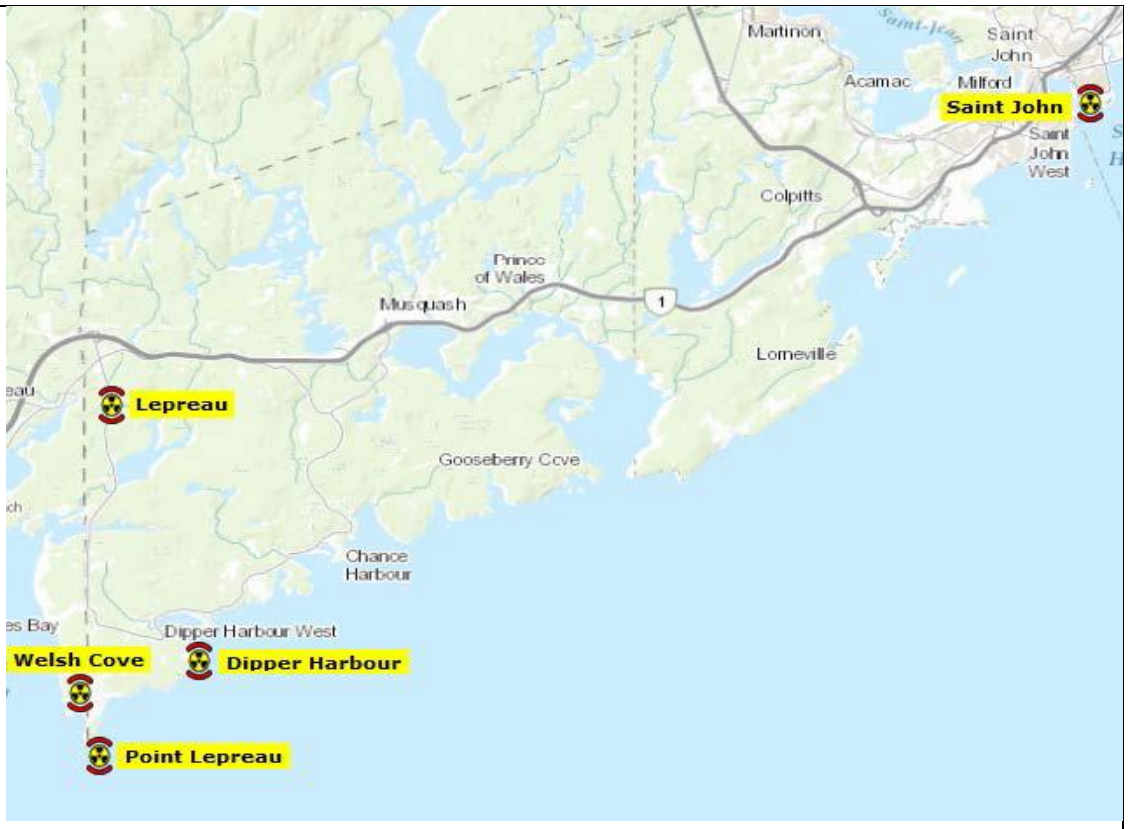
OIL3γ is adopted directly from IAEA (*IAEA 2015a*). It is an early indicator that drinking water, milk and other foods and beverages may be contaminated. If OIL3γ is exceeded, restrictions should be put in place and replacement supplies should be made available until more detailed assessments can be completed. Once the time for urgent action has passed, representative samples of restricted food and drinking water should be collected and analyzed in a lab, for comparison against OIL5 and/or 6 values.

2.17 FEDERAL SUPPORT MATRIX – ENVIRONMENTAL MONITORING STRATEGY

Federal Departments	Resources	How to Request	Arrival Time in NB/ Special Requirements
Transport Canada	Notice to Airmen (NOTAMS): A Notice to Airmen (NOTAM) is a notice filed with an aviation authority to alert aircraft pilots of potential hazards along a flight route or at a location that could affect the safety of the flight.	Request through our Regional Public Safety representative in the PEOC to Transport Canada. Request is sent (via phone) immediately after confirmation of a release from PLNGS.	N/A
Port of Saint John	The Port of Saint John is a port complex that occupies 45 hectares of land along 3,900 m of waterfront of the Saint John Harbour at the mouth of the Saint John River in the city of Saint John, New Brunswick, Canada'. The Port of Saint John is a port the Canadian Coast Guard and DFO may direct vessels to as part of the evacuation at sea during a radiation emergency at the PLNGS. The Port of Saint John Operations Manager is the approving authority for vessels to enter the harbour. Vessels may remain at assigned anchorage points outside the harbour until cleared for entry to the port.	Request through our Regional Public Safety representative in the PEOC to the Port of Saint John.	
Canadian Coast Guard Canadian Coast Guard	Notice to Mariners (NOTMAR): A notice to mariners (NOTMAR) advises mariners of important matters affecting navigational safety, including new hydrographic information, changes in channels and aids to navigation, and other important data. Notice to Shipping (NOTSHIP): Notices to shipping (NOTSHIPs) are notices concerning Navigational Aid changes or defects, fishing zones, military exercises, dredging, or other marine hazards. Contain information for all boaters and is intended to inform the marine community of hazards, current activities and other pertinent information.	Request through our Regional Public Safety representative in the PEOC to the Canadian Coast Guard. Request is sent (via phone) immediately after confirmation of a release from PLNGS.	N/A

Health Canada	Federal Nuclear Emergency Plan (FNEP) Technical Assessment Group (TAG) Liaison Officers (LO) - (FTLOs) The FNEP TAG links into the overall provincial, responses through the FNEP TAG Liaison Officer (FTLO). The FTLOs are embedded, as required, in the respective Provincial Emergency Operations Center (PEOC) – NB TAG and provide the necessary interface between these bodies and the FNEP TAG. One or more FTLO(s) may, upon request or as appropriate, be dispatched to a PEOC to manage the linkages between that PEOC – NB TAG and the FNEP TAG for an effective response. FNEP TAG Liaison Officers (FTLO) The FTLO(s) will: a. Interface the FNEP TAG with the key IMS functions of the PEOC. b. Facilitate information exchange between the FNEP TAG and the NB TAG (PEOC). c. Provide scientific or technical support in coordination with the FNEP TAG. d. Provide situational Awareness and Information Management group or reach back for support that requires a more comprehensive analysis or response. e. Provide guidance in the most appropriate/efficient method of formulating requests to and from the FNEP TAG. f. Deliver any requests or relevant information from the NB TAG; and g. Advise, or instruct, on the proper interpretation or use of FNEP TAG products and tools. In the Province of New Brunswick, FTLOs primarily link the scientific activities of the FNEP TAG with those of the NB TAG.	A FTLO will be deployed to the PEOC Technical Advisory Group (TAG) according to an agreed arrangement written into the Point Lepreau Off-site Emergency Plan and the FNEP NB Annex. When NBEMO is notified by PLNGS of the classification of a “Site Area Radiation Emergency”, NBEMO notifies Health Canada Duty Officer and an FTLO is tasked to report to NBEMO in Fredericton.	Up to 24 hours. Seat in the TAG next to the NB Power Health Physicist.
Health Canada			

Health Canada	FTLOs located in the NB TAG are responsible for liaising with internal and external stakeholders, including (but not limited to): • Other provincial and federal members of the NB TAG. • FNEP TAG management. • Field Team Commander(s) of the federal radiological task team(s). • The Nuclear Control Group of the PEOC; and • e. The Emergency Public Information Service of the Executive Council Office (ECO).		
Health Canada	Fixed-Point Surveillance (FSP) Network A network of real-time radiation detection equipment operated by Health Canada and located across Canada and a single Data Center that collects analysis and stores the data measured at each of these monitoring stations. This data center is located at the RPB in Ottawa and communicates with the stations on a daily or as-needed basis. The network includes monitoring stations operated by Health Canada plus several stations that are owned and operated by the nuclear operators who share their data with Health Canada. The network provides ambient gamma dose rates and can be used in the event of a nuclear emergency to identify radioactive contamination in the air or deposited on the ground because of an atmospheric release of radioactive material.	FNEP TAG Liaison Officers (FTLO) monitoring in the TAG.	N/A
Health Canada	There are 5 located in New Brunswick:		

			
Health Canada Health Canada	Canadian Radiological Monitoring Network (CRMN) A national network of monitoring stations operated by Health Canada that routinely collect air, precipitation, external gamma dose, drinking water, atmospheric water vapor, and milk for radioactivity analysis. The network provides a mechanism for measuring routine or accidental releases of radioactivity in environmental samples. There are 26 environmental monitoring stations, plus additional sites (77 fixed point stations and 4 CTBT stations) near nuclear reactor locations. Samples collected at these stations are analyzed at Health Canada's radio analytical laboratories in Ottawa. Locations: Lighthouse (Point Lepreau), NB / Digby, Nova Scotia / Dipper Harbour, NB / Emergency Center (OEOC), NB / Saint John, NB / Welch Cove Kingston, Nova Scotia	FNEP TAG Liaison Officers (FTLO) monitoring in the TAG.	N/A

Health Canada Health Canada	ARGOS plume modeling The Accident Reporting and Guidance Operational System (ARGOS), a decision support system for handling and integrating large quantities of dynamic multi-disciplinary, multi-sourced assessment information, such as: • Radiological source term information from the PEOC and CNSC. • Meteorological modelling, monitoring, and forecasting capabilities provided by ECC's Canadian Meteorological Center. • Radiological monitoring data from Health Canada and others; and • Radiation dose assessments. • ARGOS has several important functionalities, including: • Importation of source terms provided by the PEOC TAG. • Exportation of these source terms to the Canadian Center for Meteorological and Environmental Prediction (formerly known as the Canadian Meteorological Center) state of the art atmospheric dispersion modelling. • Calculation of doses for various radiological exposure pathways; and • Exportation of results to Health Canada's GIS-based application E-Map, for further spatial and contextual analysis.	FNEP TAG Liaison Officers (FTLO) monitoring in the TAG.	N/A
Health Canada	SharePoint: SharePoint is data consolidation and information sharing. Provides event planning, event logging, situational awareness document repository and the ability to share the documentation.	FNEP TAG Liaison Officers (FTLO) has access to SharePoint in the TAG.	N/A

Health Canada	E-Map: An online geographic information systems (GIS) application for consolidating, sharing, and viewing location-based information including radiological measurements and atmospheric dispersion models (E-Map). Major New Brunswick stakeholders can request access to Health Canada's web mapping application (E-Map) to receive and view modelling and surveillance monitoring information and data.	FNEP TAG Liaison Officers (FTLO) monitoring in the TAG.	N/A
Health Canada	Population Monitoring: Health Canada maintains a deployable capability to perform population monitoring for radionuclide contamination during an emergency. Depending on scope of the event, and as resources permit, specific FNEP TAG task teams and resources may be deployed to support the province in the provision of these services. Screening services can be provided as surge capacity or in complement to population monitoring stations already set up by the province. Deployment times in New Brunswick are estimated at 24-36 hours and require integration into an existing provincial or municipal reception facility or emergency worker center. Depending on availability, the number of portal monitors that can be deployed for population monitoring varies from 12-18 units.	Requests should be directed through the FTLO.	Up to 24 hours. Requests for population monitoring must be supported by appropriate and adequate facilities and services to be provided by the Province of New Brunswick including but not limited to crowd control, security, health services, registration and demographic information capturing etc.
Health Canada	National Emergency Strategic Stockpile (NESS) PHAC maintains the National Emergency Stockpile System (NESS) to provide health and social service supplies quickly to provinces and territories when their own resources are not enough during an emergency. A 24-hour response capability is maintained, and assets can be deployed within 24 hours depending on circumstances of the event. The system consists of a central depot in Ottawa, as well as several other warehouses and pre-positioned supply centers (under the combined management of the provinces and federal government) strategically located across Canada.	Requests for emergency countermeasures, medical units or other items from the NESS may be made by individuals identified as Health Emergency Management Directors in the Province of New Brunswick, directly to the NESS Duty Supervisor or via the HPOC and/or HPLOs in the PEOC. If the request includes medical countermeasures, the FTLO in the PEOC TAG should also be notified.	24-hour response capability is maintained

Health Canada	The NESS contains various assets, from beds and blankets to a supply of pharmaceuticals, including a range of antibiotics and medical countermeasures for internal radiological contamination (Prussian Blue, Ca and Zn-DPTA, KI). As well, it maintains medical units that can be deployed on short notice (within 24 hours) to be set up in existing buildings such as schools and community centers.		
Health Canada	Emergency Dosimetry Services Health Canada maintains multiple emergency dosimetry kits that can be deployed to the province during an emergency. Each kit contains twenty (20) Electronic Personal Dosimeters and four hundred (400) passive dosimeters, portable dosimeter readers, a laptop and requisite software to track and monitor dosimeter readings, power cords, extension cords, native user guides plus a dosimetry kit user guide. One kit is maintained in the Health Canada regional office located in Halifax. Upon request, Health Canada can provide additional dosimetry devices to deal with larger surge demands for emergency response. Health Canada can deploy up to 60,000 passive dosimeters, 300 electronic personal dosimeters and 10 portable dosimeter readers (with laptop, software, and user guides). Expert advice and recommendations on doses and exposures can be requested from TAG via the FTLO in the PEOC.	Requests should be directed through the FTLO.	Up to 24 hours
	Mobile Nuclear Laboratories The Mobile Nuclear Laboratories (MNLs) are part of the Government of Canada's deployable capabilities in support of the FNEP. The MNLs and scientific staff support the federal government in radiological consequence management by providing expert scientific advice for radiation protection matters. Health Canada and CNL maintain MNLs, a Mobile Coordination Center (satellite communications, high speed internet, generators, workspaces, and	Requests should be directed through the FTLO.	Up to 36 hours

Health Canada Health Canada	multimedia), inflatable tents and equipment trucks. The Mobile Nuclear Laboratories (MNLs) can provide the following capabilities: • Radioisotope quantification and identification. • Contamination control. • Rapid field deployment (rapid response kit). • Scientific reach-back to municipal, provincial, and federal EOCs. • Decontamination and population screening; and • Emergency dosimetry services. • The Mobile Nuclear Laboratories are normally deployed, on request of the province, in the post release phase of an emergency, with a suite of assets and scientific staff to support off-site or field radiological monitoring. These requests will be assessed and prioritized by FNEP TAG and the PEOC TAG depending on the nature of the situation and operational feasibility.		
Environment and Climate Change Canada	Environment and Climate Change Canada	Reports as part of the provincial activation Level 2-3 for a radiation emergency at PLNGS. Reports as a member of the Provincial TAG	60 minutes or preset timing
Natural Resources Canada (NRCan)	Aerial Mobile Monitoring Systems Aerial surveys conducted by NRCan can be used to provide information on contamination over wide-range geographical areas while vehicle-borne surveys can be used to provide information on a mid-range scale. The teams involved in both the aerial and vehicle-borne surveys have the capacity for data exchange and scientific reach-back to subject matter experts in the FNEP TAG located in Ottawa or at the PEOC. Real-time or near real-time data capture and visualization of survey results is available through Health Canada's E-Map.	NRCan would be deployed from the FNEP TAG in conjunction with the FTLO deployment to the Provincial Emergency Operations Center (PEOC) Technical Advisory Group (TAG) according to an agreed arrangement written into the Point Lepreau Off-site Emergency Plan and the FNEP NB Annex. When NBEMO is notified by PLNGS of the classification of a "Site Area Radiation	Up to 24 hours. FNEP TAG would request transport for NRCan deployment to New Brunswick.

		Emergency", NBEMO notifies Health Canada Duty Officer and an FTLO is tasked to report to NBEMO in Fredericton.	
Health Canada / Canadian Nuclear Laboratories (CNL) / Director Nuclear Safety (DNSafe) and Natural Resources Canada (NRCan)	Ground Survey Teams The ground survey teams, including personnel from HC, CNL, DNSafe and NRCan, are responsible for the identification and characterization of ground-based contamination, for sample preparation and analysis, and conducting sampling of air, food, feed and water as directed or requested by the federal or provincial authorities.	Requests should be directed through the FTLO.	Up to 36 hours
Canadian Nuclear Safety Commission (CNSC)	Representatives from the CNSC would be sent to the Provincial Emergency Operations Center (PEOC) as a member of the Nuclear Control Group and a member to the Technical Advisory Group (TAG). Reach back to CNSC.	Reports as part of the provincial activation Level 2-3 for a radiation emergency at PLNGS	24 hours
Public Safety Canada Regional Representative	A Public Safety Canada Regional Representative is in the Provincial Emergency Operations Center (PEOC) as a member of the Provincial Emergency Action Committee (PEAC) and the Nuclear Control Group. Contact to other Federal Partners	Reports as part of the provincial activation Level 2-3 for a radiation emergency at PLNGS.	60 minutes or preset timing
DND	A Joint Task Force Atlantic (JTFA) Liaison Officer is in the Provincial Emergency Operations Center (PEOC) as a full-time member of the Provincial Emergency Action Committee (PEAC) and the Nuclear Control Group. Permanently co-located with NBEMO. Reach back to DND.	Permanently co-located with NBEMO. Reports as part of the provincial activation Level 2-3 for a radiation emergency at PLNGS.	60 minutes or preset timing
Canadian Food Inspection Agency (CFIA)	CFIA to assist with ingestion pathway monitoring plan.	Request through our Regional Public Safety Representative in the PEOC.	N/A
Department of Fisheries and Oceans (DFO)	DFO to assist with ingestion pathway monitoring plan.	Request through our Regional Public Safety Representative in the PEOC.	N/A
Canadian Border Services Agency (CBSA)	CBSA to assist OPSA as required.	Request through our Regional Public Safety Representative in the PEOC.	N/A

2.18 SECURITY EVENTS

2.18.1 The Point Lepreau Nuclear Off-site Emergency Plan does not deal with Security or Cyber Security events.

This Security Events Section will identify the Security Alert Levels used at the Point Lepreau Nuclear Generating Station for security events and the notification procedures (call charts).

2.18.2 Introduction

The Point Lepreau Nuclear Generating Station is classified as critical infrastructure of international importance. Consequently, the plant has a comprehensive security contingency plan.

In the event of a security incident, the RCMP is responsible for incident management, while the province remains responsible for consequence management (Radiation Emergency).

2.18.3 Security Plans and Procedures:

Detailed procedures for a security contingency at the station are classified and beyond the scope of the off-site emergency plan.

In the event of a security incident, the following emergency plans may apply:

- **Provincial Security Event Management Plan (PSEMP)**; and
- PLNGS Security Contingency Plan.

2.18.4 Concept of Operations:

On advice from the station (PLNGS), Office of the Provincial Security Advisor (OPSA) or the RCMP, NB EMO, once notified, will notify selected provincial officials and act to ensure that off-site emergency organizations are prepared to assist the security response and to manage any off-site consequences.

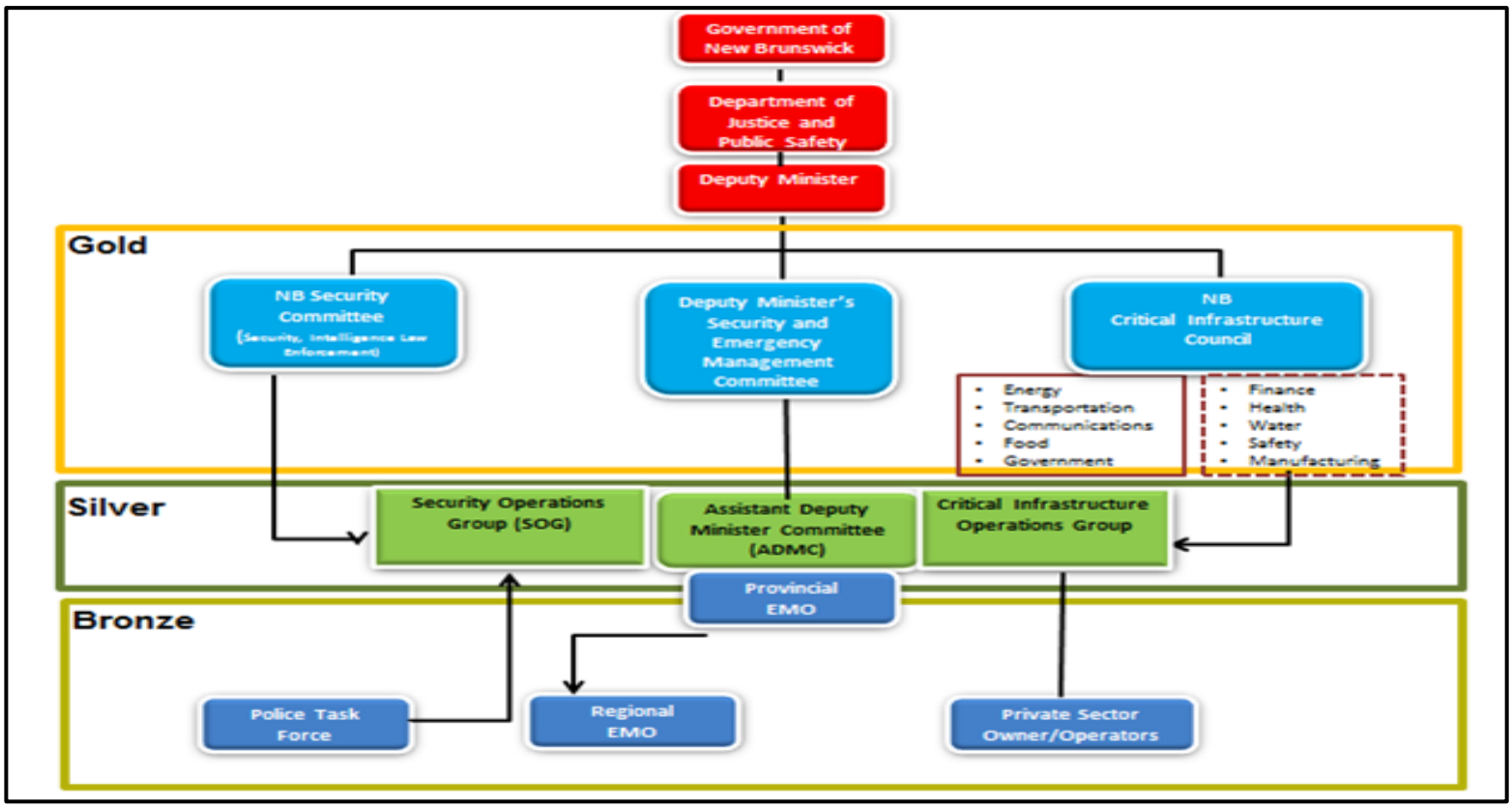
2.18.5 Security Alert Levels:

The CNSC employs three security alert levels that closely correspond to accident classification levels and provincial activation levels:

PLNGS Standard Operating Procedures define the following Security Levels:

Threat Level 1 – Active attacker inside the protected area, explosive confirmed inside the Protected Area, hostile takeover of Main Control Room, Secondary Control Room or Security Monitoring room, or potential aircraft impact in less than 60 minutes.
Threat Level 2 – Confirmed security threat to station, suspicion of explosives device inside the Protected Area, active attacker inside the Controlled Area, or potential aircraft impact in 60 minutes or more.
Threat Level 3 - Credible threat developing or bomb threat.

2.19 PROVINCIAL SECURITY



2.19.1 Bronze / Silver / Gold PSEMP

In this structure, organizations are arranged into governance and operational elements based upon the Gold/Silver/Bronze model developed by the United Kingdom (UK) Metropolitan Police Service in 1985. The primary feature is that peers interact with peers.

