

## EMERGENCY MANAGEMENT ADVISORS

Good emergency management advice doesn't cost, it pays!



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### OUR MISSION

To Provide emergency management solutions that prevent losses and protect life.

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# EMA

Emergency Management Advisors, Inc.

## ABOUT US

Emergency Management Advisors (formerly Seacom International Inc.) is recognized as a true leader in the provision of emergency management (preparedness, response, recovery and mitigation) consulting and training services to Oil and Gas (on and offshore), Government (local/state-provincial/national), Business, Power Generation and Transmission, Construction, Transportation (road, rail, sea and air), Mining, Marine, Forestry, Pulp and Paper and other sectors.



Formed in 1995 by our president, Paul R. Clay, Emergency Management Advisors is a Canadian company based in St. John's, Newfoundland and Labrador. Servicing clients across Canada, in 14 countries and in several languages, our Emergency Management Professionals have the technical, operational and geographical experience to provide exceptional quality that is specific to the needs of each client and/or sector.

Our team have conducted more than 1,000 Emergency Management projects, safeguarded hundreds of thousands of personnel, and protected billions of dollars in assets. Nothing we do is generic, no client is treated the same, and no project is duplicated.

Nothing we do is generic because as the saying goes, "one shoe does not fit all".



## MISSION

To provide emergency management solutions that prevent losses and protect life.



Emergency Management Advisors, Inc.

## VISION

Continue to develop long-term relationships with our clients based upon the principle that the advice given must be based upon what needs to be heard, not what wants to be heard.



A handwritten signature in blue ink, appearing to read "Paul R. Clay".

Paul R. Clay, CD, B.Tech., P.Tech.

President and Senior Emergency Management Professional

## WHAT IS EMERGENCY MANAGEMENT?

Emergency Management is not just a system, such as the Incident Command System (ICS), Major Emergency Management (MEM), or the National Incident Management System (NIMS), but a combination of organizational, technical, operational, tactical, and strategic management competencies. When professionally combined with the appropriate systematic process, these competencies allow for the rapid development of situational awareness and response. Effective Emergency Management must be:

- Tactically sound, ensuring field actions are safe and effective
- Operationally applicable, fitting the reality of the work environment
- Sector or industry specific, addressing the unique risks of the field
- Geographically functional, accounting for local terrain and infrastructure
- Underpinned by competence, driven by trained and assessed personnel



## OUR SERVICES

### AUDITING

We provide assurance that clients have comprehensive emergency planning in place to support a coordinated and effective response in the event of an emergency. The audit process assesses the adequacy and effectiveness of emergency management and its related activities through the review of documentation, interviews with key players, and the effectiveness of previous responses and/or exercises.

### EMERGENCY RESPONSE PLANNING

Preparation of a client's procedures for handling sudden or unexpected events, with the objective being to:

- Prevent fatalities and injuries
- Reduce damage
- Protect the environment and community
- Accelerate the resumption of normal operations

### TRAINING

We provide Command and Control, Major Emergency Management (MEM), Incident Command System (ICS), National Incident Management System (NIMS), and National Emergency Response System (NERS). Specifically:

#### ICS 100 Introduction to the Incident Command System

ICS 100 is designed to introduce the principles of the Incident Command System and to briefly acquaint attendees with the basic ICS structure and terminology. This course covers the ICS organization, basic terminology, and common responsibilities, and provides basic information about the Incident Command System. After completion of the course, attendees will be able to work in a support role.



- Pre-requisites (None)
- Duration: 1/2 day

## ICS 100 Introduction to the Incident Command System (Organization and Operational Specific)

Covers all material identified in ICS 100, but with specific focus on the application of ICS 100 to the on or offshore operations of attendees, inclusive of supporting asset Major Emergency Management in accordance with the organizations on and/or offshore assets (exploration, production, marine, aviation, etc.) and their respective emergency response plan (ERP).



- Pre-requisites (None)
- Duration: 1 day

## ICS 200 and 300 Basic and Advanced Incident Command System

ICS 200 and 300 provides an introductory and advanced training related to leadership and management, delegation of authority and management by objectives, functional areas and positions, briefings, organizational flexibility, large-scale organization development; roles and relationships of the primary staff; the planning; operational, logistical and fiscal considerations related to large and complex incidents, and transfer of command.

