



HITACHI

GE Hitachi Nuclear Energy Canada Inc.

Paul Desiri

Manager

Environment, Health & Safety and Licensing

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The following site emergency response plan has had certain pages and sections redacted in order to be compliant with privacy legislation and with security regulations that apply to our facility.

If you have unanswered questions about emergency response, we would be pleased to speak with you directly. Please contact GE Hitachi at 1-855-696-9588 or by email geh.canada@ge.com so we may connect with you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul Desiri', with a long horizontal line extending to the right.

Paul Desiri

Manager, Environment Health and Safety and Licensing



POLICY:

A primary goal of GE-Hitachi Canada Nuclear Products is to control, and where practical, eliminate both known and potential environmental, safety and health hazards, which could impact our employees and the communities in which they live.

PURPOSE:

This Emergency Response Plan describes the actions to be taken in order to minimize the health and environmental hazards, which may result from fires, explosions, or the release of hazardous materials. This includes effects to the local area and members of the public. Examples of hazardous materials included in this plan are radioactive material, flammable gases, toxic chemicals, and waste materials.

This Plan is intended to reduce the risk of fires and explosions within our facility and will assist Emergency Staff and plant personnel in understanding key emergency response issues and assist the facility in protecting employees, the local community and the environment through sound emergency management practices.

SCOPE:

This Emergency Response Plan describes the Emergency Response Organization, emergency response actions, and resources available to respond to an emergency. It also includes specific instructions for identified accident scenarios.

The following program elements will be assigned to specific personnel at the site: Emergency Evacuation, Fire Prevention, Emergency Response/Drills, Inspections/Maintenance, Training, Outside Coordination, Program Assessment, and Record-keeping.

This program conforms to the operating license from the Canadian Nuclear Safety Commission (CNSC), the federal regulatory agency, which assures that nuclear facilities and materials do not pose undue risk to health, safety, national security and the environment.

LEGISLATION & SUPPORTING DOCUMENTATION:

The Plan was developed in accordance with the following federal laws, standards, and existing documentation pertaining to emergencies:

- CAD/CSA-Z731-03 -Emergency Planning For Industry Standard
- National Fire Code
- NFPA 801- Fire Protection for Facilities Handling Radioactive Materials and applicable referenced publications in Sec. 2.2 of the standard.
- CNSC Regulatory Guide G-225, Emergency Planning at Class I Nuclear Facilities and Uranium Mines and Mills.
- Canadian Nuclear Safety Commission Regulations, Operating Licence and Licence Condition Handbook
- Province of Ontario Nuclear Emergency Plan Part VIII
- Fire Safety Plan
- [REDACTED]
- Fire Hazard Analysis



DISTRIBUTION LIST

Everyone on the distribution list will receive a copy of all amended pages as soon as they are available.

The following facility representatives have a copy of this plan:

Site Leader Copy #: 1
EHS Leader Copy #: 3
Manager Shop Operations Copy #: 3

Other copies of the plan have been distributed to the following outside agencies and contractors to serve as part of the overall emergency response team:

Fire Department Copy#: 4

Everyone on the distribution list will receive a copy of all amended pages as soon as they are available

For further information regarding this Plan, contact:

EHS Leader 



RESPONSIBILITIES

Site Leader

Planning

- Provide resources and leadership for the implementation of appropriate Emergency Response measures.
- Ensure that this Emergency Response Plan incorporates measures for responding to all credible accidents at the site.
- Assure the Emergency Response Organization is trained and effectively staffed. All training must be documented.

[Redacted]

[Redacted]

- Ensure maintenance of records for evacuation, emergency and drill critique reports, corrective actions, equipment inspections and testing for equipment such as fire extinguishers, alarms, and sprinkler systems are documented.

During Emergency

- Direct emergency response operations.
- Follow the Nuclear Products Emergency Call Tree. Direct all notifications and reporting to off-site authorities, and GE senior management. Ensure that a reachable call back number has been provided.
- Notify the GE-Hitachi Canada Corporate Public Relations Manager and Legal Representative in the event of any spill or emergency involving outside authorities (i.e. Police, Fire, HRDSC, MOE, etc.) by initiating the Nuclear Energy Emergency Call Tree.
- Liaise closely with Emergency Preparedness (EP) Coordinator to obtain regular status updates and to identify required response actions.
- Order protective actions based on technical data provided by Emergency Staff.
- Authorize shift termination in the case of severe weather, or other potential emergency or threat.