GOLD level: Participants should be the senior most official in the organization for their jurisdiction, typically reporting to elected boards or governments, and can typically commit their organizations even outside of budget, policy or mandate. Typical positions at this level include Chief of Police, Deputy Minister, Chief Executive Officer, Chief Administrative Officer.

SILVER level: Should involve participants who can commit their organizations within policy, budget and mandate, authorize resources and ensure execution. Typical positions at this level include Deputy Chief of Police, Assistant Deputy Minister/Executive Director, Vice-President or Director.

BRONZE level: Organizations typically have well-established internal operational structures.

2.20 CRITICAL INFRASTRUCTURE

Critical Infrastructure (CI) is defined as those physical and information technology facilities, networks, services, and assets, which, if disrupted or destroyed, would have a serious impact on the health, safety, security, or economic well-being of New Brunswickers or the effective functioning of government. CI impacts that require an immediate assessment in accordance with the recommended **Activation Timeline.**

LOW: Potential, imminent or actual threats, vulnerabilities, or incidents. Active Monitoring is mandatory.

MEDIUM: Potential, imminent or actual threats, vulnerabilities or incidents assessed as limited in scope but having possible impacts on critical infrastructure. Mandatory monitoring is required. An escalation in REAC Activation will likely be necessary.

HIGH: Potential, imminent or actual threats, vulnerabilities, or incidents where precautions and actions are required immediately.

Health - Hospitals, Healthcare, Blood Supply.	**Low: A-1**	**Medium: C-1**	**High: D-1**
Food - Food safety at production, Sales and use nodes, Distribution.	**Low: A-1**	**Medium: B-2**	**High: C-2**
Finance - Banking, Securities, Investments, Integrity of electronic banking systems.	**Low: A-1**	**Medium: A-3**	**High: B-1**
Water - Drinking water, Wastewater contamination.	**Low: B-1**	**Medium: C-1**	**High: D-1**
Information and Communication Technology – Telecommunications.	**Low: B-1**	**Medium: B-7**	**High: C-1**
Safety - Hazardous substances, Explosives, Nuclear waste, Emergency services.	**Low: A-1**	**Medium: B-7**	**High: C-1**
Energy and Utilities – Electrical power, Natural gas, Oil production.	**Low: A-1**	**Medium: B-1**	**High: B-7**
Manufacturing - Chemical and strategic manufacturers.	**Low: A-1**	**Medium: B-1**	**High: C-1**
Government - Services, Public facilities, Information, and information networks.	**Low: A-1**	**Medium: B-1**	**High: B-7**
Transportation - Roads, Air, Rail, Marine.	**Low: B-1**	**Medium: D-1**	**High: D-7**

3 PROVINCIAL DEPARTMENTS & AGENCIES, ROLES, AND RESPONSIBILITIES

3.1 NEW BRUNSWICK REGULATION 84-7 AND THE EMERGENCY MEASURES ACT

3.1.1 The following sections below identifies, by designated department/agency, those tasks that shall be performed in accordance with legislation and those tasks which have been, by convention and practice, conducted by specific departments in past emergencies.

3.2 TASKS COMMON TO ALL GOVERNMENT OF NEW BRUNSWICK DEPARTMENTS OR AGENCIES

3.2.1 Prepare departmental emergency response plans for the specific departmental tasks listed below and recommend emergency response actions that are considered necessary for provincial coordination of departmental key functions during an emergency. Be prepared to assist in all natural and human induced emergency management events, ensuring continued delivery of essential services to all citizens in times of emergencies, specifically:

- Prepare a departmental emergency management response plan, business continuity plan and mitigation or contingency plans as required by regulation.
- Assess potential disaster and emergency risks related to the department's functions; and
- Determine the capability of the department to respond to an emergency.

Prepare to execute the Departmental emergency response plan, or Emergency response contingency plan, which could include among other things the actions outlined below:

- Develop staff call-out and mobilization procedures.
- Assign designated personnel to the Provincial EOC.
- Prepare staff instructions, emergency staff orders and polices that may be required during an emergency event.
- Develop and conduct in-house training programs.
- Participate in training programs provided by EMO; and
- Appoint a Departmental Emergency Preparedness Officer (DEPO) and an alternate, and;
- Ensure they are trained according to EMO's standard.

The deputy minister or Deputy Head of each department must ensure that:

- The department carries out the planning required by the Emergency Management Act and subsequent regulations, including all necessary coordination with planning carried out at federal and municipal levels of government and by other departments; and
- The necessary resources are available within the department to enable the department to continue providing services in the event of an emergency.

3.3 AGRICULTURE, AQUACULTURE AND FISHERIES

3.3.1 The Department of Agriculture, Aquaculture and Fisheries (DAAF) will:

- In collaboration with NB Health, arrange for sampling locally produced foodstuff and marine products, and the delivery of samples to the specified laboratory for analysis (Health Canada (HC), Department of Fisheries and Oceans (DFO), and the Canadian Food Inspection Agency (CFIA) may also be involved).
- Be prepared to provide personnel to take samples.
- In collaboration with NB Health, ensure that locally produced foodstuff which is condemned does not reach the public (HC, and CFIA may also be involved).
- In collaboration with NB Health and NB Environment, arrange for the disposal of condemned or contaminated foodstuff (HC and CFIA may also be involved).
- When an evacuation is directed, help facilitate the movement and welfare of farm animals. It will be the responsibility of the owners of said farm animals to provide the actual feeding and care of their animals.
- In collaboration with Public Safety Canada (PSC), DFO, Canadian Coast Guard (CCG) and others, develop arrangements for removal of fishing vessels from any danger area and direct them to assurance monitoring areas or safe harbours. DAAF will contact the Nuclear Control Group or the appropriate Wharfinger to prepare them for the arrival of said vessels; and
- Assist other agencies as required.

<u>Alerting and Assembly</u>

Upon notification of an alert, NBEMO will contact the DAAF Representative on the Control Group (PEAC) or his/her alternate. The DAAF Representative will then proceed directly to the Provincial Emergency Operations Center (PEOC) in the Victoria Health Center.

On receipt of notification from NBEMO that an emergency has occurred at the Lepreau Nuclear Generating Station, the DAAF representative will advise the deputy minister.

Group	Procedures
Departmental Control Group Representative (PEAC)	The Departmental Control Group Representative is to fulfill, as directed by the EMO Director, the duties and responsibilities of the DAAF under the Off-Site Plan. The following are specific duties to which he/she must attend. • When notified by NBEMO, proceed immediately to the Provincial Emergency Operation Center (PEOC). • Ensure that the deputy minister and appropriate Departmental HQ staff are notified. • Ensure that Regional Emergency Action Committee (REAC) representatives are notified. • In conjunction with the senior NBEMO Operations Officer and other Provincial Emergency Action Committee (PEAC) members, coordinate the department's emergency responses during a provincial emergency. • Recommend the provision of specific assistance, including non-government sources, where appropriate. • Contact alternate Departmental Control Group Representatives to establish a schedule for relief such that the position is continuously manned until otherwise directed by the Director; and • Maintain a departmental operations / telephone log.
Regional Emergency Action Committee (REAC) representatives	When notified by the REMC proceed immediately to the local REAC office: • Fulfill the role of primary field office contacts for members of the Emergency Operations Committee and Branch Directors, in the event of the activation of the DAAF Emergency Plan. • Fulfill the role of coordinator, at the local level, of the implementation of the DAAF Emergency Plan. • Contact appropriate field staff if required. • Contact alternate REAC members if required, and • Maintain a departmental operations / telephone log
Departmental Field Personnel	Personnel will remain on standby or at assigned locations to receive further instruction from the Departmental Control Group Representative or the Saint John Regional Emergency Action Committee (REAC) or the St. George Regional Emergency Action Committee (REAC). These instructions may include the establishment of a shift schedule if personnel are required on a 24-hour basis and/or the assignment of crews to the specific types of samples at specific locations. Personnel are not to deploy to the field until so directed.

Figure 3.3.2

3.3.3 Concept of Operations

The DAAF will aid in procuring samples of locally produced foodstuff and the delivery of samples to the New Brunswick Power Laboratory (York Street, Fredericton) for analysis *(Sample submission form Annex D)*. The DAAF will work with officials of the Departments of Health and Environment for suitable disposal of any food found to be unfit for use.

Livestock (and riding horses, ponies, etc.) if removed from the area will be accommodated in a safe area in Saint John, NB, or nearby, under arrangements to be made by DAAF staff.

EMO, NB Power, and the Point Lepreau wardens will deliver the message to the households with livestock, that livestock owners may not be allowed back into the restricted areas (re-entry) once evacuated. Therefore, they will be encouraged to make their own arrangements for their livestock i.e., leave livestock behind with shelter and plenty of food and water or bring animals to an alternate location or take them to the identified DAAF livestock shelter. NB Power/EMO could have the information available via news release or website information updates (GNB public safety bulletins are available online, NB Power call in number for public inquiries).

Before moving any livestock, it must first be tested for contamination and decontaminated if necessary.
In a “radiation” emergency, the DAAF is to ensure the safety of fishermen at sea, the removal of craft from any threatened harbour, to assist NB Health, to arrange for obtaining samples of marine products for testing, and to assist the Control Group in any way possible.

The collection of marine products will be as coordinated with NB Health, DFO, HC, and the CFIA with whom arrangements have been made.

Arrangements have been made to inform the Director of the Research Station at St. Andrews so that he/she may put her Emergency Plan into effect, which may involve monitoring of the marine area by the Atmospheric Environment Radiation Unit which is based at Halifax.

If the briefing at NBEMO Headquarters indicates that fishermen or craft are at risk, messages will be sent to the Vessel Traffic Services Center (MCTS/SCTM) in Halifax to be broadcast as emergency messages. The Canadian Coast Guard will by radio communication inform vessels in the area to proceed to a safe harbour or decontamination area. The Canadian Coast Guard Emergency Services must be contacted to set up patrols of the area with vessels and aircraft. The Canadian Coast Guard will ensure the perimeter of the affected area is patrolled preventing entry.

The DAAF will assist NB Health to see that landed marine products are withheld from processing until the samples have been found fit for consumption.

Samples may be required from processing plants in the path of a radioactive “plume” as well as from vessels which may have passed through a “plume”.

Using the Coast Guard information, DAAF shall determine the number of ships that would require decontamination and advise the Nuclear Control Group.

3.3.4 Evacuation

In preparation for planning for an evacuation, the DAAF will:

- Develop a list of livestock for each of the 14 Warden Zones, based on the EMO Lepreau Demographic Public Safety Survey Database.
- Based on the lists developed above, be prepared to facilitate the evacuation of livestock
- Identify suitable shelters or farms to receive and care for evacuated animals.
- Identify locations for the decontamination of evacuated animals (see appropriate names and numbers for evacuation, decontamination and sheltering of livestock); and
- Disposal of dead farm animals will be done in consultation with NB Health and NB Environment.

The Coast Guard will evacuate all vessels from any restricted areas and will signal all vessels to proceed to predetermined ports as directed by the Nuclear Control Group. DAAF will contact the appropriate Wharfinger and harbour authorities to prepare them for the arrival of said vessels.
Notification of stakeholders will be by way of DAAF personnel or stakeholder groups or associations.

3.3.5 Communications

Telephone will be the primary means of communication. Radios will be provided as required by NBEMO.

The Provincial Emergency Operations Center (PEOC), when activated, is to be contacted at **(506) 453-5566** (DAAF Control Group Representative / PEAC). Alternatively, contact NBEMO at **(506) 453-2133** or **(506) 453-5500**.

The Saint John Regional Emergency Action Committee (REAC) will be established at the Provincial Lab Building, 8 Castle Street, Saint John, and phone **(506) 643-6278.**

The St George Regional Emergency Action Committee (REAC) will be established at the NBEMO Regional Building, 40 Brunswick Street, St George, and phone **(506) 469-4988**

The Regional Emergency Action Committees must be kept aware of where the field staff can be reached when they are away from assigned locations.

Contact between the NBEMO Nuclear Control Group and the Departmental Field personnel, while they are in the field, will be in the form of cellular telephones and radios provided by NBEMO.

3.3.6 Federal Resources

Contact	Address	Phone	Email
Canadian Coast Guard Marine Communication and Traffic Services (MCTS) – Joanne Smith, Officer in Charge	Saint John, NB	xxx-xxx-xxxx Fax: xxx-xxx-xxxx Cell: xxx-xxx-xxxx	Joanne.Smith@dfo-mpo.gc.ca
Sydney Marine Communications and Traffic Services	1190 Westmount Road, Sydney NS B1R 2J6	xxx-xxx-xxxx xxx-xxx-xxxx	NotshipsSyd@dfo-mpo.gc.ca
Canadian Coast Guard Casualty and Pollution Reporting	St John's, NF	xxx-xxx-xxxx 24hrs	
Labrador Coast Guard Radio	St John's, NF	xxx-xxx-xxxx	
Canadian Coast Guard Regional Operations Center (CCG) – Rock Duty Officer	St John's, NF	xxx-xxx-xxxx	
Lara Cooper, Director, Fisheries and Oceans Canada (DFO) Biological Station	St. Andrews, NB	xxx-xxx-xxxx	Lara.Cooper@dfo-mpo.gc.ca
Fisheries and Oceans Canada (DFO) Regional Office	St. George, NB	xxx-xxx-xxxx	
Harvey Millar, Area Director, Fisheries and Oceans Canada (DFO)	St. George, NB	xxx-xxx-xxxx or Fax at xxx-xxx-xxxx	MillarH@dfo-mpo.gc.ca
Margaret Hawkins, Small Craft and Harbours, Fisheries and Oceans Canada (DFO)	St. George, NB	xxx-xxx-xxxx	
Andrew Justason, Supervisor, Canadian Food Inspection Agency	St. George, NB	xxx-xxx-xxxx (Office)	Andrew.Justason@inspection.gc.ca
Blacks Harbour Wharf Office		xxx-xxx-xxxx Office)	
Blacks Harbour Gordon Dugas, Wharfinger		xxx-xxx-xxxx (Cell)	
Blacks Harbour Nelson McKenzie, Wharfinger		xxx-xxx-xxxx (Cell)	
Tanner McDevitt Port Security Officer		Cell: xxx-xxx-xxxx	www.sjport.com
Port of Saint John Port Security - 24/7		Primary xxx-xxx-xxxx (Office) Alternate xxx-xxx-xxxx	

Note: In events where, Public Safety Canada is involved, representatives from **Fisheries and Oceans Canada (DFO)** and (Canadian Coast Guard) CCG would sit on various committees **FCSC (Federal Coordination Steering Committee)** and **FCG (Federal Coordination Group)** respectively and would be aware of any incident that could endanger the public or requires a coordinated Federal Response.

The action of notifying potentially affected sites would be performed by:

- those individuals on the FCSC and FCG; or
- the Regional Emergency Services Advisor/Business Continuity Plan Coordinator within the Department.

The briefing at NBEMO Headquarters indicates that fishermen or other persons at sea are at risk, the **Canadian Coast Guard Radio Marine Communication and Traffic Services (MCTS)** Center at Sydney, NS will be asked to broadcast appropriate **Notices to Shipping (NOTSHIPS)** to all vessels at sea. As per the direction of DAAF to Public Safety Canada, the Canadian Coast Guard will by radio communication inform vessels in the area to proceed to a safer area or pre-established decontamination area. The Canadian Coast Guard will monitor the area within the plume via radar to help ensure vessels do not enter the plume.

Using the Coast Guard information, DAAF will determine the number of ships that would require decontamination and provide direction to the CCG as per the decontamination plan.

3.3.7 Operational Procedure

The only commercial agricultural production within the twenty-kilometer radius of the Point Lepreau Nuclear Generating Station is a limited number of blueberry fields.

<u>Food Production</u>

Food production consists of vegetables grown for family use and eggs and poultry in small volumes for individual use by owners of small poultry flocks. Very small volumes of locally grown vegetables are stored for winter use. No milk is produced within the area.

Detailed demographic survey information is compiled by NBEMO, by individual households, which includes pets, livestock and vegetables grown locally and stored.

Residents of the area rely on food produced outside the immediate area. The only concern, regarding possible contamination of food, would be of that stored in the home or local shops at the time of an incident. In most cases, foods stored within a building would not be affected.

If a nuclear release occurred in the summer months, locally grown vegetables and blueberries would require testing to determine level of contamination.

3.3.8 Evacuation Plan

Livestock

The DAAF has the responsibility to facilitate the evacuation of livestock and care of this livestock during an emergency. It will be the responsibility of the owners of said livestock to provide the actual feeding and care of their animals.

If an evacuation of the area is necessary, owners of horses, cattle, goats, swine, and poultry will be informed by NBEMO and NB Power via a news release, website information or by the Point Lepreau wardens to do the following:

- leave livestock behind with shelter and plenty of food and water.
- bring animals to an alternate location; and
- take them to the identified DAAF livestock shelter where one DAAF staff person will be stationed to deal with the reception/registration of animals.

Before moving any livestock past the checkpoints, it must first be tested for radioactivity and decontaminated if necessary.
Sheltering of animals should provide adequate protection against fallout contamination, so evacuation to another area may not be required.
If the decision is to evacuate immediately, livestock trucking firms will provide vehicles to move the animals, under supervision of the owner and the DAAF.

Disposal of dead farm animals will be done in consultation with NB Health and NB Environment & Local Government (HC, and CFIA may also be involved).

Decontamination of Large Animals	• Prior to the removal of animals to safe areas, animals and vehicles must be washed down to remove any possible surface contamination.
Notification of Fishing Vessels and Other Stakeholders	• The Coast Guard will evacuate all vessels from any restricted area. • Two marine assurance monitoring centers will be established as required, at selected Harbours
Selected Harbours	• A radiation monitoring post will be located at selected Harbours under the direction of the Harbour Master with assistance from NB Power. They are to be prepared to handle fishing boats, small craft and large ships including their crew and passengers. • Notification of stakeholders will be by way of DAAF personnel or stakeholder groups or associations

Figure 3.3.9

Food Sampling

When required, following an incident, the DAAF staff will assist with collecting samples of food items for testing. Testing will be performed by the NB Power Health Physics Laboratory, York Street, Fredericton.

Contaminated food will be decontaminated or destroyed under direction of officials of the NB Departments of Health and Environment.

DAAF can assist the lead agencies (i.e., NB Health and NB Environment) with the coordination of food, water and environmental sampling, food and water controls and implementation of restrictions on productions and/or distribution of food products.

3.3.10 Control Group Members

Control Group Members (PEAC)	Office	Home	Cell
Coordinator Matthew Ruff	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Alternates			
Troy Adams	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Deputy Minister			
Deputy Minister Cathy LaRochelle	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Emergency Operations Coordinator			
Assistant Deputy Minister - Agriculture Kevin McCully	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Assistant Deputy Minister – Aquaculture and Fisheries - Sarah Price xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx			
On-Site Agriculture Coordinator	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Primary Brian MacDonald			
Alternate #1 Amy McFadgen	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Alternate #2 Tom Byers	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
On-Site Aquaculture / fisheries Coordinator	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Primary Terry Hatt			
Alternate #1 Joel Richardson	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Department Resource Personnel Agriculture	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Director Animal Health Services Neil Jacobson			
Director Livestock Sector Development Greg Sweetland	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Director Crop Sector Development Josée Dunphy	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Provincial Director of Fisheries Allen Bard	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Provincial Director Aquaculture Andrew Sullivan	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
REAC Regions 1 & 12 – Carleton, Victoria, Madawaska and Part of Restigouche County	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Primary Greg Toner			
Alternate #1 Peter Brennan	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
REAC Regions 2, 3 & 4 – Gloucester and Part of Restigouche County	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Primary David Fontaine			
Alternate #1Remy Hache	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
REAC Region 5 – Northumberland County	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Primary David Fontaine			
Alternate #1 Remy Hache	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
REAC Regions 6 & 7 – Kent, Westmorland and Albert County			
Primary Duncan Fraser			
Alternate #1 Jason Wells			

REAC Regions 8 & 9 – King, Queens, and Saint John County			
Primary Brian MacDonald	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Alternate #1 Tom Byers	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
REAC Regions 10 &11 – York, Sunbury, and Charlotte County			
York & Sunbury County			
Primary Amy McFadgen	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Alternate #1 Irenia Roussel	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Charlotte County			
Primary Terry Hatt	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Alternate #1 Joel Richardson	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Aquaculture Fish Health – St. George			
Aquaculture Veterinarian, Dr. Jennifer Acheson	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Biologist Joel Richardson	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Biologist Cory Leavitt	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Biologist Kathy Cleghorn	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx

Figure 3.3.10

3.3.11 Agricultural Agencies

Name	Address	Contact
Agricultural Alliance of New Brunswick (AANB) Christian Michaurd, President Phone: (506) 452-8101 Email: alliance@fermeNBfarms.ca	2-150 Allée, Woodside Lane Fredericton, NB E3C 2R9 Email: alliance@fermeNBfarm.ca Web: www.fermenbfarm.ca xxx-xxx-xxxx (Office)	Anna Belliveau, CEO Nicole Arsenault, Office Manager;
National Farmers Union (NFU) Eva Rehak, President Phone: (506) 260-0087 Email:	560 Kenneth Road Glassville, NB E7L 1V3 Web: www.nfu.ca xxx-xxx-xxxx	Barb Sommerville, Secretary 6978 Route 107, Juniper, NB E7L 1E2 Email : nfuinnb@gmail.com xxx-xxx-xxxx
Apple Growers of NB Samuel Bourgeois (Chairman)	2-150 Allée, Woodside Lane Fredericton, NB E3C 2R9 Email : nbapple@nbnet.nb.ca xxx-xxx-xxxx (Office)	
NB Cattle Producers Trevor Welch (Chairman)	2-150 Allée, Woodside Lane Fredericton, NB E3C 2R9 Email: nbcattle@nb.aibn.com xxx-xxx-xxxx (Office) / xxx-xxx-xxxx –Fax	Brenda MacLoon, Office Manager; Brad McCallum (Executive Director)
Egg Farmers of New Brunswick Hans Kristensen (Chairman)	275 Main Street, Suite 101 Fredericton, NB E3A 1E1 Email: nbegg@nbnet.nb.ca Web: www.nbegg.ca xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (fax)	Sarah Loftus General-Manager
Producteurs de poulet du NB / Chicken Farmers of NB Hugh Harmon (Chairman)	277 Main Street, Suite 103 Fredericton, NB E3A 1E1 Email: nbchicken@nb.aibn.com Website: www.chicken.ca xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Louis Martin, Secretary-Manager Email: lmartin@aibn.com
Porc NB Pork Stephen Moffett (Chairman)	259 Brunswick St., Suite 302 Fredericton, NB E3B 1G8 Email: info@porcnb.pork.nb.ca Web: www.porcnbpork.ca xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Denise Cassidy (Executive Director) Email: harvey-denise@hotmail.ca
NB Goat Breeders Association	182 Academy Street	Arnold Steeves