- Pre-requisites (ICS 100)
- Duration: 1 day

## ICS 300 Expansion - Source Control

Expands on ICS 300, but with emphasis on the management consideration to apply when responding to a major incident (loss of well control, spill, etc.) at an on or offshore asset. Typically, attendees include asset leadership, Incident Commanders Operations Section Chiefs, Planning Section Chiefs, Logistics Section Chief, drilling personnel, and others; and includes a full-scale exercise.

- Pre-requisites (ICS 100 and 200)
- Duration: 2 days

## ICS 400 Advanced Incident Command System

ICS 400 expands on much of the material covered in ICS 100 to 300, with emphasis on large-scale organizational development; roles and relationships of the primary staff; the planning; operational, logistical and fiscal considerations related to large and complex incident management; command and control and describes the application of inter-agency coordination during complex incidents.

- Pre-requisites (ICS 100, 200, and 300)
- Duration: 1 day

## Management of Major Emergency Management Introduction

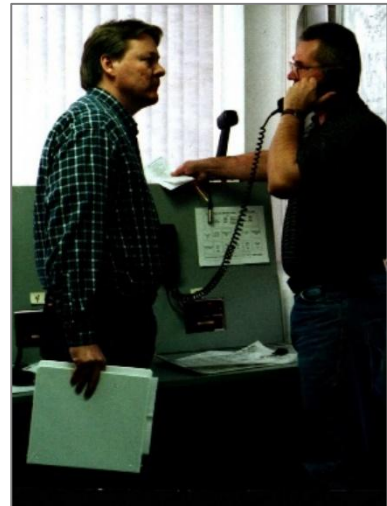
The Major Emergency Management introduction course presents the theoretical aspects of major emergency management for onshore personnel (typically, Leadership, Incident Commanders, and Operations Section Chiefs) who support asset emergencies; but require a more thorough understanding of installation management and how emergencies develop, are managed, and resolved at the asset level (on or offshore).



- Pre-requisites (None)

## Management of Major Emergencies

The full Management of Major Emergencies course covers all material from the introductory course, inclusive of command organization, for the Person in Command and his/her support staff which, when implemented effectively, allows for the development of tactical strategies based upon a sound understanding of the situation and available resources, with the aim being to control an emergency and, as a result, save or prevent further loss of life.



Operational scenarios (6 to 8) are presented to develop and coach members with regards to their competencies related to their technical/operational skills, maintenance of emergency management, how to evaluate an emergency, implementation of effective remedial actions during an emergency. correct use of command and control, maintaining communications, managing others, and stress management.

- Pre-requisites (None)
- Duration: 4 days

## EXERCISING

Preparation and delivery of exercises:

- Walkthroughs, workshops, or orientation seminars
- Tabletop exercises
- Functional exercises
- Full-scale exercises
- Virtual exercises
- Simulations (within a simulator)



## COMPETENCY ASSESSMENT (FOR COMMAND STAFF AND MANAGERS)

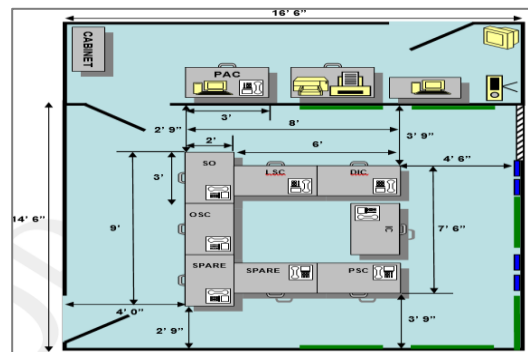
We provide competency assessment, which is the assessment of someone's capabilities against the requirements of their job (Emergency Management, in this case).

To be valid, the assessment should contain only those tasks and skills that are critical to success in Emergency Management, not every activity performed in an individual's traditional employment, but on their ability to manage an emergency in the context of their assigned responsibilities during an emergency (i.e. Incident Commander, etc.).