[Redacted]

- Manage all community relation's aspects of the emergency.
- Direct recovery operations.
- Document the emergency situation.



Planning

- Advise on protective actions as a technical expert and based on facility and equipment status.
- Implement protective actions based on facility and equipment status.

During Emergency

- Coordinate the shutdown of equipment and emergency valves if required.
- Provide assistance and technical information to emergency responders if required.

Emergency Preparedness Co-coordinator

Planning Stage

- Review, prepare, and update Emergency Preparedness and Fire Prevention Program and plans.
- Ensure the emergency medical station is set up as required.
- Ensure the Emergency Response Organization is trained and effectively staffed. All training must be documented.
- Conduct required self-assessments and periodic reviews.

During Emergency

- Coordinate Emergency Staff.
- Provide regular status updates to Site Leader during an emergency.
- The "All Clear" to reoccupy the facility, is issued by the local Fire Department or EP Coordinator if the Fire Department is not involved in the emergency.
- Liaise with regulatory authorities as directed by the Site Leader.



EHS Leader or Designate

Planning

- Conduct emergency and spill response training.
- Assist with the development of emergency response drills, and incorporate corrective actions from exercise into program.

During Emergency

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Manager Shop Operations

Planning

- Ensure each operating shift is manned with at least one trained Emergency Warden and reschedule the shift if possible.

[Redacted]

[Redacted]

[Redacted]

During Emergency

- Provide information on employee whereabouts during an in emergency.
- Perform personnel accounting of their employees during an evacuation.
- Arrange for casualty transportation to hospital.

Emergency Staff

Planning

- Participate in drills, critiques, resolving identified problems.
- Know contents of applicable emergency procedures.

During Emergency

- Activate as directed by the Emergency Preparedness Coordinator.
- Provide advice and technical assistance in their area of expertise.



Head Warden

Planning

- Schedule and conduct drills. Drills to be conducted quarterly.
- Maintain file of critiques.
- Establish and train emergency teams to cover all shifts.

[Redacted]

During Emergency

- Where possible, the Head Warden will collect the Visitor Log at the time of evacuation or otherwise consult with all assembling staff to determine which contractors were on site at the time of the emergency.
- The Head Warden will notify the Emergency Preparedness Coordinator of the headcount of personnel at the assembly area once notified by the wardens.
- Coordinate orderly evacuation at the time of an emergency.

▪ [Redacted]

Warden

Responsibilities During Emergency

- Provide initial response to fire alarm or notification
- Assist in the timely response to emergency situations for which they are trained to respond

[Redacted]

[Redacted]

[Redacted]

- Help accounting, i.e., a headcount of personnel at the designated assembly area and report results to the Head Emergency Warden.



Employee

Planning

- Actively participate in Emergency Response training.

Responsibilities During Emergency

- Follow emergency response instructions issued by Emergency Staff, Emergency Support Staff or local authorities.
- Assemble and remain at designated assembly location until given further notice.

First Aid and Rescue

- Responders to conduct first aid as required and directed by the emergency staff.

Medical Support



- Provide triage and first aid treatment as required by the emergency.

EHS Pager Responder

- Acts as designate for EP Coordinator during an emergency when the EP Coordinator is absent.



EMERGENCY RESPONSE ORGANIZATION

The "Site Emergency Response Organization", Appendix 1 has been established to allow for control of each class of emergency for all shifts. Activation of the Emergency Response Organization may result from an automatic alarm, request from a Site Leader, Emergency Preparedness Coordinator, Engineering, Production Supervisor, or EHS staff. The Site Leader classifies the emergency in consultation with the Emergency Preparedness Coordinator.

NOTIFICATION

The Site Leader will activate the "Call Tree" Appendix 4 when an incident has been confirmed. The emergency classification may not be specified at the time. However, the "Call Tree" will remain active with regular information updates.