	Hillsborough, NB E4H 2R9	Secretary/Treasurer xxx-xxx-xxxx (Home) Email: arnsfarm@nb.sympatico.ca
NB Turkey Marketing Board (Turkey Farmers of NB) Ernie Gorham (Chairman)	277 Main Street Fredericton, NB E3A 1E1 Gorhamscreekfarms@xplornet.ca xxx-xxx-xxxx (Office) / xxx-xxx-xxxx Fax	Ken Godin Secretary-Manager Email: kgodin@nb.aibn.com
NB Soil and Crop Improvement Association Tyler Coburn (President)	2-150 Allée, Woodside Lane Fredericton, NB E3C 2R9 Email: gm@nbscia.ca web: www.nbscia.ca xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Ray Carmichael Manager
Bleuets NB Blueberries Donald Arseneault (Executive Director)	82 Westmorland Street, Suite 327 Fredericton, NB E3B 3L3 Email: bnbb@nbwildblue.ca Web: www.nbwildblue.ca xxx-xxx-xxxx (office) xxx-xxx-xxxx / xxx-xxx-xxxx (Fax)	
Canneberges NB Cranberries Donald Daigle - Chair	6 Station Road Dorchester, NB E4K 3A1 Web : www.nbcranberries.com (506) 379-1886	Melvin Goodland, Chair xxx-xxx-xxxx Email: bayview@nb.sympatico.ca
Atlantic Canada Organic Regional Network (ACORN) Rebecca MacInnis (President)	Email : admin@acornorganic.org xxx-xxx-xxxx	
Landscape NB / NB Horticultural Trades Assoc. Colin Murray (President)	P.O. Box 742 Saint John, NB E2L 4B3 Email: lnb@nbnet.nb.ca Web: www.nbhta.com xxx-xxx-xxxx (office) / xxx-xxx-xxxx (Fax)	James Landry, Executive Director
Really Local Harvest Cooperative Ltd./La Coopérative La Récolte de Chez Nous Ltée. Fran Day (President)	Dieppe Farmer's Market 232 Gauvin Road, Dieppe, NB E1A 1M1 Email: info@recoltedecheznous.com Web: www.recoltedecheznous.com xxx-xxx-xxxx (office) / xxx-xxx-xxxx (Fax)	Gaetan Noel (Executive Director) Email: gaetan@recoltedecheznous.com

NB Sheep Breeders Association Jocelyn McGraw (Secretary/Treasurer)	932 Route 945, Cormier Village, NB E4P 5Y9 Email : jjmcgraw1@icloud.com xxx-xxx-xxxx (office) / xxx-xxx-xxxx (Fax)	Jocelyn McGraw, Secretary/Treasurer Email: jjmcgraw1@icloud.com xxx-xxx-xxxx
NB Beekeepers Association Chris Davey (President)	2373 Route 115 Irishtown, NB E1H 2L5 Email: chris_davey@cooperators.ca Web: http://www.nbba.ca/ xxx-xxx-xxxx	
Christmas Tree Industry Association of NB Louise Poitras (Executive Director)	250 Rue Sheriff Street Grand Falls, NB, E3Z 3A2 Email: nbmsa@gmail.com xxx-xxx-xxxx	
NB Maple Producers Association Jean-Francois Laplante (President)	250 Rue Sheriff Street Grand Falls, NB, E3Z 3A2 Email: aanb.nbmsa@gmail.com xxx-xxx-xxxx	
NB Seed Potato Growers Association André Côté (Chair)	20 Richard Road LSD of Drummond, NB E3Y 0A8 Email: nbseeds@gmail.com xxx-xxx-xxxx (Office)	
Potatoes New Brunswick Gilles Godbout (Chair)	777 Everard H Daigle Boul Grand Falls, NB E3Z 3C7 Email: gfpotato@potatoesnb.com xxx-xxx-xxxx	Matt Hemphill (Executive Director) Email: mhemphill@potatoesnb.com
Horse Racing New Brunswick Inc.	37 McAllister Drive Saint John, NB E2L 3X8 xxx-xxx-xxxx Fax xxx-xxx-xxxx Email: newbrunswickhorseracing@gmail.com	Brock McEachern Executive Director
CCNB-INNOV Net Work Daniel Laplante (Executive Director)	160 Reservoir Street Grand Falls, NB E3Y 3W3 Email: daniel.laplante@ccnb.ca xxx-xxx-xxxx / xxx-xxx-xxxx	
NB Fur Farmers Association Jim Flemming (President)	60 Watson Settlement Road Belleville, NB E7M 5W6 Email: jflemming1962@gmail.com xxx-xxx-xxxx	

NB Grape Growers Association (Vins NB Wines) Zack Everett (President)	860 Front Mountain Road Magnetic Hill, NB E1G 3E3 Email: info@magnetichillwinery.com xxx-xxx-xxxx	Tony Rickett Secretary/Treasurer Email: rickett@nbnet.nb.ca
NB Potato Shippers Association Brian DuPlessis (Executive Director)	116 Strong Street Woodstock, NB E7M 2V9 Email: familial@nbnet.nb.ca Phone: xxx-xxx-xxxx	
Commercial Agriculture Sector		
McCain Foods Ltd	8800 Main Street Florenceville, NB E7L 1B2 Web: www.mccain.com xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Max Koeune President and CEO
Agropur Cooperative Mathieu Levesque, Plant Manager	49 Milk Board Road Sussex, NB E4E 5L2 Web: www.agropur.com Email: crista.vail@agropur.com xxx-xxx-xxxx (Office) Toll Free: xxx-xxx-xxxx / xxx-xxx-xxxx Fax	
Food & Beverage Atlantic Aliments et Boissons Atlantique Norm Purdy, Board President	36 Albert Street Moncton, NB E1C 1A9 Email: info@atlanticfood.ca Website: www.atlanticfood.ca xxx-xxx-xxxx (Office)	Tammy Brideau Executive Director xxx-xxx-xxxx
Commercial Aquaculture Sector		
Atlantic Canada Fish Farmers Association	226 Limekiln Road Letang, NB E5C 2A8 PHONE: xxx-xxx-xxxx FAX: xxx-xxx-xxxx To contact the staff or board by email – info@atlanticfishfarmers.com	Susan Farquharson Executive Director Cell: xxx-xxx-xxxx
Cooke Aquaculture Glenn Cooke, President Email: gcooke@cookeaqua.com (506) 446-8106 (Cell)	874 Main Street Blacks Harbour, NB E5H 1E6 Web: www.cookeaqua.com xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Michael Szemerda Vice President, Operations Email: mszemerda@cookeaqua.com
Benson Aquaculture Ltd.	6 Old Factory Round Turn Grand Manan, NB E5G 2J4 xxx-xxx-xxxx (office)	Morton Benson President E-mail: lobfish@nbnet.nb.ca xxx-xxx-xxxx

Marine Harvest Atlantic Canada Inc.	2 Salar Court St. George, NB E5C 2N8 Web: www.https://mowi.com/cae xxx-xxx-xxxx (Office) /xxx-xxx-xxxx (Fax)	Aaron Bennett Email: Tyler.Aaron.Bennett@mowi.com Phone: xxx-xxx-xxxx Cell : xxx-xxx-xxxx
Commercial Fisheries Sector		
Association des crabiers acadiens Inc. (ACA)	226B JD Gauthier boul. J.D. Gauthier Shippagan, NB E8S 1P6 xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	aca@nb.aibn.com Robert Haché, Director Email: aca.robert@nb.aibn.com Joël Gionet, President Email: jgionet@nbnet.nb.ca
Association des pêcheurs professionnels crabiers acadiens (APPCA)	278, av. des Pêcheurs Shippagan, NB E8S 1J6 xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Paul Robichaud, paul.robichaud@frapp.org xxx-xxx-xxxx
Atlantic Ground Fish Council (AGC)	Bruce Chapman, Director Kris Vascotto, Executive Director	Tel : xxx-xxx-xxxx Tel Bruce C. xxx-xxx-xxxx Tel Kris V. xxx-xxx-xxxx Tel Steve D. xxx-xxx-xxxx Tel Sarah F. xxx-xxx-xxxx
Association des crevettiers acadiens du Golfe Inc. (ACAG)	278, av. des Pêcheurs Shippagan, NB E8S 1J6 xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Eda Roussel xxx-xxx-xxxx (Cell) xxx-xxx-xxxx (Office) M. Stephane Thériault, President xxx-xxx-xxxx Email : theriault_stephane@hotmail.com
Fédération régionale acadienne des pêcheurs professionnels Inc. (FRAPP)	278, av. des Pêcheurs Shippagan, NB E8S 1J6 xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Jean Lanteigne General Director xxx-xxx-xxxx Email: Jean.Lanteigne@frapp.org
Fundy North Fishermen's Association Bradley Small, President (506) 653-7014 Email: info@fundynorth.org	3 Prince of Wales Street St. Andrews, NB E5B 3W9 Email: info@fundynorth.org xxx-xxx-xxxx (Office) xxx-xxx-xxxx (Fax)	Lillian Mitchell Executive Director xxx-xxx-xxxx Email: lillian@fundynorth.org
Fundy Weir Fishermen Association Inc Reid Brown, President (506)747-2953 Email: julree@xplornet.ca	3 Prince of Wales Street St. Andrews, NB E5B 3W9 Email: info@fundynorth.org xxx-xxx-xxxx (Office) / xxx-xxx-xxxx	Lillian Mitchell Executive Director xxx-xxx-xxxx Email: lillian@fundynorth.org
Alma Fishermen's Association Terry Rossiter, President	3864 Scenic Drive Alma, NB E4H 1P5	Terry Rossiter xxx-xxx-xxxx (home)

	Email: trossiter123@yahoo.ca	xxx-xxx-xxxx (cell)
Grand Manan Fishermen`s Association Brian Guptill, President (506) 662-3400	315 Ingalls Head Road Grand Manan, NB E5G 4E9 Email: gmfa@nb.aibn.com xxx-xxx-xxxx (Office) xxx-xxx-xxxx (Fax)	Melanie Sonnenberg Executive Director xxx-xxx-xxxx Email: msonnenberg@gmfa.nb.ca
UPM / MFU (Maritime Fishermans Association) André Martin, président Email: shediac@mfu-upm.com	422 rue Arseneau, Tracadie Sheila, NB E1X 1B3 xxx-xxx-xxxx, xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Martin Mallet Executive Director xxx-xxx-xxxx
Eastern Charlotte Waterways Executive Director - Vacant Email: info@ecwinc.org	881 Main Street Blacks Harbour, NB E5H 1E5 xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Michelle O'Hanley Office Manager Email : mohanley@ecwinc.org
Connors Bros. Clover Leaf Seafoods Inc. Serge Gautreau, VP Operations Email: serge.gautreau@connors.ca	180 Brunswick Street Blacks Harbour, NB E4H 1G6 xxx-xxx-xxxx (Office) / xxx-xxx-xxxx (Fax)	Matt Walsh xxx-xxx-xxxx Director of Marine Resources Email: matt.walsh@connors.ca
Charlotte County Clam Harvesters Cooperative Charlene Watson, President Email: cmwatson40@gmail.com		Jeannie Foster, Capt. Dans Email: donne@nbnet.nb.ca

Figure 3.3.12

3.3.13 Harbour Authorities

Harbour Authority	Harbour(s)	Représentative	Phone	Cell Phone
Harbour Authority of Alma	Alma	Terry Rossiter	xxx-xxx-xxxx	
Harbour Authority of Back Bay	Back Bay	Larry Cook	xxx-xxx-xxxx	
Harbour Authority of Black River	Black River	Warren Seeley	xxx-xxx-xxxx	
Harbour Authority of Blacks and Beaver Harbour	Beaver Harbour Blacks Harbour	Nelson McKenzie		xxx-xxx-xxxx
Harbour Authority of Boynes Cove	Boynes Cove	Paul & Thelma Lomax	xxx-xxx-xxxx	
Harbour Authority of Campobello Wilsons Beach	Malloch Beach Head Harbour	Michelle Greene	xxx-xxx-xxxx	
Harbour Authority of Chance Harbour	Chance Harbour	Ann Little	xxx-xxx-xxxx	
Harbour Authority of Deer Island	Stuart Town / Leonardville / Fairhaven / Lords Cove	Michael Silvaggio	xxx-xxx-xxxx	
Harbour Authority of Dipper Harbour	Dipper Harbour	Brad Small	xxx-xxx-xxxx	
Harbour Authority of Harbour Authority of Grand Manan Island Grand Manan island	North Head / Ingalls Head / Seal Cove / White Head / Woodwards Cove Whale Cove / Gull Cove	Melanie Sonnenberg Bonnie Morse	xxx-xxx-xxxx	
Harbour Authority of Lorneville & Five Fathom Hole	Lorneville / Five Fathom Hole	Karen Mccavour	xxx-xxx-xxxx	
Harbour Authority of Seeleys Cove	Seeleys Cove	Brad Henderson	xxx-xxx-xxxx	
Harbour Authority of St.Martins	St. Martins	Barb Mcintyre	xxx-xxx-xxxx	

Figure 3.3.13

3.3.14 Animal Shelters and Transportation

Name	Address	Phone#1	Phone#2	Email / Website
Livestock Shelters – Large Animals				
Atlantic National Exhibition	McAllister Drive East Saint John, NB	xxx-xxx-xxxx (Office)	(506) 461- 501 Roberta Nixon- Horse Racing New Brunswick	robertanixon@hrnb.ca
Sussex and Studholm Agricultural Society	164 Park Street, Sussex, NB	xxx-xxx-xxxx	xxx-xxx-xxxx (Fax)	http://www.coopsonline.com
Princess Louise Park Show Center	10-B Leonard Drive, Sussex, NB	xxx-xxx-xxxx	xxx-xxx-xxxx	info@plpshowcenter.com
Livestock Transportation				
Peter Totton	Springfield, Sussex	xxx-xxx-xxxx		
McConchie Trucking		xxx-xxx-xxxx		
Frank and Thomas Friars	Sussex	xxx-xxx-xxxx Cell	xxx-xxx-xxxx Home	
Coleman Anderson	Sussex	xxx-xxx-xxxx		
Valley View Farm Ltd.		xxx-xxx-xxxx		
Livestock Disinfection				
Mark's Steam Clean & Bulk Water Supplier		xxx-xxx-xxxx		
Danny Byers "Wash-A-Way"	Sussex	xxx-xxx-xxxx		
Shelters - Pets				
The Disaster Animal Response Team of Nova Scotia	(Social Development is responsible for handling and care of pets)	xxx-xxx-xxxx		Information@dartns.org Website: www.dartns.org
Saint John SPCA	295 Bayside Drive, Saint John, NB E2J 1B1	xxx-xxx-xxxx		info@spcaanimalrescue.com Website: Home - Saint John SPCA Animal Rescue
Charlotte County Animal Shelter (Charlotte County Animal Rescue)	112 Prince William Street, St. Stephen, NB E3L 2X2	xxx-xxx-xxxx (Office)		ccspca@nb.aibn.com Website: Pets for Adoption at Charlotte County SPCA, in St Stephen, NB | Petfinder
Animal Rescue - Large and Small				
Oceanographic Environmental	12 Burton Ave, Barrie, Ontario L4N 2R2 Email: get.oers@gmail.com Website: www.oers.ca	xxx-xxx-xxxx (24 Hrs)		

Figure 3.3.14

3.3.15 DAAF Sample Form

Sample Submission Form

Lab use only

_____

_____

For submission of DAAF samples to the NB Power Health Physics Laboratory
Located at 420 York Street, Fredericton (ring bell at back door)

Samples Submitted By (Print): Click here to enter text.
Phone No: Click here to enter text.

Sample No.	Site ID (Location - GPS coordinates in NAD83 if possible)	Sample Type	Specify Type	Date (YYYYMMDD)	Time 24hr (HHMM)	Analysis Requested
						Gamma spec/Tritium
						Gamma spec/Tritium
						Gamma spec/Tritium
						Gamma spec/Tritium
						Gamma spec/Tritium
						Gamma spec/Tritium
						Gamma spec/Tritium

Sample Type

AN	Animal (specify type)
FI	Fish (specify type)
VE	Vegetable (specify type)
CR	Crop (specify type)
DP	Dairy Product (specify type)
OT	Other (specify type

Delivered By:

Received By (Print and Sign):

Date (YYYYMMDD) and Time (24hr):

Figure 3.3.15

3.4 ATTORNEY GENERAL

3.4.1 The Attorney General is responsible for:

- Responsible for the coordination of emergency legislation and regulations required by provincial departments or agencies during an emergency or disaster.

3.5 EDUCATION AND EARLY CHILDHOOD DEVELOPMENT

3.5.1 The Department of Education & Early Childhood Development (EECD) will:

- Make available school buses for the mass evacuation of persons living within the area affected by an emergency.
- Make available a limited number of drivers for school buses once they reach the site.
- Arrange to have designated personnel to coordinate activities in emergency area.
- In conjunction with Department of Social Development ensure that designated schools are available to be set up as reception centers; Note: Red Cross is currently negotiating sites for reception centers that aren't schools as to not interrupt the students' learning schedule; and

Alerting and Assembly

On receiving notification of an incident, the department representative will immediately notify the school.

District Transportation Officer in the affected area and proceed to NBEMO Headquarters for briefing.

District Transportation Officers will then determine the number of vehicles and drivers available and their locations.

After being briefed by NBEMO the departmental representative will advise the Assistant Deputy Minister **(EECD Corporate Services)** who will in turn advise the Deputy Ministers and Minister. Communication will then be re-established with District Transportation Officer to assess and react to any developing situations.

Concept of Operations

The role of the department is to provide facilities for reception centers, buses for evacuation of the public and personnel to work with and operate said facilities.

The Transportation Officer will play the key role in the school district.

Only one school exists in the immediate area of Point Lepreau with approximately 80 staff and students as of September 2020. Complete evacuation of this school could be accomplished within 20 minutes.

Immediate areas of concern would involve having the school district contact drivers and coordinate bus movements in conjunction with RCMP and Department of Transportation &

Infrastructure, as well as ensuring that schools designated as reception areas are open and accessible.

Drivers will NOT be directed into an area which is dangerously radioactive.

Communications

Communications between Control Group and School District Personnel (field staff) will be by telephone.

Resources

The Department of Education & Early Childhood Development can make available school buses, based on the nature and gravity of the incident, at any given time in the immediate area (St. Stephen, St. George, Saint John, and Kennebecasis Valley) and has a working relationship with Saint John City Transit to utilize their vehicles. Certain schools have been designated as reception centers (list available through Department of Social Development).

Personnel on Call:

Control Group Member	Office	Home	Cell
Primary Contact – Pascal Landry (EECD)	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Alternate # 1 – Tim McCluskey (EECD)	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Alternate # 2 – Tomas Murphy (EECD)	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
ASD-S Primary Contact - John MacDonald	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
DSF-S Primary Contact - David Després	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
District Transportation Officers			
(ASD-S) Manager – Jamie Tait	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
(DSF-S) Manager – André St-Pierre	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
St George REOC	xxx-xxx-xxxx		

See map below.

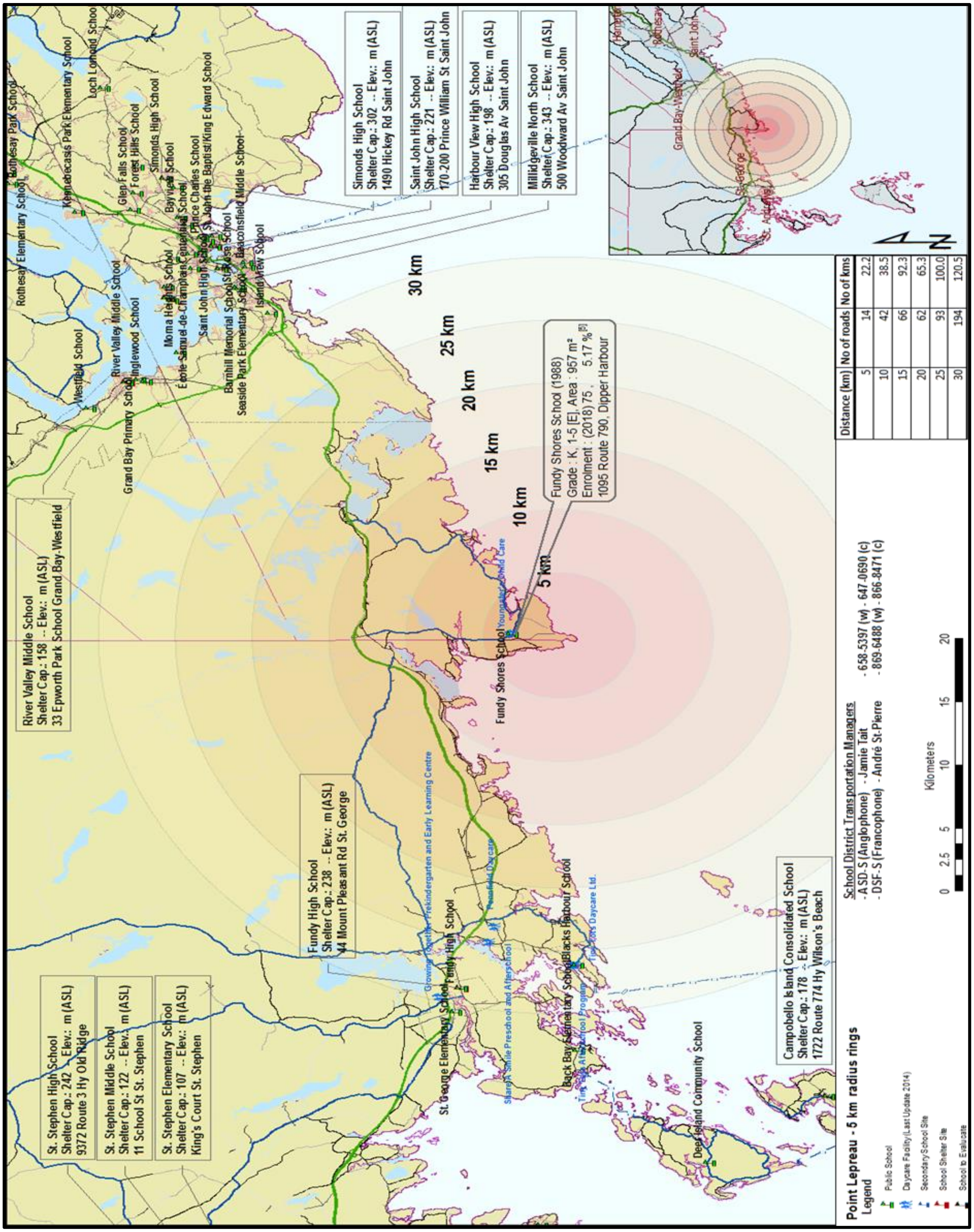

Point Lepreau - 5 km radius rings
Legend
Public School
Daycare Facility (Last Update 2014)
Secondary School Site
School Shelter Site
School to Evaluate
School District Transportation Managers
- ASD-S (Anglophone) - Jamie Tait - 658-5397 (w) - 647-0690 (c)
- DSF-S (Francophone) - André St-Pierre - 869-6488 (w) - 866-8471 (c)
Kilometers
0 2.5 5 10 15 20
Distance (km) | No of roads | No of kms
5 | 14 | 22.2
10 | 42 | 38.5
15 | 66 | 92.3
20 | 62 | 65.3
25 | 93 | 100.0
30 | 194 | 120.5
5 km
10 km
15 km
20 km
25 km
30 km
Fundy Shores School (1988)
Grade : K, 1-5 [E], Area : 957 m²
Enrolment : (2018) 75 , 5.17 %
1095 Route 790, Dipper Harbour
River Valley Middle School
Shelter Cap.: 158 -- Elev.: m (ASL)
33 Epworth Park School Grand Bay-Westfield
Fundy High School
Shelter Cap.: 238 -- Elev.: m (ASL)
44 Mount Pleasant Rd St. George
Campobello Island Consolidated School
Shelter Cap.: 178 -- Elev.: m (ASL)
1722 Route 774 Hy Wilson's Beach
St. Stephen High School
Shelter Cap.: 242 -- Elev.: m (ASL)
9372 Route 3 Hy Old Ridge
St. Stephen Middle School
Shelter Cap.: 122 -- Elev.: m (ASL)
11 School St St. Stephen
St. Stephen Elementary School
Shelter Cap.: 107 -- Elev.: m (ASL)
King's Court St. Stephen
Simonds High School
Shelter Cap.: 302 -- Elev.: m (ASL)
1490 Hickey Rd Saint John
Saint John High School
Shelter Cap.: 221 -- Elev.: m (ASL)
170-200 Prince William St Saint John
Harbour View High School
Shelter Cap.: 198 -- Elev.: m (ASL)
305 Douglas Av Saint John
Millidgeville North School
Shelter Cap.: 343 -- Elev.: m (ASL)
500 Woodward Av Saint John

Figure 3.5.2

3.6 NATURAL RESOURCES AND ENERGY DEVELOPMENT

3.6.1 The Department of Natural Resources and Energy Development will:

- Monitor forest conditions near the Point Lepreau Nuclear Generating Station with a view to priority action in the event of a forest fire.
- Provide Point Lepreau Nuclear Generating Station staff with firefighting equipment, on request.
- Assist in ensuring that access by road to the Plant is maintained always in conjunction with the RCMP and the Department of Transportation and Infrastructure (DTI).
- Coordinate with the Warden Service the alerting of seasonal residents and visitors in areas not covered by the Warden Service.
- Assist the RCMP in the evacuation of seasonal residents and visitors, and
- Aid and resources requested by the Control Group, as required.