## EMERGENCY OPERATIONS CENTRE (EOC) DESIGN AND SETUP

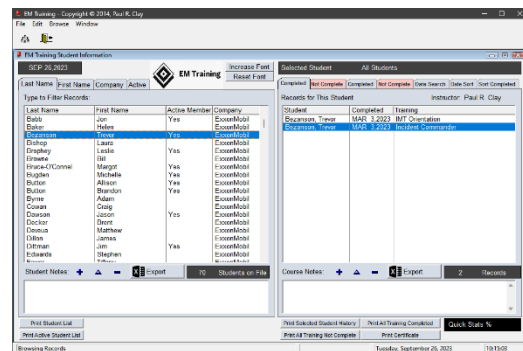
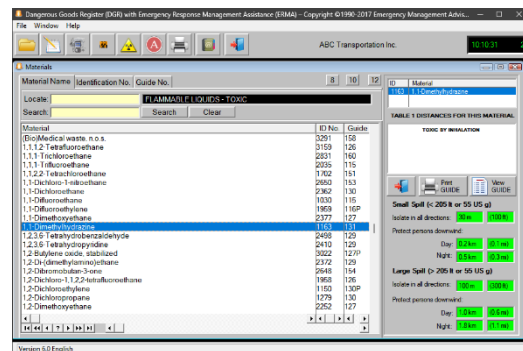
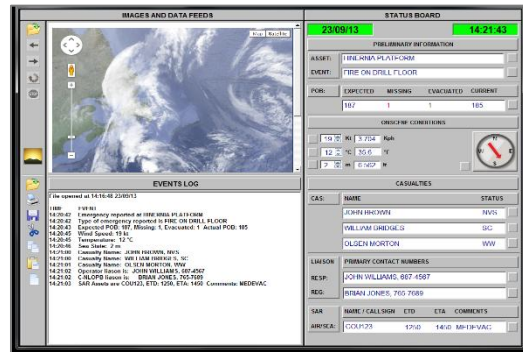
We design and assist in the setup of fixed, mobile, and virtual EOCs to ensure direction and control, information collection and analysis, coordination, and communication infrastructure work to support the functionality of the EOC type (oil and gas, mining, community, etc.), which then allows for the determination of size, configuration, and the required equipment.



## SOFTWARE (EMERGENCY MANAGEMENT AND BUSINESS)

We develop database orientated applications for the more effective Emergency Management management of:

- Response
- Response teams
- Emergency management training
- Conduct of major emergency management simulations (fires, explosions, weather events, etc.)
- Data and records management
- Small business accounting
- Materials and supply management
- And more



## SELECTION OF PROJECTS

### **Abitibi-Price**

The Stephenville Pulp and Paper Mill was in Port Harmon, Newfoundland and Labrador, and produced newsprint from thermomechanical pulp.

Project included the preparation of the assets Oil Pollution Emergency Plan, and Oil Spill Prevention Plan, inclusive of command training and exercises to prepare command staff, EOC personnel, and Emergency Response Teams in all aspects of tactical, strategic, and corporate response.

### **AGRA Earth & Environmental**

AGRA Earth & Environmental, a geotechnical, material, and environmental engineering firm.

Project included development of an underground pipe spill response plan for response to oil pollution incident involving the loss of Gasoline, JET-A1, or Fuel Oil during phase 2 drilling operations near pipelines forming part of the old Harmon Air Force Base.

### **AKER Solutions**

Aker Solutions is a global provider of products, systems and services to the oil and gas industry. Its engineering, design and technology bring discoveries into production and maximize recovery.

The project included emergency management training and the design/implementation of exercises to test response to a wide range of operational emergencies in conjunction with the coordination of external response agencies.

### **Atlantic Towing (JDI Integrated Logistics, a division of J.D. Irving, Limited)**

Atlantic Towing is a marine service provider specializing in port and terminal tug services, coastal towing, emergency towing and offshore oil and gas exploration and production support. With operations spanning the North Atlantic Ocean, Western Canada, the Caribbean, the Arctic, and North Sea.

Project included developing the corporate ERP and business continuity plan, as well as training and exercises.

### **Aurora Energy**

Aurora was engaged in developing a uranium mine in Labrador, Canada, which included field exploration of the Michelin and adjacent deposits through conventional drilling techniques.

Project included a field analysis, development of the ERP, EOC setup (field and corporate), command training, and exercises to evaluate field and corporate response to a range of emergencies.

## **A. Harvey & Company Limited**

The company is a freight forwarding, ships agency, and customs brokerage firm specializing in offshore supply and services.

Projects included development of the Base ERP, EOC, Oil Pollution Emergency Plan, Environmental Management System, command training, and exercises to evaluate field and corporate response to a range of shore base emergencies.

## **Barrick Gold Corporation**

The Hemlo mine site is located 350 kilometres east of Thunder Bay in Ontario, Canada. Barrick Gold's Williams mine is an underground and open pit operation that has produced more than 21 million ounces of gold.

