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24 April 2002

To: All Oil and Gas Companies under the Jurisdiction of the National Energy Board
(the Board or NEB) and All Interested Parties

SECURITY AND EMERGENCY PREPAREDNESS AND RESPONSE PROGRAMS

Since the events of 11 September 2001, the federal government has been examining the security of Canada's critical infrastructure including energy. The National Energy Board has been involved in this initiative and has been working with the federal Office of Critical Infrastructure Protection and Emergency Preparedness, provincial governments and oil and gas industry associations. The focus has been on identifying critical oil and gas infrastructure and assessing the level of emergency preparedness of Board regulated companies should they become targets of terrorism or other criminal activities.

To date, the Board has: undertaken audits for compliance with the *Onshore Pipeline Regulations 1999* (OPR-99) including security and emergency preparedness programs; held discussions with regulated companies and their associations on existing and planned security procedures; and, examined existing emergency preparedness documentation and manuals which are on file with the Board. As a result, the Board has decided to issue an all company letter to highlight the emergency preparedness and response requirements in OPR-99 and to clarify the Board expectations for emergency preparedness and response (EPR) programs.

To fully comply with OPR-99 and meet NEB expectations for an appropriate and effective EPR program, a company's EPR program should include the following elements:

- EPR Program Development (Hazard Assessment),
- Emergency Procedures Manual,
- Liaison Program (First Responders),
- Continuing Education Program (Public),
- Emergency Response Training,
- Emergency Response Exercises,
- Incident and Response Evaluation,
- Emergency Response Equipment.

Details on each of these eight major expected elements are attached. It should be noted that OPR-99 does not specifically reference EPR programs, however, individual and specific emergency preparedness and response related requirements within OPR-99 can likely only be met by developing an EPR program. The Board is of the view that effective preparedness and response programs should include consideration of all hazards including the threat of terrorism and criminal activities.

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Although no two companies will have identical EPR programs due to the differences in the nature and scope of their businesses and operations and associated hazards, an EPR program should include the expected elements considered necessary to meet the requirements of OPR-99. Companies should have a rationale for any expected element that is not in their EPR program.

During an NEB audit, inspection or assessment of section 58 or 52 applications, the NEB may examine and evaluate company plans, procedures, practices, work activities as well as hazard assessments and company's policies to make an overall determination as to the appropriateness and effectiveness of a company's EPR program.

All companies under NEB jurisdiction should examine their existing EPR program to ensure that their programs meet the requirements of OPR-99. The OPR-99 Guidance Notes and the attached EPR Program Expected Elements should be used to facilitate this review. It is expected that this review will be completed by 1 September 2002. Should you have any questions, please contact Bruce Moores at (403) 299-3926 or Ken Colosimo at (403) 292-4926.

Yours truly,

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

Michel L. Mantha
Secretary

Attachment

National Energy Board Expected Elements for Emergency Preparedness and Response Programs

1.0 Introduction

Section 48(2) of the National Energy Board Act permits the National Energy Board (NEB) to make regulations “providing for the protection of the environment and the safety of the public and of company employees in the construction, operation and abandonment of pipelines.”

The NEB has determined that its regulated companies must develop and maintain Emergency Preparedness and Response (EPR) Programs to minimize the effects of incidents and emergencies that have the potential to impact the health and safety of the public, company employees, property and the environment. The NEB has developed a set of expected elements for EPR programs to aid companies in understanding its expectations.

The expected elements for EPR programs are intended for use by the NEB to determine if a company's EPR program meets the following goals:

- NEB-regulated facilities are safe and perceived to be safe; and
- NEB-regulated facilities are built and operated in a manner that protects the environment and respects individual rights.

2.0 Emergency Preparedness and Response Program

The NEB expects companies to develop and implement EPR programs for all aspects of their operations. Although the Onshore Pipeline Regulations 1999 (OPR-99) do not make specific reference to EPR programs, individual and specific emergency preparedness and response related requirements within OPR-99 can only be met by developing an EPR program.

The NEB defines a program as a documented set of procedures that accomplish a goal or goals as defined by a company's policy. The program should set out how the procedures are linked and how each one contributes toward these goals.

2.1 Regulatory Requirements for Emergency Preparedness and Response Program

Sections 32 to 35 of OPR-99 require companies to have the major elements that are considered to constitute an EPR program.