Alerting and Assembling

On receipt of notification from NBEMO that an incident has occurred at the Point Lepreau Nuclear Generating Station, the Coordinator will immediately inform the Assistant Coordinator of the emergency. The coordinator will then proceed directly to the NBEMO Provincial Emergency Operations Center (PEOC) for briefing on the situation. After the briefing, the coordinator will immediately inform the deputy minister of the incident and the information obtained at the briefing.

With the Departmental response activated by the Coordinator, the Regional Coordinator will proceed directly to the Off-Site Emergency Center while the Assistant Coordinator and all other alerted departmental personnel will stand by at the places of employment to receive further information from the coordinator.

Concept of Operations

In non-radiation incidents, the Department's role is to fight forest fires near the plant and to supply Fire Departments with equipment and if possible, help extinguish structure fires at the plant.

When called to action during a radiation incident and/or if evacuation of any part of the area is required, the Department will provide personnel and vehicles from Resource Region 3 to notify and, if necessary, to assist in the evacuation of seasonal residents and visitors in camps, cottages, etc.

In the case of either incident, the Department will provide resources to assist the RCMP and other Departments on request through the Control Group.

Communications

Communications between the Control Group and the Field Staff will be by telephone or Departmental radio network via the Provincial Mobile Communication Center (PMCC).

See Annexes below for current telephone numbers.

Provincial Forest Fire Center			
Reception			xxx-xxx-xxxx
Duty Officer (Apr-Oct)	Fire Center	Office xxx-xxx-xxxx	Cell xxx-xxx-xxxx
Len Mosher Manager Fire Management	Fire Center	Office xxx-xxx-xxxx	Cell xxx-xxx-xxxx
(EMO Primary) Supervisor Fire Center Operations	Fire Center	Office xxx-xxx-xxxx	Cell
Jeff Betts (EMO Secondary) PFFC Equipment	Fire Center	Office xxx-xxx-xxxx	Nil
Steve Conn (EMO Tertiary) Technical Services	Fire Center	Office xxx-xxx-xxxx	Cell xxx-xxx-xxxx
Gilles Chiasson Air Operation Manager	Fire Center	Office xxx-xxx-xxxx	Cell xxx-xxx-xxxx
Miramichi ATB		Daytime xxx-xxx-xxxx	After hours xxx-xxx-xxxx
Provincial Mobile Communication Center / After Hours or Evening / Weekend Off Season	PMCC 24hrs	xxx-xxx-xxxx	
Regional Headquarters – Fredericton R3			
Neil Jacobson – Director (Acting)	Fredericton	xxx-xxx-xxxx	
Pam Seymour – Regional Biologist	Fredericton	xxx-xxx-xxxx	
John Kennedy - Regional Resource Manager (Acting)	Fredericton	xxx-xxx-xxxx	
Gary Moore – Regional Management Forester	Fredericton	xxx-xxx-xxxx	

Figure 3.6.2

Figure 3.6.3

3.7 ENVIRONMENT AND LOCAL GOVERNMENT

3.7.1 The primary purpose of the Department's participation in the plan is in sampling air, soil, surface waters and surface drinking water supplies. Sampling will confirm what areas, if any, have been contaminated, and to what extent.

Responsibilities

The Department of Environment and Local Government (ELG) will:

- obtain water, soil and air samples as requested; sampling to be limited to areas outside the Lepreau 20 km detailed planning Zone.
- advise on disposal of contaminated substances,
- provide regulatory oversight for site cleanup, when and if required; and
- provide departmental resources and assistance as required.

Alerting and Assembly

Upon notification of an alert, NBEMO will contact the departmental representative on the Control Group or his/her alternate. See Annex E. The department representative will then proceed directly to the Provincial Emergency Operations Center (PEOC) in the Victoria Health Center. Departmental field personnel are to be notified by the departmental representative from the Emergency Operations Center immediately upon his/her arrival.

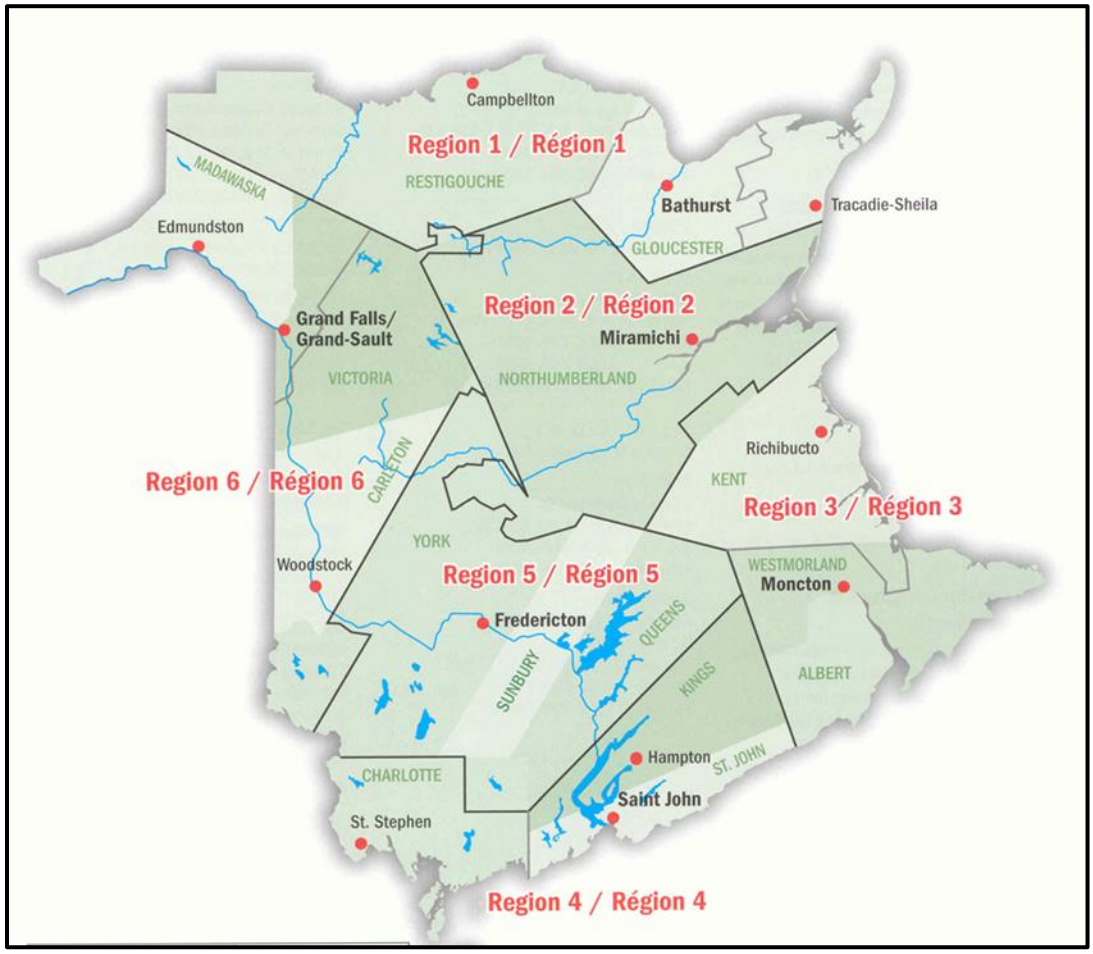


Figure 3.7.2

3.7.3 Concept of Operations

The Departmental Control Group representative will advise field personnel on possible contamination of water supplies and requests for disposal of contaminated material; field personnel will keep the EOC informed of their whereabouts and staff will carry out environmental sampling at the request of the Control Group.

3.7.3 Duties

Departmental Control Group Representative

The Departmental Control Group representative is to fulfill as directed by the Director EMO the duties and responsibilities of the Department of the Environment and Local Government under the Off-Site Plan. The following are specific duties to which he/she must attend:

- When notified by NBEMO, proceed immediately to the Emergency operations Center.
- Notify departmental field personnel to stand by or to report to assigned locations.
- Contact alternate Departmental Control Group representatives to establish a schedule for relief such that the position is continuously manned until otherwise directed by the Director.
- Assign teams as required to aid with soil and water sampling.
- Maintain a departmental operations/telephone log.

3.7.4 Departmental Field Personnel

Personnel will remain on standby or at assigned locations to receive further instruction from the Departmental Control Group representative or, in the case of the Saint John personnel, the Saint John Regional Emergency Action Committee (REAC). These instructions may include the establishment of a shift schedule if personnel are required on a 24-hour basis and/or the assignment of crews to the specific types of samples at specific locations. Personnel are not to deploy to the field until so directed.

3.7.5 Communications

The Provincial Emergency Operations Center (PEOC), when activated, is to be contacted at **(506) 453-5500**. Alternatively, contact NBEMO at **(506) 453-2133**.

The Saint John Regional Emergency Action Committee (REAC) will be established at the Provincial Lab Building, 8 Castle Street, Saint John; contact at **(506) 643-6048**.

The St George Regional Emergency Action Committee (REAC) will be established at the NBEMO Regional Building, 40 Brunswick Street, St George, and phone **(506) 469-4988**

Radio equipped vehicles will be made available through arrangements with the Control Group. The Regional Emergency Action Committee must be kept aware of where the field staff can be reached when they are away from assigned locations.

Contact between the NBEMO Control Group and the Departmental Field personnel, while they are in the field, will be in the form of portable radios and mobile radio-equipped vehicles, cellular telephones, and pagers. Contacts are maintained by Regional Services Headquarters at xxx-xxx-xxxx **.**

3.7.6 Transportation

Radio equipped vehicles will be available and assigned through the Departmental Control Group Representative. Vehicles not radio equipped should not be used unless specific instruction to do so is issued from the Control Group.
DELG has marked vehicles (Environment) with TMR radio X 23 throughout the province.

3.8 EXECUTIVE COUNCIL OFFICE

3.8.1 New Brunswick has provincial policy, plans, procedures, and robust infrastructure to support government communications and the provision of public information during emergencies.

The Emergency Public Information Plan provides for the establishment of an emergency organization; known as Emergency Public Information Services, to co-ordinate emergency public information. When activated, Emergency Public Information Services co-ordinates the communications activities of government and the utility, to ensure that timely and accurate advice is provided to the public.

3.8.2 Normal Operations

Executive Council Office (ECO) is the provincial lead agency for government communications and marketing. Day to day, ECO is responsible for editorial services, corporate and departmental media relations, marketing, and dissemination of government communications.
Note: Design services, monitoring of electronic and print media, translation services, the recording of news announcements and certain web services shall be provided by the Department of Government Services.

3.8.3 Emergency Operations

When required to meet the demands of a crisis or emergency, NBEMO activates the Emergency Information Services organization, in whole or in part, to support government emergency operations. Concurrently, ECO continues to support routine government communications.

The Emergency Information Services organization comprises ECO staff, NB Power public affairs staff, and representatives from partner organizations as required.
For the duration of the emergency, ECO in conjunction with NB Power acts as a clearinghouse for all government strategic communications, operational communications, and emergency public information.

3.8.4 Emergency Public Information

Emergency Public Information is disseminated primarily by means of the government news wire:

Newswire Site: NBEMO Website
Public Alerts Site: http://www.gnb.ca/alert
Twitter: @NBEMO_OMUNB
Facebook: https://www.facebook.com/NBEMO.OMUNB

In the event of a nuclear incident, NBEMO will notify residents of the Emergency Planning Zone by means of a mass notification system and through the Point Lepreau Warden Service. The notification system sends out safety messages to residents via phone, text, email, or fax. NBEMO maintains the contact list and tests the system twice a year to ensure that residents are familiar with the system and that their contact information is up to date.

3.8.5 Responsibilities

The Corporate Communications Division of Executive Council Office (ECO), assisted by communications staff assigned to departments, is responsible for the following:

Preparedness Responsibilities:

- Developing provincial policies for emergency public information and assisting in the preparation, maintenance, and periodic testing of the provincial Emergency Public Information Plan.
- Doing advance and ongoing preparation, and providing and disseminating public information on response procedures to the public, government officials and the media, including information provided by subject matter experts at NB Power or other government departments related to emergency assistance, radiation, respiratory concerns, shelter, evacuation, prophylactic medication, and response facilities; and
- Preparing news conferences and scrums at NBEMO headquarters and field locations as required.

3.8.6 Operational Responsibilities:

- Alerting public information staff, the Premier and other elected officials, when directed by NBEMO.
- Allocating public information personnel to various functions and locations.
- Doing ongoing liaison work with the media and disseminating subsequent public safety bulletins regarding the incident.
- Advising the Control Group on all matters relating to public information.
- Liaising with the media.
- Providing information on the event to the information agencies of other provinces, the Government of Canada, and the United States; and
- Providing continued emergency public information services throughout the response and recovery process.

3.8.7 Alerting and Assembly

NBEMO is responsible to alert designated ECO staff and NB Power staff at the onset of operations.
The Director NBEMO and the Director Emergency Public Information Services will determine jointly the level of activation necessary and will ensure enough staff and facilities are available to meet the requirements of the situation.

3.8.8 Emergency Public Information Services Organization

Nuclear Control Group
Senior communications staff will fill the following key positions in the Nuclear Control Group:

- Director of Communications at the Department of Justice and Public Safety.

- Emergency Public Information Coordinator (ECO).
- Point Lepreau Communications Manager (NBP); and
- Public Affairs Officer (NBP) Information Coordinators

The Director of Communications at the Department of Justice and Public Safety will appoint managers and assign staff for each of the following functions:

- Media Center.
- Media Relations; and
- ECO Support Services.

3.8.9 The specific duties are outlined as follows:

Communications Objectives

The principal communications requirement during an emergency is a steady flow of accurate, reliable information and public advice, both internally and externally. This is essentially the EPI Services mission.

Communications objectives include the following:

- Ensuring that all information concerning the event and all advice to the public is coordinated across mandates and levels of government.
- Explaining what has happened and what it means.
- Explaining the actions taken and actions planned to protect the public.
- Explaining the actions required to be taken by the public.
- Advising when, where and how people will receive additional information; and
- Maintaining public confidence.

3.8.10 Concept of Operations

The Provincial Incident Management System is based on the (US) **National Incident Management System (NIMS)** and Canada's **National Emergency Response System (NERS).**

For nuclear events, federal and provincial plans emphasize four functional areas: executive co-ordination, operations co-ordination, technical assessment co-ordination and emergency public information co-ordination.

On activation of the Nuclear Off-site Emergency Plan, the Nuclear Control Group convenes at the Provincial Emergency Operations Center (PEOC) and assumes control of emergency operations.

Key appointments are:

- The Minister of Department of Justice and Public Safety is the lead minister and briefs Executive Council (Cabinet).
- The Deputy Minister of Department of Justice and Public Safety chairs the Executive Group.

- The Director NBEMO chairs the Nuclear Control Group; and
- The Director EPI Services chairs the Communications Group and co-ordinates EPI Services.

3.8.11 Emergency Public Information Coordination

At the onset of operations, the Director EPI Services will activate the EPI Services Organization and assume control of all EPI activities.

Designated staff will assemble at the Joint Information Center, co-located at the Provincial Emergency Operations Center (PEOC) in Fredericton. Additional staff will deploy to other facilities as directed.

Federal public affairs specialists and spokespersons will gather at the Provincial Joint Information Center. They will provide the link between the province, federal regional departments/agencies, and the Government Operations Center in Ottawa. The role of these representatives will be to work as a team with provincial counterparts to facilitate a free exchange of information to ensure consistent public information at all levels, and to liaise with the Public Affairs Group of the Government Operations Center. A representative from Public Safety Canada will act as the Federal Public Affairs Liaison Officer.

As a general guideline, the Provincial Joint Information Center will be the main source of information for emergencies originating in New Brunswick, and the Public Affairs Group of the Government Operations Center will be the main source for emergencies occurring outside Canada.

Federal departments and agencies may send public affairs specialists, spokespersons (as required) and administrative support staff (subject to availability) to the Provincial Joint Information Center.

Their role will be to:

- Provide specialized public affairs support to the province's public information team.
- Keep the Federal Public Affairs Liaison Officer informed of public affairs issues, rumors, and inquiries; and
- Provide regular reports to their respective federal regional offices.

3.8.12 Media Facilities

<u>On Site</u>

NB Power operates a Public Information Center on the Point Lepreau site. Site communications are governed by the following:

- For incidents without a public safety implication, NB Power will be the official source of public information; and
- For incidents with public safety implications, the Provincial Emergency Operations Center in Fredericton will be the official source of public information.

Off-Site

A near-site emergency information office shall be established at the Regional Emergency Operations Center in Saint John, N.B. This facility will provide public information on the incident in accordance with direction received from the Director of Emergency Public Information Services.

Provincial Media Center
The Provincial Media Center will be identified through ECO.

This facility will be used for small-scale incidents, or while a larger facility is being prepared, and shall function as the initial Provincial Media Center.

3.8.13 Alternate Provincial Media Center

If circumstances warrant, the Provincial Media Center will move to a larger facility to accommodate media information services.

The Delta Hotel or Fredericton Convention Center in Fredericton is the preferred locations, as each has the necessary infrastructure to support a large-scale media event.

Media Notification
Stage I calls (Broadcast Media)
When deemed necessary to alert the public, the Director NBEMO will:

- Direct the Point Lepreau Warden Service to alert community residents to turn on radios and televisions.
- Direct NBEMO Operations Staff to send a corresponding message to residents using the Everbridge Notification System; and
- Direct Emergency Public Information Services to alert Stage I Media.

ECO will notify Stage I Media. Messages will be broadcast immediately and will be repeated at short intervals.
Stage I Media are listed with ECO.
Stage II Media (All Media)

3.8.14 Provincial Media Center

Staff at the Joint Information Center, Provincial Media Center, NB Power and ECO shall record all media calls and disseminate information contained in the news releases.

Near Site Media Center
The Near-Site Media Center will monitor the Public Alerts website at http://www2.gnb.ca/content/gnb/en/news/public_alerts.html and assist in disseminating the information to local media. Staff also monitor traditional and social media for rumor control and correct any inaccurate information that may be sent out by others.

Special Audiences

A nuclear contingency has a well-developed constituency of interest. There will be a number of specific clients with unique information requirements.

These clients will include, but not be restricted to those listed as:
Category A: Governmental representatives (MPs, federal agencies, international and U.S. agencies), community leaders, government employees; and
Category B: Regulatory agencies (CNSC, Radiation Protection Bureau of Health Canada), nuclear industry (CNA, AECL, AIF, Central Maine Power, Ontario Hydro and Hydro Québec) and the electrical industry.

Executive Council Office in collaboration with the Department of Human Resources staff will contact Category A agencies.

NB Power Nuclear Staff will contact Category B agencies.

3.8.15 Communication Linkages

The Executive Council Office's Corporate Communications team will establish and maintain communications linkages among the following:

- The Provincial Emergency Operations Center.
- The Joint Information Center.
- The Provincial Media Center.
- The Near Site Media Center.
- New Brunswick Power Head Office (515 King Street).
- Saint John Regional Emergency Operations Center (REOC), Public Information Desk; and
- St. Stephen Regional Emergency Operations Center (REOC), Public Information Desk

3.8.16 Telecommunications

All locations must have wired and wireless internet capability, phone lines, and the appropriate computer hardware and software.

Telephone
Provincial facilities employ commercial Centerx lines. Line numbers are recorded in the Priority Access for Dialing System

Emergency Information Services Staff
Communications Staff
Information Coordinators and Staff are listed with ECO.
Support Staff
JIC Support Staff are listed with ECO.

Requirements for administrative support, beyond that normally available to Executive Council Office and NB Power Nuclear, will be staffed through NBEMO.

3.9 FINANCE (MAY BE ASSIGNED TO TREASURY BOARD)

3.9.1 The Treasury Board is responsible for the following:

- Provision of assistance and advice, as requested to, Finance Canada and the Bank of Canada.
- Provision and control of use of funds to cover normal and emergency Provincial expenditures, including emergency financial assistance arrangements with Federal and Municipal governments.
- Provision of advice respecting imposition of emergency taxes and other fiscal measures.
- Provision of advice respecting the priorities to be given to competing demands on financial and economic resources of the province.
- Provision of advice respecting financial moratoria, and if required, the implementation of measures for financial moratoria.
- Assessment of the financial situation; and
- Prepare and implement plans and procedures for emergency financial management.

3.10 HEALTH

3.10.1 Health Responsibilities

The Department of Health, in conjunction with Horizon Health Network, Extra-mural/Ambulance NB (EM/ANB) and Vitalité Health Network, will ensure:

- Timely and accurate advice to the Control Group on all health-related aspects of the emergency.
- Provision of triage, field health support, counselling, treatment, and transportation of contaminated persons requiring hospital care, as well as provision of essential medical services to reception and decontamination centers are required.
- Provision of essential medical services to persons exposed to radiation, as well as continuity of medical treatments and care services to the community-at-large for the duration of the emergency.
- Provision of public health services related to air quality, as well as the safety of food and water in the area affected by the emergency.
- Provision of nuclear-related health and care information to residents of the Province of New Brunswick who access the Tele-Care 811 system.
- Distribution and administration of Thyroid Blocking Iodide (KI) tablets to the community.
- Provision to Executive Council Office (Communications) of accurate and relevant health information, appropriate media messages and, if necessary, public health orders for dissemination to the public.

- Provision of mental health and addiction services to persons affected by the emergency, as well as Critical Incident Stress Management (CISM) to first responders and their families.
- Consultation and cooperation with federal, provincial, and municipal departments and agencies, as well as non-government response agencies.
- Provision of appropriate post-emergency health services to affected persons; and
- Provision of public health and other health advice and services related to the management of radiation contamination decedents.

Alerting and Assembly

- Upon notification by NBEMO, the following Control Group representatives will proceed directly to EMO headquarters, Provincial Emergency Operations Center, for a briefing on the situation:
    - Chief Medical Officer of Health and/or Medical Officer of Health designate(s).
    - Provincial Radiation Medical Advisor or alternate.
    - Director, Emergency Preparedness and Response Branch or alternate; and
    - Communications Officer and others, as necessary.

When it is determined that the incident may require the implementing of departmental responsibilities, the Department's Director, Emergency Preparedness and Response Branch or alternate will immediately inform the Deputy Minister and appropriate officials in the Department, Horizon Health Network, Vitalité Health Network, Service NB (Health Services division), EM/ANB, Health Canada - Radiation Protection Bureau and the Public Health Agency of Canada Health Portfolio Operations Center of the emergency.