Project included the preparation of a tabletop and on-scene operational exercise to simulate a tailings dam failure, inclusive of coordination of relevant external agencies, other support organizations, and a comprehensive report.

## **Canship-Ugland**

Canship-Ugland is a ship management and crewing company operating and managing DP shuttle tankers, harbour tugs, bulk carrier, cargo vessel, oceangoing tug and barge, pilot boats and product tankers.

Project included the development, and subsequent implementation, of a Safety Culture – Change Implementation Plan (SCCIP) for the company's tanker operations.

## **Chevron**

Headquartered in Calgary, Alberta, Chevron Canada has interests in oil sands projects and liquids-rich shale gas acreage in Alberta; exploration, development and production projects offshore Newfoundland and Labrador; and exploration and discovered resource interests in the Beaufort Sea region of the Northwest Territories.

Projects have included preparation of project ERPs, Battle Book, Atlantic Canada ERP, Overarching ERP, Pacific Trails Pipeline ERP, providing oversight to Chevron in setting up their EOC, provision of emergency response training to members of Chevron's emergency response team, the preparation of exercises for marine, aviation, and rig based emergencies, and an analysis of oil tanker accidents and incidents.

## **Come By Chance Refinery (North Atlantic Refining)**

Come By Chance Refinery was a crude oil refinery operated by North Atlantic Refining in Come By Chance, Newfoundland and Labrador, Canada. It had a refining capacity of 130,000 barrels per day (21,000 m<sup>3</sup>/d). The plant is currently undergoing conversion to a biofuel operation.

Project included preparation of refineries Oil Pollution Emergency Plan (OPEP), review of other ERPs; training of command teams, control room operators, and other response personnel; and exercises to evaluate response capability to a range of refining emergencies.

## **Conoco-Petrozuata-PDVSA-Enbridge**

Petrozuata was the first joint-venture between the Venezuelan government, through Petroleos de Venezuela S.A (PDVSA) and Conoco, to develop an asset in the Orinoco Belt (the largest heavy oil field in the world) to produce extra heavy oil (Maya crude) through a series of inland well pads interconnected to a 210 km central pipeline system to bring 120,000 barrels/day of diluted crude oil from the field into an upgrader located near the coastline at Jose in northeast Venezuela.

The project included a field analysis of the pipeline route, the development of the Zuaducto pipeline ERP for development, construction, and operations, training of command teams, and exercises to evaluate response capability.

## **ConocoPhillips**

ConocoPhillips is one of the world's largest independent Exploration and Production companies based on production and proved reserves. Drilling was conducted in the Laurentian Sub-basin over 250 km southwest of St. John's, Newfoundland and Labrador at water depths ranging from 100 to 2,300 m.

Project included preparation of the project ERP, training, and exercising for onshore response teams and offshore drilling operations onboard the Stenna Caron.

## **Corner Brook Pulp and Paper (Kruger)**

The Corner Brook Pulp and Paper Mill is in Newfoundland and Labrador and produces newsprint from thermomechanical pulp. This mill has two hydroelectric plants and a biomass cogeneration plant as well as a woodlands department.

Project included the preparation of the assets Emergency and Environmental Contingency Plan, Oil Pollution Emergency Plan, and Oil Spill Prevention Plan, inclusive of command training and exercises to prepare command staff, EOC personnel, and Emergency Response Teams in all aspects of tactical, strategic, and corporate response.

## **Diamond Field Resources**

The company, originally founded as Diamond Fields Resources Inc by Jean-Raymond Boule in 1993, was credited with finding the Voisey's Bay deposit - widely viewed as one of the greatest mineral finds in Canada in decades - in the eastern province of Newfoundland and Labrador.

The project included a field analysis of emergency preparedness, development of the ERP. Plan, Oil Pollution Emergency Plan, EOC setup (field and corporate), command training, and exercises.

## **DMGP Servicios de Integrad (Dos Bocas, México - PEMEX)**

Dmgp Servicios de Integridad is a Mexican company dedicated to the construction of oil and gas distribution systems for PEMEX. Dos Bocas is an oil, industrial, commercial, and international port owned by PEMEX, located in the Municipality of Paraíso, Tabasco. Dos Bocas employees 5,000 personnel and receives, conditions, and distributes more than 1 billion barrels of oil per day.