The "Emergency Log Form", Appendix 8, will be used to record all persons contacted and to summarize the information provided. The purpose of the log is to assure all necessary contacts have been completed and to track the status of uncompleted actions. In addition, such information will be used by the EP Coordinator to construct the reports of actual and practice incidents

Agencies notifications will be made according to local, provincial and federal regulations/licenses. The requirements are summarized in Appendix 5 "Agency Notifications".

Agency notifications will be made as soon as possible after "Call Tree" invocation, and should be made within 30 minutes.

Local, provincial and federal organizations involved with the ongoing emergency event will normally be updated at approximately 3-hour intervals, or at a frequency mutually agreed upon during the previous update and following any significant change in conditions.

Notification of a Site Emergency will include any initial recommendation for off-site protective actions.

[Redacted]

[Redacted]

[Redacted]

[Redacted]



ALTERNATE FIRE SAFETY MEASURES

In the event of any impairment of the fire protection equipment/system,

- ❑ Head Emergency Warden will notify the Toronto Fire Department and EHS Leader, to advise on the alternative provisions to be made and actions to be taken in case of an emergency.
- ❑ EHS Leader will inform the Site Leader. The alternative provisions and actions must be acceptable to both.

[REDACTED]

If construction or repairs will impair an exit,

- ❑ Temporary emergency evacuation procedures must be identified by the Head Warden prior to the commencement of work.
- ❑ Temporary exit signs are to be installed to clearly indicate alternate exits.
- ❑ Fire watch procedures required and no hot work permitted.

[REDACTED]

Refer to the Fire Safety Plan for additional information on Alternate Fire Safety Measures.



MEDICAL EMERGENCIES

For serious injuries,

- ❑ Call 9-911 and the office.
- ❑ First aid will be administered as necessary, until off-site services arrive. Standard first aid kits are located on all floors of the plant and emergency medical kits are located in B9.
- ❑ EHS will perform direct contamination surveys of casualties prior to removal and transfer to an ambulance.



For less serious injuries that require medical aid,

- ❑ Transportation to a hospital can be arranged through the Manager Shop Operations or EHS department.



SEVERE WEATHER

In the event of an earthquake, tornado, flood, or storm alert the Emergency Preparedness Coordinator is responsible to:

- Designate an Emergency Staff member to monitor local news and weather via radio or TV if a severe storm, tornado or hurricane is announced.
- Designate an Emergency Staff member to secure any loose objects such as garbage cans, furniture and signs, or move them inside the plant.
- Ensure that a supply of flashlights with fresh batteries is available in the event of an electric power shortage.
- If a tornado or earthquake warning is issued, instruct all Departments to cease manufacturing immediately and leave all areas in a secure state where it is safe to do so.
- Designate an Emergency Staff member to close all natural gas and process gas mains, when hydrogen has been safely purged from the system.
- Instruct personnel to keep away from windows, material stored on racking, and process equipment.
- The Site Leader is authorized to terminate the shift and send home employees in the case of severe weather.

Snow storms / Blizzards

- ❑ The Manufacturing Engineer is responsible for arranging for snow/ice removal at the facility.
- ❑ During a weather related emergency, the Manufacturing Engineer will ensure that snow/ice is removed to prevent overloading of the roof. Roof drains are to be kept free from ice or debris since these materials can hinder water drainage and clog the drains.

Earthquakes

During an earthquake

- ❑ If indoors, stay there. Get under and hold onto a desk or table, or stand against an interior wall. Stay clear of exterior walls, glass, and heavy equipment. If in an office building, stay away from windows and outside walls and do not use the elevator.
- ❑ If outdoors, get into the open. Stay clear of buildings, power lines or anything else that could fall on you.
- ❑ If driving, move the car out of traffic and stop. Avoid parking under bridges or overpasses. Keep clear of tress, light posts, signs and power lines.

Immediately following an earthquake, the Emergency Preparedness Coordinator will:



Appendix 11

- ❑ Designate an Emergency Staff member to examine sprinkler control valves for damage.
- ❑ Initiate evacuation of the plant when it is safe to do so. Re-entry into the plant will be prohibited until local officials have inspected the building structurally and have authorized re-entry.