The Department of Health/Health System emergency notification and fan-out procedure will be implemented, in accordance with the Provincial and Regional Health Nuclear Emergency Management Plans. An emergency contact listing is outlined in Section 3.10. Where the Director, Emergency Preparedness and Response Branch, Chief Medical Officer of Health designate or other Control Group members or their alternates are unavailable, the Department's Emergency Preparedness and Response Branch Duty Officer will be contacted for the names and phone numbers of other departmental staff.

- The following schematic depicts the modifications made to the all-hazards notification alert protocol, specific to a nuclear emergency at PLNGS with off-site implications:

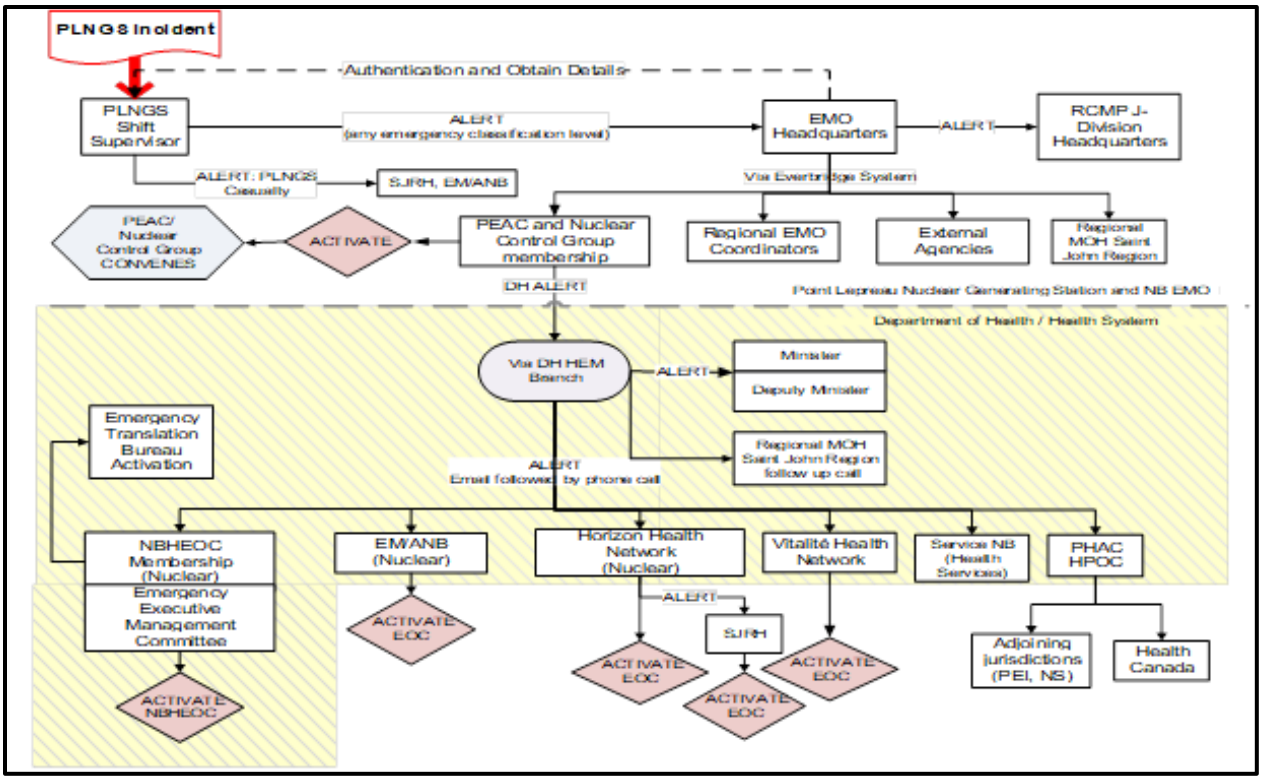


Figure 3.10.2

3.10.3 Concept of Operations

I. Activation, Implementation and Termination

The Provincial and Regional all-hazards Health Emergency Management Plans, EOC's as well as the provincial Health Nuclear Emergency Plan will all be activated upon notification from the NB Emergency Measures Organization of a site area radiation emergency alert or general radiation emergency alert by PLNGS.

The provincial Health Nuclear Emergency Plan supplements the all-hazards emergency management plans of its participating organizations by addressing issues specific to a health nuclear emergency at the PLNGS. Activation, implementation, and termination of this plan are therefore concurrent with, and subordinate to, procedures defined by the respective all-hazards emergency management plans.

II. Health System Command and Control

- Strategic Command, Control and Coordination
    - Strategic command, control and coordination of the provincial response will be directed through the PEOC Nuclear Control Group. Strategic command, control and coordination of the provincial health system response will be directed through the Department of Health's NB Health EOC in close collaboration with the PEOC Nuclear Control Group, Horizon Health Network, Vitalité Health Network and EM/ANB EOC's. Regional health operational response command, control and coordination will be directed by Horizon

Health Network, Vitalité Health Network and EM/ANB through the Saint John Regional Hospital (SJRH) EOC, Vitalité Health Network EOC and EM/ANB EOC, respectively.

- Field Command, Control and Coordination
  Depending on the circumstances, health system responders may be required to deploy to the Monitoring and Decontamination Centers, and Reception Centers. Command and control of health services in the field will be exercised as follows:

  - Horizon Health Network service operations at the Monitoring and Decontamination Centers will be coordinated through a Health Services Coordinator located at each of the two Field Command Posts established at each of the Monitoring and Decontamination Centers by NBEMO. The coordinator's role is to represent the various health services roles in the field to coordinate operational activities, relay tactical issues, as well as access and communicate information and expertise from the SJRH EOC such as changes in clinical guidelines and advice required by field health workers. The SJRH EOC will remotely provide tactical support, guidance, direction, and coordination for each health service in the field through the Health Services Coordinators in the two Field Command Posts. Similarly, EM/ANB field operations will provide coordination of EM/ANB operations through a single EM/ANB Operational Support Unit responsible for both the easterly and westerly Monitoring and Decontamination Center Field Command Post roles. This EM/ANB coordinator will also communicate with the EM/ANB EOC situated in Moncton.

  - A Canadian Red Cross Control Center will be established at each reception center. A Red Cross Site Manager will be assigned to each primary (UNBSJ and Fundy High School) Control Center to provide oversight and he/she may also have responsibility for secondary sites. Each health organization will assign a lead while they are on-site and report to the Control Center, to ensure a liaison function within the Red Cross Control Center. Health system organizational leads are not necessarily dedicated positions i.e. the roles may be assigned to individuals fulfilling a specific Health role in the Reception Center.

III. Health System Functions in an On-site Emergency

If injuries from a PLNGS on-site emergency do not involve radiation exposure or contamination, normal EM/ANB procedures will apply. If patients have been exposed or are contaminated and require hospital services, they will be transferred to SJRH in accordance with EM/ANB procedures and the current Cooperation Agreement between Horizon Health Network and Point Lepreau Nuclear Generating Station. The SJRH will receive a call directly from the PLNGS shift supervisor to the SJRH Emergency Department Nursing Team Leader providing an alert notification of an incoming patient with potential contamination. EM/ANB will also alert the SJRH Emergency Department per established procedures.

IV. Health System Functions in an Off-site Emergency
Responsibilities for health nuclear emergency management in an off-site incident are assigned to the Department of Health, Horizon Health Network, Vitalité Health Network and EM/ANB as outlined in *Section 3.10.1 and below.*

3.10.4 Health Functions and Roles

I. Health System Functions and Roles – General
The Department of Health will ensure roles and responsibilities as detailed under the PLNGS Off-Site Emergency Plan are fulfilled, as per the following:

- Via the NB Health EOC, liaise with Horizon Health Network and Vitalité Health Network to ensure that adequate care facilities, medical and mental health services are available and in a functional state of readiness.
- Via the NB Health EOC, ensure Telecare 811 services are provided in the form of health and care information to NB residents.
- Via the NB Health EOC, liaise with Horizon Health Network and Vitalité Health Network to ensure crisis intervention and counselling, public health education, and referral services are provided to individuals, families, caregivers, and emergency responders.
- Via the NB Health EOC, liaise with EM/ANB to ensure extra-mural services and emergency medical services are provided to individuals and co-ordination of ambulance services (land and air) to optimize their use in transporting injured or infirmed individuals to local hospitals; and
- Advise members of the PEOC Control Group on medical, psychosocial, and public health implications of the emergency including health problems that have already arisen or are to be expected, and appropriate protective countermeasures to be taken. This may include advising the public on what to do, dietary information, medication, evacuation, etc.

Further details on the organization, roles, responsibilities, and actions necessary for an effective health system response to a nuclear emergency at the Point Lepreau Nuclear Generation Station are outlined below and in the *Provincial Health Nuclear Emergency Plan (version 3.3).*

II. Off-site Emergency Concept and Roles

- <u>Shelter-in-place</u>
  Shelter in Place will be the most appropriate option if the health and safety risk is low, the plume is dissipating quickly enough to make the disruption of an evacuation unnecessary, or the risk of exposure during evacuation outweighs the utility of attempting to evacuate. Three challenges must then be addressed by the health system. First, there may be a requirement to respond to medical emergencies in the sheltering area and special needs may still have to be addressed. Second, there may be issues of decontamination and post-event public advice, counseling, and medical follow-up to address. Third, timely and accurate health information must be provided continuously by all appropriate means.
- <u>Evacuation</u>
  An evacuation may be precautionary before the release of radiation, or because of a release of radiation. Depending on the circumstances, evacuees may be directed to

a Radiation Monitoring Post to be checked for possible contamination. Contaminated individuals will be taken through the decontamination process at the Monitoring Decontamination Center. Uncontaminated individuals will be bussed to a reception center established by the Red Cross and directed to register. After registration, evacuees have the option of being accommodated at a reception center or making their own arrangements. The decision to evacuate will be made by Nuclear Control Group on recommendation by the Technical Advisory Group using Health Canada's Generic Criteria and Operational Intervention Levels for Nuclear Emergency Planning and Response as well as in consideration of: Health and safety risk; the dissipation rate of the plume versus the inherent disruption of an evacuation; and the risk of exposure during evacuation. If the decision is made to evacuate, two challenges must be addressed by the health system. First, there must be a requirement to respond to medical emergencies in the 20km Emergency Planning Zone (Emergency Evacuation Zone) and second, special needs may still need to be addressed.

  - **EM/ANB – Ambulance Services**. An ambulance unit may be required to enter the Emergency Evacuation Zone for emergency treatment and transport. Once an ambulance has been contaminated, it will be used only for transportation within contaminated areas. EM/ANB will continue to respond to normal patient requests in and around the Point Lepreau area.
  - **EM/ANB - Extra-Mural Program**. The Extra-Mural Program will assess the needs of their patients in the Emergency Evacuation Zone and identify those patients requiring transportation assistance. For those requiring assistance, transportation will be coordinated with NB EMO through the PEOC.

- <u>Radiation Monitoring and Mass Decontamination Centers</u>
  Health system personnel are implicated in the Monitoring and Decontamination Centers only where the public is implicated. If the Monitoring and Decontamination Centers are activated for PLNGS and emergency workers only, in a scenario where evacuation is successfully completed prior to any release of radioactive material, the field roles for the health system will not be required. In this type of scenario, EM/ANB would be available by request.

  Upon activation of the Monitoring and Decontamination Center(s) by Provincial EOC (NBEMO) the Off-site EOC will request the deployment of implicated personnel to the Monitoring and Decontamination Center assembly area(s), on the east and west sides of the 20km Emergency Planning Zone (Emergency Evacuation Zone). The Provincial EOC Health member (Director, Emergency Preparedness and Response or designate) of the Nuclear Control Group will notify the NB Health EOC to trigger the deployment of health personnel. Health staff from Horizon Health Network and EM/ANB will be notified to deploy Monitoring and Decontamination Center(s), through their respective EOC linkages, and report for duty one hour prior to the opening of the Monitoring and Decontamination Centers.

- Emergency Medical Services - In the event of a release of radiation, EM/ANB will withdraw their position to just outside of the Monitoring and Decontamination Centers and perform the following functions:
    - Pre-decontamination triage – EM/ANB will provide paramedics in the pre-decontamination area to prioritize evacuees for decontamination based on existing medical conditions or other limitations. Personal protective equipment will be required in this setting. As communication between paramedics and evacuees will be hampered by wearing the required N95 respirators, NBEMO will provide placards for communicating process information, to decrease process-related questions.
    - Facilitation of radio consultations with mental health and/or public health positioned in the post-decontamination area with evacuees in the queue for decontamination - a job action sheet will be provided to paramedics working in this area to guide them in making referrals to public health and mental health resources positioned in the post-decontamination area and facilitating a radio consultation between these resources and evacuee requiring immediate intervention, before decontamination is possible.
    - Post-decontamination medical assessment of evacuees who self-present or are referred by Red Cross for medical care.
    - Provide treatment and emergency transport, as required, potentially in the 20km Emergency Planning Zone (Emergency Evacuation Zone) or either Monitoring and Decontamination Center. If an ambulance unit is required to enter the Monitoring and Decontamination Center for emergency treatment and transport, NBEMO will ensure an area is cleared to allow access to the patient and to radiation monitoring. Once an ambulance has been contaminated, it will be used only for transportation within contaminated areas.
    - Provide one EM/ANB operational support unit to provide coordination at both the easterly and westerly Field Command Posts in the assembly area of the Monitoring and Decontamination Centers.
- Public Health Information. Some waiting time can be anticipated in the pre-decontamination area, as evacuees who have completed the radiation screening process and are awaiting decontamination. Waiting time can also be anticipated as evacuees wait to board the buses to Reception Centers. Regional Public Health staff trained in the health effects of radiation and equipped with print material and resource lists will be available in the post-decontamination area alongside mental health services (also positioned in the post-decontamination area). They will be able to provide information, answer questions related to radiation and health, and make referrals to appropriate services. This service will be a mitigation measure to ease some of the potential burden on emergency departments of unnecessary visits from the “worried well”. In addition, Regional Public Health Staff will be available remotely to those in the pre-decontamination area through paramedics

responsible for triaging evacuees in the queue for decontamination. As described above under ‘Emergency Medical Services’, paramedics will be equipped with radios and can facilitate radio consultation with public health and/or mental health personnel in the post-decontamination area, if an evacuee is identified as requiring immediate intervention. Personal protective equipment will not be required by those working in the post-decontamination area.

- Mobile Mental Health Services. Mobile Mental Health Services staff will provide psychosocial support in the field setting. They will be available alongside Regional Public Health staff, in the post-decontamination area before evacuee’s board buses. A shelter will be provided in the post-decontamination area for interventions or consultations requiring a quiet, private space. Staff will have Communities in Crisis training as well as an understanding of the health effects of radiation. As for Regional Public Health staff described above under the ‘Public Health Information’ section, mental health personnel in the post-decontamination area will be made available for consultation remotely via radio, for any evacuee identified by paramedics as requiring immediate intervention. Mental health personnel will flag any evacuee who requires follow up at one of the Reception Centers, where they can be referred to on-site mental health services.

Critical Incident Stress Management (CISM) teams will be available for deployment upon request for first responders and emergency workers.

Mental health personnel will work only in the ‘cold zone’ with decontaminated and non-contaminated evacuees and emergency workers so that Personal Protective Equipment is not required.

- Decontamination Assistance to the Medically Vulnerable. There will be three decontamination lines: male, female and one for those requiring assistance. Horizon Health staff will assist the medically vulnerable population as required, with personal care throughout the process of decontamination. Waterproof personal protective equipment will be required in this setting.

3.10.4

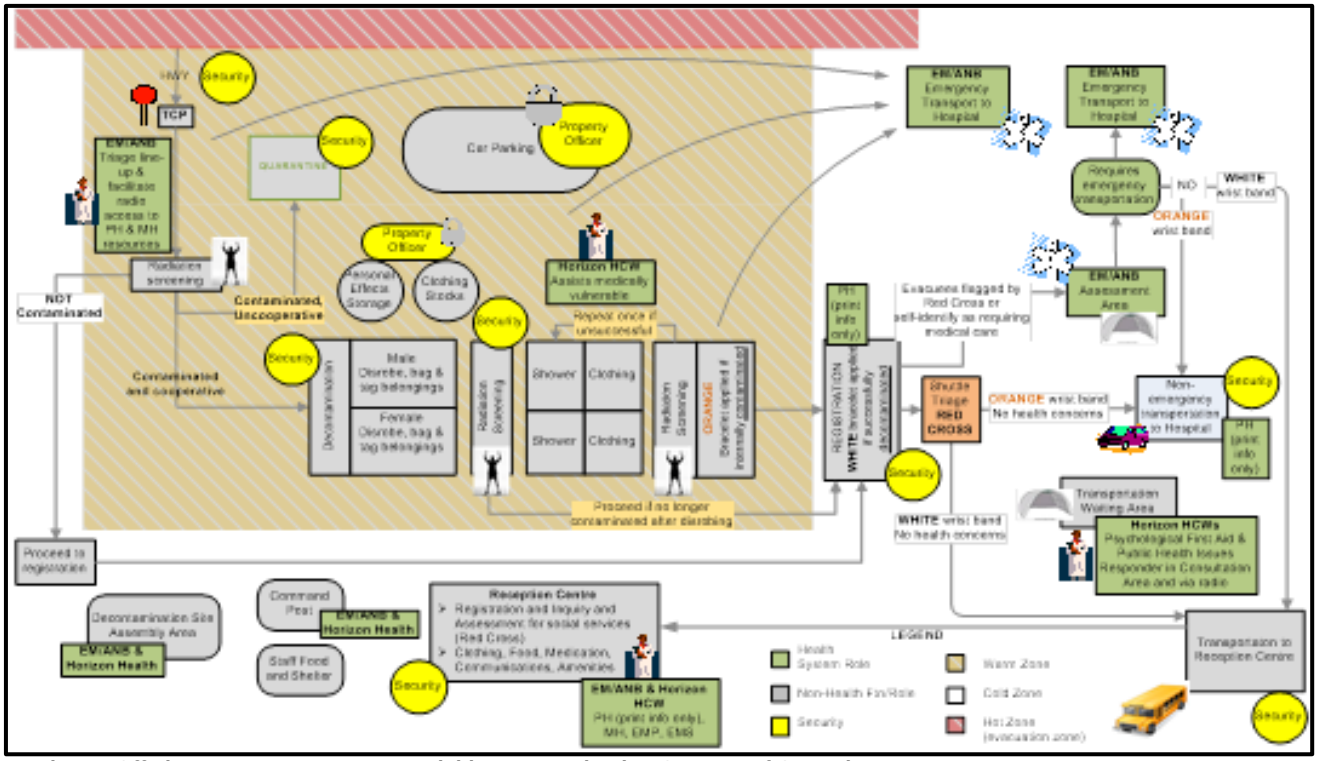


Figure: Off-site Emergency Response Field Decontamination Concept of Operations
Legend: TCP = Traffic Control Point; HWY = Highway (Highway1); PH = Public Health; HCW = health care worker; EMP = Extra-Mural Program; MH = Mental Health; EM/ANB = Extra-Mural/Ambulance NB; Hot Zone/Warm Zone/Cold Zone

- Reception Centers. Upon notification of an evacuation order by the Provincial EOC, Red Cross will deploy teams to set up Reception Centers. With the deployment of Red Cross Teams, the Red Cross Nuclear Control Group member will request the deployment of implicated personnel to Reception Centers. The health member of the Nuclear Control Group will notify the NB Health EOC to trigger the deployment of health personnel. Health staff from Horizon Health Network and EM/ANB will be notified to deploy to Reception Centers, through their respective EOC linkages, and report for duty one hour prior to the opening of the center to evacuees.
    - Emergency Medical Services. EM/ANB will provide a minimum of one paramedic for the first 24 to 48 hours at primary and secondary reception centers, as necessary to provide reassurance to evacuees as they arrive, and assist those who require first aid, treatment and/or emergency transport. After the initial 24-48 hours, coverage will be provided through the NB-911 system.
    - Mobile Mental Health Services. Horizon Health Network Communities in Crisis services teams will provide psychological first aid and crisis management briefings to evacuees at reception centers.
    - Extra-Mural Program. EM/ANB Extra-Mural Program staff will provide continuity of care for displaced patients in or outside of reception centers. Extra-Mural Program staff will also assess evacuees with health care needs, as requested and within their scope of practice, to determine if

they can be supported through Extra-Mural Program service providers. New clients may be referred to the Extra-Mural Program paramedics on-site at Reception Centers.

- Public Health. The Department of Health, Office of the Chief Medical Officer of Health will order health and hygiene inspections of reception center sites through Department of Justice and Public Safety health inspectors prior to opening the facility, as required. Signage will be posted at reception centers with relevant public health guidance related to smoking, handwashing, food safety and other public health preventative measures.
- Print information in the form of a brochure will be provided through NBEMO on behalf of the Department of Health, Office of the Chief Medical Officer of Health and distributed by the Horizon Health Red Cross Control Center Lead, to Red Cross workers and health system workers on-site at Reception Centers. This print information can be distributed to evacuees and/or used by staff at Reception Centers for answering questions on the health effects of radiation.

- Management of the Worried Well. The anticipated numbers of 'worried-well' and evacuees who bypass the Monitoring and Decontamination Centers have the potential to overwhelm hospital emergency departments. The use of emergency departments' resources needs to be optimized for providing timely service to casualties of the emergency and to the community at large, who require medical assessment and treatment. To prevent a surge in demand from the 'worried-well' and evacuees who bypass the Monitoring and Decontamination centers (requiring radiation screening and potentially decontamination), a process will be implemented at strategic locations to control access to hospital emergency departments.
    - **Saint John Regional Hospital (SJRH)** and **Charlotte County Hospital (CCH)**: Checkpoints will be established for redirecting unnecessary traffic away from hospital emergency departments. The first checkpoint, Checkpoint #1, will be established at or near the entry to a primary access route to the hospital by City Police or RCMP and serve as a traffic control point. Evacuees who bypassed Monitoring and Decontamination Centers and those reporting their intention to go to the hospital emergency department will be flagged for further screening by Horizon Health Network personnel to determine their need for medical assessment/treatment at the hospital emergency department. Police will allow any traffic with intended destinations other than the hospital to continue to their destination. Police will also allow ambulances, hospital staff, hospital volunteers, visitors, or clients of ambulatory clinics, to continue to the hospital.

There are four possible outcomes to the Checkpoint #1 screening process:

- Those who have not been in the 20km Emergency Planning Zone (Emergency Evacuation Zone) who require medical assessment/treatment will be allowed to proceed via an established thoroughfare to the hospital emergency department, without stopping at any further checkpoints.

- Evacuees who bypassed the Monitoring and Decontamination Centers and do not require medical assessment/treatment will be asked to proceed to the second checkpoint.
- Those who have not been in the Emergency Evacuation Zone and are assessed as not requiring medical assessment/treatment will be redirected to an alternate location away from the hospital, where they will receive reassurance monitoring, information on radiation and health, as well as a list of community resources for accessing further information and services.
- Evacuees stopped at the first SJRH checkpoint only, who bypassed the Monitoring and Decontamination Centers and require medical assessment/treatment, will be asked to park their cars in a designated area and will be shuttled by NBEMO coordinated transportation to the SJRH emergency department for radiation screening, medical assessment/treatment, and potentially decontamination; and
- Evacuees stopped at the first CCH checkpoint only, who bypassed Monitoring and Decontamination Centers will be asked to park their cars in a designated area and will be shuttled by NBEMO coordinated transportation to the SJRH hospital emergency department for radiation screening, medical assessment/treatment, and potentially decontamination, as CCH is not a designated treatment center for contaminated casualties; SJRH is the only designated hospital in NB for receiving contaminated casualties.