Project included the preparation of the ERP for the Marine Terminal at Dos Bocas, inclusive of training, simulations, and competency assessment for asset emergency managers and their command teams.

## **Environment Canada (Now Environment and Climate Change Canada)**

ECCC is responsible for conserving natural heritage, predicting weather and environmental conditions, preventing, and managing pollution, promoting clean growth and a sustainable environment for present and future generations.

Project included the development and presentation of a Shoreline Cleanup & Assessment Technique Course (SCAT).

## **ExxonMobil (France)**

ExxonMobil Canada and partners Gulf Oil Canada Ltd. and Murphy Oil Corp. drilled a single exploration well about 160 kilometres south of the French islands of St-Pierre-Miquelon.

Project included preparation of the project ERP, training, and exercising for onshore response teams and offshore drilling operations onboard the Glomar Grand Banks.

## **German Agency for International Cooperation (GIZ) and SITRATA Wastewater Treatment Plant, Mexico**

GIZ is the main German development agency. It is headquartered in Bonn and Eschborn and provides services in the field of international development cooperation and international education.

Conducted through WSP, project included the preparation of a Climate Risk Management Plan and Prioritization of remedial measures for the SITRATA Wastewater Treatment Plant, Mexico. Specific focus involved the municipalities of Guanajuato (San Francisco del Rincón and Purísima

del Rincón) using the Public Infrastructure Engineering Vulnerability Committee (PIEVC) protocol to study the operational and social impacts of climate change looking forward.

## **Hebron and Hibernia Production Platforms (ExxonMobil)**

Hebron (ExxonMobil) is a heavy oil platform located 350km south-east of the Newfoundland and Labrador capital St John's, in a water depth of 93m. Hibernia is an offshore production platform located 315 km from St. John's, Newfoundland and Labrador.



Project included the preparation of each installation's major ERP, oil spill response plan, construction plan, tow to field plan, inclusive of training through simulation to exercise and prepare Offshore Installation Managers for Emergency Management, training for Incident Management Team (IMT) members onshore and exercises to prepare IMT members.

## **Husky Energy (Cenovus)**

Husky Energy Inc. (now Cenovus) was a Canadian company engaged in hydrocarbon exploration.

Projects included initial emergency management setup for operations, training, and exercising, and a review of Helicopter Preparedness Internationally as it related to the use of helicopters in response to marine emergencies, specifically, the time it takes to prepare the helicopter for flight after notification (commonly referred to as wheel's-up time).

## **Husky Oil (Cenovus)**

Husky Energy Inc. (now Cenovus) was a Canadian company engaged in hydrocarbon exploration.

Projects included preparation of the project ERP, training, setup of the EOC, and exercising for onshore response teams and offshore drilling operations onboard the Bill Shoemaker, Glomar Grand Banks, Sedco 714, GlobalSantaFe, and others.

## **Interprovincial Pipeline, Ltd. (Enbridge)**

Interprovincial Pipeline (Enbridge Inc.) is a Canadian multinational pipeline and energy company headquartered in Calgary, Alberta, Canada. Enbridge owns and operates pipelines throughout Canada and the United States, transporting crude oil, natural gas, and natural gas liquids, and also generates renewable energy.

Project included the development of an emergency response and Waterfowl Protection and Rehabilitation Plan for use during hydrostatic testing of a crude oil pipeline south of Brandon Manitoba.

## **IMTT Newfoundland Limited**

Newfoundland Transshipment Limited (NTL) was formed in 1996 to oversee the construction and operation of a marine transshipment facility located in Whiffen Head, Placentia Bay, Newfoundland and Labrador. The NTL facility is specifically designed to manage crude oil production from the Grand Banks offshore oil fields. The terminal can store about 3,000,000 barrels of crude in its tank farm and can manage tankers up to 190,000 tonnes displacement.



Project included the development of an ERP; preparation of emergency response exercises related to all aspects of transshipment terminal operations; the provision of Command and Control training for Installation Management, Control Room Operators, and external contractors; and the assessment of personnel.

## **Irving Transportation Services (Rail)**

NBM Railways consists of three short line railways, New Brunswick Southern Railway (NBSR), Eastern Maine Railway (EMRY) and Maine Northern Railway (MNR).

Project included a field evaluation of response capabilities and the preparation of an emergency management report to identify opportunities for improvement that would enable the companies to enhance their response to and / or management of emergencies.