COMMUNICATION

On site communication between assembly points and the Emergency Preparedness Coordinator in the event an emergency is established via portable phones, which are carried by the Manager Shop Operations, Engineering staff, and on duty EHS Pager responder. This ensures communication is still effective in the event of a power failure.

Emergency wardens can also phone either the EHS or ME 24-hour emergency pager if an emergency occurs after regular business hours, the employee receiving this page will contact the Emergency Preparedness Coordinator.

Emergency wardens will communicate to the head warden the headcount numbers at the assembly areas. The head warden will communicate this information and whether all visitor/contractors are accounted for to the Emergency Coordinator in order to determine whether all were evacuated safely.

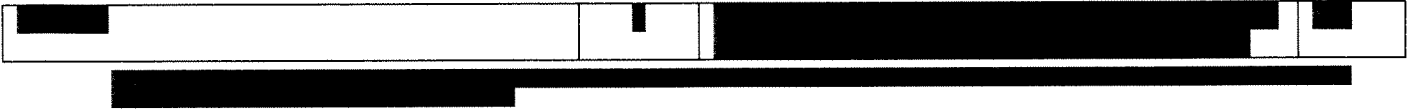
All employees involved in handling official community, press and local emergency response interactions will be trained.

Whenever possible, GE Canada Media Relations will handle all media and community relations' issues.

VISITOR & CONTRACTOR

The Visitor Logbook will be used for visitor and contractor accountability during an emergency. Security is responsible for retrieving the Visitor Logbook in the event of an evacuation, if it is safe to do so. If this is not possible, the Head Emergency Warden will consult with all assembling staff to determine which visitors were in the plant prior to evacuation.

Visitors, contractors and new employees are communicated emergency signals and appropriate emergency response actions by EHS through the EHS orientation video (15 min. & 40 min.).



FIRE HAZARD ANALYSIS

A fire hazard analysis as outlined in NFPA 801 'Fire Protection for Facilities Handling Radioactive Materials – 2008 edition' has been completed for the facility.

INSPECTIONS, TESTING AND MAINTENANCE

Fire Protection and Life Safety Inspections/Maintenance

The inspection, testing and maintenance of fire protection and life safety equipment, and building facilities are the responsibility of the ME department.

The inspection and maintenance requirements, as well as responsibilities, for Fire Protection and Life Safety systems are outlined in the NFPO Fire Safety Plan.

Records of these inspections will be kept in the Engineering library.

JHSC inspections

Members of the Joint Health and Safety committee complete inspections every three weeks. Fire prevention and housekeeping items are reviewed throughout the facility as part of the inspection.

Housekeeping Inspections

Plant supervisors are required to complete an inspection once a month.

Hot Work Inspections/Procedures

The Hot Work Permit Procedure ensures that fire safety is managed during work activities involving welding, grinding, cutting, and/or other hot work. It provides assurance that all reasonable and appropriate safeguards have been taken to prevent a fire or explosion from Hot Work activities.

Any person working within the GE-Hitachi that is introducing an ignition source (not including work in the Maintenance Weld Shop) must complete a Hot Work Permit.

Hot Work is not permitted anytime any part of the sprinkler system is inoperable. This restriction applies to all NFPO areas, i.e. Bldg. 7 (including the Maintenance Weld Shop) or Bldg. 9.



FACILITY CHANGES

Managing changes that affect fire protection is addressed in the facilities Change Notice Procedure. The procedure ensures that there is a systematic Environmental, Health and Safety review system developed for all new or modified facilities, new processes, and new, modified, or relocated equipment. This system will provide a mechanism to verify the identification and control of environmental health and safety issues including fire protection requirements, and ensure compliance with applicable regulations, from the onset to the completion of the activity.

DECOMMISSIONING

A decommissioning plan has been prepared for the facility outlining a systematic approach for decommissioning of the facility. The plan includes procedures for dealing with general decommissioning hazards (including radioactive materials, airborne particulate, fire, etc.) during the clean-up operation. The EHS Leader maintains a copy of decommissioning plan.

