

**The role for standards for helping
ensure environmental protection
when responding to land-based oil
spills**

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- The need for environmental standards for land-based oil spill response: providing the environmental as well as human health context
- Challenges to ensuring adequate environmental protection for land-based oil spill response
- The potential role of consensus-based standards for helping to ensure environmental protection in oil spill response
- Three potential areas for standards development

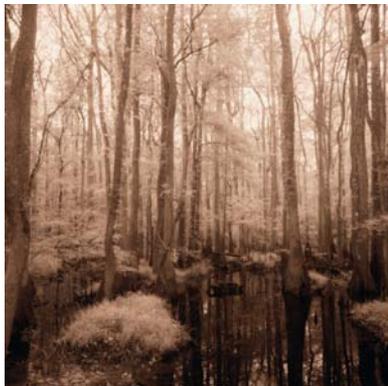
Land-based oil spill response: the “environmental context”

- There are a number of serious environmental impacts that can result from land-based oil spills:
 - impacts on the quality of water – both as a habitat and a drinking source for living organisms
 - significant and cumulative impacts on food chains
 - contaminated soil and changes in soil chemistry, with significant impacts on microorganisms within the soil



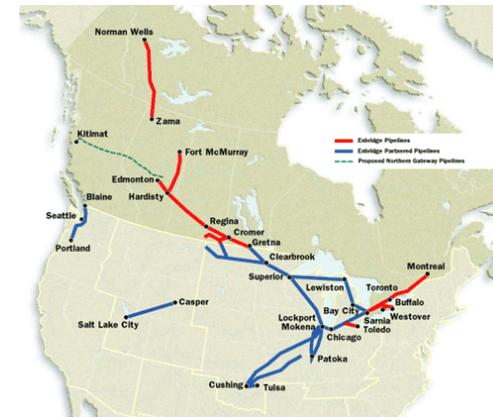
Land-based oil spill response: the “human health context”

- Environmental impacts from land-based oil spills can likewise have significant and severe impacts on human health and well being, including:
 - quality of aquifers, ground water and other sources from which humans depend for drinking water
 - the health and well-being of first nations and populations that depend on fishing and hunting for food and survival



Challenges in ensuring adequate environmental protection in land-based oil spill response

- **Having geographically-appropriate response plans**
 - often encounter diverse geographies when considering the distances involved in transporting oil
 - large differences in hydrological features that would need to be taken into account in any oil spill response
 - wide variations in population densities, availability of equipment and materials, and general resources available for emergency response



- There are diverse stakeholders involved with the potential environmental impacts resulting from land-based oil spills whose interests and concerns need to be considered in a spill response:
 - *Private sector firms* involved in the production, handling and transport of oil and other energy products as well as with the environmental response itself
 - *Environmental advocates* with an interest in safeguarding environmental resources from the environmental risks posed by land-based oil spills
 - *First nations and aboriginals* for whom environmental resources are central to their well being and survival through fishing, hunting and habitat
 - *Research communities* concerned with understanding not only the potential environmental and human health impacts of land-based oil spills, but also understanding and developing the best technologies and approaches for mitigating the environmental risks from such spills
 - *Government* – i.e. those who can regulate, enforce, and help respond to the environmental risks posed by land-based oil spills

- Any approach, and specifically a standard that is meant to help build capacity in responding to land based oil spills, must be able to adequately consider available and emerging methods and technologies for doing so.
 - For example, these could include:
 - Use of microorganisms or biological agents to break down or remove oil (bioremediation)
 - Use of bioremediation accelerators
 - Controlled burning
 - Dispersants



- Accredited Standards Development Organization in Canada and the United States
- Standards developed in partnership with industry, regulators, government, and consumers
- Reputation for independent and objective guidance (consensus-based), and experience with sensitive topics
 - Help support Provincial and Government of Canada Priorities
 - Help support harmonization across jurisdictions
 - Help support labour mobility
- Active in international standards involvement
- Major role in emerging technologies:
 - Technology Neutral
 - Meet stakeholder needs for speedy development