A second check point, Checkpoint #2, will be established by the RCMP and serve as a traffic control point to redirect those flagged by the first checkpoint:

- Evacuees who bypassed the Monitoring and Decontamination Centers will be directed to a designated parking area where they will be asked to park their cars and proceed to a radiation monitoring post. A PLNGS Radiation Qualified Personnel will screen each evacuee for radiation contamination. Those who screen positive for radiation will be shuttled to the closest Monitoring and Decontamination Center where they will go through the decontamination process. Once successfully decontaminated, they will travel by NBEMO coordinated transportation to the closest Red Cross Reception Center, as for other evacuees at Monitoring and Decontamination Centers. The PLNGS Radiation Protection Technician will provide contaminated evacuees with a briefing and rationale on the process as well as an information pamphlet, to address questions and concerns before asking them to board the shuttle to the Monitoring and Decontamination Centers; and
- All other traffic will be allowed to proceed to their destinations via an established thoroughfare, as directed in Checkpoint #1.
- St Joseph's Hospital: A secure checkpoint will be established by City Police at a designated entrance to the St Joseph's Hospital Emergency Department. Anyone arriving at the designated entrance will be screened and those flagged as evacuees who bypassed Monitoring and Decontamination Centers and/or those reporting their intention to go to the hospital emergency department will be further screened by Horizon Health Network personnel to determine their need for emergency medical assessment/treatment at the hospital emergency department. Police will allow hospital staff, visitors or others not associated with the emergency to continue to the hospital through the checkpoint.

- There are four possible outcomes to this screening process:
    - Any evacuees who bypassed the Monitoring and Decontamination Centers and do not require medical assessment/treatment, will be shuttled to the SJRH checkpoint system.
    - Evacuees, who bypassed the Monitoring and Decontamination Centers but requiring urgent/emergent medical assessment/treatment, will be sent to the hospital emergency department via EM/ANB.
    - Those who have not been in the 20km Emergency Planning Zone (Emergency Evacuation Zone) and are assessed as not requiring medical assessment/treatment (i.e., the 'worried-well') will be redirected to an alternate location away from the hospital by shuttle (arranged by NBEMO), where they will receive reassurance monitoring, information on radiation and health, as well as a list of community resources for accessing further information and services; and
    - Those who have not been in the Emergency Evacuation Zone who require medical assessment / treatment will be allowed to proceed to the hospital emergency department.
- Pre-hospital and Hospital Services

  Emergency Medical Services: Ambulance service to the community affected by an off-site emergency is governed by all-hazard standard operating procedures for emergencies; paramedics will take all precautions mandated by the hazard to ensure safety of themselves during response activities. EM/ANB will continue to participate in emergency medical care activities inside the evacuation zone during the evacuation of the community while safe to do so. When radiological contamination is above safe levels as determined by the Nuclear Control Group, EM/ANB's activities will withdraw to the outside of the Emergency Evacuation Zone and standby for further requests. Entry back into the Emergency Evacuation Zone after safe levels are exceeded will be for emergencies and while wearing NBEMO issued personal protective equipment.

  NB Trauma Program:
    - The NB Trauma Program provides Field Trauma Triage Guidelines to help ensure injured patients are transported directly to the facility best equipped to meet their immediate needs. Consideration must be given to the impact of the 20km Emergency Planning Zone (Emergency Evacuation Zone) covering access to the SJRH through Highway 1 from the Charlotte County area.
    - In compliance with the NB Trauma Program - Field Trauma Triage Guidelines, trauma cases qualifying for level 1, 2, or 3 care must be transported to the Saint John Regional Hospital (SJRH), as it is the closest Trauma Center with a designation at or above level 3. As such, any contaminated casualty qualifying for level 1, 2, or 3 care from within the plume must be transported through to the East side, to the SJRH. Any casualty qualifying for level 1, 2, or 3 care and who are on the West of the plume, will be transported across the plume to the SJRH. This will apply whether the casualty is a contaminated evacuee from the Mass Decontamination Center or a non-contaminated patient within the Charlotte County area. In traveling across Highway 1 travelling to the SJRH, the

probability of receiving radiation exposure more than 50mSv, the annual dose limit for emergency workers, is low within plausible PLNGS emergency scenarios. Real time field survey data will be available to the provincial Technical Assessment Group for analysis; if levels along Highway 1 exceed the prescribed dose limit for emergency workers, this will be communicated to RCMP at access control points on the easterly and westerly sides of the 20km Emergency Planning Zone (Emergency Evacuation Zone).

- Hospital Services - Horizon Health Network:
  - Saint John Regional Hospital:
    The Saint John Regional Hospital serves as the sole designated health care facility for receiving contaminated casualties from within the 20 km radius of PLNGS with urgent medical needs or who fail decontamination at the Monitoring and Decontamination Centers.

    Every effort will be made to decontaminate casualties before transportation to hospital emergency departments, however as the treatment of life-threatening health conditions takes precedence over decontamination, the SJRH will be prepared to receive contaminated casualties where required. In addition to those with life-threatening medical conditions, the emergency department will also receive evacuees who have failed decontamination at the Monitoring and Decontamination Center after two attempts, for further assessment for internal contamination and treatment. PLNGS Radiation Protection Technicians (6) and associated equipment will be deployed with the first case on route to the SJRH or as soon as the pre-positioning of the Monitoring and Decontamination Center has been triggered, whichever is first. The NB Power representative in the Provincial EOC will confirm once these resources have been deployed and this will be communicated through the emergency response structure to the SJRH EOC. Response activities and decontamination of the treatment areas post-response will be conducted under the advice of a PLNGS radiation protection technician.

  - **Screening and Triage**: Emergency Department Setting: The emergency department at the SJRH is responsible for screening, triaging, assessing, and treating evacuees from PLNGS, the 20km Emergency Planning Zone (Emergency Evacuation Zone) and Monitoring and Decontamination Centers. The radiation assessment tool used in the METER training course by Health Canada will be adapted at the facility level to guide procedures from screening and triage through to treatment. The Radiation Casualty Assessment Tool (adapted from the Health Canada METER training course) will be used by a Medical Doctor or Registered Nurse to assess patients presenting at the Emergency Department to establish initial priority. Triage will determine which patients need immediate treatment versus immediate decontamination versus delayed treatment and/or decontamination. Those requiring immediate treatment will be assumed contaminated and will be cohorted as such, unless they are wearing a white wrist band from the field radiation assessment, indicating that they are not contaminated.

- **Initial Assessment:** Using the Radiation Assessment Tool (adapted from the Health Canada METER training course), patients who are not already presenting with wrist bands indicating that they've been previously assessed in the field, will be assessed for contamination. The same wrist band system will be used as in the field to quickly identify a patient as contaminated or not contaminated. Patients will also be assessed for exposure to radiation.

  There may be patients who have had medical procedures or implants that are a source of radiation and despite decontamination, will fail radiation assessment. In some cases, patients can provide documentation indicating that they have had such a procedure or implant. This should be considered in the initial assessment.

- **Decontamination:** Decontamination procedures for the Emergency Department at the SJRH will include mass decontamination and wound decontamination.

- **Secondary Assessment:** The Radiation Assessment Tool (adapted from the Health Canada METER training course) includes a History and Physical Form. This form is intended to be completed by the treating physician and used to prompt the physician to obtain specifics relevant to treatment and disposition decisions unique to radiation exposure and/or contamination.

  The Radiation Assessment Tool also includes a Body Mapping Form. This form is intended to be completed by the treating physician or a registered nurse to facilitate recording the location of any skin contamination and injuries. Contaminated areas are recorded as observed by the person performing the survey. Initial counts and post-decontamination counts are recorded.

  There is also a form for physicians for ordering specific laboratory tests and medications related to the treatment of radiation exposure and/or contamination. There is a decision-making tool included for allowing the attending physician to estimate the severity of the injury due to radiation exposure when the dose has not been determined. The tool includes a list of de-corporating agents for treating internal contamination.

- **De-corporating Agents:** De-corporating agents can be made available within 24 hours of a request through the National Emergency Strategic Stockpile system. The decision to use a de-corporating agent can be difficult as these agents have unfavorable risk-to-benefit ratios for low levels of internal contamination. The US Department of Health and Human Services, Radiation Emergency Medical Management Site contains useful guidelines for decision-making.

- **Clinical Support:** The attending physician of a contaminated or exposed patient can access radiation medical expertise at their discretion, through the Provincial Radiation Medical Advisor, as facilitated through the NB Health EOC and Provincial EOC Health member (Director, Emergency Preparedness and Response or designate) (Nuclear Control Group). A secondary resource for radiation expertise is available through the Health Canada Radiation Protection

Branch, accessible through the SJRH EOC via a request to the NB Health EOC. To ensure expedient access, an initial contact will be made through the NBHEOC to place the Health Canada Radiation Protection Branch on standby. If additional resources are needed beyond Health Canada, they will facilitate access to the US Radiation Emergency Assistance Center/Training Site, which can provide access to an on-call 24 hours a day/seven days a week to offer expertise on managing the medical component of a radiation incident.

If isotope identification is required to support medical treatment, the implicated isotopes would be known to PLNGS and could be communicated from the provincial Technical Assessment Group to the attending physician, by the Provincial Radiation Medical Advisor in consultation with the NB Power health physicist. If required, an NB Power health physicist will be on site at the SJRH with a portable spectrometer with the capability to identify isotopes.

- **In-patient Care:** If diagnostic imaging or surgery is required, the SJRH supervisor or unit manager will provide advanced notice to these departments to allow time to prepare the area and staff. Personnel from the PLNGS will be on-site to monitor staff and patient contamination levels and assist with the decontamination of the treatment area.

- **Laboratory:** PLNGS Radiation Protection Technicians will be on-site in the emergency department at SJRH to assist medical personnel with dose assessment. All specimens from patients related to the nuclear emergency event requiring laboratory analysis will be labeled with radiation dose rate. As part of the assessment of casualties suspected to have been exposed to radiation, potentially contaminated samples will be sent to the laboratory for analysis. This may include blood samples, nasal swabs, mouth swabs, urine samples, stool samples or emesis samples. Any specimen with a dose rate exceeding 100 times background level will be flagged for the hospital laboratory for implementing special precautions. The laboratory will have a plan for receiving and processing potentially contaminated samples.

  Cytogenetic analysis and other radiation expertise to support the SJRH laboratory will be accessible in real time through Health Canada's Radiation Protection Bureau via the NB Health EOC.

3.10.4

III. Other Facilities and Sites within the Evacuation-Affected Area:

- Horizon Health Network facilities, sites and programs in the area surrounding PLNGS between St. Stephen and Sussex may be called upon to provide the following services. Note that Horizon Health Network facilities on the Fundy Isles hold stockpiles of KI pills however except for the designated hospitals, those on the mainland do not.
- Charlotte County Hospital (CCH), St Stephen. Although every effort will be made to transport contaminated patients to the SJRH, it is possible for an evacuee waiting on the westerly Monitoring and Decontamination Center to unexpectedly require emergency transportation to the nearest emergency department. The CCH may have

to stabilize a contaminated patient until transfer to the SJRH is possible. A PLNGS Radiation Protection Technician and associated equipment will be deployed upon notification of a contaminated casualty en route to CCH.

- St. Joseph's Hospital, Saint John. Preparedness to support SJRH if the impact is exceeding SJRH capacity (e.g., provision of staff or administrative support, overflow facilities, etc.). Preparedness to advise or counsel drop-in queries from concerned people.
- Fundy Health Center, Blacks Harbour. Preparedness to advise or counsel drop-in queries from concerned people. Otherwise, the facility should only be affected if the 57 km Ingestion Exposure EPZ is activated.
- Campobello Health Center, Welshpool. Preparedness to advise or counsel drop-in queries from concerned people. Issue pills from KI stockpile if instructed. It is possible that contaminated vessels may enter the harbour. Otherwise, the facility should only be affected if the 57 km Ingestion Exposure EPZ is activated.
- Deer Island Health Center, Fairhaven. Preparedness to advise or counsel drop-in queries from concerned people. Issue pills from KI stockpile if instructed. It is possible that contaminated vessels may enter the harbour. Otherwise, the facility should only be affected if the 57 km Ingestion Exposure EPZ is activated.
- Grand Manan Hospital. Preparedness to advise or counsel drop-in queries from concerned people. Issue pills from KI stockpile if instructed. It is possible that contaminated vessels may enter the harbour. Otherwise, the facility should only be affected if the 57 km Ingestion Exposure EPZ is activated.
- Other Facilities within the area surrounding PLNGS. SJRH will be supported by other Horizon Health staff and/or facilities if the impact is exceeding capacity.

IV. Other Facilities and Sites beyond the Evacuation Zone:

Sussex Health Center has no designated health nuclear emergency responsibilities but may be called upon by the Horizon Health Network / SJRH EOC's to support affected Horizon Health Network facilities and sites (e.g., augmentation of staff, supplies, etc.).

V. Organizational Development:

- Horizon Health Network's Organizational Development unit will support the services within network that provide direct patient care during a nuclear emergency. Its focus will remain on Human Resources Advisory Services, Library Services, Occupational Health and Safety Services and Learning Services.
- During a nuclear emergency, Organizational Development will communicate with unions and professional groups regarding the event, managed and directed by the Director of Labour and Employee Relations and/or delegated to the Horizon Health Network (Saint John Area) Senior Human Resources Advisor. Organizational Development's nuclear preparedness activities include the following responsibilities:
- Develop learning strategies in support of, and based on, direction from content owners and subject matter experts so that employees are appropriately trained to treat victims of a nuclear accident.
- Provide occupational health and safety leadership to Horizon Health including direction on personal protective equipment and decontamination.

- Develop an occupational health response plan outlining the role of Horizon's Health and Safety Officer.
- Extra-Mural Program in Community Settings:
  EM/ANB's Extra-Mural Program will provide service to all its displaced patients and any new patients resulting from the emergency event in alternate accommodations (e.g., hotels, friends, or families' homes). Roles of the closest Extra-Mural Program Units are as follows:
    - Eastern Charlotte Office, St. George. Support to displaced patients at Reception Centers. Ensuring continuity of care and preparedness to advise or counsel drop-in queries from concerned people.
    - St. Stephen Unit. Ensuring continuity of care. Preparedness to advise or counsel drop-in queries from concerned people.
    - Saint John Unit. Ensuring continuity of care. Preparedness to advise or counsel drop-in queries from concerned people.

  TeleCare 811: Tele-Care 811 must be prepared quickly to respond to individual queries on instructions on food, air and water safety, sources, and advice on KI pill administration, and advice and information on care. Coordination between the Office of the Chief Medical Officer of Health and Tele-Care is therefore required to ensure Public Health approval of information and protocols before they are provided by Tele-Care to the public. This will be done as part of wider coordination requirement with
  other partners.

  TeleCare Information Requirements:
    - For Tele-Care 811 to be in a state of readiness to fulfill all roles outlined in the provincial Tele-Care Nuclear Emergency Plan, all information requirements from contributing partners must be met on a real time basis. Procedures for obtaining validated consistent information from all partners are outlined in the Tele-Care Nuclear Emergency Plan.
    - Up-to-date public messaging.
    - A list of frequently asked questions and answers on the health effects of radiation.
    - Up-to-date information on services changes within the Health Networks.
    - Clinical support to ensure Tele-Care symptom triage protocols are aligned with current clinical information; and
    - Contact information from outside partners providing referral services.
    - Tele-Care 811 will be activated immediately after NB Health EOC activation with pre-scripted and pre-approved information.

l. Public Health – General

- Department of Health, Office of the Chief Medical Officer of Health:
- In addition to responsibilities specific to reception centers previously described, the Office of the Chief Medical Officer of Health will provide recommendations and guidance in four main areas: air quality; water quality; food quality; public health guidance. The following is a description of specific items:

- Air Quality:
    - Assist with health risk assessments related to human health as required.
    - Provide Public Health Advisories regarding air quality through the emergency communications organization, as well as through the Public Health Advisories page on the OCMOH website.
- Food Quality:
    - Assist with health risk assessments related to human health as required.
    - Provide public health advice about the contamination of foods, their condemnation, embargo, and disposal if required.
    - Provide public health advice regarding food related matters in the event of a power outage.
    - Order inspection of reception centers used for temporary accommodations to ensure adequate food safety, water quality, washroom requirements and general sanitation.
- Water and Soil Quality:
    - Assist with health risk assessments related to human health as required.
    - In conjunction with the Department of the Environment and Local Government, provide consultation and advice to local municipalities where a municipal water supply may be or has been affected.
    - Provide public health advice on what to do if water or soil contamination exceeds health guidelines.
- Public Health Guidance:
    - Provide public health advice to the population and relevant stakeholders.
    - Provide advice to government departments on public health impacts.
    - Provide advice to government departments on public health impacts.
    - Provide public health guidance to the representatives of response organizations as requested.
    - Provide advice to the Provincial Nuclear Control Group on all public health matters.
    - The Regional Medical Officer of Health (Saint John region) will review requests from the provincial Nuclear Control Group regarding the distribution of KI pills and provide recommendations on the appropriate dosages.
    - Provide a printed information brochure published by the Office of the Chief Medical Officer of Health as a resource to support Horizon Mental Health Services and Regional Public Health field roles, for distribution at Reception Centers.
    - Provide public health messaging to Provincial EOC Communications and Health Communications such that they may:
        - ensure that the web site is updated daily with public health and safe zone information.
        - ensure that Tele-Care 811 receives public health information in advance of being reported to the public.
        - ensure the public receives pertinent public health information in a timely manner to prevent adverse health effects related to the event; and

- respond to all media calls transferred from Tele-Care within 24 hours.

- Regional Health Authorities – Public Health:
  The relationship between Horizon Health Network, Vitalité Health Network and Public Health staff is already defined and there are no unique considerations for a nuclear emergency.
- Psychosocial Services – General
  In addition to roles specific to the Monitoring and Decontamination Centers, Reception Centers and Worried-well concept previously described, the Addictions and Mental Health Centers within Horizon Health Network and Vitalité Health Network will provide psychosocial assistance to individuals, families, caregivers as well as Critical Incident Stress Management services to assist first receivers and first responders who have experienced emotional and psychological stress related to the event.

  None of Horizon Health Network's Mental Health Centers or satellite clinics are within the 20 km Emergency Planning Zone (Emergency Evacuation Zone) around the PLNGS, although all are within the 57 km Ingestion Exposure EPZ. Center staff from within the RHA's may also be required to assist other Horizon Health Network programs based on abilities and needs, dependent on the phase and extent of the emergency.

  The concept of Mental Health operations during a nuclear emergency is based on the following three core functions:
    - Maintenance of Essential/Critical Services including screening, intake and assessment, urgent treatment for new patients, and ongoing treatment and intervention for active patients with complex needs. Some non-critical activities such as skill groups may be suspended during the emergency if necessary.
    - Community in Crisis Response including on-site counselling and de-briefing, telephone consultation; crisis intervention; crisis reduction counselling; defusing and debriefing; advocacy and mediation; education, and referral services. Disaster victims typically do not request services from the mental health system.
    - CISM for First Responders. The regional Critical Incident Stress Management (CISM) team is responsible for providing CISM services to first responders, front line health care workers, other CISM members and emergency coordinators before, during and after a significant traumatic incident. If services of the provincial CISM team are required, they will be requested through the PEOC.

- Management of Decedents Contaminated with Radioactive Material
  In a nuclear emergency event, the risk of mortality or morbidity to the public is very low. Despite the low probability, the management of contaminated decedents necessitates advanced planning as specific guidelines, precautions and procedures are required and multiple organizations are implicated from within, and external to the health system. Any decedent at PLNGS, within the

20km Emergency Planning Zone (Emergency Evacuation Zone), at one of the Monitoring and Decontamination Centers or any casualty transported to hospital from any of these areas, has the potential to be contaminated with radioactive material.

- Community / Town Hall
  Town Hall meetings will provide a means for health officials to engage communities by addressing public and mental health concerns and questions associated with a nuclear emergency at the PLNGS. This concept allows for the provision of public health information and advice to Town Hall attendees (public and media) relevant to nuclear / radiation population health risks as well as psycho-social support to the worried well in attendance at Town Hall session(s).

  - Designated Staff - Roles and Responsibilities
    Public Health – regional Medical Officer of Health (or alternate) to provide guidance and respond to general inquiries from attendees and media.
    Mental Health – appropriate RHA mental health staff (community in-crisis) to provide psycho-social support to worried well attendees.
    Communications – appropriate RHA Communications staff to serve as facilitator and moderator for the session(s)
    Emergency Measures Organization – appropriate Regional Emergency Action Committee coordinator to decide for venue(s) and provide Town Hall logistical support, on request.
    Department of Health, Health Emergency Management Branch Director via NB Health EOC – in consultation with Provincial EOC / EMO, authorize activation of and deployment of designated health staff to the Town Hall session.

3.10.5 Staff Radiation Protection, Procedures, and Practices

- Personal Protection:
  - A protocol and procedure guideline for health care workers (first responders and first receivers) and emergency workers in the use of personal protective equipment (PPE) in a nuclear emergency is attached in *Part 2 – Operational Information, section 2.5.2* entitled Personal Protective Equipment Protocol and Procedure Guideline for First Responders, First Receivers and Emergency Workers in a Nuclear Emergency at Point Lepreau Nuclear Generating Station. PPE is used to protect workers in radiation control zones (hot and warm zones) where there is either potential for exposure due to a release of radioactive material from PLNGS or secondary contamination due to the presence of potentially contaminated evacuees, casualties, emergency workers, first responders/first receivers and vehicles used for transportation of externally contaminated individuals or equipment. Physical boundaries will be in place in the field and hospital settings to demarcate the areas where PPE is required. Any movement between areas requires a protocol for removing and donning PPE.

    - PPE is used where there is a high risk of contamination and requires Tyvek coveralls, Tyvek booties, googles / face shield, an inner and outer layer of gloves, and an N95 respirator.
        - The protocol has been adapted from the US Dept. of Health and Human Services, Radiation Emergency Medical Management and in accordance with CNSC guidelines and PLNGS protocols.
- Emergency Worker Dose Limit Protocol
    - Radiation exposure of emergency workers will be monitored using personal dosimeters. Assignment of duties will ensure that no emergency worker receives a radiation exposure greater than that specified in Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (Requirement 11, Sections 5.49 to 5.59) *. The exposure of any worker shall not exceed an effective dose of 20 mSv per year averaged over five consecutive years and shall not exceed 50mSv in any single year. A worker may voluntarily exceed the maximum single year dose limit of 50mSv if undertaking lifesaving actions; every effort shall be made to keep doses below ten times the maximum single year dose limit (500mSv) and only when the benefits to others clearly outweigh their own risk. Emergency workers will be trained in the use of personal protective equipment for radiation contamination and proper donning and doffing procedures. Because of fetal sensitivity to radiation, pregnant staff will not be assigned to contaminated patients or evacuees. Any helpers, members of the public who are aware of the risks and voluntarily help during a nuclear emergency shall not be allowed to take actions that could result in their receiving doses more than an effective dose of 50 mSv (IAEA, 2015).