To meet the requirements set out in sections 32 to 35, companies must:

- have an up-to-date emergency procedures manual;
- regularly review and update the manual;
- file the emergency procedures manual and all updates with the NEB;
- establish and maintain liaison with all parties that may be involved in an emergency situation;
- ensure that all affected parties are aware of the applicable procedures to be followed in an emergency situation and that the procedures are consistent with those in the emergency procedures manual; and

- have a continuing education program for all appropriate agencies, organizations and the public adjacent to their pipeline to inform them of the location of the facilities, potential emergency situations and emergency procedures to be followed.

There is overlap in the requirements of Sections 32 to 35 related to establishing liaison with agencies and the public, and providing information to these parties. The objectives, however, are the same. **Companies must ensure that all persons and parties that may be involved in responding to an emergency are knowledgeable of company facilities, the hazardous products involved and emergency procedures to be followed in the event of an incident or emergency.**

In addition to OPR-99 requirements under sections 32 to 35 for an emergency procedures manual, liaison and continuing education programs, section 46 of OPR-99 requires companies to have training programs for all employees directly involved in the operation of the pipeline including related emergency procedures and equipment. Section 47 requires companies to develop and implement a safety program to anticipate, prevent, manage and mitigate potentially dangerous conditions and exposures to these conditions during construction, operation and emergency activities. Sections 18, 19, 27, 30, 37, 48, 52 and 55 also contain requirements linked to companies' EPR programs and the need to protect company employees, the public and the environment, and to report on and maintain records of these activities.

In addition to the EPR program elements described in OPR-99, the NEB references CAN/CSA Z731-95, Emergency Planning for Industry and CAN/CSA 662, Oil and Gas Pipeline Systems as well as "industry standards" (as determined from examination of EPR programs of NEB-regulated companies and other sources) in determining compliance with OPR-99.

2.2 Definitions of Incident, Emergency and Emergency Criteria

2.2.1 Incident

For the purposes of these expected elements, an incident is considered to be "incidents and releases (including *any discharge, spray, spill, leak, seep, pour, emit, dump, and exhaust*) that are defined and reportable to the NEB under sections 1 and 52 of OPR-99. These are:

- the death of or serious injury to a person;
- releases that may have significant adverse impact on the environment;
- unintended fire or explosion;
- unintended or unplanned release of LVP hydrocarbons in excess of 1.5m³;
- unintended or uncontrolled release of gas or HVP hydrocarbons; and
- operation of a pipeline beyond its design limits as defined by CSA Z662, CSA Z276 or any operating limits imposed by the NEB."

Although incidents are defined in OPR-99, it is also necessary for companies to have a clear understanding of what constitutes incidents and emergencies at their facilities, as well as methods or procedures for determining the magnitude and levels of an emergency as circumstances change.

2.2.2 Emergency

CAN/CSA- Z731-95 defines an emergency as "*a present or imminent event that requires prompt co-ordination of actions or special regulation of persons or property to protect the health, safety or welfare of people or to limit damage to property and the environment*".

Emergencies can result from numerous causes including pipeline and equipment failure, human error and natural perils such as tornadoes, hurricanes, floods, or earthquakes and terrorism or other criminal activities. Multi-hazard emergencies such as an earthquake causing pipeline breaks, fires and explosions, which result in injury and further property damage, can also occur.

Companies must consider all probable emergencies and have applicable procedures in place to deal with potential effects and threats to people, property and the environment, as determined through a formal hazard assessment.

2.2.3 Terrorism and Other Criminal Activities

Companies must consider preventing and responding to emergency situations resulting from criminal activities. These may be related to terrorism, vandalism or other property crime. Special procedures and precautions may be required for preventing and responding to the acts of terrorism and other crimes and these should be identified through a formal hazard analyses and security audits. The EPR program should also include procedures for receiving and disseminating information to First Responders, adjacent commercial, industrial or pipeline operations, product receivers and/or members of the public who may be involved in responding to an emergency or be impacted by an actual or threatened act of terrorism or other criminal activities.

2.2.4 Criteria for Determining Levels of Emergencies

Companies should use the CAN/CSA Z731-95 or a similar definition and criteria for the determination of an emergency and triggers for various levels of response to emergency situations.