RECOVERY OPERATIONS

After the emergency response phase has ended, a recovery is instituted to restore the facility to safe operation. Included in the scope of recovery operations is a root cause evaluation and corrective actions to prevent recurrence of the event. Support for the recovery will come from various site staff as well as corporate support. A detailed recovery plan would consider damage assessments, responsibilities, resources, facilities, equipment, environmental health and safety, regulatory requirements and hazardous waste disposal.

FIRE PREVENTION

Employees are trained on recognizing and reporting fire hazards and other concerns during emergency response training. Training includes but is not limited to the following:

- Keep evacuation routes clear.
- Limit combustibles in plant.
- Do not store combustibles near electrical panels.
- Report frayed electrical cords.
- Fire doors must be closed and unobstructed
- In an emergency situation close doors containing radioactive material before leave and shut off equipment if it is safe to do so.
- Use only approved containers for combustibles
- Bond and ground containers containing flammable materials before dispensing.



TRAINING

Emergency Response General Training

Fire Safety information for all employees including familiarization with procedures for fire prevention is completed through Emergency Response General training. Response to emergency alarms, and reporting of fires is included in this training.

Fire Warden training

Fire warden training is completed by two years. This training includes hands-on fire extinguisher training.

Fire Drills

Quarterly evacuation drills are conducted for the entire facility.

- The fire drill critique is completed by observers and filed by the chief fire warden.

Emergency Response Exercises

Annual emergency response exercises for Emergency staff and Emergency Support personnel are completed. When possible, outside emergency personnel and regulatory agencies are involved in the drill.

All designated staff forming the Evacuation Team meet one half hour (30 min) prior to the drill for a debriefing.

The Evacuation Team attends a debriefing session to discuss outcomes of the drill and complete appropriate fire drill document.

The EP Coordinator will document reports of actual incidents, as well reports for practice events.

Emergency response exercises may be based on the following:

- Basic first aid, CPR
- Spill response procedures
- Fire prevention and response
- Transportation

Training Tracker

Training requirements and tracking will be documented and maintained on the Training Tracker by EHS. Records of training are maintained by the EHS Department.

EVALUATION

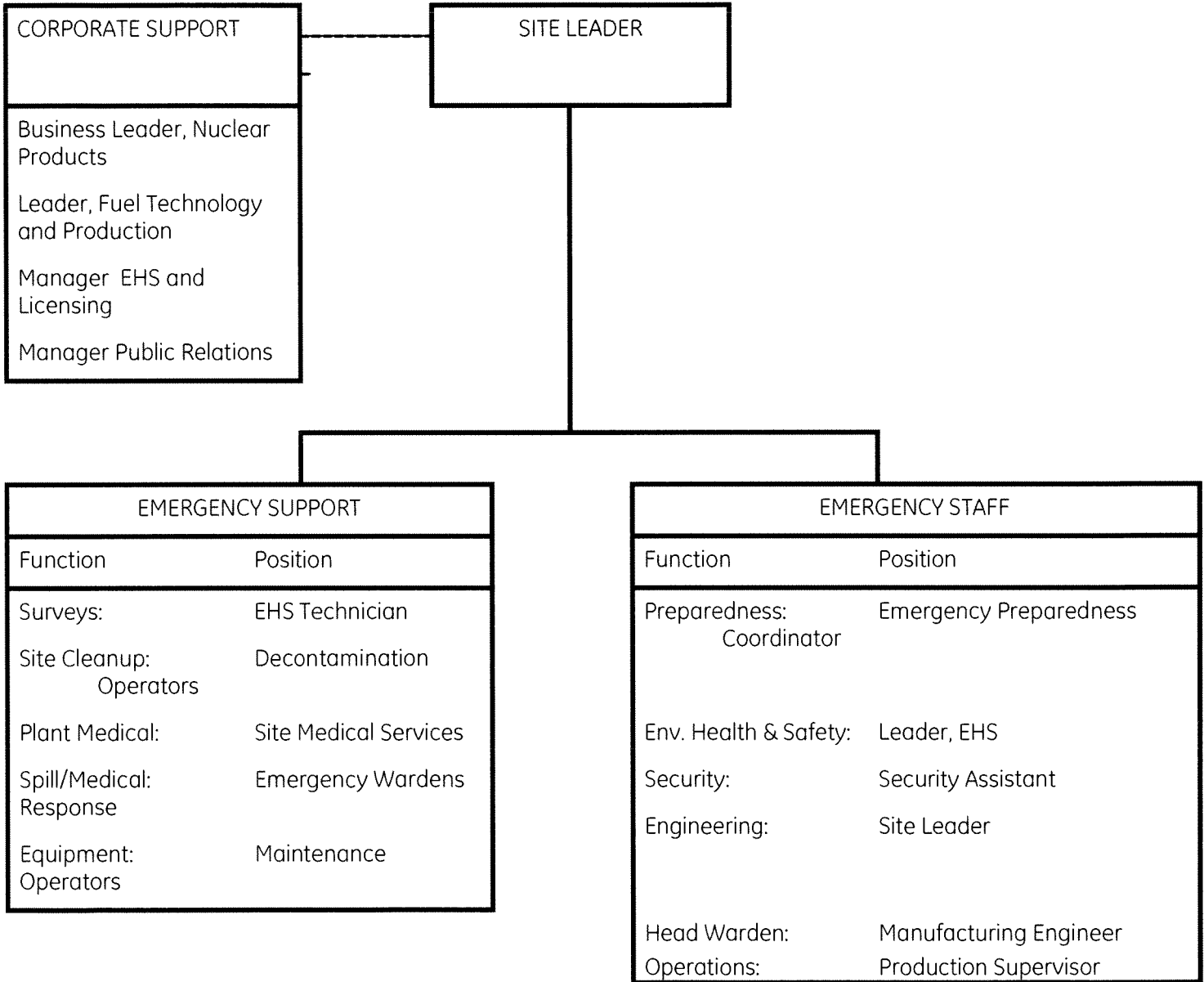
The Emergency Preparedness and Fire Prevention program is reviewed as a component of the H&S framework – Emergency Preparedness and Response. The framework is reviewed and validated on an annual basis.