## **Jeanne D'Arc Basin Exploration Drilling Project (Husky, Chevron, Mobil, Norsk Hydro)**

The Jeanne D'Arc Basin Exploration Drilling Project was a consortium made up of Husky, Chevron, Mobil, and Norsk Hydro.

The projects consisted of the preparation of ERP, providing oversight to in setting up the Emergency Response Centre, provision of emergency response training to members of the emergency response team, and the preparation of exercises for marine, aviation, and rig-based emergencies onboard the Glomar Grand Banks rig.

## **Kitimat LNG and Pacific Trails Pipeline Emergency Response Plan (Chevron)**

Chevron's indirect Canadian subsidiary, Chevron Canada Limited, acquired a 50% operating interest in the Kitimat LNG project and proposed Pacific Trail Pipeline (PTP), and a 50% interest in

approximately 644,000 acres (2,606 km<sup>2</sup>) of petroleum and natural gas rights in the Horn River and Liard Basins in British Columbia, Canada.

Project included the preparation the major ERP, Battle Book, inclusive of training and exercises to prepare Incident Management Team (IMT) and field personnel for response to all potential emergencies during construction operations.

## **Lower Churchill Project (Nalcor Energy)**

Nalcor Energy's Lower Churchill Project (LCP) comprises the construction of the Muskrat Falls Powerhouse and 1,100 km of surface and submarine transmission lines. LCP produces 900 megawatts of clean energy and is fed by two dams and a 60 km reservoir, with transmission lines joining the existing Labrador grid at the Churchill Falls Generating Station.

Project included preparation of the provincial ERP, emergency response training, exercises for response management teams and consulting on all aspects of the projects terrestrial and marine emergency preparedness program.

## **Marine Atlantic**

Marine Atlantic is a modern ferry transportation organization providing a daily ferry service between the ports of Port aux Basques, NL and North Sydney, NS. During the summer, Marine Atlantic provides a second ferry service between the ports of Argentia, NL and North Sydney, NS.

Project included the development of Oil Pollution Emergency Plans for Port Aux Basques and Argentia, NL, and Sydney, NS; and included training related to oil spill response, command and control, and exercises to evaluate response capability.

## **Municipal Construction**

Municipal Construction Limited engages in asphalt production, paving, aggregate production, road building and rehabilitation, and operates the Liquid Asphalt Marine Terminal under Asphalt Product Industries Inc.

Projects have included the preparation of the companies Oil Pollution Emergency Plan, training, and the conduct of response exercises for marine and terrestrial spills.



## **Nalcor Energy**

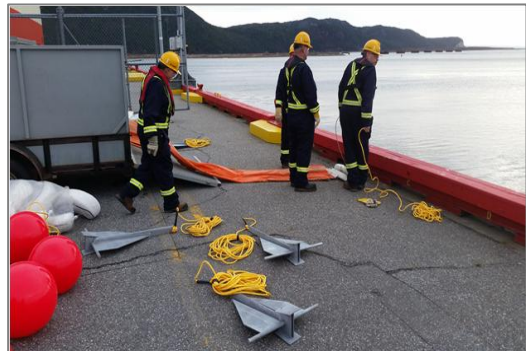
Nalcor Energy was a provincial energy corporation which was headquartered in St. John's, Newfoundland and Labrador.

Projects included preparation of an Analysis of Existing Corporate Emergency Response Capabilities, development of ERP, emergency response training, exercises, and Corporate EOC setup for response management teams, inclusive of consulting on all aspects of the companies terrestrial and marine emergency preparedness program.

## **Newfoundland and Labrador Asphalt Ltd. (Irving)**

Newfoundland and Labrador Asphalt manufactures liquid asphalt and the sale of chemically treated poles and timber to supply the needs of provincial customers.

Project included the preparation of the assets Oil Pollution Emergency Plan, inclusive of command training and exercises to prepare command staff, EOC personnel, and Emergency Response Teams in all aspects of tactical, strategic, and corporate response.



## **Newfoundland and Labrador Hydro**

Newfoundland and Labrador Hydro (Hydro) is a Crown utility providing electricity through power generation assets in Churchill Falls, Muskrat Falls, Bay d’Espoir and Holyrood.

Project included preparation of the Holyrood Generating Station Oil Pollution Emergency Plan, establishment of the Corporate EOC, training, and exercising to encompass all aspects of power generation, transmission, and onshore oil and gas exploration.