      ** International Atomic Energy Agency. (2015).*
      http://wwwpub.iaea.org/MTCD/Publications/PDF/P_1708_web.pdf

3.10.6 Health System Recovery

- The post-emergency recovery phase is the transition period in which the emergency response organization is deactivated, routine procedures are resumed, and normal capability restored. Health nuclear emergency aspects of post-event activities are to be incorporated into the respective organizational all-hazard recovery processes. This includes, but is not limited to, deactivation processes, debriefing and post-incident reporting, record management and long-term recovery actions. Ambulances used to transport contaminated patients will need to be decontaminated; this will be done at the SJRH ambulance bay with PLNGS radiation protection qualified staff. The ability to decontaminate an ambulance during the response to maximize emergency medical response will be considered on a case-by-case basis, depending on the ability to release PLNGS radiation protection qualified staff assigned to the SJRH.
- **Population Served** - Medical follow-up will be provided by the family physician with support from Health Canada and the Office of the Chief Medical Officer of Health. It is incumbent on health services to ensure post-emergency health actions, including advice, counselling, and medical follow-up.

- **Registry of Evacuees**- In the recovery phase of the emergency, the Department of Health will establish a registry through the acquisition of demographic data collected by NBEMO in the process of registering evacuees as they exit the Emergency Planning zone (evacuation zone). This registry will contain enough information to enable the identification of individuals who were in the evacuation zone. It will be stored by the Department of Health through the NB Cancer Network, the parameters of which will fully comply with the Personal Health Information Privacy and Access Act. The collection of additional data elements for epidemiological purposes is a responsibility of the Office of the Chief Medical Officer of Health.
- If an evacuee bypassed Monitoring and Decontamination Center registration due to a requirement for urgent transport to hospital prior to decontamination, the EM/ANB Command Post lead will provide the evacuee's name and destination information to Red Cross registration staff in the Monitoring and Decontamination Center. Any missing information can be acquired retrospectively from the hospital and added to the registry.

3.10.7 Health Control Group Members

Control Group Member	Office	Cell/Home	Email
PHNB / OCMOH designate via HEM Branch Contact (see below) Public Health Central Office on-call Dr. Kim Barker, Regional MOH (SJ) MOH on-call (after hours)	 xxx-xxx-xxxx xxx-xxx-xxxx	 xxx-xxx-xxxx xxx-xxx-xxxx xxx-xxx-xxxx	 N/A Kimberley.Barker@gnb.ca N/A
Dr. Eshwar Kumar, Provincial Radiation Medical Advisor	xxx-xxx-xxxx	xxx-xxx-xxxx xxx-xxx-xxxx	Eshwar.kumar@gnb.ca
Health Emergency Management (HEM) Branch Department/HEM On-call 24-hour duty officer		xxx-xxx-xxxx via PMCC operator	nbeprun@gnb.ca
Carolin Galvin HEM Branch Director	N/A	xxx-xxx-xxxx xxx-xxx-xxxx	Carolin.Galvin@gnb.ca
Other / Alternates			
EM/ANB			
MCMC Dispatcher (24/7 on-call)		xxx-xxx-xxxx	Emergency.preparedness@smunbems.ca
Horizon Health Network			
Zone 2 On-call Administrator		xxx-xxx-xxxx	em@horizonnb.ca
Saint John Regional Hospital	xxx-xxx-xxxx		
Grand Manan Hospital	xxx-xxx-xxxx		
Saint John-St. Joseph's Hospital	xxx-xxx-xxxx		
Charlotte County Hospital (St. Stephen)	xxx-xxx-xxxx		
Fundy Health Center (Blacks Harbour)	xxx-xxx-xxxx		

Detailed Health Contact Listing to be maintained by the Department of Health.

3.10.8 Resources

- A dedicated supply cabinet reserved for use in a nuclear emergency is maintained at the SJRH by the PLNGS and contains supplies such as PPE, dosimeters, waste management supplies, self-decontamination kits, KI pills, and wrist bands for identifying contaminated versus decontaminated or non-contaminated patients.
- For the field setting, most supplies and equipment such as PPE and dosimeters will be provided by NBEMO and PLNGS. Other supplies required include information brochures published by the Department of Health (Radiation Exposure from Nuclear Power Plan Incidents) and any tools required to triage and provide personal care assistance. Department of Health brochures will be provided by the DH and remain under the custodianship of NBEMO with other supplies required for the MDCs, in preparation for an emergency event. These brochures will be pre-positioned at the MDCs by NBEMO and distributed to health personnel in the post-decontamination areas as well as at Red Cross reception center registration tables by the Horizon Health Network Services Coordinator, who will also ensure the supply is maintained during the event. The National Emergency Stockpile System and Provincial Emergency Stockpile may be accessed if required through the NB Health EOC (Department of Health EPR Branch).
- **Saint John Regional Hospital Equipment and Supplies:**

Item	**# Present**	**Comment**
Hospital Storage Cabinet Supplies maintain by Point Lepreau Nuclear Generating Station		
1 Box of Disposable Gloves	✓	
Minimum of 10 Large Zip-Lock Bags	✓	
Minimum of 25 Medium Zip-Lock Bags	✓	
Minimum of 25 Small Zip-Lock Bags	✓	
4 Black Striped Waste Bags	✓	
1 Box of Stick-on Labels	✓	
8 Adhesive Radioactive Material Labels	✓	
1 Roll of Duct Tape	✓	
2 Portable Contamination Meters	✓	
1 Copy of EP-78600-M053, Senior Health Physicist Actions at the Hospital	✓	
1 Copy of the Hospital Storage Cabinet Inventory (Appendix A of EP-78600-EQ95)	✓	
1 Record / Logbook	✓	
10 TLD/PAD Assignment Sheets	✓	
1 Standard Clipboard	✓	
6 Pens	✓	
10 Personal Alarming Dosimeters (PADs)	✓	
25 Thermoluminescent Dosimeters (TLDs) and 5 Controls	✓	
Minimum of 4 D Cell Batteries	✓	
2 Permanent Markers	✓	
Minimum of 180 Potassium Iodide Tablets (KI) and Check	✓	

Expiration Date		
50 Masslinn Cloths	✓	
Minimum of 4 Pairs of Surgical Greens	✓	
Minimum of 4 Disposable Caps	✓	
Minimum of 4 Plastic Aprons	✓	
Minimum of 50 Disposable Towels	✓	
Minimum of 15 Pairs of Disposable Waterproof Booties Size Medium	✓	
Minimum of 8 Pairs of Disposable Waterproof Booties Size Large	✓	
Minimum of 10 Pairs of Disposable Coveralls with Shoe Covers Included Size Extra Large	✓	
Minimum of 10 Pairs of Disposable Coveralls with Shoe Covers Included Large	✓	
Minimum of 10 Pairs of Disposable Coveralls with Shoe Covers Included Size Medium	✓	
1 Roll of Barrier Tape	✓	
2 Carboys, 2Funnels and 1 Hose for Decontamination	✓	
1 Plastic Pail with Lid	✓	
1 Masslinn Mop	✓	
2 Caution Signs Complete with Stands	✓	
10 Personal Alarming Dosimeters (PADs)	✓	
25 Thermoluminescent Dosimeters (TLDs) and 5 Controls	✓	
Additional Horizon Health Supplies for SJRH maintained by SJRH and Service NB		
103 Patient Self Decontamination Kits	✓	
25 Post Decontamination Gowns	✓	
250 Decontamination Disp. Booties	✓	
42 Oxivir TB Wipes / 1 Sodium Chloride (1000ml) / 2 Sterile Water (500ml) / 2 BX Sterile Dressing (2x2 & 4x4)	✓	
10 Chemical Resistant Coveralls (XL) / 20 with Booties (2XL,4XL)	✓	
17 Charcoal Filters	✓	
12 Morgan Lens Delivery Set	✓	
75 P 100 Respirators (S,M,L)	✓	
20 PR Anti Skid Shoe Cover / 6 Fabric PPE Level 0	✓	
4 BX N95 Masks (S, R)	✓	
1 BX Bouffant Caps	✓	
7 PR Chemical Booties	✓	
138 Respirators (S,M,L, No Size)	✓	
253 Nuclear Coveralls (XL,2XL,4XL)	✓	
2 Clipboards / 12 Pens / 2 PK Manual Chart Paper	✓	
1 BX Orange Bracelet / 3 BX White Bracelet (1000 / BX)	✓	
90 Triage Cards / 59 METER Manuals / 1 Masslinn Mop / 50 Masslinn Cloths	✓	
17 Surgical Gowns (4X, XL)	✓	
262 PR Tyvek Booties	✓	
95 Particulate Filter P100	✓	
8 Identification Vests	✓	
40 Goggles	✓	

4 60ml Syringe / 5 14G 3.25 In Needle / 6 Saline Wet Dressing	✓	
140 Eyewear Frames / 143 Eyewear Lens	✓	
6 BX Nitrile Gloves (S, M, L) / 18 BX Exam Gloves (M, L)	✓	
6 RL Waterproof In Tape	✓	
2 Small Forceps / 2 Forceps / 2 Shears / 6 Catheter Adapters / 2 Denture Cups / 6 Suture Removal Kits / 34 Transpore Tape/ 1 Waterproof Tape / 8 Peanut White Dishes / 16 5lb Paper Bags / 1 Radioactive Stocker / 50 Ziplock Bags (M) / 1 BX Eyepads40 Cotton Tip Applicators /	✓	
1 SJRH Ambulance Bay Decontamination Tent	✓	
Accessible External Resources		
SJ Fire Hazmat Decontamination Tent		

- Provincial Emergency Stockpile
    - The Department of Health maintains a provincial emergency stockpile of supplies, including personal protective equipment, infection control and other health supplies for use by regional health authorities in emergencies. In a nuclear event, the provincial emergency stockpile management plan may be activated to meet a surge in demand by Horizon Health Network.
    - Activation will be a multifactorial, real-time decision based on factors such as a surge in demand, evidence of supply chain disruption, and/or manufacturers imposing ordering restrictions. Activation will be triggered through a decision by the NB Health EOC in consultation with Horizon Health Network (via Service NB). The NB Health EOC Director will initiate deployment through communication with Service NB.
    - EM/ANB maintains its own stockpile of similar supplies.
- **National Emergency Strategic Stockpile (NESS)**
    - As part of the Public Health Agency of Canada National Emergency Strategic Stockpile (NESS), the federal Health Portfolio maintains a limited supply of medical countermeasures for internal radiological contamination. These supplies can be made available to provinces and territories upon request for use in response to a nuclear emergency. For NB during a nuclear emergency event, a request for these supplies must be made through the NB Health EOC Director (or designate) as the provincial authority for NESS access. The NESS maintains a supply of the following countermeasures: Prussian Blue, Ca-DTPA, Zn-DTPA and potassium iodide (KI).
- Decision Support System
    - A key function of the NB Health EOC is to provide decision-support to decision makers at both the operational and policy levels. A significant challenge will be carrying out this responsibility in the context of the significant uncertainty that will likely accompany a nuclear emergency event.
    - <u>The Decision Support function includes:</u>
        - collecting and analyzing data about the event, estimating its impact on the health system, and assessing the capacity of the health system to respond; and
        - working with Departmental staff to use the gathered information to inform decision making.

- The information collected, and the analysis undertaken will also assist in providing situational awareness to key stakeholders.
- Carrying out the Decision Support function may require the utilization of a variety of resources, tools, and processes:
    - Information about the event and its impact, and the capacity of the health system to respond; information will be shared with the Department of Health by its partner organizations; and
    - the decision support system is a password protected, web-based electronic system that has been developed to facilitate the collection and housing of data during health emergencies; the decision support system has the potential to be modified and utilized in any emergency event to support primary data collection; and given the nature of a nuclear event, however, (e.g. the type of data needing to be collected and reported, the anticipated frequency of reporting, the number of health facilities involved in the response), the decision support system will be used primarily as a tool to house and display information, and not as a primary data collection tool; the decision support system may also be used to support trending and strategic planning as well as historical data comparisons of some data elements (e.g. # emergency room visits, # admissions).

3.11 DEPARTMENT OF JUSTICE AND PUBLIC SAFETY (JPS)

3.11.1 Justice is responsible for:

- Ensure that the administration of public affairs is in accordance with the law, regardless of the nature of the emergency.
- Ensure the continuation of the administration of the courts during an emergency.
- Ensure judicial independence is respected even under emergency situations.
- Oversee that all emergency response emergency legislative enactments are in accordance with principles of natural justice and civil rights.
- Advise on the constitutionality and legality of emergency response emergency legislation; and
- The Sheriff Service will assist local authorities in emergency response operations, including law enforcement operations and the evacuation of persons and property.

Public Safety is responsible for:

- Plan and develop an organization for wartime control of engineering and construction.
- Develop a Provincial Fire Plan to direct and coordinate all efforts related to the suppression and prevention of fires, every fire brigade, fire department and firefighter in the area in which the state of emergency exists (Change of wording as requested by FMO).

- Be responsible for the administration of law and order during an emergency or disaster.
- Arrange for the disposal of explosives (expand to include CBRN?).
- Develop plans to inspect buildings that may have suffered damage because of an emergency or disaster.
- Assist local authorities in emergency response operations, including law enforcement operations and the evacuation of persons and property.
- Coordinate and maintain liaison with the provincial departments and other bodies for use of their available personnel and equipment for augmentation and special assignments, if necessary.
- Liaise with Government of Canada agencies for emergency resources as necessary.
- Provide Coroner Services as necessary.
- Facilitate communication between the Department, RCMP and municipal police services in the event of an emergency as well as to provide policy direction, advice, and support to police services.
- Coordinate law enforcement and traffic control throughout the province.
- Develop public order plans for events of a provincial nature.
- Provide personnel and equipment to support, hazardous materials operation, transportation, response, and recovery.
- Coordinate a multi-ministry Provincial Disaster Assessment Team to assess level and nature of impacts and make recommendations about the types of assistance required; and
- Ensure continuity of care and protective measures for correctional institutions and persons under custody.

3.12 JPS CRIME PREVENTION AND POLICING STANDARDS AND CONTRACT MANAGEMENT BRANCH

3.12.1 The Department of Justice and Public Safety Crime Prevention & Policing Standards and Contract Management Branch will:

- Immediately upon notification of an emergency or exercise at Point Lepreau, advise the Officer in Charge, RCMP J Division Operational Support Services (OIC RCMP J Div. OSS) of the Emergency.
- Ensure required Police service to the entire area affected by the emergency, (Delegated to the RCMP).
- Ensure Police assistance to NB Power to ensure safety of access to plant personnel, (Delegated to the RCMP).
- Participate in alerting procedures for the Control Group and residents of the area, to the extent of the responsibilities as enumerated in the off-site emergency plan.
- Assist the Control Group by advising and assisting in all Police matters and maintaining liaison with Municipal Police Forces; and
- Be the lead agency to expedite the safe and orderly evacuation of the affected area to the extent of the responsibilities as enumerated in the detailed Plan.

3.12.2 Alerting and Assembly

Upon receipt of a reported emergency at Point Lepreau, the RCMP Operational Communications Center (OCC), located at "J" Division Headquarters, will alert:

- The appropriate designated RCMP personnel; and
- The Director Crime Prevention & Policing Standards and Contract Management Branch.

The Director of Crime Prevention & Policing Standards and Contract Management Branch and the J Div OIC OSS, following a briefing by NBEMO, will instruct the following organizations as to what is required of them:

- The RCMP.
- The Department of Justice and Public Safety, Inspections and Enforcement.
- The Department of Justice and Public Safety, Coroners Services; and
- Other police departments as required.

3.12.3 Communications

The RCMP will utilize their existing police radio network, including Base radios located at EMO Headquarters, Fredericton and at the PLNGS Off-Site Emergency Operations Center (OEOC). Communications will also be maintained through the Regional Emergency Operations Centers (REOCs) in Saint John, and St. Stephen.

Sheriffs' vehicles equipped with both radio and telephone communications, are linked to the provincial mobile communications network and their phone numbers will be dedicated as arranged with Bell/Aliant.

The RCMP communications equipment at the PLNGS OEOC, EMO Headquarters and the REOCs at Saint John and St. Stephen are to be manned by designated RCMP personnel as soon as an emergency is declared.

3.12.4 Concept of Operations

In the event of a Declaration of an Emergency by the Minister of Department of Justice and Public Safety under authority of the Emergency Measures Act, Section 15 (b), "the officer commanding "J" Division of the Royal Canadian Mounted Police is the coordinator of all efforts in relation to law enforcement, and every police officer and auxiliary police officer in the area in which the state of emergency exists is subject to his or her direction and control."

It should be noted that this includes all regional and municipal police forces within the province; however only on a Declaration of a State of Emergency (SOE).

The Director of Crime Prevention & Policing Standards and Contract Management Branch will, acting on behalf of the Minister of Department of Justice and Public Safety, and in accordance with Policing Standards address emergency preparedness in "Chapter 34.1.1 and 34.1.2 stating police forces will designate a position for planning response to disasters and also to have a written policy for responding to disasters, prepared in consultation with NBEMO officials".

Ops Policy needs to be developed to assist the RCMP in carrying out duties delegated to the Commanding Officer of RCMP "J" Division pursuant to *Section 15 (b) of The Emergency Measures Act*, including:

- Advising all police forces in the province that an emergency exists, the nature of the emergency, and that the Commanding Officer, of RCMP "J" Division is the coordinator of all efforts in relation to law enforcement and every police officer and auxiliary police officer in the area in which the state of emergency exists is subject to his direction and control.
- Providing police assistance as required to ensure NB Power personnel have free flowing access to the PLNGS. This will be supported through the establishment of the NB Power Staging Area & Triage procedures, (Delegated to the RCMP).
- Providing advice and assistance to the Control Group on all law enforcement matters, where not in conflict with Section 15 (b) of the Emergency Measures Act; and
- Assisting the Control Group in the acquisition of any specialized law enforcement equipment or support, when the consent of the Solicitor General is required.

3.13 JPS OFFICE OF THE FIRE MARSHAL

3.13.1 The Department of Justice and Public Safety – Fire Marshal will:

- Ensure that fire protection measures are established, including assistance from Municipal Fire Departments.
- Provide the Control Group with advice on any incident involving fire; and
- Assist in the decontamination of ships and vehicles leaving the radiation zone.

3.13.2 Alerting and Assembly

On being notified of an incident at the Point Lepreau Nuclear Generating Station, the Fire Marshal or his alternate will proceed to NBEMO Headquarters, Emergency Operations Center, for a briefing. When it is determined that the incident may require their resources, departmental personnel in support areas (Saint John and St. George) will be alerted by the Deputy Fire Marshal or his alternate and placed on stand-by.

3.13.3 Concept of Operations

The role of the Department is to coordinate back up firefighting services in case of fire at the Nuclear Generating Station or in its vicinity and to assist in decontamination. The Department will assume direct control of all fire departments in the province when an emergency is declared by the Minister of Public Safety under the authority of the Emergency Measures Act. All fire departments vehicles and resources will be available to support Control Group operations.

3.13.4 Operations

Firefighting or other support will be provided as requested by the Director of the Control Group.

3.13.5 Communications

Telephone land line will be used to communicate with departmental and municipal personnel. Radio and other forms of communication will be provided by NBEMO.

Control Group	Office	Home	Cell
Michael Lewis Provincial Fire Marshal	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Resource Personnel			
Mark Nowlan Fredericton		xxx-xxx-xxxx	xxx-xxx-xxxx
Leon Ross Miramichi	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Jeff Cross Saint John	xxx-xxx-xxxx	xxx-xxx-xxxx	xxx-xxx-xxxx
Raymond Leblanc Moncton		xxx-xxx-xxxx	xxx-xxx-xxxx
Paul Boudreau Grand Falls		xxx-xxx-xxxx	xxx-xxx-xxxx
Fredericton			

"PMCC maintains an on-call primary and secondary RFPI (Regional Fire Prevention Officer) 24/7 and this should be considered as primary OFM Points of contact outside of the Fire Marshal".

3.14 POST-SECONDARY EDUCATION, TRAINING AND LABOUR

3.14.1 PSETL are responsible for the following:

- Responsible for developing plans, policies, and guidelines to be used by administrators of New Brunswick College of Craft and Design for the protection of their students during an emergency or disaster.
- Responsible for the mobilization of pools of labour as required for disaster recovery operations.
- Support the establishment of reception centers and shelters for evacuees by allowing the use of buildings under its control for this purpose (change of language required to reflect NBCC & CCNB as separate Crown Corporations).
- Ensure that employers meet their obligations concerning health and safety of workers during an emergency.
- Provide emergency worker safety support according to departmental emergency response plans; and
- Provide occupational health and safety advice for workers deployed to emergency sites.

3.15 SERVICE NEW BRUNSWICK

3.15.1 SNB are responsible for the following:

- Be responsible for development of plans and procedures for emergency operations supply, compatible with Federal plans and procedures.

- Be responsible for emergency telephone and telecommunications facilities.
- Provide emergency purchasing services to support emergency response efforts (i.e., emergency relief supplies, office supplies and equipment, contracting services, telecommunication, communications, and emergency equipment);
- Provide language interpretation and translation services within the capabilities of the ministry as required.
- Provide priority support to Provincial EOC operations for the province once EMO activates to Level 2 and 3. SNB will ensure continuity of IT data, email, and voice management services, as well as IT data center operations and IT infrastructure management services for PEOC operations during level 2 and 3 activation and operation during and after normal business hours, and provide priority support for these services; and
- Current infrastructure supporting EMO/PEOC at the Victoria Health Center will accommodate the business requirements of service continuity during loss of localized network or power. This requirement will be considered as a part of infrastructure move from its current location at VHC.

3.16 SOCIAL DEVELOPMENT (FAMILIES AND CHILDREN; AND SENIORS AND LONG-TERM CARE)

3.16.1 The Department of Social Development will:

- provide for the prompt registration of evacuating residents and transients from the danger area.
- provide for lodging and feeding of evacuees.
- allow provincial and regional personnel engaged in emergency operations to partake in congregate feeding and lodging as required; and
- provide other emergency social services as required under the provincial emergency action plan. The Department of Social Development is responsible for provision of the six Emergency Social Services as follows:

Note: Reception and Information (Under Contract with Red Cross):

- Emergency Lodging.
- Emergency Feeding.
- Emergency Clothing.
- Registration & Inquiry.
- Personal Services (which includes the care of domestic pets); and
- Reception Center Management.

3.16.2 Alerting and Assembly

When notified of an incident, the Control Group representatives will proceed directly to EMO headquarters, Provincial Emergency Operations Center (PEOC), for a briefing on the situation.

When it is determined that the incident may require the implementing of departmental responsibilities, the Department's representatives on the Control Group will immediately inform their Respective Deputy Ministers and the Department of the emergency.

When the Regional Emergency Action Committees (REACs) are to be activated, the district representatives will be informed by the EMO District fan-out system. Saint John will in turn notify office personnel in Sussex, St. Stephen and will then proceed to NBEMO (REAC) Saint John and St Stephen for briefing. Once representatives have assembled at various operations centers, they should contact each other as soon as possible.

3.16.3 Concept of Operations

The department will be responsible for provision of the services of Registration and Inquiry, clothing, feeding, lodging and personal social services. Social Development staff will be deployed to represent Social Development at a REAC or in a support role where required.

The NBEMO Evacuation Coordinator will provide information to direct evacuees to the designated reception centers.

The Red Cross holds a Reception Center list which has all approved possible locations; even though the district representatives may be on the ground, the location selected will be the decision of Social Development in consultation with the Red Cross. The RCMP, Municipal Police, Public Health Officials and the PEAC representatives will be notified immediately of the location of the Reception Centers being opened.

The PEAC representative will inform the Media, through the Control Group, of the location of the selected Reception Centers.