Deficiencies are entered in the site action tracking system.



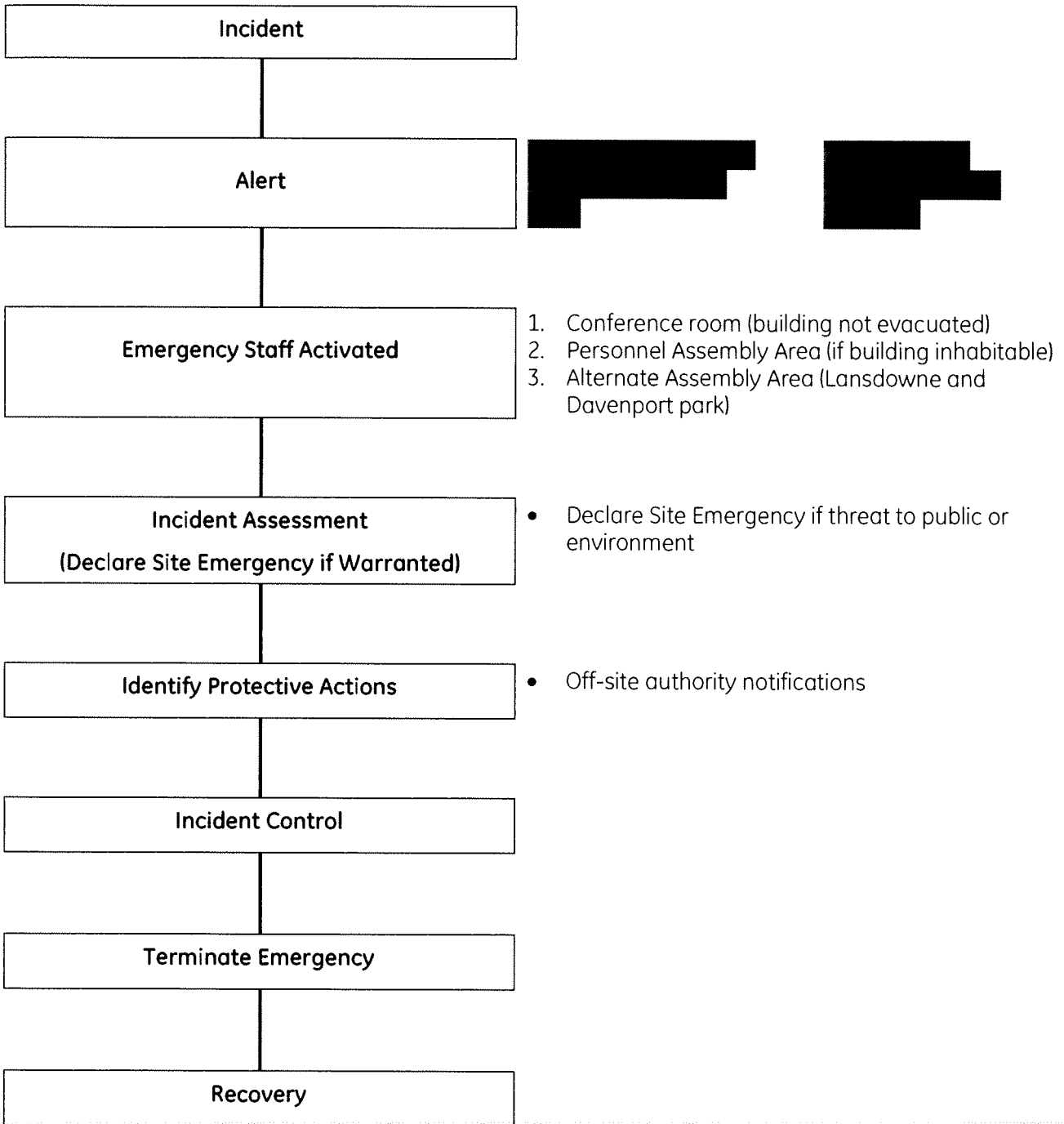
APPENDICES

1. EMERGENCY RESPONSE ORGANIZATION





2. EMERGENCY RESPONSE PLAN





3. EMERGENCY STAFF MEMBERS



4. CALL TREE - TORONTO NUCLEAR EMERGENCY PHONE NUMBERS

Refer to most recent Call Tree distributed to all emergency organization members.



5. AGENCY NOTIFICATIONS

EMERGENCY CONDITION	AGENCY	PHONE NUMBER
1. "Any situation or incident that results or is likely to result in a hazard to the health or safety of any person and the environment"; 2. "Any unauthorized release of nuclear substances or other hazardous substances within or from the facility"; 3. Those specific pressure boundary degradation events set out in Appendix "D" of the site licence.	CANADIAN NUCLEAR SAFETY COMMISSION, DUTY OFFICER	1-613-995-0479 (off- hours)
Unauthorized release of uranium or other hazardous substances into the environment.	MINISTRY OF ENVIRONMENT	800-268-6060 / 416-325-3000
Unauthorized release of uranium or other hazardous substances into the sanitary/storm sewer.	TORONTO DEPARTMENT OF PUBLIC WORKS (water/sewer emerg.)	416-392-7737
Critical injury or fatality	HRSDC	1-800-463-2493
Transportation Incident	CANUTEC	1-613-996-6666
Fire (other than automatic activation)	FIRE DEPARTMENT	911