An example of criteria for determining the level of an emergency is provided below:

Level I	Level II	Level III
<ul style="list-style-type: none"> • No effects outside company property • Control of hazardous substance completed or pending • No immediate threat to the public or company personnel • Minimal environmental effects • Incident/spill handled by company personnel • Low potential to escalate 	<ul style="list-style-type: none"> • No immediate threat outside company property but potential exists to extend beyond property boundaries • Outside services and government agencies likely to be directly involved • Imminent control of hazardous substance probable • Some injury or threat to the public and company personnel • Moderate environmental effects 	<ul style="list-style-type: none"> • Serious injury to the public and company personnel and ongoing threat to the public • Uncontrolled release of hazardous substance continuing • Significant and ongoing environmental effects • Immediate and significant government agency involvement • Assistance from outside parties required • Effects extend beyond company property

3.0 EPR Program Expected Elements

Although no two companies will have identical EPR programs due to the differences in the nature and scope of their businesses and operations and the associated hazards, an EPR program should have the expected elements considered necessary to meet the requirements of OPR-99.

Companies should have a rationale for any expected element that is not in their EPR program and that is considered by the NEB to be applicable to their business and operations.

3.1 EPR Program Development

The NEB expects companies to develop and implement EPR programs for **all** aspects of their operations. In order to develop an appropriate and effective EPR program with applicable emergency procedures and comprehensive liaison and continuing education programs, companies must clearly understand the hazards posed by their operations and products and identify who or what may be exposed to these hazards.

3.1.1 Hazard Assessment

A method for evaluating hazards is discussed in CAN/CSA-Z731-95. Companies should use this or a similar process to undertake a formal hazard assessment of their operations. Companies should then use the hazard assessment to develop their EPR program and to identify all company staff, connected and adjacent operations, members of the public and government agencies that may be involved in an incident or emergency situation.

A formal hazard assessment should include:

- plume dispersion or similar dispersion modeling;
- identification and documentation of worst-probable emergencies involving the specific products being used or transported;
- a determination of what can go wrong, its effects, its likelihood of occurrence, how often it could occur and the location of occurrence;
- consideration of the dangers arising from human activity, such as fire, explosion, environmental contamination, hazardous substance release or pipeline ruptures, in addition to natural perils such as tornadoes, hurricanes, floods, or earthquakes and terrorism and other criminal activities;
- an evaluation of the potential for multi-hazard emergencies (e.g. an earthquake causing natural gas line breaks, fires, and explosions, which result in injury and further property damage); and
- measures that could reduce or eliminate the hazard.

The hazard assessment should be used to create and delineate the Emergency Planning Zone(s) to be utilized for developing the various constituents of the EPR Program (Emergency Procedures Manual, Continuing Education Program and Liaison Program).

Companies must be able to demonstrate that they have completed a hazard assessment as a basis for their EPR program. The results of any hazard assessment, risk assessment or similar process should be kept on file and available for examination by the NEB during audits, inspections or other NEB regulatory activities.

3.2 Emergency Procedures Manual

An emergency procedures manual is required under section 32 of OPR-99.

The format and content of emergency procedures manuals may vary according to the operations of individual companies; however, a company's emergency preparedness and response policies, practices and procedures should be reflected in all emergency procedures manuals.

At a minimum, an emergency procedures manual should include information related to the following topics:

- Directions for Use of Manual;
- Emergency Preparedness and Response Policy;
- Description of Initial Responses to Incident Calls;
- Management of Threat Information;
- Definitions and Levels of Emergencies;
- Corporate and Operational Chains of Command;
- Internal and External Contact Lists;
- External Communication Information (e.g. media outlets);
- Description of General and Site Specific Emergency Response Procedures;
- Roles and Responsibilities (e.g. checklist of duties);
- Site-Specific Emergency Information (e.g. control points);
- Lists of Persons in Emergency Planning Zones(or on separate file);
- Environmental or Other Areas Requiring Special Consideration or Protection;
- Detailed Product Information (e.g. MSDS);
- Description and Location of Response Equipment;
- Internal and External Reporting Requirements;
- Area Maps;
- Training Requirements;
- Role of Government Departments;
- Manual Updating Procedure and Schedule;
- Forms and Records; and
- Manual Distribution List.

To facilitate the use of an emergency procedures manual at the time of an emergency, the manual should be logically sequenced with various sections tabbed for ease of use. It is suggested that companies laminate the checklist of duties for key emergency personnel so that these can be removed, posted and used during an emergency to ensure that all duties, practices and procedures are performed.

3.3 Liaison

Companies are required under section 33 of OPR-99 to establish and maintain liaison with all parties that may be involved in an emergency situation. Under section 34, companies must ensure that all parties are aware of the procedures to be followed in an emergency situation and that the procedures are consistent with those in the emergency procedures manual.

At the time of an emergency situation, the assistance of various First Responders (fire, police and medical) as well as other federal, provincial and municipal agencies may be required. Prior knowledge of potential hazards and individual roles by the company personnel, First Responders and other agencies prior to an emergency is critical for the safety of all involved.