3,000

Standards and Codes

7,800

expert Committee
Members

63,000

customers

40%

of standards are
referenced in
government regulation

180

highly dedicated staff

\$60-70M

annual in-kind contribution
by Committee Members

Value of a Standards-Based Approach

- **Complements policy and regulations**
 - Can be referenced as technical building blocks within regulations
 - Support harmonization nationally and internationally
- **Complements and adds value to existing initiatives**
 - Levels the playing field
 - Establishes a common language
 - Facilitates benchmarking and reporting
- **Increases credibility and transparency**
 - Builds trust and cultivates relationships and collaboration
 - All interest groups are represented, using a consensus process
 - High degree of outcome predictability

- CSA Group standards used as a tool to help organizations manage risk, improve performance, and streamline operations
- Recognized benefits of a holistic approach to standardization
 - Strategically and systematically address all needs
 - Consensus based
 - Multi-stakeholder Matrix
 - Credible, globally recognized
- Industry- and stakeholder-approved standards development roadmap key to results:
 - Identify and evaluate existing initiatives
 - Identify harmonization opportunities and gaps
 - Prioritize development of standards solutions

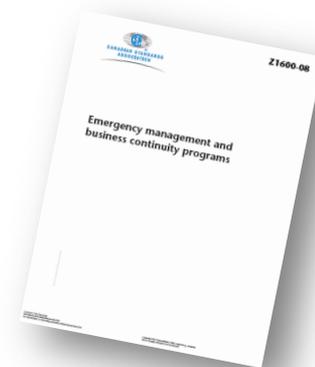
- The consensus-based development process relies on stakeholders from government, industry, consumer groups or environmental organizations to develop any given standard. Its building blocks include:
 - Building on or complementing existing government regulation and policy
 - Relying on expert input and developing technical content and rigour
 - Ensuring stakeholder representation through the balanced matrix
 - Using the consensus-building process to arrive at agreed upon content and requirements
 - The inclusion of public review and comment

How the consensus-standards development can help with this issue

- With specific consideration of helping to ensure environmental protection when responding to oil spills, the consensus-standards development process can:
 - Bring the necessary technical expertise to the table
 - Ensure that existing documents or regulation are appropriately built upon or complemented
 - Bring together stakeholders in a balanced way in order to help ensure that all needs and voices are heard with no one dominating the others
 - Help provide a forum that is transparent and open to public input and criticism



Three potential standards-based solutions for helping ensure environmental protection in land-based oil spill response are discussed. These could form one or a series of unique standards.



Scope and purpose

- Both human and physical geographical variations have major implications for how best to respond to a land-based oil spill. Response plans need to consider and address conditions and capacity specific to a region's geography. This proposed standard would provide a decision-making framework and minimal requirements for spill response in respect of environmental and human health impacts when considering the following:
 - Local terrain
 - Local and regional climate
 - Potentially impacted ecosystems
 - Proximity and size of potentially impacted population centres
 - Available response capacity
 - Available materials
- The standard will address minimizing the impacts of the spill as well as remediation and restoration

Scope and purpose

- Having the right spill response capability and equipment capacity in place and ready for deployment could have significant implications with respect to minimizing the environmental and related human health impacts of a land-based oil spill. This proposed standard would help to set out minimal requirements as well as specifications on requirements for the following:
 - Requirements on spill response capability, including:
 - Materials requirements
 - Personnel requirements (types of specialists, etc)
 - Requirements for equipment capacity, including:
 - Types of equipment
 - Size/capacity of equipment
- The standard will address minimizing the impacts as well as remediation and restoration



Scope and purpose

- Ensuring the best oil spill response in respect of environmental protection will depend on having properly trained responders that understand the complexities of dealing with oil in the environment alongside the approaches, technologies and equipment to respond to this.
 - The potential scope of this standard could therefore include:
 - Decision-making frameworks/guidance on appropriate level of action in order to respond to the spill incident
 - Decision-making frameworks/guidance on appropriate technologies and processes to use and follow
 - Requirements for personal safety considerations
 - The standard will address minimizing the impacts of the spill as well as remediation and restoration

Thank You / Merci Beaucoup