6. EMERGENCY CONTACT NUMBERS FOR ASSISTANCE

SERVICE/ /ASSISTANCE	CONTACT NUMBER
EMERGENCY MEDICAL TECHNICIANS/AMBULANCE	911
CITY OF TORONTO EMERGENCY PLANNING COORDINATOR OFFICE OF EMERGENCY MGMT - 416-392-4554 WATER/SEWER EMERGENCIES - 416-338-8888 ROAD EMERGENCIES - 416-338-9999 ALL OTHER EMERG CALLS - ACCESS TORONTO 416-338-0338	
NEWALTA (ENVIRONMENTAL SPILL CLEANUP)	1-800-567-7455
ENVIRONMENT CANADA EMERGENCY CENTRE	819-997-3742
PUBLIC SAFETY & EMERGENCY PREPAREDNESS CANADA EMERGENCY MANAGEMENT ONTARIO (need to declare community emergency)	General 1-800-830-3118 Emergency - 613-991-7000 1-866-314-0472
PROTECTIVE SERVICES (HAZMAT)	416 363-2133
FIRE DEPARTMENT - COMMUNICATIONS	416 338-9000
AIR PRODUCTS, NANTICOKE, [REDACTED]	[REDACTED]
PRAXAIR	[REDACTED]
ADT	[REDACTED]
POLICE	911
POLICE - NON EMERGENCY SERVICE	416 808-2222
GUARD HOUSE - PETERBOROUGH	[REDACTED]
EHS PAGER	[REDACTED]
EHS CELL PHONE	[REDACTED]
ENGINEERING PAGER	[REDACTED]
ENGINEERING CELL PHONE	[REDACTED]
GUARD HOUSE 940 LANSDOWNE	[REDACTED]
GE CANADA COMMUNITY/PRESS RELATIONS [REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]



8. EMERGENCY LOG FORM

TIME (use 24 hrs)	ACTIONS TAKEN (Include persons contacted, information, etc.)	STATUS (Ongoing, done, hold)



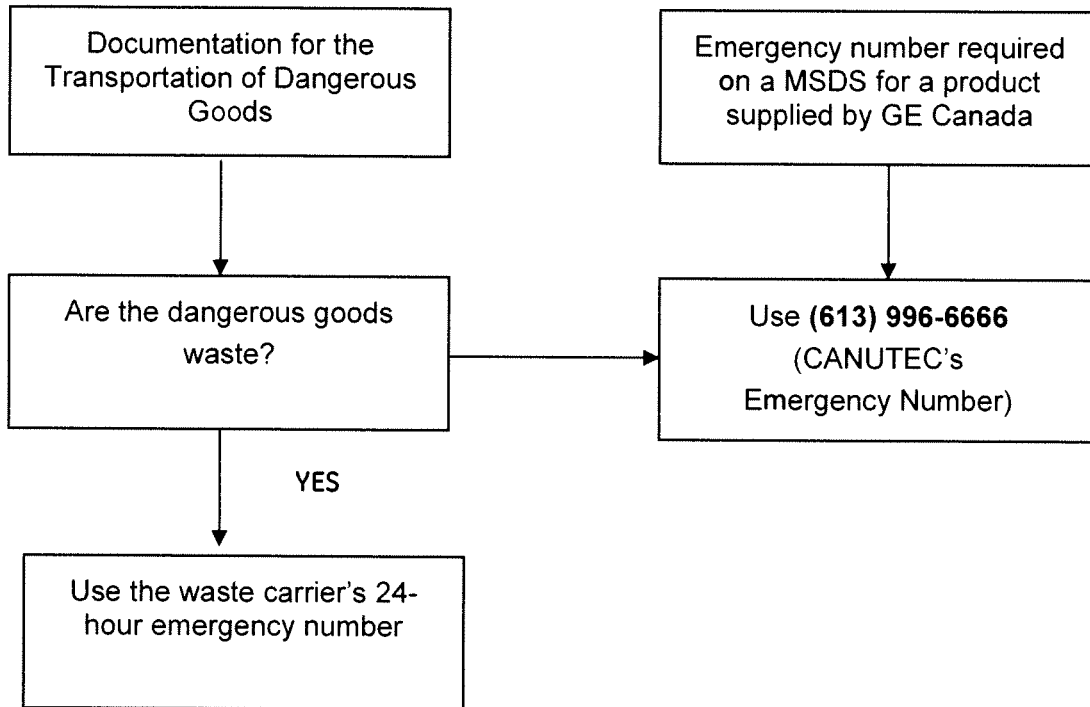
9. TORONTO FIRE DEPARTMENT ALARM RESPONSE





10. INDUSTRIAL HYGIENE BULLETIN

Documentation requiring a 24-Hour Emergency Number



The facility must be registered with CANUTEC
 Prior agreement with the waste carrier is required

Emergency contacts within GE Canada Inc.

- In case of media involvement, enquiries should be forwarded to:

████████████████████
 ████████████████████

- 24-hr Emergency Number ██████████



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14. FACILITY LAYOUT





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