In order to determine with whom liaison should be established, companies should use the hazard, safety and/or emergency planning zones that are calculated as part of the hazard assessment. These zones should be used to identify the parties with whom liaison should be established and emergency response information directed. Companies should also keep up-to-date, readily accessible contact lists to ensure that all parties potentially involved in an emergency can be contacted when required and that the liaison program is maintained and developed as appropriate.

A liaison program should include:

- clearly defined and measurable objectives and goals;
- the rationale for the boundaries of the emergency planning zones;
- lists and rationale for agencies and individuals to be included or excluded from the program;
- a description of the consultation process including a schedule for contacts, nature of discussions, type of information to be provided and methods to assess the effectiveness of the consultation process;
- records and documentation of all liaison activities; and
- actions taken based on the results of the program and feedback received.

Prior knowledge of the following will facilitate an appropriate and effective response by all parties:

- type and locations of company facilities;
- all potentially hazardous products transported in the pipeline and/or stored at company facilities in significant volumes;
- MSDS sheets or similar information on the properties of products;
- plume dispersion information and ignition guidelines(if applicable);
- spill control points;
- emergency procedures and practices for dealing with an emergency consistent with those specified in the emergency procedures manual; and
- key roles of all personnel and agencies involved in an emergency response.

A company's EPR program should be integrated, to the extent possible, with existing local and regional emergency measures programs. **Arrangements and any formal agreements with mutual aid partners or spill cooperatives should be identified and incorporated into emergency procedures manuals as well as into training and education programs.** All parties potentially involved in an emergency situation should be aware of the essential components of these arrangements and agreements.

Copies of any agreements with mutual aid partners, spill cooperatives or other organizations or government agencies should be kept on file and be available for examination by the NEB during audits, inspections or other NEB regulatory activities.

3.4 Continuing Education Program

Companies are required under section 35 of OPR-99 to develop a continuing education program for police, fire, and medical personnel, as well as other appropriate organizations and agencies and **the public adjacent to the pipeline**, to inform them of:

- the location of the pipeline,
- potential emergency situations involving the pipeline; and
- safety procedures to be followed in the case of an emergency.

As previously noted, in order to determine who should be included in a continuing education program, companies should use the emergency planning zones that were calculated as part of a hazard assessment and were the basis for the overall EPR program. These zones should be used to determine who “the public adjacent to the pipeline” is and to identify any other persons with whom emergency preparedness and response information should be shared. Companies should keep up-to-date, readily accessible lists to ensure that all persons potentially involved in an emergency can be contacted when required.

An appropriate and effective continuing education program should include:

- clearly defined and measurable goals and objectives;
- the rationale for the boundaries of emergency planning zones;
- a rationale for the methods used to distribute information as well as an documented assessment of the success in delivering the safety message;
- documentation of actions taken to deliver information and identify recipients including examples of the information delivery tools, e.g. pamphlets, videos;
- up-to-date, readily-accessible lists of all persons potentially affected by an emergency situation; and,
- actions taken based on the results of the program and feedback received.

Information included in a continuing education program should be clear, concise and understandable to persons not familiar with company operations, products or the oil and gas industry.

Information prepared and distributed should include:

- all potentially hazardous products transported in the pipeline and/or stored at company facilities in significant volumes;
- identification of the hazards posed;
- MSDS sheets or similar information on the properties of the hazardous products;
- plume dispersion information;
- methods and timing of communication during an emergency;
- circumstances and procedures for sheltering and evacuation; and
- other emergency procedures and practices for responding to an emergency consistent with those specified in the emergency procedures manual.

Companies should provide, as part of the information package, a telephone number or web site where the public or other interested parties can obtain additional information or clarification regarding the material contained in the continuing education program.

Copies of contact lists, information and material distributed as well as any assessments or internal audits of the continuing education program should be kept on file and be available for examination by the NEB during audits, inspections or other NEB regulatory activities.

3.5 Emergency Response Training

Training is an essential component of any EPR program. Training for the EPR program and other activities related to the construction and operation of company facilities is required under section 46, as well as through other safety and environmental protection provisions of OPR-99. The type and frequency of training necessary may vary according to the scope and size of company operations; however, company staff should be appropriately trained for all probable emergencies within the emergency planning zones calculated as part of a hazard assessment.