## **North Star Cement**

North Star Cement operates a cement manufacturing and distribution facility from its headquarters at Corner Brook with other bulk cement distribution terminals at various locations.

Project included the preparation of the assets Oil Pollution Emergency Plan, inclusive of command training and exercises to prepare command staff, EOC personnel, and Emergency Response Teams in all aspects of tactical, strategic, and corporate response.



## **PEMEX Exploration and Production**

PEMEX is engaged in the exploration and production of oil, gas, and other hydrocarbons within Mexico.

Project included the implementation, training, evaluation and certification of Directors, Asset Administrators, and On and Offshore Installation Managers), coordinators, and technicians who form part of the Regional Centre for the Attention to Emergencies and EOCs of 32 offshore platforms, onshore processing centers, and cross-country pipeline systems.



Completion of new ERPs for the same 32 platforms and processing centers, inclusive of delivery of 70 Major Emergency Management courses and 227 technical and operational simulations; and offshore installation manager assessments for competence.

## **StatoilHydro (Equinor)**

Equinor (formerly Statoil and StatoilHydro) is a Norwegian state-owned multinational energy company headquartered in Stavanger, Norway.

Projects included the initial setup of the Orphan Basin EOC, preparation of the project ERP, and preparation of a series of exercises related to marine, aviation, environmental, and drilling emergencies onboard the Henry Goodrich.

## **The Sable Offshore Energy Project (ExxonMobil, Shell, Imperial, Pengrowth, and Mosbacher)**

The Sable Offshore Energy Project (SOEP) is a consortium based in Halifax, Nova Scotia which explores for and produced natural gas near Sable Island on the edge of the Nova Scotian continental shelf in eastern Canada.

Project included training, preparation, and exercising for Incident Management Team members in preparation for operations and decommissioning of the Thebaud Processing Facility, Venture platform, North Triumph platform, Alma Facilities, South Venture platform, Goldboro Gas Plant, and Point Tupper Fractionation.

## **Terra Nova FPSO - Petro-Canada (Suncor)**

The Terra Nova Floating Production Storage and Offloading (FPSO), producing in the North Atlantic 350 kilometres southeast of Newfoundland and Labrador, Canada, is a 292.2 metre vessel with a width of 45.5 metres.

Projects included preparation and assessment of emergency response exercises and simulations for all aspects of the project, inclusive of marine, drilling, and production operations related to the Terra Nova FPSO. Work was conducted onboard and offshore, and at the project's simulation

centre. In addition, training was conducted for the Terra Nova Incident Command Centre as well as Major Emergency Management training for the FPSO's OIM's and emergency management teams.

## **Town of Channel-Port Aux Basques (Health Canada)**

Channel-Port aux Basques is a town at the extreme southwestern tip of Newfoundland and Labrador fronting on the western end of the Cabot Strait.

Project included a study, funded by Health Canada, and exercise to assess the capacity of the emergency response and public health systems regarding coping with and adapting to extreme weather events exacerbated by a changing climate. Specific elements included testing internal emergency response communications and coordination capabilities with other towns and/or cities, provincial/state/federal agencies, and evaluating the potential health impacts and ability of all levels of government to support a major event.



## **Vale - Underground Mine**

The Voisey's Bay Underground Mine Project (VBUG) ERP for the Construction and Operations Phases of the Underground Components (Underground ERP) was developed to provide an appropriate and consistent response to any reasonably foreseeable underground emergency likely to occur during construction and operations of the underground mine.

Project included preparation of the ERP, command training, and exercises to evaluate response to surface and underground emergencies.



Emergency Management Advisors, Inc.

## ACRONYMS

ECCC	Environment and Climate Change Canada
EOC	Emergency Operations Centre
ERP	Emergency Response Plan
FPSO	Floating Production Storage and Offloading
ICS	Incident Command System
IMT	Incident Management Team
LCP	Lower Churchill Project
MEM	Major Emergency Management
NERS	National Emergency Response System
NIMS	National Incident Management System
OIM	Offshore Installation Manager
OPEP	Oil Pollution Emergency Plan
PTP	Pacific Trail Pipeline
SCAT	Shoreline Cleanup and Assessment Technique
SCCIP	Safety Culture, Change Implementation Plan
SOEP	Sable Offshore Energy Project
VBUG	Voisey's Bay Underground Mine Project