The New Brunswick Division of the Canadian Red Cross Society will provide, through their volunteers, workers to assist with Registration and Inquiry upon the request of Social Development through the Manager of Emergency Social Services.

Registration – In the event of an evacuation of the 20 Km EPZ, residents will need to Register with the Canadian Red Cross during the decontamination process. Any residents who were not in the 20 Km EPZ will need to register with the Red Cross at one of the identified Reception Centers. If residents cannot physically travel to a reception center, a toll-free number will be provided with the ability for registration over the phone. It is important to note that although evacuees are advised to register that some may not do so like those who are non-residents (tourists) or those hunting from a camp and also not residents of the area.

3.16.4 Accommodations

The CRC shelter manual indicates that 10-15% of the population will remain in overnight shelters during times of emergency. Due to the complexity of the Point Lepreau operation, the Red Cross believes this percentage will increase to 20%, or 620 evacuees. These

accommodations would either be in congregate shelters, or for the vulnerable population as required, in commercial accommodations. After initial registration, thorough assessments are completed to identify any additional services.

Evacuees placed in commercial accommodations will be determined on a case-by-case basis, however, typically will include:

- Families with young children.
- Elderly.
- Persons with medical requirements; and
- Disabilities including mobility, hearing and visual impairment.

3.16.5 Feeding – The feeding at Reception Centers will be provided through contracted workforces. For sites that do not have a food preparation workforce on site, the Red Cross would look to bringing in outside agencies such as the Salvation Army, restaurants, and catering companies.

3.16.6 Alerting and assembly of regional center personnel will be carried out by the zone office (Saint John) by Social Development and the Department of Health.

3.16.7 Communications

Telephone landline will be used for routine matters but the departments own radio nets for communications between Fredericton and field staff will be provided by NBEMO, when required. Additional communications requirements will be brought to the attention of the EMO representative at the DEAC or the representative at the PEAC.

3.16.8 Primary and Secondary identified shelter locations

East:

Primary	**Secondary**
Reception Centre East - Nick Nicolle Center, 85 Durham St, Saint John, NB E2K 1V6, Contact: xxx-xxx-xxxx Capacity: Approx. 380 people	Reception Centre East - Carleton Community Center, 82 Market Pl, Saint John, NB E2M 1B5, Contact: xxx-xxx-xxxx (Greg Cutler) Capacity: 380 people

West:

Primary	Secondary	Tertiary
Reception Centre West - Blacks Harbour Arena, 12 Arena Street Blacks Harbour, NB E5H1B5, xxx-xxx-xxxx Capacity: 250 people	Reception Centre West - W.C. O'Neill Arena, 24 Reed St, St. Andrews, NB E5B 1A1, xxx-xxx-xxxx Capacity: 400 people	St. Stephen High School 282 King Street St. Stephen, New Brunswick Jamie Waycott ph: xxx-xxx-xxxx (bus), ph: xxx-xxx-xxxx Capacity: 242

3.17 TOURISM, HERITAGE, AND CULTURE

3.17.1 The department of Tourism, Heritage and Culture are responsible for:

- Develop plans to support Department of Natural Resources (Department of Energy and Resource Development) in its emergency role.
- Develop plans for alerting tourists during an emergency or disaster.
- Be prepared to assist in the evacuation and/or closure of provincial operated parks as required or if requested by the Provincial EOC; and
- Be prepared to provide facilities to be used as assembly, relocation, and dispatch areas for emergency response operations, and temporary emergency care and accommodation.

3.18 TRANSPORTATION AND INFRASTRUCTURE

3.18.1 The Department of Transportation & Infrastructure will:

- Always ensure road access to the Nuclear Generating Station on a priority basis.
- Ensure that evacuation routes are cleared on a priority basis if evacuation becomes necessary.
- Assist the Control Group and the RCMP in the evacuation of people.
- Provide equipment and personnel, as required, by the Control Group; and
- Post and update road closures on NB511 to notify the public, if necessary.

Alerting and Assembly

On receiving notification of an incident, the Departmental representative will immediately notify the District Engineers and the affected Highway Contractors in the area and proceed to NBEMO Headquarters for briefing.

District Engineers and the affected Highway Contractors will place their personnel on alert for action.

On being briefed, the representative will advise the deputy minister of the situation.

Concept of Operations

The Department's role is to work closely with the RCMP and the Control Group to assist in traffic management and the evacuation of threatened areas, and to provide road barriers and signage.

Communications
Telephone landline will be used for routine matters, but the departments own radio nets will be available for contact with District Engineers and field staff.

Resources
The department has many types of specialist vehicles and equipment as well as radio equipped vehicles and drivers/operators available for use in emergency operations.

3.18.1 Resources

District 1 – Bathurst	Toll Free # 1-888-624-7077
District Engineer: Daniel LeBlanc, P. Eng.	
Local Offices	Phone #
Bathurst	xxx-xxx-xxxx
Campbellton	xxx-xxx-xxxx
District 2 – Miramichi	Toll Free # 1-888-787-3133
District Engineer: Darren Matchett, P. Eng.	
Local Offices	Phone #
Miramichi	xxx-xxx-xxxx
District 3 – Moncton	Toll Free # 1-888-679-
District Engineer: Vincent Roussel, P. Eng.	
Local Offices	Phone #
Moncton	xxx-xxx-xxxx
Rexton	xxx-xxx-xxxx
District 4 – Saint John	Toll Free # 1-888-915-1011
District Engineer: Mike Rosehart, P. Eng.	
Local Offices	Phone #
Saint John	xxx-xxx-xxxx
Sussex	xxx-xxx-xxxx
St. Stephen	xxx-xxx-xxxx
District 5 – Fredericton	Toll Free # 1-888-922-9399
District Engineer: Sebastien Roy, P. Eng.	
Local Offices	Phone #
Fredericton	xxx-xxx-xxxx
Woodstock	xxx-xxx-xxxx
Chipman	xxx-xxx-xxxx
District 6 – Edmundston	Toll Free # 1-888-767-9899
District Engineer: Pierre Morin, P. Eng.	
Local Offices	Phone #
Edmundston	xxx-xxx-xxxx
Perth-Andover	xxx-xxx-xxxx

New Brunswick Department of Transportation & Infrastructure District Boundary Map

DTI Provincial Emergency Action Committee (PEAC) Representatives				
Contact	**Main Office**	**Home**	**Cell**	**E-mail**
Jordan Stephens	xxx-xxx-xxxx		xxx-xxx-xxxx	Jordan.Stephens@gnb.ca
Sam Worrall	xxx-xxx-xxxx		xxx-xxx-xxxx	matthew.mcgivney@gnb.ca

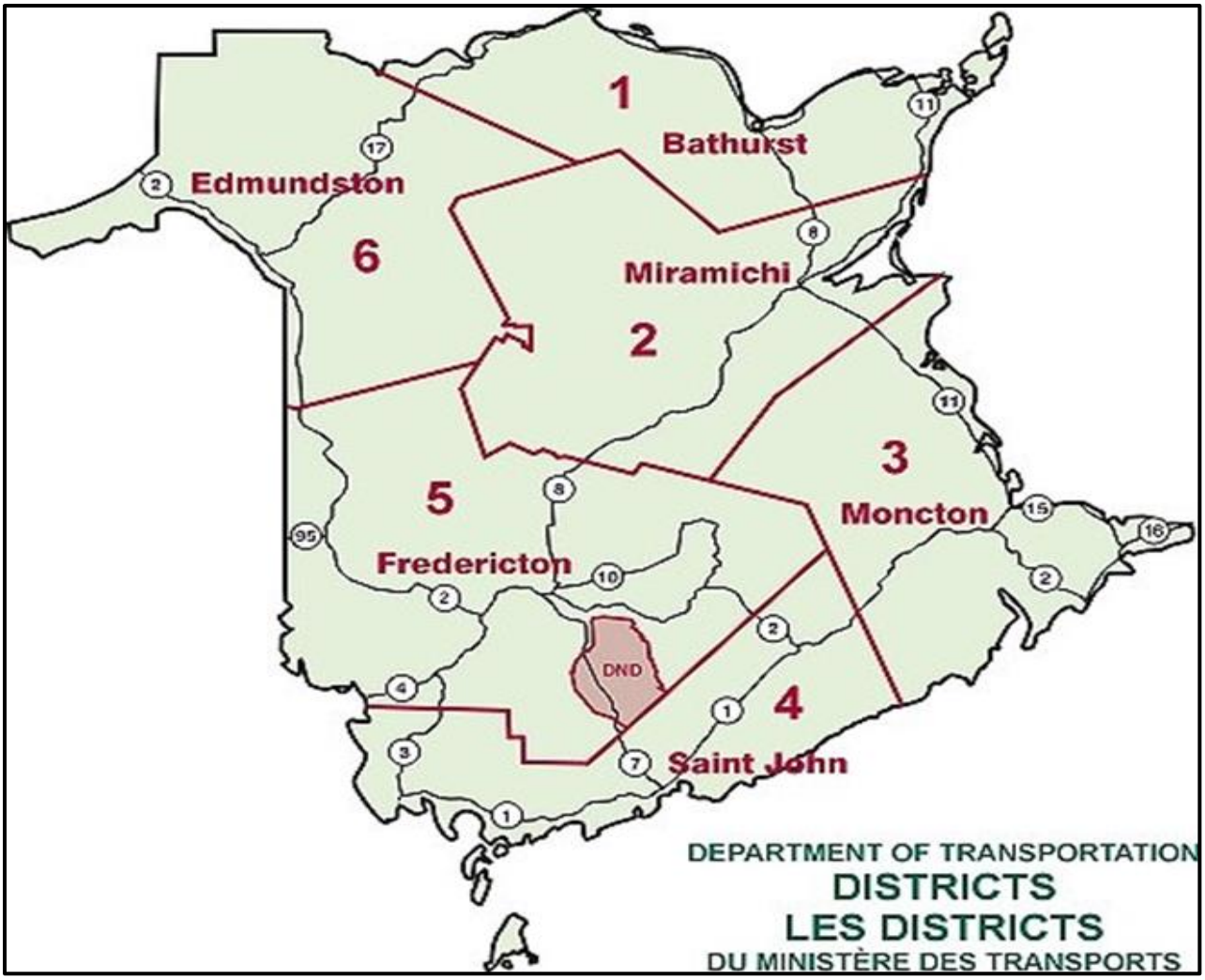


Figure 3.18.1

3.19 NB POWER CORPORATION

3.19.1 The Duty Shift Supervisor will in the event of a radiation emergency at the Point Lepreau Nuclear Generating Station:

- Take immediate action to mitigate the effects of such an emergency using plant staff and equipment and requesting off-site assistance as required.
- Promptly advise NBEMO by initiating the alerting procedure; and
- Provide NBEMO with an initial assessment of the emergency so that appropriate government action can be started.

Alerting and Assembly

The Duty Shift Supervisor will alert Station Staff and organize the response to control the situation in the Station. He / she will also direct radiation survey teams to assess hazards outside the station.

Immediate notification of NBEMO will proceed simultaneously. The Duty Shift Supervisor will call NBEMO. NBEMO Duty Officer will call the Duty Shift Supervisor through the Contingency Desk Operator within 15 minutes to verify receipt of the message. The Duty Shift Supervisor will follow up and send an Event Information Update to NBEMO if a Site Area Radiation Emergency or General Radiation Emergency classification is declared.

After commencing the alerting procedure, the NBEMO Duty Officer or Operations Officer will call the Duty Shift Supervisor through the Contingency Desk Operator for further details of the incident, including weather conditions. This call will be tape recorded so that it can be played back as the Control Group assembles.

The type of incident and the potential public hazards will dictate the extent of NBEMO actions and the requirements to assemble the Control Group.

Radiation Incidents

The radiation conditions outside the station for which notification of NBEMO is mandatory have been set at very low levels which do not represent a serious risk to the public.

This ensures that NBEMO will be ready and alerted should the situation deteriorate.

Staffing of the OEOC will be initiated in conjunction with declaration of a Site Area Radiation Emergency, General Radiation Emergency or Radiation Alert or at the request of NBEMO.

If the Control Group is convened, NB Power Health Physics will be alerted by NBEMO.

Non- Radiation Emergencies

The following are conditions under which NBEMO notification is mandatory:

Medical Emergency	a. When several people have suffered injuries from an incident which threatens to injure other people. b. When the scale of personnel injuries is sufficient to require extensive help in rescue, treatment or hospitalization actions
Fire Emergency	When a fire poses a general threat to personnel or the plant.
HAZMAT Emergency	When a spill of hazardous materials poses a general threat to personnel on or off the site.
Security Alert	a. When there is a general threat to the safety of personnel on site or to the continued safe operation of the plant as a result of a security breach, or a threatened security breach. b. An assessment of the specific incident, its potential off-site impact and the nature of the specific requests by the Shift Supervisor will dictate the NBEMO response.

3.19.1 Concept of Operations

Introduction

In the event of an emergency at the Point Lepreau Nuclear Generating Station resulting in significant releases of radioactive materials to the environment, the immediate concerns of

Station Staff are to bring the emergency under control, to monitor the off-site radiation levels, and to initiate or recommend countermeasures.

These activities are Station-directed during the early phase of an emergency because time is an important factor, and the Station personnel are the only ones immediately available who are competent in radiation safety.

Initial indication of a radiation release may come from the **Radiation Boundary Monitoring System (RBMS)**. The RBMS consists of 16 fixed gamma detectors located within 1 km of PLNGS. They transmit real time data 24/7 to a web page and alarm in the PLNGS Control Room on a dose rate reading greater than 10uSv/hr or system trouble / failure.

Emergency radiation monitoring will occur within a matter of hours following an accidental release. It does not include follow-up monitoring which may be carried out jointly with external agencies. It is separate from the routine environmental monitoring program carried out by NB Power. Emergency radiation monitoring will be confined to areas within a radius of about 10 Kms from the Station.

NB Power maintains an Off-site Emergency Operations Center (OEOC) located in St George, 3 Magaguadavic Drive, St. George, New Brunswick, E5C 3H7. This facility will be staffed by NB Power following a radiation contingency involving possible off-site releases. It will be used as a communications center from which radiation surveys will be directed. Communication links with NBEMO are set up from this location and contact can be maintained between the OEOC Coordinator and the NBEMO Control Group, through the NBEMO OEOC Manager. In addition, the OEOC Coordinator will initially update the Duty Shift Supervisor/Incident Commander and NBEMO of radiation conditions outside the station, then with the Incident Command staff once the PLNGS Command Staff is declared functional.

The OEOC will be the focal point for representatives from PLNGS OEOC Coordinator, NBEMO Manager, RCMP, Department of Energy and Resource Development, and the Warden Service.

The organization of the NB Power emergency response will evolve as people become available. Initially, the Duty Shift Supervisor is responsible for notifying NBEMO and for initiating radiation surveys near the Station. When the OEOC is occupied, he will turn over responsibility for NB Power actions outside the Station to the OEOC Coordinator. The OEOC Coordinator will control NB Power actions at the OEOC. The OEOC Coordinator will act in close cooperation with NBEMO Manager. Emergency Radiation Monitoring Program

The primary objective of the monitoring program is to rapidly assess the extent of radiation hazards in the environment following a release of radioactivity. **A summary of the measurements which may be taken is shown below.**

Emergency Off-Site Monitoring Program		
Measurement of Sample	**Purpose**	**Location**
Ground Gamma Dose Rate:	• Define area of contamination.	In downwind direction

	• Estimate projected external dose from ground deposits.	
Grab Samples (Air)	Indication of degree of airborne hazard if plume present.	In downwind direction.
Emergency TLD	Estimate total external gamma dose from plume and ground deposits	Throughout Lepreau Peninsula.
Continuous Samples (Air)	Direct estimates of total inhalation dose	At routine air monitoring sites.
Marine Survey (gamma dose rate along the shoreline)	Assess dose from liquid releases.	Local shoreline

Figure 3.19.1

The preliminary assessment of gamma dose rates and airborne contamination levels will be carried out by survey teams from the Station. If significant radiation fields are found, extensive radiation surveys will be performed by the OEOC Survey Teams.

The first measurements available will be gamma dose rates. Air samples may be taken at locations having the highest gamma dose rates. Later, when the extent of the contaminated area has been defined, soil and food samples may be taken and analyzed.

Facilities at the NB Power Health Physics Lab in Fredericton will be available for a detailed analysis of food and soil samples as well as for reading TLD badges. These services will be provided for the different government agencies taking part in the emergency response as well as for Point Lepreau Nuclear Generating Station. This lab will also report its results to the NBEMO Control Group / TAG.

Several hours after the commencement of a radiation contingency, upon request of the NBEMO Control Group, an accurate estimate of the exposure received by members of the public may be obtained from:

- **Emergency TLDs:**
  External gamma doses from the passing radiation plume are measured by **thermoluminescent dosimeters (TLDs)** positioned around populated areas. Four TLDs are placed at each location. Note that one TLD should be left at each location to permit a final dose assessment after the emergency is over.
- **Continuous Air Monitors:**
  Grab samples cannot reliably give the radioiodine exposure from the plume in releases of short duration, since an unknown fraction of the total plume is sampled.

  The continuous samplers are located at routine environmental monitoring sites near the Station and in local communities. Information from these monitors can be used to determine mean airborne particulate, radioiodine, and tritium concentrations so that dose estimates can be made.

  The TLDs and the Continuous Air Monitor filters will be collected by NB Power personnel working from the OEOC and sent to the Fredericton lab for analysis. The

location of static TLDs is found in PLNGS procedure EP-78600-R034. The results of this analysis will be reported to NBEMO Control Group.

NB Power will provide dosimetry for public officials entering contaminated areas during a contingency. TLD badges will be issued and collected at RCMP roadblocks and to Point Lepreau Wardens by NB Power personnel. These TLD badges will then be sent to the Fredericton Health Physics lab for analysis. The officials' parent organization will later be informed of the radiation dose, if any, that they received.

Resources

NB Power possesses considerable resources, both in terms of personnel and equipment, which can be deployed if necessary. A complete list of these resources is available in the Point Lepreau Nuclear Generating Station On-Site Contingency Plan and the NB Power Head Office Emergency Plan, which are available to the Control Group upon request.

Communication Facility		
Communicating Parties	Primary Links	Back Ups
Control Group and OEOC	OEOC NB Power Coordinator xxx-xxx-xxxx	NB Power radio to head office Cellular Phone
	OEOC NBEMO Manager xxx-xxx-xxxx	
		EMO Net on IRCS
		EMO Point Lepreau net
		Ham radio
	OEOC Fax/Telecopier xxx-xxx-xxxx	Sat phone at OEOC
		Mobile phone in EMO Command Post (MAX)
Control Group and Fredericton HP Lab	Telephone xxx-xxx-xxxx (HP Control Group) xxx-xxx-xxxx (HP Lab)	Courier
Point Lepreau GS and OEOC	Dedicated telephone line FAX xxx-xxx-xxxx (PLNGS Control Room) Satellite Phones FAX xxx-xxx-xxxx (OEOC)	Radio (2 systems) Cellular Phone
Radiation Survey Teams and OEOC	Radio	Cellular Phone
Incident Command - Safety Officer	NBP Health Physicists in the TAG	E-mail, phone, Web EOC Cellular Phone

Figure 3.19.2

3.20 NB POWER – HEADQUARTERS STAFF

3.20.1 The NB Power Group – President's Team will coordinate NB Power corporate resources to support the provincial emergency response.

The EMO Control Group NB Power Corporate Representative will function as a link between NB Power Staff at Point Lepreau, the President's Team and the EMO Control Group in Fredericton. The corporate representative will recommend actions to the Control Group based on plant status.

The EMO Control Group NB Power Health Physics Representative provides the link between NBEMO, NB Power staff at the OEOC, and the Fredericton Health Physics Laboratory on radiation information. The HP Representative will advise the Control Group of the survey results and, in conjunction with the Department of Health, recommend appropriate countermeasures (thyroid blocking, evacuation, sheltering in place, etc.…).

The EMO Control Group and NB Power Public Relations and Corporate Communications Group will coordinate the preparation of press releases with NB Power Management, NBEMO, and Executive Council Office NB.

3.20.2 Alerting and Assembly

- The EMO Control Group NB Power Representative is alerted by NBEMO as per the off-site emergency plan procedure.
- The NB Power Corporate Representative will notify the NB Power President's Team and will then proceed to the PEOC.
- Once the President's Team has been notified, the NB Power Corporate Representative will establish contact with the Incident Commander (Station Director or his delegate) at Point Lepreau.

3.20.3 Concept of Operations

- The EMO Control Group NB Power representative will proceed immediately to the NBEMO Provincial Emergency Operations Center (PEOC) in Fredericton.
- The Public Relations and Corporate Communications Liaison will request a Public Affairs Technical Briefer and a Technical Translator, when and if required.
- The NB Power Corporate Representative activates the NB Power Executive Emergency Response Plan, including calling in the NB Power President's Team. This group will respond to requests for support both from the Lepreau NB Power staff and from the NBEMO Control Group. They will also appraise the situation in conjunction with other NB Power staff and make arrangement to expand or contract the group representation to suit the situation.

  The resource group will remain in existence throughout the full duration of the emergency on a 24 hour per day basis.

3.20.4 Communications

NB Power will continue to use Bell Aliant and AVAYA lines and cell phones where available and convenient. In addition, a dedicated UHF radio net links the Control Room at the PLNGS, the OEOC, and NBEMO PEOC.

There are also communication links with its distribution branch offices and mobile distribution services throughout the province via UHF and VHF links, and a power line carrier and microwave system interconnecting major terminals throughout the power system.

A FAX machine is installed at the OEOC and at the Head Office to provide “hard copy” of survey results and other information.

Web EOC software will be utilized to provide common situational awareness between NB Power staff. This will include the OEOC and the PEOC.

3.20.5 Departmental Resources

NB Power has on staff specialists in communications, transportation, construction, environmental and meteorological services, insurance, health physics, etc. These services will be made available by the NB Power Corporate Representative and/or President’s Team, to NB Power Lepreau staff and the EMO Control Group upon request.

New Brunswick Power Staff at PEOC:

NB Power Corporate Representatives for Nuclear Events			
PEOC Representatives			
Name	Cell #	Home #	Work #
Todd Hallett RHallett@nbpower.com	xxx-xxx-xxxx		xxx-xxx-xxxx
Greg Carroll (first alternate) gcarroll@nbpower.com	xxx-xxx-xxxx		
Roxane McCarthy (second alternate) romccarthy@nbpower.com	xxx-xxx-xxxx		xxx-xxx-xxxx
Nuclear Technical Representatives			
Chris Wilson cwilson@nbpower.com	xxx-xxx-xxxx		xxx-xxx-xxxx
Trent Martin trmartin@nbpower.com	xxx-xxx-xxxx		
Chestnut Complex			
Jennifer Allen jallen@nbpower.com	xxx-xxx-xxxx		xxx-xxx-xxxx
Corporate Affairs			
Robert Scott wrscott@nbpower.com	xxx-xxx-xxxx		xxx-xxx-xxxx
PLNGS Communications			
Paul Doucet paudoucet@nbpower.com	xxx-xxx-xxxx		
Corporate Communications			
Dominique Couture dcouture@nbpower.com	xxx-xxx-xxxx		
Janice McNeil jmcneil@nbpower.com			xxx-xxx-xxxx

NB Power Head Office Support

The NB Power Head Office Support is defined in NB Power’s Corporate Emergency Response Plan. This plan (maintained by NB Power) identifies:

- Members of the President’s Team and Alternates including contact information.
- NB Power Representatives for both nuclear and non-nuclear events; and
- Public Affairs/Communications Contacts.