As a minimum, companies should:

- provide personnel likely to be involved in **any** aspect of an emergency with appropriate training prior to assigning emergency response roles;
- ensure that emergency response personnel and any contractors that may be involved in an emergency response are qualified for their respective roles, as described in the emergency procedures manual;
- establish clear training requirements for each emergency response role (e.g. incident commander, on-scene supervisor, communication officer, etc.);
- establish minimum qualifications and training schedules;
- review and update the content of the training program as required including knowledge gained of new response procedures and equipment from simulated emergency response exercises and from actual responses to incidents and emergency situations;
- familiarize contractors and visitors with company policies and key procedures for responding to emergencies while working at or visiting the facilities; and
- document and maintain records of all emergency preparedness and response training for all individuals.

To demonstrate that the EPR program requirements of section 46 have been met, companies should maintain current records of all EPR training that is required as well as the methods used to determine “working knowledge” and continuing competency. These records should be available for examination by the NEB during audits, inspections or other NEB regulatory or project approval activities.

3.6 Emergency Response Exercises

Simulated emergency response exercises are an essential in developing, maintaining and improving companies’ EPR programs. Exercises are particularly important for training and evaluating company staff in their roles and responsibilities during an emergency as required under section 46 of OPR-99.

Exercises should be held with sufficient frequency to ensure a high level of emergency preparedness, to test the effectiveness of existing and new response procedures and, as noted, to determine the adequacy of staff training in all aspects of a company’s EPR program.

The type of exercise should be varied to ensure all aspects of potential emergencies are tested. Companies should also ensure that exercises simulate a wide range of potential geographic and weather conditions and worst-case spill or gas release scenarios. At least one simulated emergency response exercise should be held **annually** (e.g. table top, site-specific drill). A full-scale exercise involving all agencies identified in companies’ liaison programs should be held at least every **three years**.

It is recognised that a company may not be able to simulate all potential incidents in a given year due to resource and manpower restrictions. Companies should, however, have a plan to meet these requirements over an appropriate time period. Agencies and parties with whom liaison has been established should be advised of the schedule of exercises and be invited to participate or observe.

Detailed records of emergency response exercises should be kept and information and knowledge gained should be documented and reflected in companies' EPR programs. These records should be available for examination by the NEB during audits, inspections or other NEB regulatory activities.

3.7 Emergency Response Evaluation

Companies should maintain detailed records of all incidents and must, under section 52 of the OPR-99, provide preliminary and detailed reports of incidents and related emergencies to the NEB as soon as practicable. Information, knowledge and experience acquired from having to respond to an incident or emergency situation should be well documented during all aspects of an emergency response, and this information should be used to update response procedures, equipment and staff training requirements as outlined in companies' EPR programs. Companies should have a formal, documented review mechanism to ensure that this information and experience is fed back into its EPR program and also distributed throughout all of its regions of operations.

Additional information, knowledge and experience acquired from the oil and gas industry, other industrial sectors, staff training courses, EPR literature and simulated emergency response exercises should be used to continually improve companies' EPR programs.

3.8 Emergency Response Equipment

Under section 47 of the OPR-99, companies are required to develop and implement a safety program to anticipate, prevent, manage and mitigate potentially dangerous conditions and exposure to those conditions during construction, operations and emergency activities. In order to meet this requirement, companies should possess or have access to sufficient emergency response equipment to respond to the worst-case emergency, as determined by their hazard assessments. Placement of equipment should be based on people, property and environmental considerations to minimize response times and reduce potential impacts of incidents.

Lists of equipment required and available to company staff, First Responders and for emergency response in general should be formalized and included in the emergency procedures manual. These lists should include storage locations and information on how to access the equipment on a 24-hour basis. If equipment resides with mutual aid partners, spill co-operatives, government agencies or other organizations, formal agreements should be in place for access to the equipment by company personnel.

Companies should have documented procedures and schedules for preventive maintenance of response equipment. These procedures should include regularly scheduled sessions for operational testing and inventory control and should be outlined in a company's EPR program.

Company equipment lists, as well as any agreements for the use of third party equipment, should be included in the emergency procedures manual or on file and be available for examination by the NEB during audits, inspections or other NEB regulatory activities.

4.0 NEB Regulatory Activities

During an NEB audit, inspection or other regulatory activities, the NEB may examine and evaluate all company plans, procedures, practices and work activities, as well as hazard assessments and company policies, to make an overall determination of the adequacy and effectiveness of an EPR program.

Head office and field verification may be undertaken to confirm that EPR programs, as submitted to the NEB, have been applied and implemented into a company's operations and activities. Companies should prepare and maintain detailed records of all activities associated with its EPR program and be prepared to make them available to the NEB.